



Northwest Training and Testing

Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement

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NAVSEA
NAVAL SEA SYSTEMS COMMAND



Northwest Training and Testing Activities Final Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement



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Appendix A Navy Activities Descriptions

Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement

Northwest Training and Testing

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APPENDIX A NAVY ACTIVITIES DESCRIPTIONS

A.1 TRAINING ACTIVITIES

The Navy's training activities are organized generally into eight primary mission areas and a miscellaneous category (Other Training) that includes those activities that do not fall within a primary mission area, but are an essential part of Navy training. In addition, because the Navy conducts a number of activities within larger training exercises, descriptions of those larger exercises are also included here. It is important to note that these larger exercises are comprised entirely of individual activities described in the primary mission areas.

Descriptions of sonar, ordnance/munitions, targets, and other systems were provided in the 2015 Northwest Training and Testing (NWTT) Final Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) (Section 2.3, Description of Sonar, Ordnance/Munitions, Targets, and Other Systems Employed in Northwest Training and Testing Activities).

A.1.1 AIR WARFARE TRAINING

Air warfare is the primary mission area that addresses combat operations by air and surface forces against hostile aircraft. Navy ships contain an array of modern anti-aircraft weapon systems, including naval guns linked to radar-directed fire-control systems, surface-to-air missile systems, and radar-controlled guns for close-in point defense. Strike/fighter aircraft carry anti-aircraft weapons, including air-to-air missiles and aircraft guns. Air warfare training encompasses events and exercises to train ship and aircraft crews in employment of these weapons systems against simulated threat aircraft or targets. Air warfare training includes surface-to-air gunnery, surface-to-air and air-to-air missile exercises, and aircraft force-on-force combat maneuvers.

A.1.1.1 Air Combat Maneuver

Air Warfare			
Air Combat Maneuver			
Short Description	Fixed-wing aircrews aggressively maneuver against threat aircraft to gain tactical advantage.	Typical Duration	
		1–2 hours	
Long Description	Basic flight maneuvers in which fixed-wing aircrew engage in offensive and defensive maneuvering against each other. During air combat maneuver engagements, no ordnance is fired, but countermeasures such as chaff and flares may be used. These events typically involve two aircraft; however, based upon the training requirement, events may involve multiple aircraft. Occurs year round, day and night. Primarily a day activity with only about 4 percent occurring at night.		
Typical Components	Platforms: Fixed-wing aircraft Targets: Air targets Systems being Trained/Tested: None		
Standard Operating Procedures <i>(Section 2.3.3)</i>	Aircraft safety	Typical Locations	
		Offshore Area W-237 Olympic Military Operations Area (MOA)	
Stressors to Biological Resources	Acoustic: Aircraft noise	Physical Disturbance and Strike: Aircraft and aerial targets	Energy: In-air electromagnetic devices
	Explosive: None	Ingestion: Military expended materials – other than munitions	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Airborne acoustics Physical disturbance and strike	Public Health and Safety: None
Military Expended Material	Ingestible Material: Compression pad or plastic piston, endcap – chaff and flare, flare O-ring Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	None		
Assumptions Used for Analysis	No munitions fired. Flare and chaff may be used. For air quality analysis: <ul style="list-style-type: none">- Average 2 fixed-wing fighter aircraft per event- Average 1 hr. per event		

A.1.1.2 Gunnery Exercise Surface-to-Air

Air Warfare			
Gunnery Exercise Surface-to-Air			
Short Description	Surface ship crews fire medium- and large-caliber guns at air targets.	Typical Duration	
		1–2 hours	
Long Description	Surface ship crews defend against threat aircraft or missiles with large- and medium-caliber guns to disable or destroy the threat. An event involves one ship and a simulated threat aircraft or anti-ship missile that is detected by the ship's radar. Large- or medium-caliber guns fire non-explosive projectiles to disable or destroy the threat before it reaches the ship. The target is towed by a contract air services jet. Occurs year round, daytime only.		
Typical Components	Platforms: Aircraft carrier, amphibious warfare ship, fixed-wing aircraft, surface combatants Targets: Air targets Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Weapons firing safety	Typical Locations	
		Offshore Area W-237	
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise Weapons noise	Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Military expended materials	Energy: None
	Explosive: None	Ingestion: Military expended materials – munitions	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Metals	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: Large- and medium-caliber projectile fragments Non-Ingestible Material: Large- and medium-caliber casings, large-caliber projectiles	Military Recoverable Material	Air targets
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		

Air Warfare	
Gunnery Exercise Surface-to-Air	
Procedural Mitigation Measures	Acoustic Stressors: <i>(Section 5.3.2)</i> Weapons Firing Noise Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	All large-caliber non-explosive events occur greater than 20 NM from shore, and all other non-explosive rounds are used 12 NM or greater from shore. The target is a fiberglass finned target that is towed approximately 3 NM behind the towing aircraft, at an altitude of 1,000 ft. or greater.

A.1.1.3 Missile Exercise Air-to-Air

Air Warfare			
Missile Exercise Air-to-Air			
Short Description	Fixed-wing aircrews fire air-to-air missiles at air targets.	Typical Duration	
		1–2 hours	
Long Description	An event involves two or more fixed-wing aircraft and a target. Missiles are either high-explosive warheads or non-explosive practice munitions. The target is an unmanned aerial target drone, a tactical air-launched decoy, or a parachute suspended illumination flare. Target drones deploy parachutes and are recovered by small boat or rotary-wing aircraft; tactical air-launched decoys and illumination flares are expended and not recovered. These events typically occur at high altitudes. Occurs year round, daytime only.		
Typical Components	Platforms: Fixed-wing aircraft; rotary-wing aircraft; small boat Targets: Air targets, flares Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area W-237	
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise Weapons noise Explosive: In-air explosions	Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Military expended materials Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: Decelerators/parachutes
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Explosives Metals	Chemicals
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: Target and missile (explosive) fragments, casing Non-Ingestible Material: Large parachutes, medium parachutes, illumination flares, missile (non-explosive)	Military Recoverable Material	Targets
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		

Air Warfare	
Missile Exercise Air-to-Air	
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	4 Training events per year with 4 high explosive (HE) warheads, 4 non-explosive practice munitions (NEPM) warheads. Assume 1 flare per Missile Exercise event. All events occur greater than 50 NM from shore and above 15,000 ft. altitude. All propellant and explosives are consumed.

A.1.1.4 Missile Exercise Surface-to-Air

Air Warfare			
Missile Exercise Surface-to-Air			
Short Description	Surface ship crews fire surface-to-air missiles at air targets.	Typical Duration	
		1–2 hours	
Long Description	Surface ship crews defend against threat missiles and aircraft with ship-launched surface-to-air missiles. The event involves a simulated threat aircraft or anti-ship missile that is detected by the ship’s radar. Ship-launched surface-to-air missiles are fired (high-explosive) to disable or destroy the threat. The target typically is a remote-controlled drone. Surface-to-air missiles may also be used to train against land attack missiles. Occurs year round, daytime only.		
Typical Components	Platforms: Aircraft carrier, amphibious warfare ships, surface combatants Targets: Air targets Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area W-237	
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise Weapons noise	Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Military expended materials	Energy: None
	Explosive: In-air explosions	Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Entanglement: Decelerators/parachutes
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Explosives Metals	Chemicals
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: Target and missile (explosive) fragments Non-Ingestible Material: Large parachutes	Military Recoverable Material	Undamaged targets
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		

Air Warfare	
Missile Exercise Surface-to-Air	
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	Assumes that all surface-to-air missiles are high explosive. All events occur greater than 50 NM from shore and missile explosions occur above 500 ft. altitude. All explosive and propellant are consumed.

A.1.2 ANTI-SUBMARINE WARFARE TRAINING

Anti-submarine warfare involves helicopter and maritime patrol aircraft, ships, and submarines. These units operate alone or in combination to locate, track, and neutralize submarines. Controlling the undersea battlespace is a unique naval capability and a vital aspect of sea control. Undersea battlespace dominance requires proficiency in anti-submarine warfare. Every deploying strike group and individual surface combatant must possess this capability.

Various types of active and passive sonar are used by the Navy to determine water depth, and identify, track, and target submarines. Passive sonar “listens” for sound waves by using underwater microphones, called hydrophones, which receive, amplify, and process underwater sounds. No sound is introduced into the water when using passive sonar. Passive sonar can indicate the presence, character, and movement of submarines. However, passive sonar provides only a bearing (direction) to a sound-emitting source; it does not provide an accurate range (distance) to the source. Active sonar is needed to locate objects because active sonar provides both bearing and range to the detected contact (such as an enemy submarine).

The Navy’s anti-submarine warfare training plan, including the use of active sonar in at-sea training scenarios, includes multiple levels of training. Individual-level anti-submarine warfare training addresses basic skills such as detection and classification of contacts; distinguishing discrete acoustic signatures including those of ships, submarines, and marine life; and identifying the characteristics, functions, and effects of controlled jamming and evasion devices.

This training integrates the full anti-submarine warfare continuum from detecting and tracking a submarine to attacking a target using either exercise torpedoes or simulated weapons. Training events include detection and tracking exercises against “enemy” submarine contacts, torpedo employment exercises against the target, and exercising command and control tasks in a multi-dimensional battlespace.

A.1.2.1 Anti-Submarine Warfare Torpedo Exercise – Submarine

Anti-Submarine Warfare			
Anti-Submarine Warfare Torpedo Exercise—Submarine			
Short Description	Submarine crews search for, track, and detect submarines. Event would include one non-explosive MK-48 torpedo.	Typical Duration	
		8 hours	
Long Description	Submarine crews search for, detect, and track a surface vessel or threat submarine to develop firing position to launch a torpedo. A single submerged submarine operates at slow speeds and various depths while using its hull-mounted or towed array sonar to track a surface vessel or threat submarine. Passive sonar is used almost exclusively. Explosive (only for Alternative 2) or non-explosive exercise torpedoes can be fired and active sonar can be used during this training event. This exercise may involve a single submarine, or be undertaken in the context of a coordinated larger exercise involving multiple aircraft, ships, and submarines. The preferred range for this exercise is an instrumented underwater range, but it may be conducted in other range complexes depending on training requirements and available assets. Occurs year round, day and night.		
Typical Components	Platforms: Fixed-wing aircraft, small boats, submarines Targets: Sub-surface targets Systems being Trained/Tested: Mid-frequency and high-frequency sonar, torpedoes		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Towed in-water device safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise	Physical Disturbance and Strike: Vessels and in-water devices Military expended materials	Energy: None
	Explosive: In-water explosions (Alternative 2 only)	Ingestion: None	Entanglement: Wires and cables
Stressors to Physical Resources	Air Quality: None	Sediments and Water Quality: Metals	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions
Military Expended Material	Ingestible Material: For Alternative 2 only: heavyweight torpedo (explosive) – fragments, target fragments Non-Ingestible Material: Guidance wires, heavyweight torpedo accessories	Military Recoverable Material	Anti-Submarine Warfare Training Targets, Exercise Torpedoes
Sonar and Other Transducer Bins	Mid-Frequency: MF3 High-Frequency: HF1	Torpedoes: TORP2	

Anti-Submarine Warfare	
Anti-Submarine Warfare Torpedo Exercise—Submarine	
In-Water Explosive Bins	E11 (Alternative 2 only)
Procedural Mitigation Measures	<div> <div> Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar Explosive Stressors: <i>(Section 5.3.3)</i> Explosive torpedoes (Alternative 2 only) </div> <div> Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Towed in-water devices </div> </div>
Assumptions Used for Analysis	<p>Exercise non-explosive practice torpedoes are recovered.</p> <p>Guidance wire has a low breaking strength and breaks easily. Weights and flex tubing sink rapidly.</p> <p>All explosive events would occur 50 NM or more from shoreline; non-explosive events would occur at least 12 NM from shore. All events occur in water depth of 600 ft. or greater.</p>

A.1.2.2 Anti-Submarine Warfare Tracking Exercise – Helicopter

Anti-Submarine Warfare			
Anti-Submarine Warfare Tracking Exercise - Helicopter			
Short Description	Helicopter crews search for, track, and detect submarines.	Typical Duration	
		2–4 hours	
Long Description	Helicopters using sonobuoys and dipping sonar search to detect, classify, localize, and track a simulated threat submarine with the goal of determining a firing solution that could be used to launch a torpedo and destroy the submarine. Sonobuoys (both passive and active) are typically employed by a helicopter operating at altitudes below 3,000 ft. Dipping sonar (both passive and active) is employed from an altitude of about 50 ft. after the search area has been narrowed based on the sonobuoy search. The anti-submarine warfare target used for this exercise may be a MK-39 Expendable Mobile Anti-submarine Warfare Training Target, a MK-30 target, or a live submarine. Unmanned aerial systems, such as the MQ-8 Fire Scout, may also be used. The preferred range for this exercise is an instrumented range, but it may be conducted in other range complexes depending on training requirements and available assets. Occurs year round, day and night.		
Typical Components	Platforms: Rotary-wing aircraft, small boats, unmanned aerial systems Targets: Sub-surface targets Systems being Trained/Tested: Dipping sonar systems, sonobuoys		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Unmanned aircraft system procedures Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise Explosive: None	Physical Disturbance and Strike: Aircraft and aerial target Vessels and in-water devices Military expended materials Ingestion: Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: Decelerators/parachutes Wires and cables
	Air Quality: Criteria air pollutants	Sediments and Water Quality: Chemicals Metals Other materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions
Military Expended Material	Ingestible Material: Small decelerators/parachutes Non-Ingestible Material: Sonobuoys, ASW Training Targets, sonobuoy wires	Military Recoverable Material	ASW Training Targets
Sonar and Other Transducer Bins	Mid-Frequency: MF4 MF5		

Anti-Submarine Warfare	
Anti-Submarine Warfare Tracking Exercise - Helicopter	
In-Water Explosive Bins	None
Procedural Mitigation Measures	<div> Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar </div> <div> Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement </div>
Assumptions Used for Analysis	Submarines may provide service as the target. All events are conducted in water greater than 600 ft. in depth and further than 12 NM from shore. For air quality analysis: <ul style="list-style-type: none"> - 1 rotary-wing aircraft per event - Average 2 hours per event

A.1.2.3 Anti-Submarine Warfare Tracking Exercise – Maritime Patrol Aircraft

Anti-Submarine Warfare			
Anti-Submarine Warfare Tracking Exercise—Maritime Patrol Aircraft			
Short Description	Maritime patrol aircraft crews search for, track, and detect submarines.		Typical Duration
			2–8 hours
Long Description	Fixed-wing maritime patrol aircraft employ sonobuoys to search for, detect, classify, localize, and track a simulated threat submarine with the goal of determining a firing solution that could be used to launch a torpedo and destroy the submarine. Sonobuoys are deployed in specific patterns based on the expected threat submarine and specific water conditions. Depending on these two factors, these patterns will cover many different size areas. For certain sonobuoys, tactical parameters of use may be classified. The anti-submarine warfare target used for this exercise may be a MK-39 Expendable Mobile Anti-Submarine Warfare (ASW) Training Target, a MK-30 target, or a live submarine. Occurs year round, day and night.		
Typical Components	Platforms: Fixed-wing aircraft Targets: Sub-surface targets, submarines Systems being Trained/Tested: Mid-frequency sonar		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise Explosive: None	Physical Disturbance and Strike: Aircraft and aerial target Vessels and in-water devices Military expended materials Ingestion: Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: Decelerators/parachutes Wires and cables
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Chemicals Metals Other materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions
Military Expended Material	Ingestible Material: Small decelerators/parachutes Non-Ingestible Material: Sonobuoys, ASW training targets, sonobuoy wires	Military Recoverable Material	ASW training targets, lightweight (non-explosive) torpedo
Sonar and Other Transducer Bins	Mid-Frequency: MF5	Anti-Submarine Warfare: ASW2 ASW5	Torpedoes: TORP1
In-Water Explosive Bins	None		

Anti-Submarine Warfare	
Anti-Submarine Warfare Tracking Exercise—Maritime Patrol Aircraft	
Procedural Mitigation Measures	Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar
Assumptions Used for Analysis	Submarine may provide service as the target. If target is air dropped, one parachute per target. Exercise non-explosive practice torpedoes are recovered. All events are conducted in water greater than 600 ft. in depth and further than 12 NM from shore. For air quality analysis: <ul style="list-style-type: none"> - 1 fixed-wing patrol aircraft per event - Average 6 hours per event

A.1.2.4 Anti-Submarine Warfare Tracking Exercise – Ship

Anti-Submarine Warfare			
Anti-Submarine Warfare Tracking Exercise—Ship			
Short Description	Surface ship crews search for, track, and detect submarines.	Typical Duration	
		2–4 hours	
Long Description	Surface ships search for, detect, and track threat submarines to determine a firing position to launch a torpedo and attack the submarine. A surface ship operates at slow speeds while employing sonobuoys, hull-mounted sonar, or towed array sonar. Passive or active sonar is employed depending on the type of threat submarine, the tactical situation, and environmental conditions. The target for this exercise is either a MK-39 Expendable Mobile Anti-Submarine Warfare Training Target or live submarine. This exercise may involve a single ship, or involve multiple aircraft, ships, and submarines. Occurs year round, day and night.		
Typical Components	Platforms: Surface combatants Targets: Sub-surface targets Systems being Trained/Tested: Mid-frequency sonar		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Towed in-water device safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise	Physical Disturbance and Strike: Vessels and in-water devices Military expended materials	Energy: In-air electromagnetic devices
	Explosive: None	Ingestion: None	Entanglement: Wires and cables
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions
Military Expended Material	Ingestible Material: None Non-Ingestible Material: ASW training targets, expendable bathythermograph	Military Recoverable Material	ASW training targets
Sonar and Other Transducer Bins	Mid-Frequency: MF1 MF11	Anti-Submarine Warfare: ASW3	
In-Water Explosive Bins	None		

Anti-Submarine Warfare	
Anti-Submarine Warfare Tracking Exercise—Ship	
Procedural Mitigation Measures	Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Towed in-water devices
Assumptions Used for Analysis	A submarine may provide service as the target. All events are conducted in water greater than 600 ft. in depth and further than 12 NM from shore.

A.1.2.5 Anti-Submarine Warfare Tracking Exercise – Submarine

Anti-Submarine Warfare			
Anti-Submarine Warfare Tracking Exercise—Submarine			
Short Description	Submarine crews search for, track, and detect submarines.	Typical Duration	
		8 hours	
Long Description	Submarine crews search for, detect, and track a threat submarine to develop firing position to launch a torpedo. A single submerged submarine operates at slow speeds and various depths while using its hull-mounted or towed array sonar to track a threat submarine. Passive sonar is used almost exclusively. The target for this exercise is either an MK 39 expendable mobile anti-submarine warfare training target, MK 30 recoverable training target, or live submarine. Occurs year round, day and night.		
Typical Components	Platforms: Submarines Targets: Sub-surface targets Systems being Trained/Tested: Mid-frequency and high-frequency sonar		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Towed in-water device safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise	Physical Disturbance and Strike: Vessels and in-water devices Military expended materials	Energy: None
	Explosive: None	Ingestion: None	Entanglement: None
Stressors to Physical Resources	Air Quality: None	Sediments and Water Quality: Metals	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions
Military Expended Material	Ingestible Material: None Non-Ingestible Material: ASW Training Targets	Military Recoverable Material	None
Sonar and Other Transducer Bins	Mid-Frequency: MF3	High-Frequency: HF1	
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar	Physical Disturbance and Strike: (Section 5.3.4) Towed in-water devices Vessel movement	
Assumptions Used for Analysis	All events are conducted in water greater than 600 ft. in depth and further than 12 NM from shore.		

A.1.3 ELECTRONIC WARFARE TRAINING

Electronic warfare is the mission area of naval warfare that aims to control use of the electromagnetic spectrum and to deny its use by an adversary. Typical electronic warfare activities include threat avoidance training, signals analysis for intelligence purposes, and use of airborne and surface electronic jamming devices to defeat tracking systems.

A.1.3.1 Electronic Warfare Training

Electronic Warfare			
Electronic Warfare Training			
Short Description	Aircraft and ship crews control portions of the electromagnetic spectrum used by enemy systems to degrade or deny the enemy’s ability to take defensive actions.	Typical Duration	
		1–2 hours	
Long Description	Aircraft and ship crews control the electromagnetic spectrum used by enemy systems to degrade or deny the enemy’s ability to take defensive actions. Electronic Warfare Operations can be active or passive, offensive or defensive. Fixed-wing aircraft employ active jamming and deception against enemy search radars to mask the friendly inbound strike aircraft mission. Surface ships detect and evaluate enemy electronic signals from enemy aircraft or missile radars; evaluate courses of action concerning the use of passive or active countermeasures; and then use ship maneuvers and either chaff, flares, active electronic countermeasures, or a combination of them to defeat the threat. Occurs year round, day and night.		
Typical Components	Platforms: Fixed-wing aircraft, surface combatants Targets: Air targets, electronic warfare targets Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety	Typical Locations	
		Offshore Area W-237 Olympic MOA	Inland Waters Inland Waters
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise	Physical Disturbance and Strike: Aircraft and aerial target Vessels and in-water devices	Energy: In-air electromagnetic devices
	Explosive: None	Ingestion: Military expended materials – other than munitions	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions

Electronic Warfare			
Electronic Warfare Training			
Military Expended Material	Ingestible Material: Chaff (Offshore Area only) – air fibers, compression pad or plastic piston, endcap – chaff Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement		
Assumptions Used for Analysis	For air quality analysis: <ul style="list-style-type: none"> - 1 contract air services aircraft - 1 fixed-wing electronic warfare aircraft - 1 fixed-wing strike aircraft - Average 2 hours per event 		

A.1.4 MINE WARFARE TRAINING

Mine warfare is the naval warfare area involving the detection, avoidance, and neutralization of mines to protect Navy ships and submarines, and offensive mine laying in naval operations. A naval mine is a self-contained explosive device placed in water to destroy ships or submarines. Naval mines are deposited and left in place until they are triggered by the approach of an enemy ship, or are destroyed or removed. Naval mines can be laid by purpose-built minelayers, other ships, submarines, or airplanes. Mine warfare training includes mine countermeasures exercises and mine laying exercises.

A.1.4.1 Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises

Mine Warfare			
Civilian Port Defense—Homeland Security Anti-Terrorism/Force Protection Exercises			
Short Description	Maritime security personnel train to protect civilian ports and harbors against enemy efforts to interfere with access to those ports.	Typical Duration	
		Multiple days	
Long Description	Naval forces conduct mine warfare training in conjunction with Department of Homeland Security units. The three pillars of mine warfare, airborne (helicopter), surface (surface ships), and undersea (divers, marine mammals, and unmanned vehicles) mine countermeasures will be brought to bear in order to ensure strategic U.S. ports remain free of mine threats. Various mine warfare sensors, which utilize active acoustics, will be employed in the detection, classification, and neutralization of mines. Along with traditional mine warfare techniques, such as helicopter towed mine countermeasures, new technologies (unmanned vehicles) will be utilized. Marine mammal systems may be used during this exercise. Event locations and scenarios will vary according to Department of Homeland Security and Department of Defense strategic goals and evolving world events. Occurs year round, day and night.		
Typical Components	Platforms: Moored platform, rotary-wing aircraft, support craft, surface combatants, unmanned underwater vehicles Targets: Sub-surface targets (mine shapes) Systems being Trained/Tested: Mine detection systems, towed mine neutralization systems, airborne mine neutralization system		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Unmanned surface vehicle and unmanned underwater vehicle procedures Towed in-water device procedures	Typical Locations	
		Inland Waters Naval Magazine Indian Island NS Everett Naval Base Kitsap (NBK) Bangor NBK Bremerton Manchester Fuel Pier Port Angeles Port of Seattle	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise	Physical Disturbance and Strike: Aircraft and aerial target Vessels and in-water devices Seafloor devices	Energy: In-water electromagnetic devices In-air electromagnetic devices
	Explosive: None	Ingestion: None	Entanglement: None

Mine Warfare			
Civilian Port Defense—Homeland Security Anti-Terrorism/Force Protection Exercises			
Stressors to Physical Resources	Air Quality: Criteria air pollutants		Sediments and Water Quality:
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy In-air energy Physical interactions
Military Expended Material	Ingestible Material: None	Military Recoverable Material	Mine shapes
	Non-Ingestible Material: None		
Sonar and Other Transducer Bins	High-Frequency: HF4	Synthetic Aperture Sonars: SAS2	
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar	Physical Disturbance and Strike: (Section 5.3.4) Vessel movement Towed in-water devices	
Assumptions Used for Analysis	Non-permanent mine shapes will be laid in various places on the bottom and will be retrieved Shapes are varied, from about 1 m circular to about 2.5 m long by 1 m wide. They will be recovered using normal assets, with diver involvement. While goal is to conduct once per year, alternating East/West Coast, assume that a West Coast event will occur every other year with a total of three per 5-year period. For air quality analysis: - 1 rotary-wing aircraft (12 hours) - 1 Mine Countermeasures-class ship (24 hours) - 1 Rigid Hull Inflatable Boat (24 hours)		

A.1.4.2 Mine Neutralization – Explosive Ordnance Disposal Training

Mine Warfare			
Mine Neutralization – Explosive Ordnance Disposal Training			
Short Description	Personnel disable threat mines using explosive charges.	Typical Duration	
		Up to 4 hours	
Long Description	Navy divers, typically explosive ordnance disposal personnel, disable threat mines with explosive charges to create a safe channel for friendly vessels to transit. Personnel detect, identify, evaluate, and neutralize non-explosive practice mines in the water with an explosive device and may involve detonation of one or more explosive charges per training event. At each of the two training locations, up to three events per year may occur using < 0.1-pound (E0) explosive charges (Limpet Mine Neutralization Tool), and three events per year with up to 2.5-pound (E3) charges. For each event using 0.1-pound charges, a total of up to six charges may be used. For events using charges of 2.5 pounds or less, one charge will be used. Events may also include recovery of the neutralized non-explosive mine to the surface and towing it to shore by small boat. These training events are normally conducted during daylight hours for safety reasons. Occurs year round, daytime only.		
Typical Components	Platforms: Small boat Targets: Sub-surface targets (mine shapes) Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Underwater detonation safety	Typical Locations	
		Inland Waters Crescent Harbor EOD training Range Hood Canal EOD Training Range	
Stressors to Biological Resources	Acoustic: Vessel Noise	Physical Disturbance and Strike: Vessels and in-water devices Military expended materials Seafloor devices	Energy: None
	Explosive: In-water explosions	Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Explosives Chemicals Metals Other materials	
Stressors to Human Resources	Cultural Resources: Explosives Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions
Military Expended Material	Ingestible Material: Target fragments, small-caliber projectile casings Non-Ingestible Material: Mine-shape (explosive) fragments	Military Recoverable Material	Training targets (mine shapes)

Mine Warfare		
Mine Neutralization – Explosive Ordnance Disposal Training		
Sonar and Other Transducer Bins	None	
In-Water Explosive Bins	Up to E3	
Procedural Mitigation Measures	Explosive Stressors: (Section 5.3.3) Explosive mine neutralization activities involving Navy divers	Physical Disturbance and Strike: (Section 5.3.4) Vessel movement
Assumptions Used for Analysis	Mine shapes will be recovered. For air quality analysis: - 3 small boats - Average 2 hours per event	

A.1.5 SURFACE WARFARE TRAINING

Surface warfare is a type of naval warfare in which aircraft and surface ships employ weapons and sensors in operations directed against enemy surface ships or small boats. Aircraft-to-surface Surface Warfare is conducted by using precision guided munitions. Surface warfare also is conducted by warships employing naval guns. Training in surface warfare includes surface-to-surface gunnery, air-to-surface gunnery, and bombing exercises. Gunnery and missile training may involve expenditure of ordnance against a towed target.

A.1.5.1 Bombing Exercise Air-to-Surface

Surface Warfare			
Bombing Exercise Air-to-Surface			
Short Description	Fixed-wing aircrews deliver bombs against surface targets.	Typical Duration	
		1 hour	
Long Description	Fixed-wing aircraft conduct bombing exercises against stationary floating targets (e.g., MK-58 smoke buoy), towed targets, or maneuvering targets. An aircraft clears the area, deploys a smoke buoy, and then delivers high-explosive or non-explosive practice munitions bombs on the target. A range boat may be used to deploy towed or maneuvering targets for an aircraft to attack. Exercises for strike fighters typically involve a flight of two aircraft delivering unguided or guided munitions that may be either high-explosive or non-explosive. The following munitions may be employed by strike fighter aircraft in the course of bombing exercise: Unguided munitions include non-explosive subscale bombs (MK-76 and BDU-45), explosive and non-explosive general purpose bombs (MK-80 series), MK-20 cluster bomb (explosive, non-explosive). Precision-guided munitions include laser-guided bombs (explosive, non-explosive), laser-guided training rounds (non-explosive), Joint Direct Attack Munition (explosive, non-explosive). Occurs year round, daytime only.		
Typical Components	Platforms: Fixed-wing aircraft, support craft Targets: Surface targets Systems being Trained/Tested: Aircraft platforms, bombs, non-explosive practice munitions		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Laser procedures Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area W-237 (Excluding Olympic MOA and Olympic Coast National Marine Sanctuary)	
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise	Physical Disturbance and Strike: Aircraft and aerial target Vessels and in-water devices Military expended materials	Energy: In-air electromagnetic devices
	Explosive: In-water explosions	Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Entanglement: Decelerators/parachutes
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Explosives Metals	

Surface Warfare			
Bombing Exercise Air-to-Surface			
Stressors to Human Resources	Cultural Resources: Explosives Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions
	Military Expended Material Ingestible Material: Small decelerators/parachutes, target fragments, bomb fragments Non-Ingestible Material: Mark 58 marine marker, bomb (non-explosive)	Military Recoverable Material	Recoverable surface targets
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	E10		
Procedural Mitigation Measures	Explosive Stressors: <i>(Section 5.3.3)</i> Explosive bombs	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Non-explosive bombs and mine shapes	
Assumptions Used for Analysis	Approximately 90 percent of non-explosive bombs are the sub-scale bombs such as the MK-76 and BDU-48. 110 NEPM and 10 HE bombs annually. All explosive bombing events occur greater than 50 NM from shore. Non-explosive bombing events occur greater than 20 NM from shore. Air-to-surface bombing is not authorized in the Olympic Coast National Marine Sanctuary. For air quality analysis: - 2 fixed-wing strike aircraft (1 hour)		

A.1.5.2 Gunnery Exercise Surface-to-Surface – Ship

Surface Warfare			
Gunnery Exercise Surface-to-Surface – Ship			
Short Description	Surface ship crews fire large-, medium-, and small-caliber guns at surface targets.	Typical Duration	
		Up to 3 hours	
Long Description	This exercise involves ships’ gun crews engaging surface targets at sea with their main battery large-caliber (typically 57 millimeter [mm], 76 mm, and 5-inch), medium-caliber (20 mm, 25 mm, and 40 mm), and small-caliber (.50-caliber and smaller) guns. Targets include the QST-35 seaborne powered target, high speed maneuverable surface target, or a specially configured remote controlled water craft. Some targets are expended during the exercise and are not recovered. The target may be a 10-foot diameter red balloon (Killer Tomato), a 50-gallon steel drum, or other available target, such as a cardboard box. Some targets are expended during the exercise and are not recovered. Large-caliber guns will also be fired during weapon certification events and in conjunction with weapon maintenance. During all events, either high-explosive or non-explosive rounds may be used. High-explosive rounds can either be fused for detonation on impact (with water surface or target), or for proximity to the target (in air detonation). Shipboard protection systems utilizing small-caliber projectiles will train against high-speed mobile targets. Occurs year round, daytime only.		
Typical Components	Platforms: Surface combatants Targets: Recoverable or expendable floating target (stationary or towed), remote controlled high speed targets Systems being Trained/Tested: Large-, medium-, and small-caliber gun systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Vessel noise Weapons noise	Physical Disturbance and Strike: Vessels and in-water devices Military expended materials	Energy: In-air electromagnetic devices
	Explosive: In-water explosions In-air explosions	Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Explosives Metals	
Stressors to Human Resources	Cultural Resources: Explosives Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions

Surface Warfare			
Gunnery Exercise Surface-to-Surface – Ship			
Military Expended Material	Ingestible Material: Target fragments, projectile fragments, small- and medium-caliber casings, small- and medium-caliber (non-explosive) projectiles Non-Ingestible Material: Large-caliber projectiles (non-explosive), large-caliber casings, marine marker, canister	Military Recoverable Material	Recoverable surface targets
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	E1 E2 E5		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Weapons firing noise Physical Disturbance and Strike: (Section 5.3.4) Vessel movement Small-, medium-, and large-caliber non-explosive practice munitions		
	Explosive Stressors: (Section 5.3.3) Explosive medium-caliber and large-caliber projectiles		
Assumptions Used for Analysis	Small- and medium-caliber NEPM activity always occurs 12 NM or more from the shoreline. Large-caliber NEPM activity always occurs 20 NM or more from shoreline. Medium- and large-caliber explosive munitions activity always occur 50 NM or more from shore. For analytical purposes assume all high explosive rounds are fused to detonate upon impact with water surface or target. After impacting the water, the high explosive rounds are expected to detonate within three feet of the surface. Non-explosive rounds and fragments from the high explosive rounds will sink to the bottom of the ocean.		

A.1.5.3 Missile Exercise Air-to-Surface

Surface Warfare			
Missile Exercise Air-to-Surface			
Short Description	Fixed-wing aircrews simulate firing precision-guided missiles, using captive air training missiles (CATMs) against surface targets. Some activities include firing a missile with a high-explosive (HE) warhead.		Typical Duration
			2 hours
Long Description	Fighter, Electronic Attack, maritime patrol aircraft aircrews fire precision-guided missiles against surface targets. Aircraft involved may be unmanned. Fixed-wing aircraft (fighters, Electronic Attack, or maritime patrol aircraft) approach an at-sea surface target from high altitude and launch high-explosive precision guided missiles. Occurs year round, daytime only.		
Typical Components	Platforms: Fixed-wing aircraft, surface combatants Targets: Recoverable floating target (stationary or towed), remotely operated target Systems being Trained/Tested: Air-to-surface missile systems		
Standard Operating Procedures (Section 2.3.3)	Aircraft safety Laser procedures Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area W-237	
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise Weapons noise Explosive: In-water explosions	Physical Disturbance and Strike: Aircraft and aerial target strike Military expended materials Vessel and in-water devices Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria Air Pollutants Hazardous Air Pollutants	Sediment and Water Quality: Explosives Chemicals Metals	
Stressors to Human Resources	Cultural Resources: Acoustics Explosives Physical disturbance	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy In-air energy Physical interactions
Military Expended Material	Ingestible Material: Missile fragments, target fragments Non-Ingestible Material: Missiles (non-explosive)	Military Recoverable Material	Recoverable surface targets
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	E10		

Surface Warfare	
Missile Exercise Air-to-Surface	
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Non-Explosive Missiles Explosive Stressors: <i>(Section 5.3.3)</i> Explosive Missiles
Assumptions Used for Analysis	Assume one target per event. Most missiles are non-firing. Some missiles are live missiles with HE warhead (2 HE missiles per year). All events occur greater than 50 NM from shore.

A.1.6 OTHER TRAINING

A.1.6.1 Intelligence, Surveillance, Reconnaissance

Other Training			
Intelligence, Surveillance, Reconnaissance			
Short Description	Aircraft, unmanned aerial systems, ships, and submarines use all available sensors to collect data on threat vessels.	Typical Duration	
		2–8 hours	
Long Description	Aircraft, unmanned aerial systems operators, ships, and submarines use all available sensors to collect data on threat vessels. Passive sonobuoys are used to collect and analyze acoustic data, and photographic equipment is used to document the vessel with visual information. Occurs year round, daytime only.		
Typical Components	Platforms: Aircraft, unmanned aerial system, ships, submarines Targets: None Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Aircraft safety Unmanned aircraft system procedures Vessel safety	Typical Locations	
		Offshore Area Offshore Area	Inland Waters Restricted Area 6701 NAVY 7 OPAREA
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise Explosive: None	Physical Disturbance and Strike: Aircraft and aerial target Military expended materials Vessel and in-water devices Ingestion: Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: Wires and cables
	Air Quality: Criteria air pollutants	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: None	Public Health and Safety: None
Military Expended Material	Ingestible Material: Small decelerators/parachutes Non-Ingestible Material: Sonobuoys, sonobuoy wires	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	None		

Other Training	
Intelligence, Surveillance, Reconnaissance	
Assumptions Used for Analysis	ISR training is conducted by Maritime Patrol Aircraft and unmanned aerial systems in W-237 and the Pacific Northwest Operating Area. Activities typically last 6 hours. P-8A aircrews use a variety of intelligence gathering and surveillance methods, including visual, infrared, electronic, radar, and acoustic. EP-3 and EA-18G crews conduct ISR training as well, but to a lesser extent than P-8A crews.

A.1.6.2 Maritime Security Operations

Other Training			
Maritime Security Operations			
Short Description	Aircraft, surface ship, and small boat crews conduct a suite of maritime security operations events, including maritime security escorts for Navy vessels such as submarines and aircraft carriers; Visit, Board, Search, and Seizure; Maritime Interdiction Operations; Force Protection; and Anti-Piracy Operations.		Typical Duration
			TPP, averaging 10 hours, up to approximately 12–18 hours; 2 hours for other MSO activities
Long Description	<p>Maritime security operations in the NWTT study area are predominantly maritime security escort events, including the Transit Protection Program (TPP) and training of other escort units. The TPP includes up to 9 security vessels that protect SSBNs while moving within Puget Sound and the Strait of Juan de Fuca. U.S. Coast Guard (USCG) personnel and their ancillary equipment and weapons systems are involved in these events. Generally, the escorts establish a moving 1000-yard perimeter (security zone) around the vessel to prevent non-participants from entering that security zone. Non-participant vessels might be ordered to move. Every 2 years, a training event occurs which involves up to 16 vessels, transiting from Hood Canal to Admiralty Inlet. During this biennial event, boat crews train to engage surface targets by firing small-caliber (blank) weapons.</p> <p>Similar maritime security escort training occurs with Coastal Riverine Group (CRG) boats that conduct force protection for designated vessels and movements. These CRG boat crews train to protect ships while entering and leaving ports. Other missions include ensuring compliance with vessel security zones for ships in port and at anchor, conducting patrols to counter waterborne threats, and conducting harbor approach defense.</p> <p>The vessels used by TPP and CRG include small unit riverine craft, combat rubber raiding craft, rigid-hull inflatable boats, patrol craft, reaction vessels, blocking vessels, and many other versions of these types of boats. These boats use inboard or outboard, diesel or gasoline engines with either propeller or water jet propulsion. Boat crews may use high or low speeds to approach and engage targets simulating other boats, swimmers, floating mines, or nearshore land targets with small-caliber (blank) weapons. Occurs year round, daytime only.</p>		
Typical Components	Platforms: Small boats, reaction vessels, blocking vessels, aircraft, and patrol boats Targets: High-performance small boats, recoverable or expendable floating target Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Inland Waters NBK Bremerton Hood Canal Dabob Bay TPS Route (169) NS Everett Puget Sound Strait of Juan de Fuca	
Stressors to Biological Resources	Acoustic: Vessel noise Weapons noise Aircraft noise	Physical Disturbance and Strike: Aircraft and aerial target Vessels and in-water devices Military expended materials	Energy: In-air electromagnetic devices
	Explosive: None		Entanglement: None

Other Training			
Maritime Security Operations			
	Ingestion: Military expended materials – munitions		
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Metals	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: Shell casings Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement		
Assumptions Used for Analysis	<p>Maritime security training events conducted in inland waters do not involve live fire of weapons. All maritime security events involve vessel movement, sometimes at speeds necessary to overtake suspect vessel or small boats (targets). Maritime security training events, particularly maritime security escorts, are conducted proximate to Naval Bases (NAVBASEs) Kitsap Bangor, Bremerton, and Everett, and within the Hood Canal, Dabob Bay, Puget Sound, and Strait of Juan de Fuca.</p> <p>Maritime Security Escort (SSBN Transit Protection): The Transit Protection Program (TPP) utilizes a mixture of 16 security vessels, up to 9 of which can be utilized at any time for escorting SSBNs transiting between the SSBN homeport of NAVBASE Bangor and the dive/surface point in the Strait of Juan de Fuca or Dabob Bay. TPP vessels include 16 escort security boats home ported at NAVBASE Kitsap Bangor, consisting of 2 Blocking Vessels (250 ft.), 2 Reaction Vessels (87 ft.), and 12 Screening Vessels (small boats and patrol boats – 16–85 ft.).</p> <p>Depending on the type of vessel escort being conducted and other conditions, the security zone could be from a 100-yard to a 1,000-yard radius around the escorted vessel. Recreational and commercial vessels might be ordered to move.</p> <p>To the extent practicable, all use of blank ammunition would be near the center of the waterway and no closer than 500 yards to the shoreline.</p> <p>All shell casings associated with use of blank ammunition shall be captured, to the greatest extent feasible, using either cofferdams around guns, capture bins, or capture on the deck of vessels. Radio broadcasts to mariners will be conducted during exercises to ensure the public is aware and clear of the area.</p>		

Other Training	
Maritime Security Operations	
	<p>Maritime Security Escort (Coastal Riverine Group): Naval Coastal Riverine Units train to provide escort and force protection security to naval vessels. These training events will be conducted within inland waterways in and around Naval Homeports such as Naval Base Kitsap Bangor, Naval Base Kitsap Bremerton, and Naval Station Everett, and within the Hood Canal, Dabob Bay, Puget Sound, and Strait of Juan de Fuca WA.</p> <p>These training events would occur approximately 51 times per year, approximately 60–70 percent originating proximate to Bangor, 20–30 percent proximate to Bremerton, and the remainder (less than 10 percent) proximate to Everett. The average total transit distance associated with maritime security escort training events (Other) can vary between 50 and 180 NM.</p> <p>Maritime Security Escort (Other) is supported with 6 total vessels (i.e., 34' Sea Ark Patrol Craft and 85' Mk VI Riverine Craft), of which 2–4 vessels would be used for a single escort mission. Naval Coastal Riverine Forces would also conduct certification maritime security escort training events once every 6–9 months. These certification events would include 8–10 days underway, operating in common escort areas (with 1–2 days of no-fire events/7 days of blank fire events in the vicinity of Whidbey Island). The typical training day would consist of two shifts, approximately 5 hours each. Nighttime training is not anticipated. Certification training would utilize up to 5 boats (3 as escorts, 1 simulating a Navy vessel to be protected, and 1 simulating Opposition Force [OPFOR]).</p> <p>Expended Brass: Efforts will be made by crews to collect all expended brass (shell casings) captured on the deck; however, brass ejection may result in loss over the side. Use of Pyrotechnics limited to flash, flare, and sound devices, may be utilized. Noise Levels: Loud hailers will be used for hailing contacts if no radio communication can be established. Use of sirens in support of mission or training will be minimized and period of use limited to late-morning through early evening.</p> <p>Water Depth: Patrol boats will not typically be operating in shoal water. Unless in an emergency and during launch and recovery, patrol boats will only operate in waters in which the charted depth is greater than 6 ft. Speed: Patrol boats are not expected to exceed 15 knots unless involved in a drill that requires them to quickly move from one zone to another to provide force protection.</p> <p>For air quality analysis:</p> <ul style="list-style-type: none"> - 1 fixed-wing strike aircraft - 1 rotary-wing aircraft - 3–9 small boats - Average 2 hours per event

A.1.6.3 Personnel Insertion/Extraction – Non-Submersible

Other Training			
Personnel Insertion/Extraction Training—Non-Submersible			
Short Description	Military personnel train for insertion and extraction into target areas using rotary wing aircraft, fixed-wing aircraft (insertion only), or small boats.		Typical Duration
			Up to 12 hours
Long Description	Personnel train to approach or depart an objective area using various transportation methods and tactics. These operations train forces to insert and extract personnel and equipment day or night. Tactics and techniques employed include insertion from aircraft by parachute, by rope, or from low, slow-flying helicopters from which personnel jump into the water. Parachute training is required to be conducted on surveyed drop zones to enhance safety. Insertion and extraction methods also employ small inflatable boats. Activity may include Navy personnel learning advanced self-contained underwater breathing apparatus (SCUBA) diving, to include tactics, techniques, and procedures and emergency procedures. Small boats are used for safety. Occurs year round, day and night.		
Typical Components	Platforms: Small boats, rotary-wing aircraft, fixed-wing aircraft Targets: None Systems being Trained/Tested: None		
Standard Operating Procedures <i>(Section 2.3.3)</i>	Vessel safety Aircraft safety	Typical Locations	
		Inland Waters Crescent Harbor EOD Range NAVY 7 OPAREA	
Stressors to Biological Resources	Acoustic: Vessel noise Aircraft noise	Physical Disturbance and Strike: Vessels and in-water devices Aircraft and aerial target	Energy: None
	Explosive: None	Ingestion: None	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: None	Public Health and Safety: None
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		

Other Training	
Personnel Insertion/Extraction Training—Non-Submersible	
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	For air quality analysis: - 1 small boat - Average 8 hours per event

A.1.6.4 Precision Anchoring

Other Training			
Precision Anchoring			
Short Description	Surface ship crews release and retrieve anchors in designated locations.		Typical Duration
			Up to 1 hour
Long Description	Ship crews choose the best available anchoring sites. The ship uses all means available to determine its position when anchor is dropped to demonstrate calculating and plotting the anchor's position within 100 yards of center of planned anchorage. Occurs year round, day and night.		
Typical Components	Platforms: Navy ships Targets: None Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety	Typical Locations	
		Inland Waters Naval Magazine Indian Island Naval Station Everett NAVY 3 OPAREA Eastern Banks Area	
Stressors to Biological Resources	Acoustic: Vessel noise Explosive: None	Physical Disturbance and Strike: Vessels and in-water devices Seafloor devices Ingestion: None	Energy: In-air electromagnetic devices Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: (Section 5.3.4) Vessel movement		
Assumptions Used for Analysis	None		

A.1.6.5 Search and Rescue

Other Training			
Search and Rescue			
Short Description	Helicopter crews train to rescue military personnel at sea.	Typical Duration	
		2–3 hours	
Long Description	Helicopter crews rescue military personnel at sea. Helicopters fly below 3,000 ft. and locate personnel to be rescued. Flares are expended during training. Occurs year round, day and night.		
Typical Components	Platforms: Rotary-wing aircraft, small boats Targets: None Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety	Typical Locations	
		Inland Waters Crescent Harbor EOD Range Restricted Area 6701	
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise	Physical Disturbance and Strike: Aircraft and aerial target Vessels and in-water devices	Energy: In-air electromagnetic devices
	Explosive: None	Ingestion: None	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: Flares Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: (Section 5.3.4) Vessel movement		
Assumptions Used for Analysis	This activity involves a helicopter landing and simulated extraction of a survivor (typically one of the helicopter crewmembers). The search and rescue helicopter, an H-60, approaches the survivor, hovers, recovers the survivor, and then departs the area with the survivor onboard.		

A.1.6.6 Small Boat Attack Exercise

Other Training			
Small Boat Attack Exercise			
Short Description	Small boat crews engage pierside surface targets with small-caliber weapons. Only blank rounds are fired.	Typical Duration	
		4 hours over 3 days	
Long Description	A single activity consists of multiple days of training. For analysis in this Supplemental, a 3-day scenario is assumed. On the first day, blanks will be fired from a small-caliber machine gun, mounted on a high-speed boat used by Navy security forces. The second day will consist of test firing multiple crew-serve and hand-held small-caliber weapons, all with blank ammunition. Some rounds will be fired from both the high-speed boat and from a Navy surface ship moored at a Navy pier. The third day will be the full training exercise. This consists of a high-speed attack vessel running directly at the Navy pier where the simulated target surface ship is moored. Duration of firing will be approximately 2 hours with a total of 1,000 rounds fired the first day, and a duration of 1.5 hours with a total of 1,000 rounds fired the second day. The final day will have a duration of approximately 30 minutes, with 1,000 rounds fired. Typical firing patterns are 3–30 round bursts, assess target, and then fire again. Multiple crew members will be given a chance to fire the weapons. Occurs year round, daytime only.		
Typical Components	Platforms: Small boats or watercraft Targets: High-performance small boats Systems being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Weapons firing procedures	Typical Locations	
		Inland Waters Naval Station Everett NBK Bangor NBK Bremerton	
Stressors to Biological Resources	Acoustic: Vessel noise Weapons noise	Physical Disturbance and Strike: Vessels and in-water devices Military expended materials	Energy: None
	Explosive: None	Ingestion: Military expended materials – munitions	Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: Metals	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: Small-caliber casings Non-Ingestible Material: None	Military Recoverable Material	None

Other Training	
Small Boat Attack Exercise	
Sonar and Other Transducer Bins	None
In-Water Explosive Bins	None
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	At locations where a security barrier is present, and sea lions may be hauled out on the barrier, the security barrier will be pulled fully open to remove haul out opportunities. During Day 1 training, all firing will occur at least 250 ft. away from the security barrier.

A.1.6.7 Submarine Sonar Maintenance

Other Training			
Submarine Sonar Maintenance			
Short Description	Maintenance of submarine sonar and other system checks are conducted pierside or at sea.	Typical Duration	
		Up to 1 hour	
Long Description	A submarine performs periodic maintenance on the AN/BQQ-10 (low-, mid-, and high-frequency) sonar system while in port or at sea. Submarines conduct maintenance to their sonar systems in shallow water near their homeport; however, sonar maintenance could occur at sea as the system’s performance may warrant. Occurs year round, day and night.		
Typical Components	Platforms: Submarines Targets: None Systems being Trained/Tested: Low-, mid-, and high-frequency hull mounted sonar		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Pierside testing safety	Typical Locations	
		Offshore Area Offshore Area	Inland Waters NBK Bremerton NBK Bangor
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise	Physical Disturbance and Strike: Vessels and in-water devices	Energy: None
	Explosive: None	Ingestion: None	Entanglement: None
Stressors to Physical Resources	Air Quality: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: None	Public Health and Safety: In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	Low-Frequency: LF5 Mid-Frequency: MF3	High-Frequency: HF1	
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike: (Section 5.3.4) Vessel movement
Assumptions Used for Analysis	For biological resources analysis, vessel noise and vessel strike are only analyzed for the periods while the submarines are surfaced, typically brief in nature. Mitigation measures related to vessel movement are also only considered during the period of surfacing. For human resources stressor analysis, physical disturbance and strike and physical interactions are only analyzed for the periods while the submarines are surfaced, typically brief in nature.		

A.1.6.8 Surface Ship Sonar Maintenance

Other Training			
Surface Ship Sonar Maintenance			
Short Description	Maintenance of surface ship sonar and other system checks are conducted pierside or at sea.	Typical Duration	
		Up to 4 hours	
Long Description	This scenario consists of surface ships performing periodic maintenance to the AN/SQS-53 sonar and other ship systems while in port or at sea. This maintenance takes up to 4 hours. Surface ships operate active sonar systems for maintenance while in shallow water near their homeport; however, sonar maintenance could occur anywhere as the system’s performance may warrant. Occurs year round, day and night.		
Typical Components	Platforms: Surface combatants Targets: None Systems being Trained/Tested: Mid-frequency hull mounted sonar		
Standard Operating Procedures (Section 2.3.3)	Vessel safety	Typical Locations	
		Offshore Area Offshore Area	Inland Waters Naval Station Everett NBK Bremerton
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosive: None	Physical Disturbance and Strike: Vessels and in-water devices Ingestion: None	Energy: In-air electromagnetic devices Entanglement: None
	Stressors to Physical Resources	Air Quality: Criteria air pollutants	Sediments and Water Quality: None
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: None	Public Health and Safety: In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	Mid-Frequency: MF1		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike: (Section 5.3.4) Vessel movement
Assumptions Used for Analysis	None		

A.1.6.9 Unmanned Underwater Vehicle Training

Other Training			
Unmanned Underwater Vehicle Training			
Short Description	Unmanned underwater vehicle certification involves training with unmanned platforms to ensure submarine crew proficiency. Tactical development involves training with various payloads for multiple purposes to ensure that the systems can be employed effectively in an operational environment.		Typical Duration
			Up to 24 hours
Long Description	Unmanned underwater vehicle certification and tactical development involves training with unmanned platforms on which various payloads are attached and used for different purposes. Payload certification and development training assesses various systems that can be incorporated onto unmanned platforms for mine warfare, bottom mapping, and other missions. Training can range from basic remote control and autonomous navigation tests to deployment and activation of onboard systems that may include hydrodynamic instruments, launchers, and recovery capabilities. These vehicles are capable of expanding the communication and surveillance capabilities of submarines, and terrestrial commands. Occurs year round, day and night.		
Typical Components	Platforms: Support craft, unmanned underwater vehicle Targets: None Systems being Trained/Tested: Acoustic modem, high-frequency sonar, synthetic aperture sonar		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Unmanned surface vehicle and unmanned underwater vehicle procedures	Typical Locations	
		Offshore Area Quinault Range Site W-237A	Inland Waters Crescent Harbor EOD Range, Dabob Bay Range Complex, NBK Bangor, NBK Bremerton, Keyport Range Site, Manchester Fuel Pier, NAVY 3 OPAREA, NAVY 7 OPAREA
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosive: None	Physical Disturbance and Strike: Vessels and in-water devices Military expended materials Ingestion: None	Energy: None Entanglement: None
	Stressors to Physical Resources	Air Quality: None Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: None	Public Health and Safety: None
Military Expended Material	Ingestible Material: None Non-Ingestible Material: Anchor blocks	Military Recoverable Material	None

Other Training	
Unmanned Underwater Vehicle Training	
Sonar and Other Transducer Bins	<div>Forward-Looking Sonar: FLS2</div> <div>Acoustic Modems: M3</div>
In-Water Explosive Bins	None
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	Potential specific locations for this activity include Northwest Training Range Complex Dabob Bay, Hood Canal Sinclair Inlet, NBK Bangor, NBK Keyport, Manchester Fuel Pier. For air quality analysis: <ul style="list-style-type: none"> - 1 support craft - Average 8 hours per event

A.2 NAVAL SEA SYSTEMS COMMAND TESTING ACTIVITIES

A.2.1 ANTI-SUBMARINE WARFARE

A.2.1.1 Anti-Submarine Warfare Testing

Anti-Submarine Warfare			
Anti-Submarine Warfare Testing			
Short Description	Ships and their supporting platforms (rotary-wing aircraft and unmanned aerial systems) detect, localize, and prosecute submarines.		Typical Duration 1–2 weeks, with 4–8 hours of active sonar use with intervals of non-activity in between.
Long Description	Ships conduct detect-to-engage operations against modern diesel-electric and nuclear submarines using airborne and surface assets (both manned and unmanned). Active and passive acoustic systems are used to detect and track submarine targets, culminating in the deployment of lightweight torpedoes to engage the threat. Occurs year round, daytime only.		
Typical Components	Platforms: Rotary-wing aircraft, submarine, surface combatant Targets: Sub-surface targets System being Trained/Tested: Acoustic countermeasures, navigation sonar, sonar systems, sonobuoys, torpedo systems, underwater communications		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Towed in-water device safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area Quinault Range Site	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Military expended material Vessels and in-water devices Ingestion: Military expended materials – other than munitions	Energy: None Entanglement: Decelerators/parachutes Wires and cables
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended material	Sediments and Water Quality: Chemicals Metals Other materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy In-water energy	
Military Expended Material	Ingestible Material: Small decelerator/parachute Non-Ingestible Material: Acoustic countermeasures, lightweight torpedo accessories, mobile subsurface target, sonobuoy (non-explosive), sonobuoy wires	Military Recoverable Material	Lightweight (non-explosive) torpedo, mobile subsurface target

Anti-Submarine Warfare					
Anti-Submarine Warfare Testing					
Sonar and Other Transducer Bins	Mid-Frequency:		Anti-Submarine Warfare:		Torpedoes:
	MF1K	MF4	ASW1	ASW2	TORP1
	MF10	MF11	ASW3	ASW5	
	MF 5				
	MF12				
In-Water Explosive Bins	None				
Procedural Mitigation Measures	Acoustic Stressors: <i>(Section 5.3.2)</i>		Physical Disturbance and Strike: <i>(Section 5.3.4)</i>		
	Active sonar		Vessel movement Towed in-water devices		
Assumptions Used for Analysis	All sonobuoys have parachutes unless otherwise noted.				

A.2.1.2 At-Sea Sonar Testing

Anti-Submarine Warfare					
At-Sea Sonar Testing					
Short Description	At-sea testing to ensure systems are fully functional in an open ocean environment.			Typical Duration	
				From 4 hours to 11 days	
Long Description	At-sea sonar testing is required to calibrate or document the functionality of sonar systems while the ship or submarine is in an ocean environment. At-sea sonar testing is conducted to verify the vessel meets design acoustic specifications, define the underwater characteristics of the vessel, determine effects of systems and equipment on ship’s acoustic characteristics, and provide technical background necessary to initiate development of design improvements to reduce noise. Tests also consist of electronic support measurement, photonics, and sonar sensor accuracy testing. In some instances, a submarine's passive detection capability is tested when a second submarine utilizes its active sonar or is equipped with a noise augmentation system in order to replicate acoustic or electromagnetic signatures of other vessel types or classes. Occurs year round, day and night.				
Typical Components	Platforms: Aircraft carrier, submarines, support craft Targets: Sub-surface targets System being Trained/Tested: Acoustic countermeasures, acoustic modems, sonar systems, underwater communication systems, torpedo systems				
Standard Operating Procedures <i>(Section 2.3.3)</i>	Vessel safety Towed in-water device safety Target deployment and retrieval safety		Typical Locations		
			Offshore Area	Inland Waters	
	Offshore Area		Dabob Bay Range Complex		
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None		Physical Disturbance and Strike: Military expended materials Vessels and in-water devices Ingestion: Military expended materials – other than munitions		Energy: In-air electromagnetic devices Entanglement: Decelerator/parachutes
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended material		Sediments and Water Quality: Metals Chemicals Other materials		
Stressors to Human Resources	Cultural Resources: None		Socioeconomic Resources: Accessibility		Public Health and Safety: Physical interactions In-air energy In-water energy
Military Expended Material	Ingestible Material: Small decelerator/parachute Non-Ingestible Material: Anti-torpedo torpedo accessories, motorized sub-surface target		Military Recoverable Material	Anti-torpedo torpedo, mobile subsurface target	
Sonar and Other Transducer Bins	Mid-Frequency: MF3	High-Frequency HF1 HF5	Anti-Submarine Warfare ASW3	Torpedoes TORP1	Acoustic Modems M3

Anti-Submarine Warfare	
At-Sea Sonar Testing	
In-Water Explosive Bins	None
Procedural Mitigation Measures	<div> Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar </div> <div> Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Towed in-water devices </div>
Assumptions Used for Analysis	Active sonar use is intermittent throughout the duration of the event.

A.2.1.3 Countermeasure Testing

Anti-Submarine Warfare			
Countermeasure Testing			
Short Description	Countermeasure testing involves the testing of systems that will detect, localize, and track incoming weapons, including marine vessel targets. Countermeasures may be systems to obscure the vessel's location or systems to rapidly detect, track, and counter incoming threats. Testing includes surface ship torpedo defense systems and marine vessel stopping payloads.		Typical Duration
			From 4 hours to 6 days, depending on the countermeasure being tested
Long Description	<p>Countermeasure testing evaluates the deployment, operation, and effectiveness of components or fully integrated systems used to defend a vessel from an incoming threat. Countermeasures may be mechanical, chemical, or electronic devices that are released from a vessel to obscure the vessel's location or provide a false target. Countermeasures may also be threat-intervention systems operated from within the vessel to detect, localize, track, and respond to incoming threats. Threat detection range may be extended by towing a sensor array. Test scenarios vary widely, ranging from measuring the operation of a deployment mechanism to validating the ability of an integrated system to detect, track, localize, and destroy an incoming torpedo.</p> <p>Torpedo defense systems are an array of integrated systems that detect, localize, track, and respond to incoming weapons. At-sea testing of torpedo defense systems addresses all components, including towed acoustic systems, torpedo warning systems, and countermeasure anti-torpedo subsystems. Some torpedo defense system scenarios employ non-explosive torpedoes against targets released by secondary platforms (e.g., submarine). While surface vessels are in transit, countermeasure systems may be used to identify false alert rates.</p> <p>Marine vessel stopping payloads are systems designed to deliver the appropriate measure(s) to affect a vessel's propulsion and associated control surfaces to significantly slow and potentially stop the advance of the vessel. Marine vessel-stopping proposed activities include the use of biodegradable polymers. The biodegradable polymers that the Navy uses are designed to temporarily interact with the propeller(s) of a target craft, rendering the craft ineffective. Occurs year round. Offshore Area: Up to 50% of testing could occur at night. Inland waters: Daytime testing only.</p>		
Typical Components	<p>Platforms: All Navy ships and boats, moored platforms, support craft</p> <p>Targets: Mine warfare targets, sub-surface targets, surface targets</p> <p>System being Trained/Tested: Acoustic countermeasures, sonar systems, underwater communications, torpedo systems</p>		
Standard Operating Procedures (Section 2.3.3)	Vessel safety		Typical Locations
	<p>Towed in-water device safety</p> <p>Weapons firing safety</p> <p>Target deployment and retrieval safety</p>		<p>Offshore Area</p> <p>Quinault Range Site</p> <p>Western Behm Canal</p> <p>SEAFAC</p> <p>Inland Waters</p> <p>Dabob Bay Range Complex</p> <p>Keyport Range Site</p>
Stressors to Biological Resources	<p>Acoustic:</p> <p>Sonar and other transducers</p> <p>Vessel noise</p> <p>Explosives:</p> <p>None</p>	<p>Physical Disturbance and Strike:</p> <p>Military expended material</p> <p>Vessels and in-water devices</p> <p>Ingestion:</p> <p>Military expended materials – other than munitions</p>	<p>Energy:</p> <p>In-air electromagnetic devices</p> <p>Entanglement:</p> <p>Biodegradable polymer</p> <p>Wires and cables</p>

Anti-Submarine Warfare				
Countermeasure Testing				
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended material		Sediments and Water Quality: Metals Chemicals Other materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy In-water energy	
Military Expended Material	Ingestible Material: Biodegradable polymer Non-Ingestible Material: Acoustic countermeasures, guidance wire, heavyweight torpedo accessories, mobile subsurface target	Military Recoverable Material	Mine shape (non-explosive), heavyweight (non-explosive) torpedo, acoustic countermeasures, mobile subsurface target	
Sonar and Other Transducer Bins	Mid-Frequency: MF1	High-Frequency: HF8	Anti-Submarine Warfare: ASW3 ASW4	Torpedoes: TORP2
In-Water Explosive Bins	None			
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike: (Section 5.3.4) Vessel movement Towed in-water devices	
Assumptions Used for Analysis	Not all events will include the use of sonar and other transducers. Use of expendable materials is minimized in Inland Waters, and most components of countermeasures are recovered (some components are consumed in use and dissipate in the environment). Obscuring devices deployed in the water may have a self-inflating balloon and tether that helps them to operate at the ideal depth. The balloon allows test units to be recovered in calm conditions, but has a slow leak enabling the empty container to sink to the floor. The tether is a very thin wire or monofilament type material and is an entanglement hazard. No marine vessel stopping testing will occur at Southeast Alaska Acoustic Measurement Facility (SEAFAC). All materials used at SEAFAC would be recovered.			

A.2.1.4 Pierside Sonar Testing

Anti-Submarine Warfare			
Pierside Sonar Testing			
Short Description	Pierside testing to ensure systems are fully functional in a controlled pierside environment prior to at-sea test activities.	Typical Duration	
		Up to 3 weeks total per ship, with each source run independently and not continuously during this time	
Long Description	Ships and submarines will activate mid- and high-frequency tactical sonars, underwater communications systems, and navigational devices to ensure they are fully functional prior to at-sea test events. Testing may also include the firing of inert torpedo shapes. Event duration varies, with average durations of 3 weeks with active sonar used intermittently over 2 days during the total event duration. This also includes pierside sonar testing during surface combatant sea trials. Occurs year round, day and night.		
Typical Components	Platforms: Submarines, surface combatants Targets: None System being Trained/Tested: Sonar systems, underwater communications		
Standard Operating Procedures (Section 2.3.3)	Pierside testing safety	Typical Locations	
		Inland Waters NBK Bangor NBK Bremerton Naval Station Everett	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Explosives: None	Physical Disturbance and Strike: None Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: None Habitats: None Sediments and Water Quality: None		
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: None	Public Health and Safety: In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	Mid-Frequency: MF1 MF2 MF3 MF9 MF10 MF12	High-Frequency: HF3	Anti-Submarine Warfare: ASW3
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		
Assumptions Used for Analysis	None		

A.2.1.5 Submarine Sonar Testing/Maintenance

Anti-Submarine Warfare			
Submarine Sonar Testing/Maintenance			
Short Description	Pierside, moored, and underway testing of submarine systems occurs periodically following major maintenance periods and for routine maintenance.		Typical Duration
			Up to 3 weeks, with intermittent use of active sonar
Long Description	Following major and routine maintenance periods, system operations are evaluated in both stationary and underway tests. Multiple systems with active and passive acoustic sources such as navigation systems, fathometers, underwater communications systems, underwater distress beacons, range finders, and other similar systems, will be tested. Occurs year round, day and night.		
Typical Components	Platforms: Moored platform, submarines, surface ships Targets: None System being Trained/Tested: Sonar systems, underwater communications		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Pierside testing safety	Typical Locations	
		Western Behm Canal SEAFAC	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: None Habitats: None	Sediment and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Physical disturbance and strike	Public Health and Safety: Physical interactions In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	Mid-Frequency: MF9	High Frequency: HF6	
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike: (Section 5.3.4) Vessel movement
Assumptions Used for Analysis	None		

A.2.1.6 Torpedo (Explosive) Testing

Anti-Submarine Warfare			
Torpedo (Explosive) Testing			
Short Description	Air, surface, or submarine crews employ explosive and non-explosive torpedoes against artificial targets.		Typical Duration
			1–2 days during daylight hours
Long Description	Non-explosive and explosive torpedoes (carrying a warhead) will be launched at a suspended target by a submarine and fixed- or rotary-wing aircraft or surface combatants. Occurs year round.		
Typical Components	Platforms: Fixed-wing aircraft, moored platform, rotary-wing aircraft, submarines, support craft, surface combatant Targets: Sub-surface targets, surface targets System being Trained/Tested: Acoustic countermeasures, sonar systems, sonobuoys, underwater communications, torpedo systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Towed in-water device safety Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise Explosives: In-water explosions	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials Vessels and in-water devices Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: Decelerator/Parachutes Wires and cables
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended material In-water explosions	Sediment and Water Quality: Explosives Chemicals Metals Other materials	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy In-water energy

Anti-Submarine Warfare				
Torpedo (Explosive) Testing				
Military Expended Material	Ingestible Material: Lightweight torpedo (explosive) - fragments, heavyweight torpedo (explosive) – fragments, small decelerator/parachute, target fragments		Military Recoverable Material	Heavyweight (non-explosive) torpedo, lightweight (non-explosive) torpedo
	Non-Ingestible Material: Buoy (non-explosive), guidance wire, heavyweight torpedo accessories, lightweight torpedo accessories, sonobuoy (non-explosive), sonobuoy wires, stationary surface target			
Sonar and Other Transducer Bins	Mid-Frequency: MF1 MF3 MF4 MF5 MF6	High-Frequency: HF1 HF6	Anti-Submarine Warfare: ASW3	Torpedoes: TORP1 TORP2
In-Water Explosive Bins	E8 E11			
Procedural Mitigation Measures	Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar Explosive Stressors: <i>(Section 5.3.3)</i> Explosive torpedoes		Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Towed in-water devices	
Assumptions Used for Analysis	All sonobuoys have parachutes unless otherwise noted. Only one heavyweight torpedo test could occur in 1 day; two heavyweight torpedo tests could occur on consecutive days. Two lightweight torpedo tests could occur in a single day. All non-explosive torpedoes are recovered. Explosive torpedo testing occurs at least 50 NM from shore and does not occur within the boundaries of the Olympic Coast National Marine Sanctuary.			

A.2.1.7 Torpedo (Non-Explosive) Testing

Anti-Submarine Warfare			
Torpedo (Non-Explosive) Testing			
Short Description	Air, surface, or submarine crews employ non-explosive torpedoes against targets, submarines, or surface vessels.		Typical Duration
			Up to 2 weeks
Long Description	Aerial, surface, and subsurface assets fire exercise torpedoes against surface or subsurface targets, or at no target and programmed with a particular run geometry. Torpedo testing evaluates the performance and the effectiveness of hardware and software upgrades of heavyweight or lightweight torpedoes. It also includes testing of experimental torpedoes. Not all torpedo tests involve acoustics. Exercise torpedoes are recovered, typically from surface ships and helicopters that are specifically crewed and outfitted for torpedo recovery. Event duration is dependent on number of torpedoes fired. Offshore Area: A few events within this activity may have nighttime testing up to 50%. Inland Waters: Daytime testing only.		
Typical Components	Platforms: Aircraft carrier, autonomous underwater vehicle, fixed-wing aircraft, moored platform, rotary-wing aircraft, remotely operated vehicle, submarines, support craft, surface combatant, unmanned underwater vehicle Targets: Sub-surface targets, surface targets System being Trained/Tested: Acoustic countermeasures, sonar systems, sonobuoys, underwater communications, torpedo systems		
Standard Operating Procedures (Section 2.3.3)	Typical Locations		
	Offshore Area	Inland Waters	
Vessel safety Aircraft safety Towed in-water device safety Unmanned surface vehicle and unmanned underwater vehicle procedures Weapons firing safety Target deployment and retrieval safety	Offshore Area	Dabob Bay Range Complex	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials Vessels and in-water devices Ingestion: Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: Decelerators/Parachutes, Wires and cables
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended materials	Sediment and Water Quality: Metals Chemicals Other materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy In-water energy

Anti-Submarine Warfare					
Torpedo (Non-Explosive) Testing					
Military Expended Material	Ingestible Material: Small decelerator/parachute			Military Recoverable Material	Anchors, heavyweight (non-explosive) torpedo, lightweight (non-explosive) torpedo, anti-torpedo torpedo, stationary sub-surface target, mobile subsurface target
	Non-Ingestible Material: Acoustic countermeasures, buoy (non-explosive), heavyweight torpedo accessories, lightweight torpedo accessories, mobile sub-surface target, sonobuoy (non-explosive), sonobuoy wires, fiber optic cable, guidance wire, anti-torpedo torpedo accessories				
Sonar and Other Transducer Bins	Low-Frequency: LF4	Mid-Frequency:	High-Frequency:	Anti-Submarine Warfare: ASW3 ASW4	Torpedoes: TORP1 TORP2 TORP3
		MF1 MF3 MF4 MF5 MF6 MF9 MF10	HF1 HF5 HF6		
In-Water Explosive Bins	None				
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar			Physical Disturbance and Strike: (Section 5.3.4) Vessel movement	
Assumptions Used for Analysis	All exercise torpedoes are recovered. Typically, no more than 8 torpedoes are fired per day during daylight hours.				

A.2.2 MINE WARFARE

A.2.2.1 Mine Countermeasure and Neutralization Testing

Mine Warfare			
Mine Countermeasure and Neutralization Testing			
Short Description	Air, surface, and subsurface vessels neutralize threat mines and mine-like objects.	Typical Duration	
		1–10 days, with intermittent use of countermeasure/neutralization systems during this period	
Long Description	Mine countermeasure-neutralization and mine system testing is required to ensure systems can effectively neutralize threat (live or inert) mines that will otherwise restrict passage through an area and to ensure U.S. Navy mines remain effective against enemy ships. These systems may be deployed with a variety of ships, aircraft, submarines, or unmanned autonomous vehicles and operate in water depths up to 6,000 ft. Mines are neutralized by cutting mooring cables of buoyant mines, producing acoustic energy that fires acoustic-influence mines, by employing radar or laser fields, detonating mines using remotely operated vehicles, or using explosive charges to destroy threat mines. There will be no explosive testing in the Inland Waters. Testing in Inland Waters would involve non-explosive aspects of mine countermeasure and neutralization testing, including the placement of non-explosive targets, the operation of unmanned underwater vehicles and associated sensors, and the operation of laser systems. Occurs year round, primarily daytime, though some events may extend into night. Inland Waters testing is daylight hours only.		
Typical Components	Platforms: Amphibious warfare ship, mine warfare ship, rotary-wing aircraft, rotary-wing unmanned aerial system, surface combatant, unmanned underwater vehicle Targets: Mine shapes System being Trained/Tested: Electromagnetic devices, minehunting sonar, low powered lasers, radar		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Laser procedures Unmanned aircraft system procedures Unmanned surface vehicle and unmanned underwater vehicle procedures Towed in-water device safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area	Inland Waters
		Offshore Area	Only non-explosive aspects of this testing activity would occur at the following areas: NBK Bremerton Carr Inlet Operations Area Crescent Harbor EOD Range Dabob Bay Range Complex Hood Canal EOD Range Naval Station Everett Keyport Range Site Naval Magazine Indian Island NAVY 3 OPAREA
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise Explosives: In-water explosions (Offshore Area only)	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials Vessels and in-water devices Seafloor devices Ingestion: Military expended materials - munitions	Energy: In-air electromagnetic devices Entanglement: Wires and cables

Mine Warfare			
Mine Countermeasure and Neutralization Testing			
Stressors to Physical Resources	Air Quality: Criteria air pollutants		Sediment and Water Quality: Explosives
	Habitats: Physical disturbance and strike – military expended material		Metals
	Physical disturbance and strike – seafloor devices		Other materials
	In-water explosions (Offshore Area only)		
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy In-water energy
	Military Expended Material	Ingestible Material: Neutralizer (explosive) – fragments, mine (explosive) – fragments Non-Ingestible Material: Fiber optic cable, fiber optic can, anchors	Military Recoverable Material Mine shape (non-explosive)
Sonar and Other Transducer Bins	High-Frequency: HF4		
In-Water Explosive Bins	E4 E7		
Procedural Mitigation Measures	Physical Disturbance and Strike: (Section 5.3.4) Vessel movement Towed in-water devices	Explosive Stressors: (Section 5.3.3) Explosive mine countermeasure and neutralization activities Acoustic Stressors (Section 5.3.2) Active sonar	
Assumptions Used for Analysis	Explosives are not used in the Inland Waters or in the Olympic Coast National Marine Sanctuary. Manned aircraft are not used in the Inland Waters except within the area above Navy 3 OPAREA, and operate per FAA regulations.		

A.2.2.2 Mine Detection and Classification Testing

Mine Warfare			
Mine Detection and Classification Testing			
Short Description	Air, surface, and subsurface vessels and systems detect and classify mines and mine-like objects. Vessels also assess their potential susceptibility to mines and mine-like objects.	Typical Duration	
		Up to 24 days, with up to 12 hours of acoustic activity each day	
Long Description	Mine detection and classification systems require testing to evaluate the capability of generating underwater magnetic and acoustic signature fields as well as sonar systems that can detect and classify a wide range of threat mines at tactically different water depths. Surface craft may deploy an underwater sensor system that uses ship signature to develop a susceptibility profile against mine-like objects. This testing encompasses evaluating the operation and effectiveness of the components and integrated systems for mine detection and classification, as well as assessing vessel vulnerability to mines and development of new mine-like targets. Detection systems may use acoustic, electro-optic, or laser sensors, and may be deployed from surface or subsurface vessels, or unmanned platforms. Mine detection and classification sonar may also be used for mapping, as well as detection, classification, and localization of items on the seafloor. In order to develop better and safer methods of minesweeping, the Navy is currently testing new systems to detect locate, identify, and avoid mines including a laser airborne mine detection system that uses laser illumination coupled with sensitive electro-optic receivers to find mines in the upper part of the water column. Occurs year round, daytime only.		
Typical Components	Platforms: Moored platforms, support craft, surface combatants, remotely operated vehicles, unmanned aerial vehicles, unmanned underwater vehicles Targets: Mine shapes System being Trained/Tested: Minehunting sonar, electro-magnetic or laser sensors		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Laser procedures Unmanned aircraft system procedures Unmanned surface vehicle and unmanned underwater vehicle procedures Towed in-water device safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Quinault Range Site	Inland Waters Dabob Bay Range Complex Keyport Range Site
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Seafloor devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – seafloor devices	Sediments and Water Quality: Metals	

Mine Warfare			
Mine Detection and Classification Testing			
Stressors to Human Resources	Cultural resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics	Public Health and Safety: Physical interactions In-air energy In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	Anchors, mine shape (non-explosive)
Sonar and Other Transducer Bins	Low-Frequency: LF4	High-Frequency: HF4	Broadband BB1 BB2
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike: (Section 5.3.4) Vessel movement Towed in-water devices
Assumptions Used for Analysis	Mine-like targets and temporary anchored devices may be deployed for the duration of a single test event or may be left in place for up to 12 months to support multiple events; all devices and their anchors are recovered. Bottom anchors are not deployed in known sensitive shallow water benthic habitats such as eelgrass beds.		

A.2.3 SURFACE WARFARE

A.2.3.1 Kinetic Energy Weapon Testing

Surface Warfare			
Kinetic Energy Weapon Testing			
Short Description	A kinetic energy weapon uses stored energy released in a burst to accelerate a projectile.	Typical Duration	1 day
Long Description	A kinetic energy weapon uses stored energy released in a burst to accelerate a projectile to more than 7 times the speed of sound to a range of up to 200 miles. Occurs year round, up to 25% of this testing could occur at night.		
Typical Components	Platforms: Surface combatants Targets: Air targets, surface targets System being Trained/Tested: Kinetic energy weapon		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Weapons firing safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Weapons noise Vessel noise Aircraft noise Explosives: In-air explosions	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials Vessels and in-water devices Ingestion: Military expended materials – munitions Military expended materials – other than munitions	Energy: In-air electromagnetic devices Entanglement: Decelerators/Parachutes
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended material	Sediments and Water Quality: Metals	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy
Military Expended Material	Ingestible Material: Large-caliber (explosive) projectile fragments, target fragments Non-Ingestible Material: Expendable aerial drone, kinetic energy round, large-caliber projectile (non-explosive), large-caliber projectile casings, sabot - kinetic energy round, stationary surface target	Military Recoverable Material	None

Surface Warfare	
Kinetic Energy Weapon Testing	
Sonar and Other Transducer Bins	None
In-Water Explosive Bins	None
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Small-, medium-, and large-caliber non-explosive practice munitions
Assumptions Used for Analysis	Assume one target is expended per event. Explosive rounds are designed to detonate above the surface target. Activity takes place at least 50 NM from shore.

A.2.4 UNMANNED SYSTEMS

A.2.4.1 Unmanned Aerial System Testing

Unmanned Systems			
Unmanned Aerial System Testing			
Short Description	Unmanned aerial systems (UASs) are remotely piloted or self-piloted (i.e., preprogrammed flight pattern) aircraft that include fixed-wing, rotary-wing, and other vertical takeoff vehicles. They can carry cameras, sensors, communications equipment, or other payloads.		Typical Duration
			1–12 hours
Long Description	UASs are remotely piloted or self-piloted (i.e., preprogrammed flight pattern) aircraft that include fixed-wing, rotary-wing, and other vertical takeoff vehicles. They can carry cameras, sensors, communications equipment, or other payloads. UASs can vary in size up to approximately 10 ft. in length, with gross vehicle weights of a couple hundred pounds. Propulsion types can range from traditional turbopfans, turboprops, and piston engine-driven propellers, to electric motor-driven propellers powered by rechargeable batteries (lead-acid, nickel-cadmium, and lithium ion), photovoltaic cells, or hydrogen fuel cells. Occurs year round, daytime only.		
Typical Components	Platforms: Fixed-wing unmanned aerial system, rotary-wing unmanned aerial system, support craft Targets: None System being Trained/Tested: Unmanned aerial vehicle		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Unmanned aircraft system procedures	Typical Locations	
		Offshore Area Quinault Range Site	Inland Waters Dabob Bay Range Complex Keyport Range Site Restricted Area 6701
Stressors to Biological Resources	Acoustic: Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		

Unmanned Systems	
Unmanned Aerial System Testing	
In-Water Explosive Bins	None
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	UASs work in compliance with the Federal Aviation Administration (FAA) regulations UASs can vary in size up to approximately 10 ft. in length, with gross vehicle weights of a couple hundred pounds.

A.2.4.2 Unmanned Surface Vehicle System Testing

Unmanned Systems			
Unmanned Surface Vehicle System Testing			
Short Description	Unmanned surface vehicles are primarily autonomous systems designed to augment current and future platforms to help deter maritime threats. They employ a variety of sensors designed to extend the reach of manned ships.		Typical Duration
			Up to 10 days. Some propulsion systems (gliders) could operate continuously for multiple months.
Long Description	Unmanned surface vehicles (USV) can include remotely operated craft (semisubmersible, plane hull, semi-plane hull, etc.) and test vehicles. During testing, they can operate autonomously, semi-autonomously, or non-autonomously. Non-autonomous or remotely controlled vehicles may be tethered like remotely operated vehicles (ROVs) or remotely controlled via radio link. USVs may have multiple test objectives or payloads (such as cameras and sonar) onboard so that numerous tests can be executed during a single testing activity. USVs may be used in conjunction with unmanned underwater vehicles and unmanned aerial systems to meet test objectives. USV launch and retrieval methods are highly variable because of the differences in vehicle type and size. USV test vehicle launch methods include lowering onto the water from a support craft or pier, deploying from another craft, or launching from a boat ramp. The vehicle will propel itself through the water to complete the test objectives, which could include deployment or recovery of a payload, sonar or other sensor use, or completion of a propulsion test. Occurs year round, daytime only.		
Typical Components	Platforms: Unmanned surface vehicle; support craft Targets: Surface targets System being Trained/Tested: Unmanned surface vehicle		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Unmanned surface vehicle and unmanned underwater vehicle procedures Target deployment and retrieval safety	Typical Locations	
		Offshore Area	Inland Waters
		Quinault Range Site	Dabob Bay Range Complex Keyport Range Site
Stressors to Biological Resources	Acoustic: Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	Stationary Surface Targets, anchors

Unmanned Systems	
Unmanned Surface Vehicle System Testing	
Sonar and Other Transducer Bins	None
In-Water Explosive Bins	None
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	None

A.2.4.3 Unmanned Underwater Vehicle Testing

Unmanned Systems			
Unmanned Underwater Vehicle Testing			
Short Description	Testing involves the production or upgrade of unmanned underwater vehicles. This may include testing of mission capabilities (e.g., mine detection), evaluating the basic functions of individual platforms, or conducting complex events with multiple vehicles.	Typical Duration	
		Typically 1–2 days, but endurance testing may last up to 35 days. Some propulsion systems (e.g., gliders) could operate continuously for multiple months.	
Long Description	Unmanned underwater vehicle (UUV) testing covers a broad range of activity in support of the development of UUV performance capabilities (propulsion, navigation, control, durability, and reliability) and mission capabilities (launch and recovery systems, development of various payloads and the capability to deliver the payload as needed, data collection and communication). UUVs may operate singly, in groups, or in coordination with unmanned aircraft or unmanned surface vehicles. Most UUV operations include a launch, transit, mission profile execution, and recovery operations. UUVs may be developed to carry out warfare missions (e.g., mine detection) or scientific missions (e.g., bottom mapping), while others are developed to support other testing objectives (e.g., performing as a target for anti-submarine warfare). UUVs may be launched from unmanned aerial vehicles, surface craft, submarines, piers, or land. Once launched, the vehicles are either towed or self-propelled to the test area. Unmanned underwater vehicles may also deploy, tow, operate, or recover remote sensors and payload systems. Systems on or towed by the UUV may be acoustically active, produce radio-frequency transmissions, or use lasers. Occurs year round, day and night.		
Typical Components	Platforms: Fixed-wing unmanned aerial systems, patrol boats, remotely operated vehicles, shore-based facilities, small boats, special mission ships, submarines, support craft, surface combatants, unmanned surface vehicles, unmanned underwater vehicles Targets: Mine warfare targets, sub-surface targets, surface targets System being Trained/Tested: Sonar systems, acoustic modem, underwater communications systems, torpedo systems, unmanned underwater vehicle		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Towed in-water device safety Unmanned aircraft system procedures Unmanned surface vehicle and unmanned underwater vehicle procedures Target deployment and retrieval safety	Typical Locations	
		Offshore Area Quinault Range Site	Inland Waters Carr Inlet Operations Area Dabob Bay Range Complex Keyport Range Site
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials Vessels and in-water devices Seafloor devices Ingestion: Military Expended Materials – Other Than Munitions	Energy: In-air electromagnetic devices Entanglement: Decelerators/parachutes Wires and cables

Unmanned Systems						
Unmanned Underwater Vehicle Testing						
Stressors to Physical Resources	Air Quality: Criteria air pollutants			Sediments and Water Quality: Chemical		
	Habitats: Physical disturbance and strike – military expended material			Other materials		
	Physical disturbance and strike – seafloor devices					
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike		Socioeconomic Resources: Accessibility Physical disturbance and strike		Public Health and Safety: Physical interactions In-air energy In-water energy	
Military Expended Material	Ingestible Material: Small decelerators/parachutes			Military Recoverable Material	Anchor, mine shape (non-explosive), lightweight (non-explosive) torpedo, anti-torpedo torpedo, stationary surface target, stationary sub-surface target, mobile subsurface target	
	Non-Ingestible Material: Lightweight torpedo accessories, anti-torpedo torpedo accessories, fiber optic cable, mobile subsurface target					
Sonar and Other Transducer Bins	High-Frequency: HF5 HF9	Very High Frequency: VHF1	Torpedoes: TORP1	Forward-Looking Sonar: FLS2	Acoustic Modems: M3	Synthetic Aperture Sonars: SAS2
In-Water Explosive Bins	None					
Procedural Mitigation Measures	Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar			Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Towed in-water devices		
Assumptions Used for Analysis	Mine shapes and other temporary anchored targets may be deployed for the duration of a single test event or may be left in place for up to 12 months to support multiple events; all devices and their anchors are recovered. Bottom anchors are not deployed in known sensitive shallow water benthic habitats such as eelgrass beds. Multiple vehicles may operate simultaneously in one or multiple areas.					

A.2.5 VESSEL EVALUATION

A.2.5.1 Propulsion Testing

Vessel Evaluation			
Propulsion Testing			
Short Description	Ship is run at high speeds in various formations and at various depths.		Typical Duration Up to 5 days
Long Description	Propulsion testing is one part of the total sea trial activity. During this activity, the ship is tested for maneuverability, including full power and endurance runs. Occurs year round, day and night.		
Typical Components	Platforms: Surface ships Targets: None System being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria Air Pollutants Habitats: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike (Section 5.3.4) Vessel movement		
Assumptions Used for Analysis	Surface ships will not be conducting test constantly for the entire duration. Surface ships may not be traveling in a straight line. Surface ships will operate at least 10 NM from shore, across the full spectrum of capable speeds.		

A.2.5.2 Undersea Warfare Testing

Vessel Evaluation			
Undersea Warfare Testing			
Short Description	Ships demonstrate capability of countermeasure systems and underwater surveillance, weapons engagement, and communications systems. This tests ships’ ability to detect, track, and engage undersea targets.	Typical Duration	
		Up to 10 days	
Long Description	Undersea warfare events may be comprised of tracking and firing events or tests of hull-mounted sonar system capabilities to detect and avoid torpedo type targets. Tracking and firing events ensure the operability of the undersea warfare suite and its interface with the rotary-wing helicopter. Tests include demonstrating the ability of the ship to search, detect, and track a target and conduct attacks with exercise torpedoes. Detection and avoidance events may use surface craft and underwater platforms to test the capability of mid- and high-frequency acoustic sources. Subsurface moving targets, rocket and air-dropped weapons, sonobuoys, towed arrays, and sub-surface torpedo-like devices may be used. Approximately 1 week of in-port training may precede the event. Occurs year round, day and night.		
Typical Components	Platforms: Rotary-wing aircraft, submarines, support craft, surface combatant Targets: Sub-surface targets System being Trained/Tested: Acoustic countermeasures, underwater communications systems, sonar systems, sonobuoys, torpedo systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials Vessels and in-water devices Ingestion: Military expended materials – other than munitions	Energy: None Entanglement: Decelerator/Parachute, Wires and cables
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended material	Sediments and Water Quality: Metals Chemicals Other materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy In-water energy

Vessel Evaluation				
Undersea Warfare Testing				
Military Expended Material	Ingestible Material: Small decelerator/parachute Non-Ingestible Material: Acoustic countermeasures, buoy (non-explosive), expended bathythermograph, expended bathythermograph wire, heavyweight torpedo accessories, lightweight torpedo accessories, mobile subsurface target, sonobuoy (non-explosive), sonobuoy wires, guidance wire		Military Recoverable Material	Lightweight (non-explosive) torpedo, heavyweight (non-explosive) torpedo, mobile subsurface target
Sonar and Other Transducer Bins	Mid-Frequency: MF1 MF4 MF5 MF6 MF9	High-Frequency: HF4	Anti-Submarine Warfare: ASW3 ASW4	Torpedoes: TORP1 TORP2
In-Water Explosive Bins	None			
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike (Section 5.3.4) Vessel movement	
Assumptions Used for Analysis	Not all sonobuoys used in this activity would include a decelerator/parachute. Ships will not be conducting test constantly during the duration of the allotted time.			

A.2.5.3 Vessel Signature Evaluation

Vessel Evaluation			
Vessel Signature Evaluation			
Short Description	Surface ship, submarine, and auxiliary system signature assessments. This may include electronic, radar, acoustic, infrared and magnetic signatures.		Typical Duration Typically 1–5 days, up to 20 days depending on the test being conducted
Long Description	Signature testing is passive monitoring of surface ships and submarines, conducted on new ships and periodically throughout a vessel's life cycle, to assess the vessel's vulnerability to various types of detection systems when operating in different profiles (e.g., with or without a communication buoy deployed). Signature testing may include the subject vessel's own safety and navigation systems, tracking devices and range safety systems, radar systems, and underwater or in-air communications equipment. Submarines move through the test site, but in-water devices may be towed. Data may be collected by passive acoustic hydrophones, by passive electro-magnetic or infrared sensors, or by radar. Also included in this activity is the Shipboard Electronic Systems Evaluation Facility, which conducts measurements of antenna emission patterns, Federal Aviation Administration identification of Friend or Foe systems, and Tactical Air Navigation Systems. Occurs year round, day and night.		
Typical Components	Platforms: Moored platforms, submarines, support craft, surface combatant Targets: None System being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety	Typical Locations	
		Western Behm Canal SEAFAC	Inland Waters Dabob Bay Range Complex
Stressors to Biological Resources	Acoustic: Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Ingestion: None	Energy: In-air electromagnetic devices Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike (Section 5.3.4) Vessel movement		

Vessel Evaluation	
Vessel Signature Evaluation	
Assumptions Used for Analysis	None

A.2.6 OTHER TESTING

A.2.6.1 Acoustic and Oceanographic Research

Acoustic and Oceanographic Science and Technology			
Acoustic and Oceanographic Research			
Short Description	Research using active transmissions from sources deployed from ships, aircraft, and unmanned underwater vehicles. Research sources can be used as proxies for current and future Navy systems.		Typical Duration
			Up to 14 days
Long Description	Active acoustic transmissions used for engineering tests of acoustic sources, validation of ocean acoustic models, tests of signal processing algorithms, and characterization of acoustic interactions with the ocean bottom, fish and ocean surface. Standard oceanographic research sensing (acoustic Doppler current profiler, fathometer-like systems) also to be employed. Occurs year round, daytime only.		
Typical Components	Platforms: Support craft, unmanned underwater vehicle Targets: None System being Trained/Tested: Sonar systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Unmanned surface vehicle and unmanned underwater vehicle procedures	Typical Locations	
		Offshore Area Quinalt Range Site	Inland Waters Dabob Bay Range Complex Keyport Range Site
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Seafloor devices Ingestion: None	Energy: In-air electromagnetic devices Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – seafloor devices	Sediments and Water Quality: Other materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy In-water energy	
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	Anchors
Sonar and Other Transducer Bins	Low Frequency: LF4	Mid Frequency: MF9	
In-Water Explosive Bins	None		

Acoustic and Oceanographic Science and Technology		
Acoustic and Oceanographic Research		
Procedural Mitigation Measures	Acoustic Stressors: <i>(Section 5.3.2)</i> Active sonar	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement
Assumptions Used for Analysis	None	

A.2.6.2 Acoustic Component Testing

Other Testing			
Acoustic Component Testing			
Short Description	Various surface vessels, moored equipment, and materials are tested to evaluate performance in the marine environment.	Typical Duration	
		1 day to multiple months	
Long Description	Acoustic component testing includes various activities utilizing the marine environment for testing and evaluation, including troubleshooting components of all installed systems, including acoustic systems. Components may be tested in-situ or removed and tested independently. Test may involve radar, environmental sensors, magnetic, passive acoustic, optical, or air quality instrumentation to measure, record, and analyze system effectiveness, dependability, operational parameters, and durability. Surface operations utilize a variety of vessels for deployment of test equipment and for the monitoring of the air, surface, and subsurface. Occurs year round, day and night.		
Typical Components	Platforms: Moored platforms, submarines, support craft, surface combatants, unmanned underwater vehicles, unmanned aerial vehicles, unmanned surface vessels Targets: None System being Trained/Tested: Acoustic modems, sonar systems, underwater communication systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Unmanned aircraft system procedures Unmanned surface vehicle and unmanned underwater vehicle procedures	Typical Locations	
		Western Behm Canal SEAFAC	Inland Waters NBK Bangor NBK Bremerton Naval Station Everett Naval Magazine Indian Island
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	Low Frequency: LF5	Mid Frequency: MF9	High Frequency: HF3 HF6
In-Water Explosive Bins	None		

Other Testing		
Acoustic Component Testing		
Procedural Mitigation Measures	Acoustic Stressors (<i>Section 5.3.2</i>) Active sonar	Physical Disturbance and Strike: (<i>Section 5.3.4</i>) Vessel movement
Assumptions Used for Analysis	Subject vessel being tested is moored at the Navy piers in Washington, but may be moving or static if the test is conducted at SEAFAC. ROVs may be used to deploy sensors below the water line at the Washington piers, but are unlikely to be used at SEAFAC.	

A.2.6.3 Cold Water Support

Other Testing			
Cold Water Support			
Short Description	Fleet training for divers in a cold-water environment, and other diver training related to Navy divers supporting range/test site operations and maintenance.		Typical Duration
			Assume 8 hours for all events, though they may continue for up to 40 hours, and infrequently some may operate intermittently for multiple consecutive months
Long Description	Fleet training for divers in a cold-water environment, and other diver training related to Navy divers supporting range/test facility operations and maintenance. Hand-held acoustic systems and underwater communication devices may be used in diver training, as well as a variety of in-water devices for transporting divers or cargo, and various dive targets such as mine-like shapes. Occurs year round, day and night.		
Typical Components	Platforms: Moored platform, submarines, surface combatant Targets: Mine warfare targets System being Trained/Tested: Sonar systems, underwater communications		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Target deployment and retrieval safety		Typical Locations
			Western Behm Canal SEAFAC Inland Waters Carr Inlet Operations Area Dabob Bay Range Complex Keyport Range Site
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Seafloor devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – seafloor devices Sediments and Water Quality: None		
Stressors to Human Resources	Cultural resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility	Public Health and Safety: Physical interactions In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	Mine shape (non-explosive), anchors
Sonar and Other Transducer Bins	High-Frequency HF6		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike: (Section 5.3.4) Vessel movement
Assumptions Used for Analysis	If a submarine is used as part of the event (SEAFAC, Carr Inlet), submarine acoustic systems may be activated.		

A.2.6.4 Hydrodynamic and Maneuverability Testing

Other Testing			
Hydrodynamic and Maneuverability Testing			
Short Description	Submarines maneuver in the submerged operating environment.	Typical Duration	
		10 days	
Long Description	Hydrodynamic testing is required to validate the control and maneuverability of a submarine in a submerged testing environment. Occurs year round, day and night.		
Typical Components	Platforms: Moored platform, submarines, support craft Targets: None System being Trained/Tested: None		
Standard Operating Procedures (Section 2.3.3)	Vessel safety	Typical Locations	
		Western Behm Canal SEAFAC	
Stressors to Biological Resources	Acoustic: Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: None Habitats: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural resources: None	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: (Section 5.3.4) Vessel movement		
Assumptions Used for Analysis	For biological resource analysis, vessel noise and vessel strike are only analyzed for the periods while the submarines are surfaced, typically brief in nature. Mitigation measures related to vessel movement are only considered using the period of surfacing as well. For human resource stressor analysis, physical disturbance and strike and physical interactions are only analyzed for the periods (typically brief in nature) while the submarine is surfaced. Underwater communications are used for range and vessel safety purposes.		

A.2.6.5 Non-Acoustic Component Testing

Other Testing			
Non-Acoustic Component Testing			
Short Description	These tests involve non-acoustic sensors and communication systems. Non-acoustic sensors may also gather other forms of environmental data.	Typical Duration	
		3 days (4 hours per day for 3 days)	
Long Description	Radio communication with submarines typically includes systems using tethered, untethered, or towed buoyant in-water devices to raise an antenna package to the surface to broadcast the signal. Some communication buoys are intended for single-use applications while the rest are multi-use packages. The component hardware of these systems needs to be tested to ensure that it will reliably support communication without interfering with non-communication vessel operations. Components may be tested while integrated with the platform or removed and tested independently. Test may involve radar, environmental sensors, magnetic, passive acoustic, or optical instrumentation to measure, record, and analyze component effectiveness, dependability, operational parameters, and durability. Optical communications tests may include communication between helicopter or fixed-wing aircraft and manned or unmanned underwater systems, and may also include ground truth sensors mounted on surface craft. Occurs year round, day and night.		
Typical Components	Platforms: All Navy ships and boats, in-water structures, moored platforms, remotely operated vehicles, support craft, unmanned aerial vehicles, unmanned underwater vehicles Targets: None System being Trained/Tested: Communications systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Unmanned aircraft system procedures Unmanned surface vehicle and unmanned underwater vehicle procedures	Typical Locations	
		Offshore Area	Inland Waters
		Offshore Area	Dabob Bay Range Complex Keyport Range Site Keyport Pier NBK Bangor Zelatched Point Pier
Stressors to Biological Resources	Acoustic: Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Seafloor devices Ingestion: None	Energy: In-air electromagnetic devices Entanglement: Wires and cables
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – seafloor devices		Sediments and Water Quality: None
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: Physical interactions In-air energy

Other Testing			
Non-Acoustic Component Testing			
Military Expended Material	Ingestible Material: None Non-Ingestible Material: Fiber optic cable	Military Recoverable Material	Bottom placed instruments
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel Movement		
Assumptions Used for Analysis	Manned aircraft are not used in Dabob Bay Range Complex or Keyport Range Site. Underwater communications are used for range and vessel safety purposes. Unmanned aerial vehicles used in the inland waters areas would be small (e.g., Phantom quadcopter).		

A.2.6.6 Post Refit Sea Trial

Other Testing			
Post Refit Sea Trial			
Short Description	Following periodic maintenance periods or repairs, sea trials are conducted to evaluate submarine propulsion, sonar systems, and other mechanical tests.		Typical Duration
			Typically 8 hours
Long Description	Testing activities are conducted throughout the life of a Navy submarine to verify performance and mission capabilities. Sea trials are conducted following periodic maintenance or repairs. A typical test may include a submarine operating at full power and subjected to high-speed runs, steering tests, and other mechanical tests. Occurs year round, day and night.		
Typical Components	Platforms: Fixed facility, submarines Targets: None System being Trained/Tested: Acoustic modem, underwater communications		
Standard Operating Procedures (Section 2.3.3)	Vessel safety	Typical Locations	
		Inland Waters Dabob Bay Range Complex	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Explosives: None	Physical Disturbance and Strike: None Ingestion: None	Energy: None Entanglement: None
Stressors to Physical Resources	Air Quality: None Habitats: None	Sediments and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	Mid-Frequency: MF10	High-Frequency: HF9	Acoustic Modems: M3
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar		Physical Disturbance and Strike: (Section 5.3.4) Vessel movement
Assumptions Used for Analysis	None		

A.2.6.7 Radar and Other System Testing

Other Testing			
Radar and Other System Testing			
Short Description	Testing may include use of military or commercial radar, communication systems (or simulators), or high-energy lasers. Testing may occur aboard a ship, helicopter, manned or unmanned underwater vehicle against drones, small boats, or other targets.		Typical Duration
			12 hours per day over a 7-day period
Long Description	At-sea testing may include use of military or commercial radar, communication systems (including laser-based optical communication systems), or high-energy laser weapons. Air and surface targets used in testing may include unmanned aerial vehicles, small craft (e.g., floating cardboard triwalls, towed, anchored, or self-propelled vessels) or shore-based platforms. Testing of laser-based optical communication systems may include air and subsurface transmissions with targets that include stationary/moored platforms, manned or unmanned underwater vehicles, and unmanned aerial vehicles. High-energy laser weapons testing may include tracking, scoring, and neutralization runs with single or multiple targets. No subsurface transmission will occur during high-energy laser weapons testing. Occurs year round, day and night.		
Typical Components	Platforms: Surface ships, rotary-wing aircraft, unmanned aerial vehicles, manned and unmanned underwater vehicles, submerged vehicles, stationary/moored platforms, support craft, shore-based facility Targets: Aerial targets, surface targets, sub-surface targets System being Trained/Tested: Radar, high-energy laser weapons, laser-based optical communication systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety High-energy laser safety Unmanned aircraft system procedures Unmanned surface vehicle and unmanned underwater vehicle Procedures Towed in-water device safety Target deployment and retrieval safety	Typical Locations	
		Offshore Area Offshore Area	Inland Waters/Pierside Dabob Bay Range Complex NBK Bremerton
Stressors to Biological Resources	Acoustic: Aircraft noise Vessel noise Explosives: None	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials Vessels and in-water devices Ingestion: None	Energy: In-air electromagnetic devices High-energy lasers Entanglement: Decelerators/parachutes
	Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: Physical disturbance and strike – military expended material	Sediments and Water Quality: Metals Other materials

Other Testing			
Radar and Other System Testing			
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Accessibility Airborne acoustics	Public Health and Safety: Physical interactions In-air energy In-water energy
Military Expended Material	Ingestible Material: None Non-Ingestible Material: Air targets – expended drone, large parachutes mobile surface target	Military Recoverable Material	Stationary surface target
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement Towed in-water devices		
Assumptions Used for Analysis	High-energy laser weapons would be tested only in the Offshore Area. Laser-based optical communication systems would be tested in the Dabob Bay Range Complex or the Offshore Area (including the Quinault Range Site).		

A.2.6.8 Semi-Stationary Equipment Testing

Other Testing				
Semi-Stationary Equipment Testing				
Short Description	Semi-stationary equipment (e.g., hydrophones) is deployed to determine functionality.		Typical Duration	
			From 10 minutes to multiple days	
Long Description	Semi-stationary equipment calibration and testing is performed from a fixed site, suspended over the side of a boat, moored to the bottom, suspended in the water column, or on the surface. Examples of semi-stationary equipment include moored hydrophones (i.e., devices to listen to underwater sound), line arrays (i.e., multiple hydrophones) deployed on the ocean bottom, acoustic countermeasures, a moored oceanographic sensor that moves vertically through the water column, sonobuoys, and transducers. Some units produce sound in the water (e.g., acoustic countermeasures), while others only listen (e.g., passive sonobuoys, vector sensors that measure particle motion). Some tests could require deployment in an area that provides opportunistic data collection (e.g., placing a hydrophone near a shipping lane to collect shipping noise data), or with specific geographic or oceanographic requirements. Occurs year round, day and night.			
Typical Components	Platforms: Moored platform, shore-based facility, submarines, support craft Targets: None System being Trained/Tested: Acoustic modems, sonar systems, underwater communications systems			
Standard Operating Procedures (Section 2.3.3)	Vessel safety		Typical Locations	
			Western Behm Canal SEAFAC	Inland Waters Dabob Bay Range Complex Keyport Range Site
Stressors to Biological Resources	Acoustic: Sonar and other transducers Vessel noise Explosives: None	Physical Disturbance and Strike: Vessels and in-water devices Ingestion: None	Energy: None Entanglement: Wires and cables	
Stressors to Physical Resources	Air Quality: Criteria air pollutants Habitats: None	Sediments and Water Quality: Metals Other materials		
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: Accessibility Physical disturbance and strike	Public Health and Safety: Physical interactions In-water energy	
Military Expended Material	Ingestible Material: None Non-Ingestible Material: Fiber optic cable		Military Recoverable Material	Anchors, canister
Sonar and Other Transducer Bins	Low-Frequency: LF4	Mid-Frequency: MF9	High-Frequency: HF6 HF9	Very High Frequency: VHF2
In-Water Explosive Bins	None			

Other Testing	
Semi-Stationary Equipment Testing	
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active sonar Physical Disturbance and Strike: (Section 5.3.4) Vessel movement
Assumptions Used for Analysis	<p>Anchored equipment and temporary mooring buoys may be deployed for the duration of a single test event or may be left in place for up to 12 months to support multiple events; all devices and their anchors are recovered. Bottom anchors are not deployed in known sensitive shallow water benthic habitats such as eelgrass beds.</p> <p>Acoustic test facility testing would occur at the Keyport Pier.</p>

A.2.6.9 Simulant Testing

Other Testing			
Simulant Testing			
Short Description	The capability of surface ship defense systems to detect and protect against chemical and biological attacks are tested.		Typical Duration
			3 days
Long Description	<p>The capabilities of surface ship defense systems to detect and protect in the event of chemical and biological attacks are tested. Testing involves the deployment of harmless compounds (i.e., simulants) as substitutes for chemical and biological warfare agents. Because chemical and biological warfare agents remain a security threat, the Department of Defense uses relatively harmless compounds (simulants) as substitutes for chemical and biological warfare agents to test equipment intended to detect their presence. Chemical and biological agent detectors monitor for the presence of chemical and biological warfare agents and protect military personnel and civilians from the threat of exposure to these agents. The simulants trigger a response by sensors in the detection equipment without irritating or injuring personnel involved in testing detectors. Navy Chemical Agent Simulant 82 (commonly referred to as NCAS-82), glacial acetic acid, triethyl phosphate, sulfur hexafluoride, 1,1,1,2 tetrafluoroethane (a refrigerant commonly known as R134), and 1,1-difluoroethane (a refrigerant commonly known as R-152a) are also referred to as gaseous simulants and can be released in smaller quantities in conjunction with glacial acetic acid or triethyl phosphate releases. The types of biological simulants that may be used include spore-forming bacteria, non-spore-forming bacteria, ovalbumin, bacteriophage MS2, and Aspergillus niger. The simulants are generally dispersed by hand at the detector or by aircraft as a fine mist or aerosol. Occurs year round, daytime only.</p>		
Typical Components	<p>Platforms: Fixed-wing aircraft, rotary-wing aircraft, surface combatant Targets: None System being Trained/Tested: None</p>		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	<p>Acoustic: Aircraft noise Vessel noise Explosives: None</p>	<p>Physical Disturbance and Strike: Aircraft and aerial targets Vessels and in-water devices Ingestion: None</p>	<p>Energy: In-air electromagnetic devices Entanglement: None</p>
Stressors to Physical Resources	<p>Air Quality: Criteria air pollutants Habitats: None</p>	<p>Sediments and Water Quality: Chemicals Other materials</p>	
Stressors to Human Resources	<p>Cultural Resources: None</p>	<p>Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike</p>	<p>Public Health and Safety: Physical interactions In-air energy</p>

Other Testing			
Simulant Testing			
Military Expended Material	Ingestible Material: None Non-Ingestible Material: None	Military Recoverable Material	None
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Physical Disturbance and Strike: <i>(Section 5.3.4)</i> Vessel movement		
Assumptions Used for Analysis	<p>All chemical simulants have low toxicity to humans and the environment. Examples of chemical simulants include glacial acetic acid and triethyl phosphate.</p> <p>All biological simulants are considered to be Biosafety Level 1 organisms. Examples of biological simulants are spore-forming bacteria, non-spore-forming bacteria, the protein ovalbumin, MS2 bacteriophages, and the fungus <i>Aspergillus niger</i>.</p> <p>Simulant testing will occur at least 3 NM from shore.</p>		

A.3 NAVAL AIR SYSTEMS COMMAND TESTING ACTIVITIES

A.3.1 ANTI-SUBMARINE WARFARE

A.3.1.1 Anti-Submarine Warfare Tracking Test – Maritime Patrol Aircraft

Anti-Submarine Warfare			
Anti-Submarine Warfare Tracking Test—Maritime Patrol Aircraft			
Short Description	The test evaluates the sensors and systems used by maritime patrol aircraft to detect and track submarines and to ensure that aircraft systems used to deploy the tracking systems perform to specifications and meet operational requirements.		Typical Duration
			4–8 flight hours per event
Long Description	Similar to an anti-submarine warfare (ASW) tracking exercise-maritime patrol aircraft, an anti-submarine warfare tracking test—maritime patrol aircraft evaluates the sensors and systems used to detect and track submarines and to ensure that platform systems used to deploy the tracking systems perform to specifications and meet operational requirements. P-3 or P-8 fixed-wing aircraft conduct anti-submarine warfare testing using non-impulsive sonobuoys (e.g., AN/SSQ-62 DICASS, AN/AQS-125 MAC, AN/AQS-125 HDC, MK-84 ESUS) and passive sonobuoys (e.g., AN/SSQ-53 DIFAR). If available, tests may be conducted using an actual submarine as the target. This activity would be conducted in deep (typically beyond 100 ft.) waters. Some anti-submarine warfare maritime patrol aircraft tracking tests could be conducted as part of a coordinated event with fleet training activities. Occurs year round, day and night.		
Typical Components	Platforms: Fixed-wing aircraft Targets: Submarines Systems being Trained/Tested: Sonobuoys/sonobuoy launching systems, data transmission systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Sonar and other transducers Aircraft noise	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials	Energy: In-air electromagnetic devices
	Explosives: None	Ingestion: Military expended materials – other than munitions	Entanglement: Wires and cables Decelerators/parachutes
Stressors to Physical Resources	Habitats: Physical disturbance and strike – military expended material	Air Quality: Criteria Air Pollutants	
		Sediment and Water Quality: Metals Other Materials	
Stressors to Human Resources	Cultural Resources: Physical disturbance and strike	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical interactions

Anti-Submarine Warfare			
Anti-Submarine Warfare Tracking Test—Maritime Patrol Aircraft			
Military Expended Material	Ingestible Material: Small decelerators/parachutes Non-Ingestible Material: Sonobuoys, sonobuoy wires	Military Recoverable Material	None
Sonar and Other Transducer Bins	Mid-Frequency: MF5 MF6 Anti-Submarine Warfare: ASW2 ASW5		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	Acoustic Stressors: (Section 5.3.2) Active Sonar Physical Disturbance and Strike: (Section 5.3.4) Vessel movement		
Assumptions Used for Analysis	Assume one decelerator/parachute per sonobuoy For air quality analysis: - 1 fixed-wing patrol aircraft - Average 8 hours per event		

A.3.1.2 Anti-Submarine Warfare Tracking Test – Maritime Patrol Aircraft (SUS)

Anti-Submarine Warfare			
Anti-Submarine Warfare Tracking Test—Maritime Patrol Aircraft (SUS)			
Short Description	This test evaluates the sensors and systems used by maritime patrol aircraft to communicate with submarines using any of the family of signal underwater sound (SUS) sonobuoy systems.		Typical Duration
			8 flight hours per event
Long Description	Similar to an ASW tracking exercise-maritime patrol aircraft, an anti-submarine warfare tracking test—maritime patrol aircraft (SUS) evaluates the sensors and systems used to detect and track submarines and to ensure that platform systems used to deploy the tracking systems perform to specifications and meet operational requirements. P-3 or P-8 fixed-wing aircraft conduct anti-submarine warfare testing using explosive (SUS) sonobuoys (i.e., MK-61 SUS, MK-64 SUS, and MK-82 SUS) and passive sonobuoys (e.g., AN/SSQ-53 DIFAR). If available, tests may be conducted using an actual submarine as the target. This activity would be conducted in deep (typically beyond 100 ft.) waters. Some anti-submarine warfare maritime patrol aircraft tracking tests could be conducted as part of a coordinated event with fleet training activities. Occurs year round, day and night.		
Typical Components	Platforms: Fixed-wing aircraft Targets: Submarines Systems being Trained/Tested: Sonobuoys/sonobuoy launching systems, data transmission systems		
Standard Operating Procedures (Section 2.3.3)	Vessel safety Aircraft safety	Typical Locations	
		Offshore Area Offshore Area	
Stressors to Biological Resources	Acoustic: Aircraft noise	Physical Disturbance and Strike: Aircraft and aerial targets Military expended materials	Energy: In-air electromagnetic devices
	Explosive: In-water explosions	Ingestion: Military expended materials – other than munitions	Entanglement: Wires and cables Decelerators/parachutes
Stressors to Physical Resources	Air Quality: Criteria Air Pollutants	Sediment and Water Quality: Explosives Chemicals Metals Other Materials	
	Cultural Resources: Explosives Physical disturbance	Socioeconomic Resources: Accessibility Airborne acoustics Physical disturbance and strike	Public Health and Safety: In-water energy Physical Interactions
Military Expended Material	Ingestible Material: Small decelerators/parachutes, sonobuoy fragments Non-Ingestible Material: Sonobuoys, sonobuoy wires	Military Recoverable Material	None

Anti-Submarine Warfare	
Anti-Submarine Warfare Tracking Test—Maritime Patrol Aircraft (SUS)	
Sonar and Other Transducer Bins	None
In-Water Explosive Bins	E1 E3
Procedural Mitigation Measures	<div> <div> Explosive Stressors: (Section 5.3.3) Explosive Sonobuoys </div> <div> Physical Disturbance and Strike: (Section 5.3.4) Vessel movement </div> </div>
Assumptions Used for Analysis	<p>Assume one decelerator/parachute per sonobuoy</p> <p>Explosive sonobuoy testing occurs at least 50 NM from shore and does not occur within the boundaries of the Olympic Coast National Marine Sanctuary.</p> <p>For air quality analysis:</p> <ul style="list-style-type: none"> - 1 fixed-wing patrol aircraft - Average 8 hours per event

A.3.2 OTHER TESTING

A.3.2.1 Intelligence, Surveillance, Reconnaissance/Electronic Warfare Triton Testing

Electronic Warfare (EW)			
ISR/EW Triton Testing			
Short Description	ISR/EW Triton Testing will evaluate the sensors and communication systems on board the MQ-4C Triton unmanned aerial system.		Typical Duration
			Up to 30 flight hours per event
Long Description	The MQ-4C Triton unmanned aerial system will fill a complementary role to the P-8A fixed-wing aircraft, providing maritime intelligence, surveillance and reconnaissance (ISR) and Electronic Warfare (EW) support to the Navy. This MQ-4C Triton will be equipped with electro-optical and infrared sensors that allow it to conduct high-altitude surveillance operations. ISR/EW Triton Testing will evaluate the sensors and communication systems on board the MQ-4C Triton unmanned aerial system at a high altitude (50,000 feet above sea level) within the NWTT Study Area. Occurs year round, day and night.		
Typical Components	Platforms: Fixed-wing aircraft Targets: None Systems being Trained/Tested: Unmanned aerial systems, data transmission systems		
Standard Operating Procedures <i>(Section 2.3.3)</i>	Aircraft safety Unmanned aircraft system procedures	Typical Locations	
		Offshore Area Offshore Area	Inland Waters EW Range
Stressors to Biological Resources	Acoustic/Explosive: Aircraft noise	Physical Disturbance and Strike: Aircraft and aerial targets	Energy: In-air electromagnetic devices
		Ingestion: None	Entanglement: None
Stressors to Physical Resources	Air Quality: None	Sediment and Water Quality: None	
Stressors to Human Resources	Cultural Resources: None	Socioeconomic Resources: None	Public Health and Safety: None
Military Expended Material	Ingestible Material: None	Military Recoverable Material	None
	Non-Ingestible Material: None		
Sonar and Other Transducer Bins	None		
In-Water Explosive Bins	None		
Procedural Mitigation Measures	None		

Electronic Warfare (EW)	
ISR/EW Triton Testing	
Assumptions Used for Analysis	None

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Appendix B Activity Stressor Matrices

**Supplemental Environmental Impact Statement/
Overseas Environmental Impact Statement
Northwest Training and Testing**

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APPENDIX B Activity Stressor Matrices

This appendix contains three matrices. The first two matrices in this appendix list the training and testing activities that occur in the Northwest Training and Testing Study Area and their associated stressors. The third matrix lists the resources analyzed in this Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement and the stressors they are potentially affected by.

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Table B-1: Stressors by Training Activity

Northwest Training Activity	Biological Resources																		Physical Resources ¹					Human Resources ²								
	Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors			Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors			Cultural Resources Stressors	Socioeconomic Resources Stressors			Public Health & Safety Stressors					
	Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	In-Air Explosions	In-Water Explosions	In-Air Electromagnetic Devices	In-Water Electromagnetic Devices	High-Energy Lasers	Vessels & In-water Devices	Aircraft & Aerial Targets	Military Expended Material	Seafloor Devices	Wires & Cables	Decelerators/Parachutes	Biodegradable Polymer ³	Military Expended Materials – Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Explosives	Metals	Chemicals	Other Materials ⁴	Explosives ⁵	Physical Disturbance & Strike ⁶	Accessibility ⁷	Airborne Acoustics ⁸	Physical Disturbance & Strike ⁶	In-Water Energy ⁹	In-Air Energy ¹⁰	Physical Interactions ¹¹	
AIR WARFARE																																
Air Combat Maneuver			✓				✓				✓	✓						✓	✓		✓			✓			✓	✓				
Gunnery Exercise (Surface-to-Air)		✓	✓	✓	✓		✓			✓	✓	✓					✓		✓	✓	✓				✓	✓	✓	✓			✓	
Missile Exercise (Air-to-Air)		✓	✓	✓	✓		✓			✓	✓	✓			✓		✓	✓	✓	✓	✓			✓	✓	✓	✓				✓	
Missile Exercise (Surface-to-Air)		✓	✓	✓	✓		✓			✓	✓	✓			✓		✓	✓	✓	✓	✓			✓	✓	✓	✓				✓	
ANTI-SUBMARINE WARFARE																																
Torpedo Exercise – Submarine	✓	✓								✓		✓		✓							✓				✓			✓	✓		✓	
Tracking Exercise – Helicopter	✓	✓	✓				✓			✓	✓	✓		✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓		✓	
Tracking Exercise – Maritime Patrol Aircraft	✓	✓	✓				✓			✓	✓	✓		✓	✓		✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓		✓	
Tracking Exercise – Ship	✓	✓					✓			✓		✓		✓					✓						✓	✓	✓	✓	✓		✓	
Tracking Exercise – Submarine	✓	✓								✓		✓									✓				✓			✓	✓		✓	
ELECTRONIC WARFARE																																
Electronic Warfare Training – Aircraft			✓				✓				✓							✓	✓								✓	✓	✓			✓
Electronic Warfare Training – Ship		✓					✓			✓									✓							✓		✓				✓
MINE WARFARE																																
Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises	✓	✓	✓				✓	✓		✓	✓		✓						✓	✓				✓	✓	✓	✓	✓	✓			✓
Mine Neutralization – Explosive Ordnance Disposal Training		✓				✓				✓		✓	✓				✓	✓	✓	✓				✓	✓	✓	✓	✓	✓			✓
SURFACE WARFARE																																
Bombing Exercise Air-to-Surface		✓	✓			✓	✓			✓	✓	✓					✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓
Gunnery Exercise Surface-to-Surface – Ship		✓		✓	✓	✓	✓			✓		✓					✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓			✓

Table B-1: Stressors by Training Activity (continued)

Northwest Training Activity	Biological Resources																Physical Resources ¹					Human Resources ²										
	Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors			Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors				Cultural Resources Stressors	Socioeconomic Resources Stressors			Public Health & Safety Stressors				
	Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	In-Air Explosions	In-Water Explosions	In-Air Electromagnetic Devices	In-Water Electromagnetic Devices	High-Energy Lasers	Vessels & In-water Devices	Aircraft & Aerial Targets	Military Expended Material	Seafloor Devices	Wires & Cables	Decelerators/Parachutes	Biodegradable Polymer ³	Military Expended Materials – Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Explosives	Metals	Chemicals	Other Materials ⁴	Explosives ⁵	Physical Disturbance & Strike ⁶	Accessibility ⁷	Airborne Acoustics ⁸	Physical Disturbance & Strike ⁶	In-Water Energy ⁹	In-Air Energy ¹⁰	Physical Interactions ¹¹	
SURFACE WARFARE (Continued)																																
Missile Exercise Air-to-Surface		✓	✓	✓		✓	✓			✓	✓	✓					✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
OTHER TRAINING																																
Intelligence, Surveillance, Reconnaissance		✓	✓				✓			✓	✓	✓		✓	✓			✓	✓													
Maritime Security Operations		✓	✓	✓			✓			✓	✓	✓					✓		✓		✓					✓	✓	✓			✓	
Personnel Insertion/ Extraction – Non-Submersible		✓	✓							✓	✓								✓													
Precision Anchoring		✓					✓			✓			✓						✓						✓	✓					✓	
Search and Rescue		✓	✓				✓			✓	✓								✓									✓	✓		✓	
Small Boat Attack Exercise		✓		✓						✓		✓					✓		✓		✓				✓	✓	✓	✓			✓	
Submarine Sonar Maintenance	✓	✓								✓																		✓				
Surface Ship Sonar Maintenance	✓	✓				✓	✓			✓																		✓				
Unmanned Underwater Vehicle Training	✓	✓								✓		✓																				

¹ Habitat stressors are included under Biological Resources

² Area of interest is U.S. Territorial Waters (seaward of the mean high water line to 12 nautical miles and any inshore waters)

³ Testing activities only

⁴ Other Materials include marine markers and flares, chaff, towed and stationary targets, and miscellaneous components of other expended objects

⁵ Vibration and shock waves from underwater explosions

⁶ Physical disturbance and strike stressors resulting from in-water devices, military expended materials, seafloor devices, and vibration from sonic booms in U.S. territorial waters (seaward of the mean high water line to 12 nautical miles)

⁷ Availability of access on the ocean and in the air

⁸ Loud noises from weapons firing, in-air explosions, and sonic booms

⁹ Active sonar, underwater explosions, vessel movements, mine warfare training devices, and unmanned underwater systems

¹⁰ Sources or electromagnetic energy and lasers

¹¹ Interaction of Navy aircraft, vessels, and equipment with general public

Note: A check indicates events that take place for Alternative 1 and Alternative 2.

Table B-2: Stressors by Testing Activity

Northwest Testing Activity	Biological Resources																		Physical Resources ¹					Human Resources ²								
	Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors			Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors				Cultural Resources Stressors	Socioeconomic Resources Stressors			Public Health & Safety Stressors				
	Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	In-Air Explosions	In-Water Explosions	In-Air Electromagnetic Devices	In-Water Electromagnetic Devices	High-Energy Lasers	Vessels & In-water Devices	Aircraft & Aerial Targets	Military Expended Material	Seafloor Devices	Wires & Cables	Decelerators/Parachutes	Biodegradable Polymer ³	Military Expended Materials – Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Explosives	Metals	Chemicals	Other Materials ⁴	Explosives ⁵	Physical Disturbance & Strike ⁶	Accessibility ⁷	Airborne Acoustics ⁸	Physical Disturbance & Strike ⁶	In-Water Energy ⁹	In-Air Energy ¹⁰	Physical Interactions ¹¹	
NAVAL SEA SYSTEMS COMMAND																																
ANTI-SUBMARINE WARFARE																																
Anti-Submarine Warfare Testing	✓	✓	✓							✓	✓	✓		✓	✓			✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
At-Sea Sonar Testing	✓	✓					✓			✓		✓			✓			✓	✓		✓	✓	✓			✓		✓	✓	✓	✓	✓
Countermeasure Testing	✓	✓					✓			✓		✓		✓		✓		✓	✓		✓	✓	✓		✓	✓		✓	✓	✓	✓	✓
Pierside-Sonar Testing	✓																												✓			
Submarine Sonar Testing/Maintenance	✓	✓								✓																		✓	✓		✓	
Torpedo (Explosive) Testing	✓	✓	✓			✓	✓			✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓
Torpedo (Non-Explosive) Testing	✓	✓	✓				✓			✓	✓	✓		✓	✓			✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
MINE WARFARE																																
Mine Countermeasure and Neutralization Testing	✓	✓	✓			✓	✓			✓	✓	✓	✓	✓			✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mine Detection and Classification Testing	✓	✓								✓	✓		✓						✓		✓				✓	✓	✓		✓	✓	✓	✓
SURFACE WARFARE																																
Kinetic Energy Weapon Testing		✓	✓	✓	✓		✓			✓	✓	✓			✓		✓	✓	✓		✓				✓	✓	✓	✓		✓	✓	✓
UNMANNED SYSTEMS																																
Unmanned Aerial System Testing		✓								✓	✓								✓						✓	✓	✓	✓				✓
Unmanned Surface Vehicle System Testing		✓								✓									✓						✓	✓		✓		✓	✓	✓
Unmanned Underwater Vehicle Testing	✓	✓					✓			✓	✓	✓	✓	✓	✓			✓	✓			✓	✓		✓	✓		✓	✓	✓	✓	✓
VESSEL EVALUATION																																
Propulsion Testing		✓								✓									✓							✓		✓				✓
Undersea Warfare Testing	✓	✓	✓							✓	✓	✓		✓	✓			✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓

Table B-2: Stressors by Testing Activity (continued)

Northwest Testing Activity	Biological Resources																		Physical Resources ¹					Human Resources ²								
	Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors			Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors			Cultural Resources Stressors	Socioeconomic Resources Stressors			Public Health & Safety Stressors					
	Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	In-Air Explosions	In-Water Explosions	In-Air Electromagnetic Devices	In-Water Electromagnetic Devices	High-Energy Lasers	Vessels & In-water Devices	Aircraft & Aerial Targets	Military Expended Material	Seafloor Devices	Wires & Cables	Decelerators/Parachutes	Biodegradable Polymer ³	Military Expended Materials – Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Explosives	Metals	Chemicals	Other Materials ⁴	Explosives ⁵	Physical Disturbance & Strike ⁶	Accessibility ⁷	Airborne Acoustics ⁸	Physical Disturbance & Strike ⁶	In-Water Energy ⁹	In-Air Energy ¹⁰	Physical Interactions ¹¹	
VESSEL EVALUATION (CONTINUED)																																
Vessel Signature Evaluation		✓					✓			✓									✓						✓	✓		✓		✓	✓	
OTHER TESTING																																
Acoustic and Oceanographic Research	✓	✓					✓			✓			✓						✓				✓		✓	✓		✓	✓	✓	✓	
Acoustic Component Testing	✓	✓								✓	✓								✓						✓	✓		✓	✓		✓	
Cold Water Support	✓	✓								✓			✓						✓						✓	✓				✓	✓	
Hydrodynamic and Maneuverability Testing		✓								✓																✓		✓			✓	
Non-Acoustic Component Testing		✓					✓			✓	✓		✓	✓					✓						✓	✓	✓	✓		✓	✓	
Post-Refit Sea Trial	✓																									✓		✓	✓		✓	
Radar and Other System Testing		✓	✓				✓		✓	✓	✓				✓				✓		✓		✓			✓	✓		✓	✓	✓	
Semi-Stationary Equipment Testing	✓	✓								✓				✓					✓		✓		✓			✓		✓	✓		✓	
Simulant Testing		✓	✓				✓			✓	✓								✓			✓	✓			✓	✓	✓		✓	✓	
NAVAL AIR SYSTEMS COMMAND																																
ANTI-SUBMARINE WARFARE																																
Tracking Test – Maritime Patrol Aircraft	✓		✓				✓				✓	✓		✓	✓			✓	✓		✓		✓		✓	✓	✓	✓	✓		✓	
Tracking Test – Maritime Patrol Aircraft (SUS)			✓			✓	✓				✓	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	

Table B-2: Stressors by Testing Activity (continued)

Northwest Testing Activity	Biological Resources																Physical Resources ¹					Human Resources ²										
	Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors			Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors				Cultural Resources Stressors	Socioeconomic Resources Stressors			Public Health & Safety Stressors				
	Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	In-Air Explosions	In-Water Explosions	In-Air Electromagnetic Devices	In-Water Electromagnetic Devices	High-Energy Lasers	Vessels & In-water Devices	Aircraft & Aerial Targets	Military Expended Material	Seafloor Devices	Wires & Cables	Decelerators/Parachutes	Biodegradable Polymer ³	Military Expended Materials – Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Explosives	Metals	Chemicals	Other Materials ⁴	Explosives ⁵	Physical Disturbance & Strike ⁶	Accessibility ⁷	Airborne Acoustics ⁸	Physical Disturbance & Strike ⁶	In-Water Energy ⁹	In-Air Energy ¹⁰	Physical Interactions ¹¹	
OTHER TESTING																																
Intelligence, Surveillance, Reconnaissance (ISR)/Electronic Warfare (EW) Triton Testing			✓				✓				✓																					

¹ Habitat stressors are included under Biological Resources

² Area of interest is U.S. Territorial Waters (seaward of the mean high water line to 12 nautical miles and any inshore waters)

³ Testing activities only

⁴ Other Materials include marine markers and flares, chaff, towed and stationary targets, and miscellaneous components of other expended objects

⁵ Vibration and shock waves from underwater explosions

⁶ Physical disturbance and strike stressors resulting from in-water devices, military expended materials, seafloor devices, and vibration from sonic booms in U.S. territorial waters (seaward of the mean high water line to 12 nautical miles)

⁷ Availability of access on the ocean and in the air

⁸ Loud noises from weapons firing, in-air explosions, and sonic booms

⁹ Active sonar, underwater explosions, vessel movements, mine warfare training devices, and unmanned underwater systems

¹⁰ Sources or electromagnetic energy and lasers

¹¹ Interaction of Navy aircraft, vessels, and equipment with general public

Note: A check indicates events that take place for Alternative 1 and Alternative 2.

Table B-3: Stressors by Resource

Stressors vs. Resources		Biological Resources																Physical Resources ¹					Human Resources ²									
		Acoustic Stressors				Explosive Stressors		Energy Stressors			Physical Disturbance and Strike Stressors				Entanglement Stressors			Ingestion Stressors		Air Quality Stressors	Sediments and Water Quality Stressors				Cultural Resources Stressors		Socioeconomic Resources Stressors			Public Health & Safety Stressors		
		Sonar & Other Transducers	Vessel Noise	Aircraft Noise	Weapons Noise	In-Air Explosions	In-Water Explosions	In-Air Electromagnetic Devices	In-Water Electromagnetic Devices	High-Energy Lasers	Vessels & In-water Devices	Aircraft & Aerial Targets	Military Expended Material	Seafloor Devices	Wires & Cables	Decelerators/Parachutes	Biodegradable Polymer ³	Military Expended Materials – Munitions	Military Expended Materials – Other than Munitions	Criteria Air Pollutants	Explosives	Metals	Chemicals	Other Materials ⁴	Explosives ⁵	Physical Disturbance & Strike ⁶	Accessibility ⁷	Airborne Acoustics ⁸	Physical Disturbance & Strike ⁶	In-Water Energy ⁹	In-Air Energy ¹⁰	Physical Interactions ¹¹
Physical	Sediments and Water Quality						✓														✓	✓	✓	✓								
	Air Quality					✓												✓	✓													
Biological	Marine Habitats						✓				✓		✓																			
	Marine Mammals	✓	✓	✓	✓		✓		✓	✓	✓		✓	✓	✓	✓	✓				✓	✓	✓	✓								
	Sea Turtles	✓	✓	✓	✓		✓		✓	✓	✓		✓	✓	✓	✓	✓				✓	✓	✓	✓								
	Birds	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓													
	Marine Vegetation						✓			✓		✓	✓								✓	✓	✓	✓								
	Marine Invertebrates	✓					✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓								
	Fishes	✓	✓		✓		✓		✓	✓		✓	✓	✓			✓	✓				✓	✓	✓	✓							
Human	Cultural Resources			✓			✓				✓	✓													✓	✓						
	American Indian and Alaskan Traditional Resources																															
	Socioeconomic Resources and Environmental Justice	✓	✓	✓	✓		✓			✓	✓	✓		✓							✓	✓	✓	✓			✓	✓	✓			
	Public Health and Safety	✓			✓		✓			✓	✓	✓	✓																	✓	✓	✓

¹ Habitat stressors are included under Biological Resources

² Area of interest is U.S. Territorial Waters (seaward of the mean high water line to 12 nautical miles and any inshore waters)

³ Testing activities only

⁴ Other Materials include marine markers and flares, chaff, towed and stationary targets, and miscellaneous components of other expended objects

⁵ Vibration and shock waves from underwater explosions

⁶ Physical disturbance and strike stressors resulting from in-water devices, military expended materials, seafloor devices, and vibration from sonic booms in U.S. territorial waters (seaward of the mean high water line to 12 nautical miles)

⁷ Availability of access on the ocean and in the air

⁸ Loud noises from weapons firing, in-air explosions, and sonic booms

⁹ Active sonar, underwater explosions, vessel movements, mine warfare training devices, and unmanned underwater systems

¹⁰ Sources or electromagnetic energy and lasers

¹¹ Interaction of Navy aircraft, vessels, and equipment with general public

Note: A check indicates stressors analyzed for each resource.

Appendix C Air Quality Example Calculations

Supplemental Environmental Impact Statement/

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Northwest Training and Testing

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Appendix C Air Quality Example Calculations

This appendix discusses emission factor development, calculations, and assumptions used in the air quality analyses presented in Section 3.2 (Air Quality) of the Northwest Training and Testing (NWTT) Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (Supplemental).

C.1 Surface Operations Emissions

Surface operations are activities associated with vessel movements. Fleet training activities use a variety of marine vessels, including cruisers, destroyers, frigates, carriers, submarines, amphibious vessels, and small boats. Testing activities use a variety of marine vessels, including various testing support vessels, work boats, torpedo recovery vessels, unmanned surface vehicles, and small boats. These vessels use diverse propulsion methods, including marine outboard engines, diesel engines, and gas turbines.

C.1.1 Marine Outboard Engines

Emission factors for small surface craft involved in amphibious training and testing activities were obtained from the Navy and Military Sealift Command Marine Engine Fuel Consumption & Emission Calculator database. Emissions for surface craft using outboard engines were calculated using Navy and Military Sealift Command emission factors, which are provided in terms of Vessel Emission Total per hour and multiplied by the hours of operation.

$$\text{Emissions} = \text{HR/YR} \times \text{EF}$$

Where:

Emissions = surface craft emissions (*pounds [lb.]/yr*)

HR/YR = hours per year per vessel per activity (*hr/yr*)

EF = emission factor for specific vessel (*lb./hr*)

To obtain the total criteria pollutant emissions for the Proposed Action, emissions were calculated for each training or testing activity, type of surface vessel, and criteria pollutant. These individual estimates of emissions, in units of tons per year, were then summed by criteria pollutant to obtain the aggregate emissions for surface vessel emissions activities.

C.1.2 Ship Marine Engines

Large vessel emissions were calculated in a similar fashion using emission factors from the Naval Sea Systems Command Navy and Military Sealift Command Marine Engine Fuel Consumption and Emission Calculator for the propulsion system and the supplemental ship service generator(s).

Ship engine emission factors were multiplied by the engine horsepower and annual hours of operation to calculate the pounds of pollutant emissions per year. This value was then converted to a tons-per-year value for comparison with the Study Area total summed emissions on an individual pollutant basis.

C.2 Air Operations Emissions

Fleet training and Naval Air Systems Command testing use various aircraft, including the E/A-18G, P-8, EP-3, and SH-60B. Aircraft operations of concern are those that occur from ground level up to 3,000 feet (ft.) above ground level (AGL). The 3,000 ft. AGL altitude was assumed to be the ceiling of the mixing zone (known as the atmospheric mixing height) above which any pollutant generated would not contribute to increased pollutant concentrations at ground level. Pollutants emitted by aircraft above 3,000 ft. AGL are excluded from the analysis of compliance with National Ambient Air Quality Standards. The pollutant emission rate is a function of the aircraft engine's fuel flow rate and efficiency. Emissions for one complete training activity for a particular aircraft are calculated by knowing the specific engine pollutant emission factors for each mode of operation.

For this Supplemental, emission factors for most military engines were obtained from the Navy's Aircraft Environmental Support Office memoranda. For those aircraft for which engine data were unavailable from Aircraft Environmental Support Office, emission factors from Air Emissions Guide for Air Force Mobile Source, July 2016, were used. Using these data, as well as number of sorties, pollutant emissions for each aircraft were calculated by applying the equation below.

$$\text{Emissions} = N \times FF \times EF \times ENG \times CF$$

Where:

Emissions = annual aircraft emissions (pounds [lb.]/yr.)

N = Hours of operation of aircraft operations per year for each type of aircraft per activity (hr./yr.)

FF = fuel flow at a specified power setting (gal./hr./engine)

EF = pollutant emission factor by engine type and power setting (lb./1,000 gal. of fuel used)

ENG = number of engines per aircraft

CF = conversion factor (0.001)

C.3 Ordnance and Munitions Emissions

Available emissions factors (AP-42, *Compilation of Air Pollutant Emission Factors*) were used. If an AP-42 factor was not available, other references, including Chemical Products of Underwater Explosions, 1980, were used to estimate the emissions. These factors were then multiplied by the net weight of the explosive and the number of items that were used per year. This calculation provides estimates of annual emissions.

$$\text{Emissions} = EXP/YR \times EF \times \text{Net Wt}$$

Where:

Emissions = annual ordnance emissions

EXP/YR = number of explosives, propellants, and pyrotechnics items used per year

EF = air pollutant emissions factor per item

Net Wt = net weight of explosive, propellant, or pyrotechnics per ordnance item

C.4 Emissions Estimates Spreadsheets

Tables C-1 through C-7 provide example emissions summaries for aircraft, vessels, and ordnance for the Baseline and Alternatives 1 and 2.

C.5 Example Record of Non-Applicability

This appendix provides an example of the documentation that will be prepared for each affected Air Quality Control Region potentially impacted by the Proposed Action. The example document includes a Record of Non-Applicability memorandum, a standard form to show Clean Air Act conformity, and sample conformity analyses.

MEMORANDUM FOR THE RECORD

From: _____

Subj: Conformity Analysis for Northwest Training and Testing (NWTT) Environmental Impact Statement/Overseas Environmental Impact Statement – Operations in State of Washington Waters

Ref: (a) 40 CFR, Part 93, Subpart B: Determining Conformity of General Federal Actions to State or Federal Implementation Plans

Encl: (1) Record of Non-Applicability for Northwest Training and Testing in State of Washington Waters

1. Enclosure (1) is a Record of Non-Applicability for those activities associated with Pacific Fleet training and testing activities that are expected to occur annually in State of Washington waters. The Proposed Action would have no new emissions of criteria air pollutants in air quality non-attainment or maintenance areas.

2. If there are any questions or if additional information is needed, please call _____ at _____.

Name

Title

Figure C-1: Sample Record of Non-Applicability Form for Northwest Washington Air Quality Control Region

NAVY RECORD OF NON-APPLICABILITY FOR CLEAN AIR ACT CONFORMITY

The Proposed Action falls under the Record of Non-Applicability (RONA) category and is documented with this RONA.

Proposed Action: Northwest Training and Testing

Action Proponents: Commander, Pacific Fleet
Naval Sea Systems Command
Naval Air Systems Command

Proposed Action Name: Northwest Training and Testing (NWTT) Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (SEIS/OEIS)

Proposed Action and Emissions Summary:

The Proposed Action consists of training and testing activities in the waters of the States of Alaska and Washington, as well as in federal and international waters. The action involves operation of military aircraft, vessels, and small boats in order to achieve requisite training and testing requirements. Small boats and vessels would be operational in locations within the Northwest Washington Air Quality Control Region. These nearshore activities generate emissions primarily through fossil fuel combustion from engine operation. The region managed by Olympic Region Clean Air Agency, Thurston County is an air quality maintenance area for PM₁₀. As a conservative estimate it was assumed that all of the activities occurring within the Olympic-Northwest Washington Air Quality Control Region would take place in the maintenance areas for PM₁₀. The Proposed Action would result in no increases in emissions of criteria air pollutants in air quality non-attainment or maintenance areas. Accordingly, the Proposed Action is exempt from the provisions of 40 CFR, Part 93, Subpart B.

The table below provides a summary of the evaluation.

Emissions from all sources – with 3 NM, tons	Baseline	ALT 1	ALT 2
PM ₁₀	3.0	4.2	10.1
Net Increase (Decrease)	N/A	1.2	7.1
<i>De Minimis</i> Threshold	100	100	100
Exceedance?	N/A	No	No

The U.S. Navy concludes that *de minimis* thresholds for PM₁₀ would not be exceeded as a result of implementation of the Proposed Action. Formal Conformity Determination procedures are not required, resulting in this RONA. The emissions data supporting the conclusion are attached to this RONA.

Affected Air Basins: Northwest Washington Air Quality Control Region

Date RONA prepared: _____

RONA prepared by: Naval Facilities Engineering Command, Northwest

Attainment Area Status and Emissions Evaluation Conclusion:

To the best of my knowledge and belief, the information contained within this General Conformity Applicability Analysis is correct and accurate. By signing this statement, I am in agreement with the finding that the total of all reasonably foreseeable direct and indirect emissions that will result from this action is below the *de minimis* threshold set forth in 40 CFR 93.153. Accordingly, it is my determination that this action conforms to the applicable State Implementation Plan (SIP).

RONA Approval:

Signature: _____

Name/Rank: _____ Date: _____

Position: _____ Commanding Officer: _____ Activity: _____

Enclosure 1

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Table C-1: Total Baseline Emissions (2015 NWTT ALT1) – Updated August 2020

		Criteria Pollutants, Tons					
		CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Training	Aircraft	9.7	67.4	0.8	12.2	1.4	1.4
	Vessels	130.8	265.0	10.2	104.9	14.0	14.0
	Ordnance	3.4	0.2	0.0	0.0	2.0	1.6
	Total	143.9	332.6	11.0	117.1	17.4	17.4
Testing	Aircraft	2.4	10.1	0.2	2.0	0.9	0.9
	Vessels	28.3	52.2	3.0	11.8	1.6	1.6
	Ordnance	0.0	0.0	0.0	0.0	0.0	0.0
	Total	30.7	62.3	3.2	13.8	2.5	2.5
Total	Aircraft	12.1	77.5	1.0	14.2	2.3	2.3
	Vessels	159.1	317.2	13.2	116.7	15.6	15.6
	Ordnance	3.4	0.2	0.0	0.0	2.0	1.6
	Total	174.6	394.9	14.2	130.9	19.9	19.5

Table C-2: Estimated Annual Criteria Air Pollutant Emissions in the Northwest Training and Testing Study Area Under Alternative 1

		Criteria Pollutants, Tons					
		CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Training	Aircraft	12.6	78.5	1.2	14.4	5.4	5.4
	Vessels	108.7	269.7	7.3	111.9	11.5	11.5
	Ordnance	2.5	0.1	0.0	0.0	1.3	1.1
	Total	123.8	348.3	8.5	126.3	18.2	18.0
Testing	Aircraft	3.4	12.9	0.3	2.6	1.4	1.4
	Vessels	50.6	271.1	7.1	106.6	6.9	6.9
	Ordnance	0.0	0.0	0.0	0.0	0.0	0.0
	Total	54.0	284.0	7.4	109.2	8.3	8.3
Total	Aircraft	15.9	91.4	1.5	16.9	6.8	6.8
	Vessels	159.3	540.8	14.4	218.5	18.5	18.5
	Ordnance	2.5	0.1	0.0	0.0	1.3	1.1
	Total	177.7	632.3	15.9	235.5	26.6	26.4
Baseline		174.6	394.9	14.2	130.9	19.9	19.5
Delta		3.1	237.4	1.7	104.6	6.6	6.8
% Delta		2%	60%	12%	80%	33%	35%

Table C-3: Estimated Annual Criteria Air Pollutant Emissions in the Northwest Training and Testing Study Area Under Alternative 2

		Criteria Pollutants, Tons					
		CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Training	Aircraft	13.5	79.8	1.4	14.8	6.8	6.8
	Vessels	124.7	310.1	8.4	127.8	16.4	16.4
	Ordnance	3.2	0.2	0.0	0.0	1.7	1.7
	Total	141.4	390.1	9.8	142.6	24.9	24.9
Testing	Aircraft	3.5	13.2	0.3	2.6	1.5	1.5
	Vessels	54.1	294.9	7.4	115.0	13.0	13.0
	Ordnance	0.0	0.0	0.0	0.0	0.0	0.0
	Total	57.5	308.1	9.7	117.6	14.4	14.4
Total	Aircraft	17.0	93.1	1.7	17.4	8.3	8.3
	Vessels	178.7	605.0	15.8	242.8	29.4	29.4
	Ordnance	3.2	0.2	0.0	0.0	1.7	1.7
	Total	198.9	698.3	19.5	260.3	39.4	39.4
Baseline		174.6	394.9	14.2	130.9	19.9	19.5
Delta		24.3	303.4	5.3	129.4	19.4	19.8
% Delta		14%	77%	37%	99%	97%	101%

Table C-4: Estimated Net Change in Annual Air Pollutant Emissions from Training and Testing Activities in the Olympic Northwest Washington Intrastate (Within 3 NM) Under Alternative 1

	Criteria Pollutants, Tons					
	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Emissions from all sources	32.0	237.7	2.9	76.5	4.2	4.2
Baseline	27.6	69.7	2.3	15.6	3.0	2.9
Net Increase (Decrease)	4.4	168.0	0.6	60.9	1.2	1.3
<i>De Minimis</i> Threshold	N/A	N/A	N/A	N/A	100.0	100.0

Table C-5: Estimated Net Change in Annual Air Pollutant Emissions from Training and Testing Activities in the Puget Sound Intrastate (Within 3 NM) Under Alternative 1

	Criteria Pollutants, Tons					
	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Emissions from all sources	10.8	47.8	1.2	15.1	6.1	6.1
Baseline	18.2	41.4	1.7	9.0	7.2	7.2
Net Increase (Decrease)	-7.5	6.4	-0.5	6.1	-1.1	-1.1
<i>De Minimis</i> Threshold	N/A	N/A	N/A	N/A	100.0	100.0

Table C-6: Estimated Net Change in Annual Air Pollutant Emissions from Training and Testing Activities in the Olympic Northwest Washington Intrastate (Within 3 NM) Under Alternative 2

	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
	Criteria Pollutants, Tons					
Emissions from all sources	36.0	254.5	3.2	81.5	10.1	10.1
Baseline	27.6	69.7	2.3	15.6	3.0	3.0
Net Increase (Decrease)	8.4	184.8	0.9	65.9	7.1	7.1
<i>De Minimis</i> Threshold	N/A	N/A	N/A	N/A	100.0	100.0

Table C-7: Estimated Net Change in Annual Air Pollutant Emissions from Training and Testing Activities in the Puget Sound Intrastate (Within 3 NM) Under Alternative 2

	Criteria Pollutants, Tons					
	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}
Emissions from all sources	13.4	56.5	1.4	17.9	10.1	10.1
Baseline	18.2	41.4	1.7	9.0	7.2	7.2
Net Increase (Decrease)	-4.8	15.1	-0.3	8.9	2.9	2.9
<i>De Minimis</i> Threshold	N/A	N/A	N/A	N/A	100.0	100.0

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Appendix D Acoustic and Explosive Concepts

Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement

Northwest Training and Testing

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APPENDIX D ACOUSTIC AND EXPLOSIVE CONCEPTS

This appendix is an update to the 2015 Northwest Training and Testing (NWTT) Final Environmental Impact Statement (EIS)/Overseas EIS (OEIS) Appendix F (Acoustic and Explosives Primer) and introduces basic principles and terminology for acoustics and explosives to help the reader understand the analyses presented in this Environmental Impact Statement. This appendix briefly explains the transmission of sound and explosive energy; introduces some of the basic mathematical formulas used to describe propagation; and defines acoustical terms, abbreviations, and units of measurement. The difference between transmission of sound in water and in air is also discussed. Finally, it discusses methods used to analyze what animals may hear.

A number of other sources provide a more extensive background on acoustics and explosives than presented in this overview and are recommended for further inquiry. These include, but are not limited to:

- *Marine Mammals and Noise* (Richardson et al., 1995) for a general overview
- *Principles of Underwater Sound* (Urlick, 1983), *Fundamentals of Acoustical Oceanography* (Medwin & Clay, 1998), and *Principles of Marine Bioacoustics* (Au & Hastings, 2008) for comprehensive explanations of underwater acoustics

D.1 Terminology

The following terms are used in this document when discussing sound and the attributes of a sound source.

D.1.1 Sound

Sound is produced when an elastic medium (such as air or water) is set into motion, typically by a vibrating object within the medium. As the object vibrates, its motion is transmitted to adjacent “particles” of the medium. The motion of these particles is transmitted to adjacent particles, and so on. The result is a mechanical disturbance (the “sound wave”) that moves away from the source and propagates at a medium-dependent speed (the “sound speed”). As the sound wave travels through the medium, the individual particles of the medium oscillate about their original positions but do not actually move with the sound wave. As the particles of the medium move back and forth, they create small changes about the original values of the medium density, pressure, and temperature.

Sound may be described by both physical and subjective attributes. Physical attributes, such as sound amplitude and frequency, may be directly measured. Subjective (or sensory) attributes like loudness depend on an animal’s perception of sound. Physical attributes of a sound at a particular point are usually obtained by measuring pressure changes as sound waves pass.

D.1.2 Signal Versus Noise

When sound is purposely created to convey information, communicate, or obtain information about the environment, it is often referred to as a signal. Examples of sounds that could be considered signals are sonar pings, marine mammal vocalizations and echolocation clicks, tones used in hearing experiments, and small sonobuoy explosions used for submarine detection.

Noise is undesired sound (American National Standards Institute, 1994). Sounds produced by naval aircraft and vessel propulsion are considered noise because they represent possible inefficiencies and increased detectability. Whether a sound is perceived as noise often depends on the receiver (i.e., the

animal or system that detects the sound). For example, small explosives and sonar used to generate sounds that can locate an enemy submarine produce signals that are useful to sailors engaged in anti-submarine warfare, but are assumed to be noise when detected by marine mammals.

The combination of all sounds at a particular location, whether these sources are located near or far, is ambient noise (American National Standards Institute, 1994). Ambient noise includes natural sources, such as sound from crashing waves, rain, and animals (e.g., snapping shrimp), and anthropogenic sources, such as seismic surveys and vessel noise.

D.1.3 Frequency and Wavelength

Frequency is the physical attribute most closely associated with the subjective attribute “pitch”; the higher the frequency, the higher the pitch. Frequency is defined by the number of oscillations in the sound pressure or particle motion per second. One hertz (Hz) is equal to one oscillation per second, and one kilohertz (kHz) is equal to 1,000 oscillations per second. Human hearing generally spans the frequency range from 20 Hz to 20 kHz.

Sounds can be pure or complex frequency tones. Pure tones have energy at a constant, single frequency. Complex tones contain energy at multiple, discrete frequencies. The frequency range of a sound is called its bandwidth. A harmonic of a sound at a particular frequency is a multiple of that frequency (e.g., harmonic frequencies of a 2 kHz tone are 4 kHz, 6 kHz, 8 kHz, etc.). A source operating at a nominal frequency may emit several harmonic frequencies, but at lower amplitudes. Some sources may also emit subharmonics; however, these are typically many orders of magnitude less powerful than at the center frequency. Sounds with large bandwidth (“broadband” sounds) have energy spread across many frequencies.

In this document, sounds are generally described as either low- (less than 1 kHz), mid- (1 kHz–10 kHz), high- (10 kHz–100 kHz), or very high- (greater than 100 kHz) frequency. Hearing ranges of marine animals (e.g., fish, birds, sea turtles, and marine mammals) are quite varied and are species-dependent. For example, some fish can hear sounds below 100 Hz and some species of marine mammals have hearing capabilities that extend above 100 kHz. Acoustic impact analyses must therefore focus not only on the sound amplitude (i.e., pressure or particle motion, see Section D.1.4, Sound Amplitude), but on the sound frequency and the hearing capabilities of the species being considered.

The wavelength of a sound is the distance between wave peaks. Wavelength decreases as frequency increases. The frequency multiplied by the wavelength equals the speed of sound in a medium, as shown in this equation:

$$\text{Frequency (s}^{-1}\text{)} \times \text{wavelength (m)} = \text{sound speed (m/s)}$$

The approximate speed of sound in sea water is 1500 m/s and in air is 340 m/s, although speed varies depending on environmental conditions [e.g., pressure, temperature, and, in the case of sea water, salinity; see Section D.3.1, Speed of Sound].

D.1.4 Sound Amplitude

Sound amplitude is the physical attribute most closely associated with the subjective attribute loudness. Amplitude is related to the amount that the medium particles oscillate about their original positions and can be thought of as the “strength” of a sound (as the amplitude increases, the loudness also increases). As the sound wave travels, the particles of the medium oscillate but do not actually travel with the

wave. The result is a mechanical disturbance (i.e., the sound wave) that propagates away from the sound source.

Sound amplitude is typically characterized by measuring the acoustic pressure or particle motion (see Section D.2, Sound Metrics).

D.1.5 Impulsive Versus Non-Impulsive Sounds

Although no standard definitions exist, sounds may be broadly categorized as impulsive or non-impulsive. Impulsive sounds have short durations, rapid rise-times, broad frequency content, and high peak sound pressures. Impulsive sounds are often produced by processes involving a rapid release of energy or mechanical impacts (Hamernik & Hsueh, 1991). Explosions, air guns, weapon firing, and impact pile driving are examples of impulsive sound sources analyzed in this document. In contrast, sonars, vessel operation, vibratory pile driving, and underwater transducers lack the characteristics of impulsive sources and are thus examples of non-impulsive sound sources. Non-impulsive sounds can be essentially continuous, such as machinery noise, or intermittent, such as sonar pings.

D.1.6 Acoustic Impedance

Acoustic impedance is a property of the propagation medium (air, water, or tissue) that can be simply described as the opposition to flow of a pressure wave. Acoustic impedance is a function of the density and speed of sound in a medium. Sound transmits more readily through materials of similar acoustic impedance, such as water and animal tissue. When sound waves encounter a medium with different acoustic impedance (for example, an air-water interface), they reflect and refract (see Sections D.3.3.3, Refraction; and D.3.3.4, Reflection and Multipath Propagation), creating more complex propagation conditions. For example, sound traveling in air (low impedance) encountering the water surface (high impedance) will be largely reflected, preventing most sound energy in the air from being transmitted into the water. The impedance difference at the tissue-air interface in animals with gas-containing organs also makes these areas susceptible to damage when exposed to the shock wave near an explosion, since the transmission from high-impedance to low-impedance can result in large motion at the boundary.

D.1.7 Duty Cycle

Duty cycle describes the portion of time that a sound source actually generates sound. It is defined as the percentage of time during which a sound is generated over a total operational time period. For example, if a sonar source produces a one-second ping once every 10 seconds, the duty cycle is 10 percent. Duty cycles vary among different acoustic sources; in general, a low duty cycle could be considered 20 percent or less and a high duty cycle 80 percent or higher.

D.1.8 Resonance

Resonance occurs when an object is vibrated at a frequency near its “natural frequency” or resonant frequency. The resonant frequency can be considered the preferred frequency at which an object will oscillate at a greater magnitude than when it is exposed to other frequencies. In this document, resonance is considered in relation to the size of an air bubble or air cavity in an animal that is exposed to high pressure waves and the potential for injury. The natural frequencies of dolphin and beluga lungs near the surface are about 36 Hz and 30 Hz, respectively (Finneran, 2003), the natural frequency of lungs of a large whale would be lower, while the natural frequency of small air bubbles would be much higher. Resonant frequencies would tend to increase as an animal dives, since the increased water pressure would compress an air-filled structure and reduce its size.

D.2 Sound Metrics

The sound metrics described here are used in this document to quantify exposure to a sound or explosion.

D.2.1 Pressure

Sound pressure is the incremental variation in a medium's static pressure as a sound wave travels through it. Sound pressure is typically expressed in units of pascals (Pa) ($1 \text{ Pa} = 1 \text{ N/m}^2 = 10 \text{ } \mu\text{bar} = 1.45 \times 10^{-4} \text{ psi}$), although explosive overpressure may also be described in pounds per square inch (psi).

Various sound pressure metrics are illustrated in Figure D-1 for (a) a non-impulsive sound (a pure tone in this illustration) and (b) an impulsive sound. As shown in Figure D-1, the non-impulsive sound has a relatively gradual rise in pressure from static pressure (the ambient pressure without the added sound), while the impulsive sound has a near-instantaneous rise to a high peak pressure. The peak pressure shown on both illustrations is the maximum absolute value of the instantaneous sound pressure during a specified time interval ("zero-to-peak" or "peak"), which accounts for the values of peak pressures below the static (ambient) pressure (American National Standards Institute, 2013). "Peak-to-peak" pressure is the difference between the maximum and minimum sound pressures. The root-mean-square (rms) value is often used to describe the average sound pressure level of sounds, and sound pressure levels provided in this EIS/OEIS are root-mean-square values unless otherwise specified. As the name suggests, this method takes the square root of the average squared sound pressure values over a time interval. The duration of this time interval can have a strong effect on the measured rms sound pressure for a given sound, especially where pressure levels vary significantly, as during an impulsive sound exposure. If the analysis duration includes a significant portion of the waveform after the sound pressure has returned to zero, the rms pressure would be relatively low. If the analysis duration includes only the highest pressures of the impulsive exposure, the rms value would be comparatively high. For this reason, it is important to specify the duration used to calculate the rms pressure for impulsive sounds.

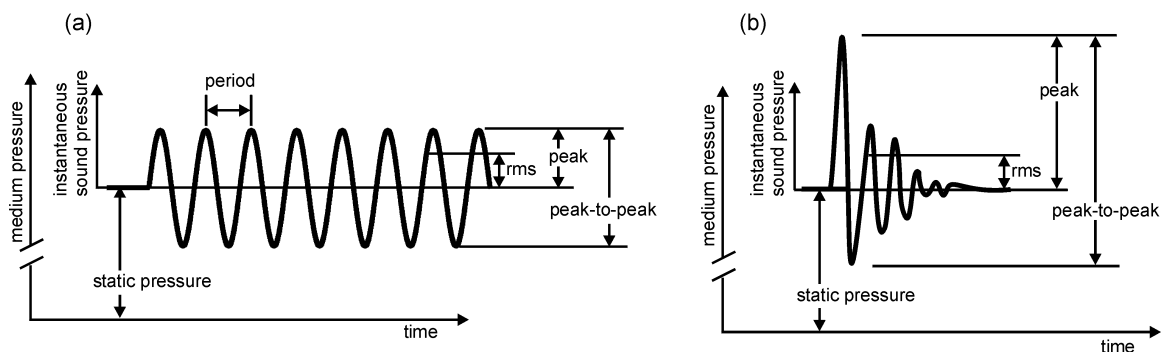


Figure D-1: Various Sound Pressure Metrics for a Hypothetical (a) Pure Tone (Non-Impulsive) and (b) Impulsive Sound

D.2.2 Sound Pressure Level

The most common sound level metric is sound pressure level (SPL). Because many animals can detect very large pressure ranges and judge the relative loudness of sounds by the ratio of the sound pressures (a logarithmic behavior), SPL is described by taking the logarithm of the ratio of the sound pressure to a reference pressure. Use of a logarithmic scale compresses the wide range of measured pressure values into a more useful scale.

Sound pressure levels are normally expressed in decibels. A decibel is 1/10 of a bel, a unit of level when the logarithm is to the base ten and the quantities concerned are proportional to power (American National Standards Institute, 2013). Sound pressure level in decibels is calculated as follows:

$$SPL = 20 \log_{10} \left(\frac{P}{P_{ref}} \right)$$

where P is the sound pressure and P_{ref} is the reference pressure. Unless stated otherwise, the pressure P is the rms value of the pressure (American National Standards Institute, 2013). In some situations, SPL is calculated for the peak pressure rather than the rms pressure. On the occasions when rms pressure is not used, the pressure metric will be stated (e.g., peak SPL means an SPL calculated using the peak pressure rather than the rms pressure).

When a value is presented in decibels, it is important to also specify the value and units of the reference quantity. Normally the numeric value is given, followed by the text “re,” meaning “with reference to,” and the numeric value and unit of the reference quantity. For example, a pressure of 1 Pa, expressed in decibels with a reference of 1 micropascal (μ Pa), is written 120 dB re 1 μ Pa. The standard reference pressures are 1 μ Pa for water and 20 μ Pa for air. The reference pressure for air, 20 μ Pa, is the approximate lowest threshold of human hearing. It is important to note that because of the differences in reference units, the same sound pressures would result in different SPL values for each medium (the same sound pressure measured in water and in air would result in a higher SPL in water than in air, since the in-air reference is larger). Therefore, sound pressure levels in air and in water should never be directly compared.

D.2.3 Sound Exposure Level

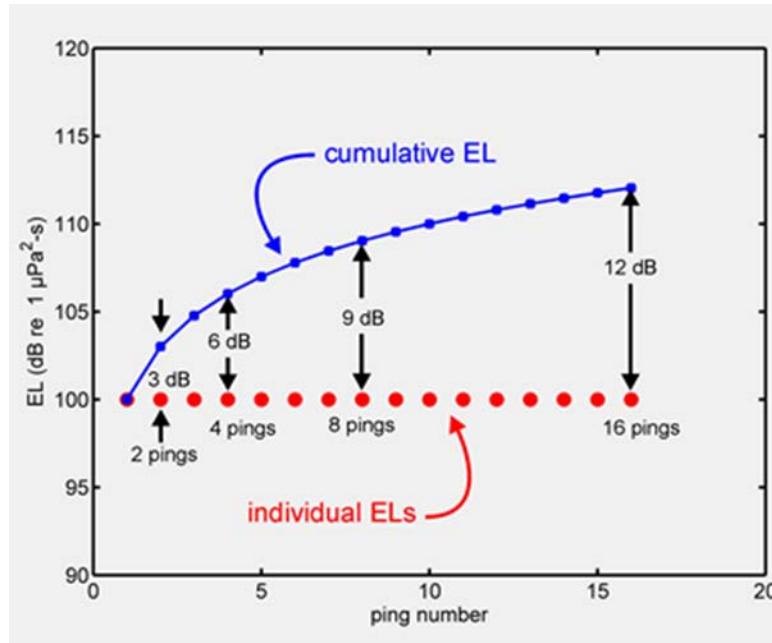
Sound exposure level (SEL) can be thought of as a composite metric that represents both the SPL of a sound and its duration. Individual time-varying noise events (e.g., a series of sonar pings or an impulsive sound) have two main characteristics: (1) a sound pressure that changes throughout the event and (2) a period of time during which the source is exposed to the sound. SEL can be provided for a single exposure (i.e., a single sonar ping or single explosive detonation) or for an entire acoustic event (i.e., multiple sonar pings or multiple explosive detonations). Cumulative SEL provides a measure of the net exposure of the entire acoustic event, but it does not directly represent the sound level heard at any given time. SEL is determined by calculating the decibel level of the cumulative sum-of-squared pressures over the duration of a sound, with units of dB re 1 micropascal squared seconds (re 1 μ Pa²-s) for sounds in water and dB re (20 micropascal) squared seconds [dB re (20 μ Pa)²-s] for sounds in air.

Some rules of thumb for SEL are as follows:

- The numeric value of SEL is equal to the SPL of a one-second sound that has the same total energy as the exposure event. If the sound duration is one second, SPL and SEL have the same numeric value (but not the same reference quantities). For example, a one-second sound with an SPL of 100 dB re 1 μ Pa has a SEL of 100 dB re 1 μ Pa²-s.
- If the sound duration is constant but the SPL changes, SEL will change by the same number of decibels as the SPL.
- If the SPL is held constant and the duration (T) changes, SEL will change as a function of $10 \log_{10}(T)$:
 - $10 \log_{10}(10) = 10$, so increasing duration by a factor of 10 raises SEL by 10 dB.

- $10 \log_{10}(0.1) = -10$, so decreasing duration by a factor of 10 lowers SEL by 10 dB.
- Since $10 \log_{10}(2) \approx 3$, so doubling the duration increases SEL by 3 dB.
- $10 \log_{10}(1/2) \approx -3$, so halving the duration lowers SEL by 3 dB.

Figure D-2 illustrates the summation of energy for a succession of sonar pings. In this hypothetical case, each ping has the same duration and SPL. The SEL at a particular location from each individual ping is 100 dB re 1 $\mu\text{Pa}^2\text{-s}$ (red circles). The upper, blue curve shows the running total or cumulative SEL.

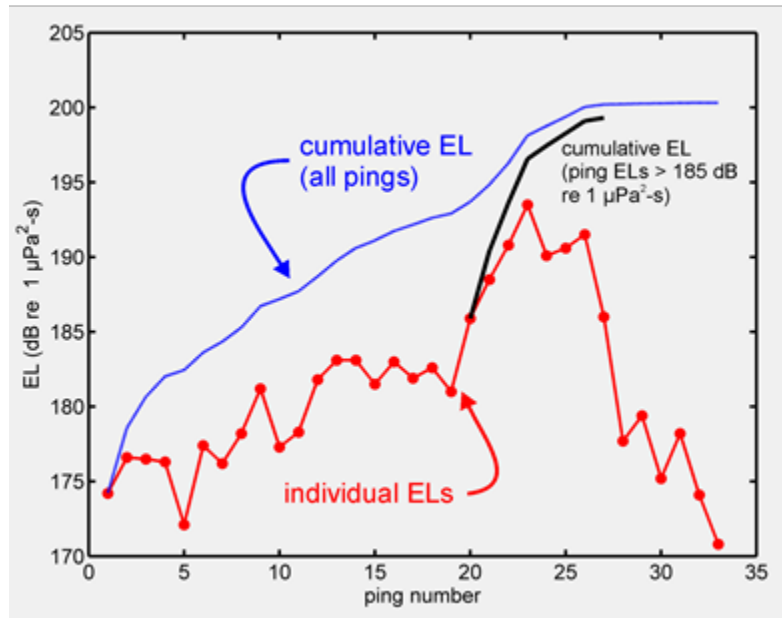


Note: EL = Exposure Level (i.e., Sound Exposure Level)

Figure D-2: Summation of Acoustic Energy from a Hypothetical, Intermittently Pinging, Stationary Sound Source

After the first ping, the cumulative SEL is 100 dB re 1 $\mu\text{Pa}^2\text{-s}$. Since each ping has the same duration and SPL, receiving two pings is the same as receiving a single ping with twice the duration. The cumulative SEL from two pings is therefore 103 dB re 1 $\mu\text{Pa}^2\text{-s}$. The cumulative SEL from four pings is 3 dB higher than the cumulative SEL from two pings, or 106 dB re 1 $\mu\text{Pa}^2\text{-s}$. Each doubling of the number of pings increases the cumulative SEL by 3 dB.

Figure D-3 shows a more realistic example where the individual pings do not have the same SPL or SEL. These data were recorded from a stationary hydrophone as a sound source approached, passed, and moved away from the hydrophone. As the source approached the hydrophone, the received SPL from each ping increased, causing the SEL of each ping to increase. After the source passed the hydrophone, the received SPL and SEL from each ping decreased as the source moved farther away (downward trend of red line), although the cumulative SEL increased with each additional ping received (slight upward trend of blue line). The main contributions are from those pings with the highest individual SELs. Individual pings with SELs 10 dB or more below the ping with the highest level contribute little (less than 0.5 dB) to the total cumulative SEL. This is shown in Figure D-3, where only a small error is introduced by summing the energy from the eight individual pings with SEL greater than 185 dB re 1 $\mu\text{Pa}^2\text{-s}$ (black line), as opposed to including all pings (blue line).



Note: EL = Exposure Level (i.e., Sound Exposure Level)

Figure D-3: Cumulative Sound Exposure Level Under Realistic Conditions with a Moving, Intermittently Pinging Sound Source

D.2.4 Particle Motion

The particles of a medium (e.g., water or air) oscillate around their original position as a sound wave passes. This motion is quantified using average displacement (m or dB re 1 picometer [pm]), velocity (m/s or dB re 1 nanometer [nm]/s²), and acceleration (m/s² or dB re 1 micrometer [μm]/s²) of the particles (Nedelec et al., 2016). Note that particle motion is not the same as sound speed. Since particle motion is a vector (unlike pressure which is a scalar entity), the direction of travel of the sound wave can be obtained, while the sound speed provides information about how fast the sound wave propagates through a medium (Nedelec et al., 2016).

Far from a sound source and without any boundaries that could cause wave interference, particle velocity is directly proportional to sound pressure. Closer to a sound source, particle velocity begins to increase relative to sound pressure. Because this phenomenon is related to wavelength, it may be relevant only when very close to sound sources with extremely low frequencies.

D.2.5 Impulse

Impulse is a metric used to describe the pressure and time component of a pressure wave. Impulse is typically only considered for high energy exposures to impulsive sources, such as exposures close to explosives. Specifically, positive impulse is the time integral of the initial peak positive pressure with units of Pascal-seconds (Pa-s). Impulse is a measured quantity that is distinct from the term “impulsive,” which is not a measurement term, but rather describes a type of sound (see Section D.1.5, Impulsive Versus Non-Impulsive Sounds).

D.3 Predicting How Sound Travels

While the concept of a sound wave traveling from its source to a receptor is relatively simple, sound propagation is quite complex because of the simultaneous presence of numerous sound waves of

different frequencies and source levels, and other phenomena such as reflections of sound waves and subsequent constructive (additive) or destructive (cancelling) interferences between reflected and incident waves. Other factors such as refraction, diffraction, bottom types, and surface conditions also affect sound propagation. While simple examples are provided here for illustration, the Navy Acoustic Effects Model used to quantify acoustic exposures to marine mammals and sea turtles takes into account the influence of multiple factors to predict acoustic propagation [see technical report *Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing* (U.S. Department of the Navy, 2018)].

D.3.1 Speed of Sound

The speed of sound is not affected by the SPL or frequency of the sound, but rather depends wholly on characteristics of the medium through which it is passing (e.g., the density and the compressibility). Sound travels faster through a medium that is harder to compress. For example, water is more difficult to compress than air, and sound travels approximately 340 m/s in air and 1,500 m/s in seawater.

The speed of sound in air is primarily influenced by temperature, relative humidity, and pressure, because these factors affect the density and compressibility of air. Generally, the speed of sound in air increases as air temperature increases.

The speed of sound in seawater also increases with increasing temperature and, to a lesser degree, with increasing hydrostatic pressure and salinity. Figure D-4 shows an example of how these attributes can change with depth. In seawater, temperature has the most important effect on sound speed for depths less than about 300 m. Below 1,500 m, the increasing hydrostatic pressure is the dominant factor because the water temperature is relatively constant. The variation of sound speed with depth in the ocean is called a sound velocity profile. The sound velocity profile at a location also strongly influences how traveling sound waves bend (e.g., toward the seafloor, surface, or direct).

D.3.2 Source Directivity

Most sonar and other active acoustic sources do not radiate sound in all directions. Rather, they emit sounds over a limited range of angles, in order to focus sound energy on a specific area or object of interest. The specific angles are sometimes given as horizontal or vertical beam widths. Some sources can be described qualitatively as “forward-looking,” when sound energy is radiated in a limited direction in front of the source, or “downward-looking,” when sound energy is directed toward the bottom.

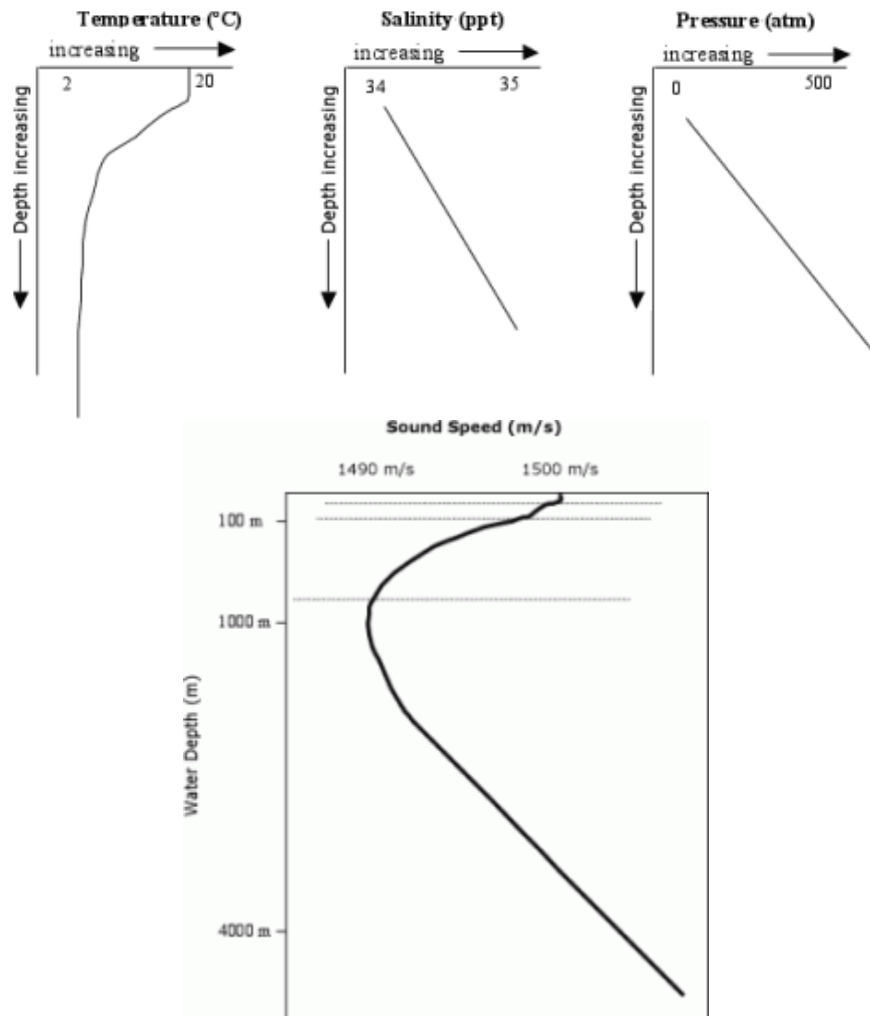
D.3.3 Transmission Loss

As a sound wave passes through a medium, the sound level decreases with distance from the sound source. This phenomenon is known as transmission loss (TL). The transmission loss is used to relate the source SPL (SL), defined as the SPL produced by a sound source at a distance of one meter, and the received SPL (RL) at a particular location, as follows:

$$RL = SL - TL$$

The main contributors to transmission loss are as follows (Urlick, 1983):

- Geometric spreading of the sound wave as it propagates away from the source
- Sound absorption (conversion of sound energy into heat)
- Scattering, diffraction, multipath interference, and boundary effects



Source: (Diogou, 2014)

Figure D-4: Sound Velocity Profile (Sound Speed) Is Related to Temperature, Salinity, and Hydrostatic Pressure of Seawater

D.3.3.1 Geometrical Spreading Loss

Spreading loss is a geometric effect representing regular weakening of a sound wave as it spreads out from a source. Spreading describes the reduction in sound pressure caused by the increase in surface area as the distance from a sound source increases. Spherical and cylindrical spreading are common types of spreading loss.

In the simple case of sound propagating from a point source without obstruction or reflection, the sound waves take on the shape of an expanding sphere. An example of spherical spreading loss is shown in Figure D-5. As spherical propagation continues, the sound energy is distributed over an ever-larger area following the inverse square law: the pressure of a sound wave decreases inversely with the square of the distance between the source and the receptor. For example, doubling the distance between the receptor and a sound source results in a reduction in the pressure of the sound to one-fourth of its initial value; tripling the distance results in one-ninth of the original pressure, and so on. Since the surface area of a sphere is $4\pi r^2$, where r is the sphere radius, the change in SPL with distance r from the

source is proportional to the radius squared. This relationship is known as the spherical spreading law. The transmission loss for spherical spreading between two locations is:

$$TL = 20 \log_{10}(r_2/r_1)$$

where r_1 and r_2 are distances from the source. Spherical spreading results in a 6 dB reduction in SPL for each doubling of distance from the sound source. For example, calculated transmission loss for spherical spreading is 40 dB at 100 m and 46 dB at 200 m.

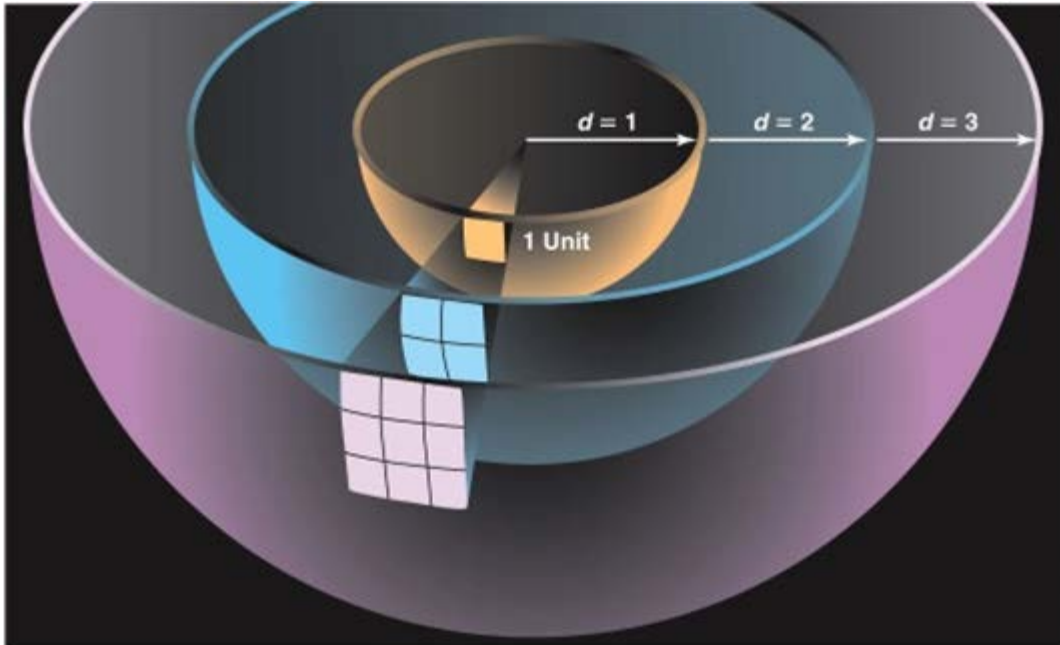


Figure D-5: Graphical Representation of the Inverse Square Relationship in Spherical Spreading

In cylindrical spreading, spherical waves expanding from the source are constrained by the water surface and the seafloor and take on a cylindrical shape. In this case the sound wave expands in the shape of a cylinder rather than a sphere, and the transmission loss is:

$$TL = 10 \log_{10}(r_2/r_1)$$

Cylindrical spreading is an approximation of sound propagation in a water-filled channel with horizontal dimensions much larger than the depth. Cylindrical spreading predicts a 3 dB reduction in SPL for each doubling of distance from the source. For example, calculated transmission loss for cylindrical spreading is 30 dB at 1,000 m and 33 dB at 2,000 m.

The cylindrical and spherical spreading equations above represent two simple hypothetical cases. In reality, geometric spreading loss is more spherical near a source and more cylindrical with distance, and is better predicted using more complex models that account for environmental variables, such as the Navy Acoustic Effects Model [see technical report *Modeling and Quantitative Analysis of Acoustic and Explosive Impacts to Marine Species due to Navy Training and Testing Activities* (DON 2017)].

However, when conducting simple spreading loss calculations in near shore environments, “practical spreading loss” can be applied, where:

$$TL = 15 \log_{10}(r_2/r_1)$$

Practical spreading loss accounts for other realistic losses in the environment, such as absorption and scattering, which are not accounted for in geometrical spreading.

D.3.3.2 Absorption

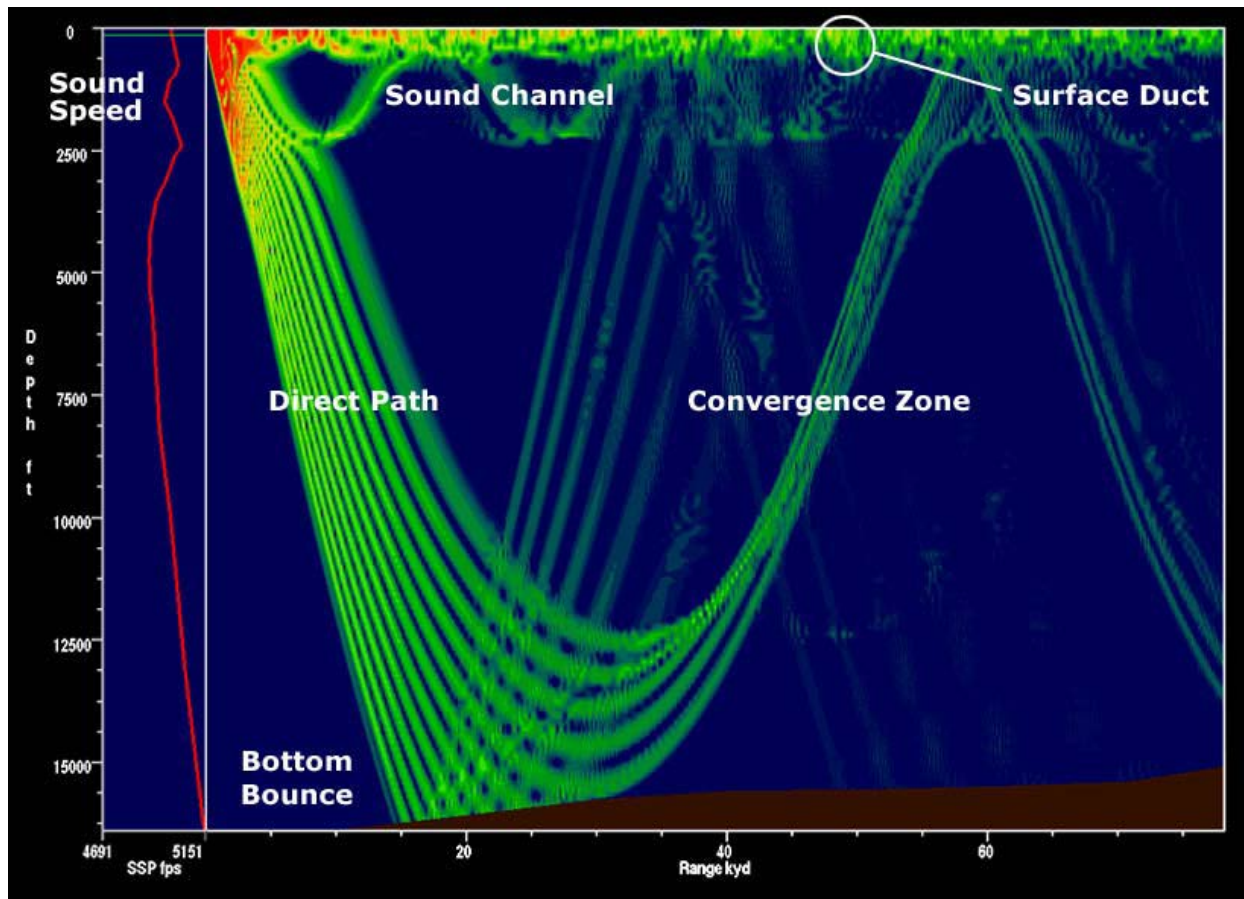
Absorption is the conversion of acoustic energy to kinetic energy in the particles of the propagation medium (Urlick, 1983). Absorption is directly related to sound frequency, with higher frequencies having higher rates of absorption. Absorption rates range from 0.07 dB/km for a 1 kHz sound to about 30 dB/km for a 100 kHz sound. Therefore, absorption is the cause of a significant amount of attenuation for high and very high frequency sound sources, reducing the distance over which these sources may be perceived compared to mid- and low-frequency sound sources with the same source level.

D.3.3.3 Refraction

When a sound wave propagating in a medium encounters a second medium with a different density (e.g., the air-water boundary), part of the incident sound will be reflected back into the first medium and part will be transmitted into the second medium (Kinsler et al., 1982). The propagation direction will change as the sound wave enters the second medium; this phenomenon is called refraction. Refraction may also occur within a single medium if the properties of the medium change enough to cause a variation in the sound speed. Refraction of sound resulting from spatial variations in the sound speed is one of the most important phenomena that affect sound propagation in water (Urlick, 1983).

As discussed in Section D.3.1 (Speed of Sound), the sound speed in the ocean primarily depends on hydrostatic pressure (i.e., depth) and temperature. Although the actual variations in sound speed are small, the existence of sound speed gradients in the ocean has an enormous effect on the propagation of sound in the ocean. If one pictures sound as rays emanating from an underwater source, the propagation of these rays changes as a function of the sound speed profile in the water column. Specifically, the directions of the rays bend toward regions of slower sound speed. This phenomenon creates ducts in which sound becomes “trapped,” allowing it to propagate with high efficiency for large distances within certain depth boundaries. During winter months, the reduced sound speed at the surface due to cooling can create a surface duct that efficiently propagates sound such as commercial shipping noise (Figure D-6). Sources located within this surface duct can have their sounds trapped, but sources located below this layer would have their sounds refracted downward. A well-known deep sound channel, the Sound Fixing and Ranging (SOFAR) channel (600–1,200 m depth at the mid-latitudes), is another naturally occurring ocean duct that exists where sound speeds are slower, allowing for longer range propagation of sounds.

Similarly, the path of sound will bend toward regions of lower sound speed in air. Air temperature typically decreases with altitude, meaning sounds produced in air tend to bend skyward. When an atmospheric temperature inversion is present, air is cooler near the earth’s surface. In inversion conditions, sound waves near the earth’s surface will tend to refract downward.



Note: 1 kiloyard (kyd) = 0.9 km

Figure D-6: Sound Propagation Showing Multipath Propagation and Conditions for Surface Duct

D.3.3.4 Reflection and Multipath Propagation

In multipath propagation, sound may not only travel a direct path (with no reflection) from a source to a receiver, but also be reflected from the surface or bottom multiple times before reaching the receiver (Urlick, 1983). Reflection is shown in Figure D-6 at the seafloor (bottom bounce) and at the water surface. At some distances, the reflected wave will be in phase with the direct wave (their waveforms add together) and at other distances the two waves will be out of phase (their waveforms cancel). The existence of multiple sound paths, or rays, arriving at a single point can result in multipath interference, a condition that permits the addition and cancellation between sound waves, resulting in the fluctuation of sound levels over short distances.

Reflection plays an important role in the pressures observed at different locations in the water column. Near the bottom, the direct path pressure wave may sum with the bottom-reflected pressure wave, increasing the exposure. Near the surface, however, the surface-reflected pressure wave may destructively interfere with the direct path pressure wave, “cutting off” the wave and reducing exposure (called the Lloyd mirror effect). This can cause the sound level to decrease dramatically within the top few meters of the water column.

D.3.3.5 Diffraction, Scattering, and Reverberation

Diffraction, scattering, and reverberation are examples of what happens when sound waves interact with obstacles in the propagation path.

Diffraction may be thought of as the change of direction of a sound wave as it passes around an obstacle. Diffraction depends on the size of the obstacle and the sound frequency. The wavelength of the sound must be larger than the obstacle for notable diffraction to occur. If the obstacle is larger than the wavelength of sound, an acoustic shadow zone will exist behind the obstacle where the sound is unlikely to be detected. Common examples of diffraction include sound heard from a source around the corner of a building and sound propagating through a small gap in an otherwise closed door or window.

An obstacle or inhomogeneity (e.g., smoke, suspended particles, gas bubbles due to waves, and marine life) in the path of a sound wave causes scattering as these inhomogeneities reradiate incident sound in a variety of directions (Urlick, 1983). Reverberation refers to the prolongation of a sound, after the source has stopped emitting, caused by multiple reflections at water boundaries (surface and bottom) and scattering.

D.3.3.6 Surface and Bottom Effects

Because the sea surface reflects and scatters sound, it has a major effect on the propagation of underwater sound in applications where either the source or receiver is at a shallow depth (Urlick, 1983). If the sea surface is smooth, the reflected sound pressure is nearly equal to the incident sound pressure; however, if the sea surface is rough, the amplitude of the reflected sound wave will be reduced. Sound waves reflected from the sea surface experience a phase reversal. When the surface-reflected waves interact with the direct path waves near the surface, a destructive interference pattern is created in which the received pressure approaches zero.

The sea bottom is also a reflecting and scattering surface, similar to the sea surface. Sound interaction with the sea bottom is more complex, however, primarily because the acoustic properties of the sea bottom are more variable and the bottom is often layered into regions of differing density. As sound travels into the seafloor it reflects off of these different density layers in complex ways. For sources in contact with the bottom, such as during pile driving or bottom-placed explosives, a ground wave is produced that travels through the bottom sediment and may refract back into the water column.

For a hard bottom such as rock, the reflected wave will be approximately in phase with the incident wave. Thus, near the ocean bottom, the incident and reflected sound pressures may add together (constructive interference), resulting in an increased sound pressure near the sea bottom. Soft bottoms such as mud or sediment absorb sound waves and reduce the level in the water column overall.

D.3.3.7 Air-Water Interface

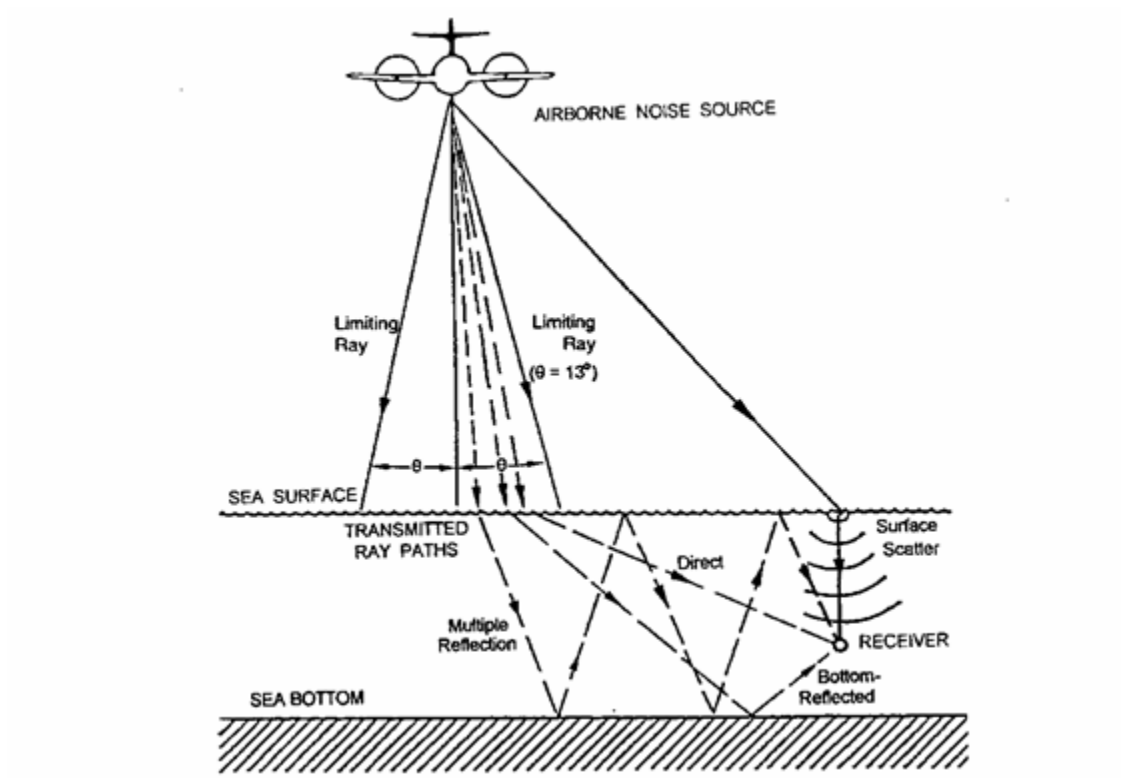
Sound from aerial sources such as aircraft and weapons firing may be transmitted into the water under certain conditions. The most studied of these sources are fixed-wing aircraft and helicopters, which create noise with most energy below 500 Hz. Noise levels in water are highest at the surface and are highly dependent on the altitude of the aircraft and the angle at which the aerial sound encounters the ocean surface. Transmission of the sound once it is in the water is identical to any other sound as described in the sections above.

Transmission of sound from a moving airborne source to a receptor underwater is influenced by numerous factors and has been addressed by Young (1973), Urlick (1983), Richardson et al. (1995), Eller

and Cavanagh (2000), Laney and Cavanagh (2000), and others. Sound is transmitted from an airborne source to a receptor underwater by four principal means: (1) a direct path, refracted upon passing through the air-water interface; (2) direct-refracted paths reflected from the bottom in shallow water; (3) evanescent transmission in which sound travels laterally close to the water surface; and (4) scattering from interface roughness due to wave motion.

When sound waves in air meet the water surface, the sound can either be transmitted across the air-water boundary or reflected off the water surface. When sound waves meet the water at a perpendicular angle (e.g., straight down from an in-air source to a flat water surface), the sound waves are both transmitted directly across the water surface in the same direction of travel and reflected 180° back toward the original direction of travel. This can create a localized condition at the water surface where the incident and reflected waves sum, doubling the in-air overpressure (+ 6 dB). As the incident angle of the in-air sound wave changes from perpendicular, this phenomenon is reduced, ultimately reaching the angle where sound waves are parallel to the water surface and there is no surface reflection.

The sound that enters the water is refracted due to the difference in sound velocity between air and water, as shown in Figure D-7. As the angle of the in-air incident wave moves away from perpendicular, the direction of travel of the underwater refracted waves becomes closer to parallel to the water surface. When the incident angle is reached where the underwater refracted sound wave is parallel to the water surface, all of the sound is reflected back into the air and no sound enters the water. This occurs at an angle of about 13-14°. As a result, most of the acoustic energy transmitted into the water through a relatively narrow cone extending vertically downward from the in-air source. The width of the footprint would be a function of the source altitude. Lesser amounts of sound may enter the water outside of this cone due to surface scattering (e.g., from water surface waves that can vary the angle of incidence over an area) and as evanescent waves that are only present very near the surface.



Source: Richardson et al. 1995

Figure D-7: Characteristics of Sound Transmission Through the Air-Water Interface

If a sound wave is ideally transmitted into water (that is, with no surface transmission loss, such as due to foamy, wave conditions that could decrease sound entering the water), the sound pressure level underwater is calculated by changing the pressure reference unit from 20 μPa in air to 1 μPa in water. For a sound with the same pressure in air and water, this calculation results in a +26 dB sound pressure level in water compared to air. For this reason, sound pressure levels in water and sound pressure levels in air should never be directly compared.

D.4 Auditory Perception

Animals with an eardrum or similar structure, including mammals, birds, and reptiles, directly detect the pressure component of sound. Some marine fish also have specializations to detect pressure changes, although most invertebrates and many marine fish do not have anatomical structures that enable them to detect the pressure component of sound and are only sensitive to the particle motion component of sound. This difference in acoustic energy sensing mechanisms limits the range at which these animals can detect most sound sources analyzed in this document. This is because far from a sound source (i.e., in the far field), particle velocity and sound pressure are directly proportional. But close to a source (i.e., in the near field), particle velocity increases relative to sound pressure and may become more detectable to certain animals. As sound frequency increases, the wavelength becomes shorter, resulting in a smaller near field.

Because mammalian ears can detect large pressure ranges and humans judge the relative loudness of sounds by the ratio of the sound pressures (a logarithmic behavior), sound amplitude is described by the SPL, calculated by taking the logarithm of the ratio of the sound pressure to a reference pressure (see

Section D.2.2, Sound Pressure Level). Use of a logarithmic scale compresses the wide range of pressure values into a more usable numerical scale. On the decibel scale, the smallest audible sound in air (near total silence) to a human is 0 dB re 20 μ Pa. If the sound intensity increases by a factor of 10, the SPL would increase to 10 dB re 20 μ Pa. If the sound intensity increases by a factor of 100, the SPL would increase to 20 dB re 20 μ Pa, and if the sound intensity increases by a factor of 1000, the SPL would be 30 dB re 20 μ Pa. A quiet conversation has an SPL of about 50 dB re 20 μ Pa, while the threshold of pain is around 120–140 dB re 20 μ Pa.

As described in Section D.2.2 (Sound Pressure Level), SPLs under water differ from those in air because they rely on different reference pressures in their calculation; therefore, the two should never be directly compared.

While sound pressure and frequency are physical measures of the sound, loudness is a subjective attribute that varies with not only sound pressure but also other attributes of the sound, such as frequency. For example, a human listener would perceive a 60 dB re 20 μ Pa sound at 2 kHz to be louder than a 60 dB re 20 μ Pa sound at 50 Hz, even though the SPLs are identical. This effect is most noticeable at lower sound pressure levels; however, at very high sound pressure levels, the difference in perceived loudness at different frequencies becomes smaller.

To account for differences in hearing sensitivity at various frequencies, acoustic risk analyses commonly use auditory weighting functions—mathematical functions that adjust (or “weight”) received sound levels across sound frequency based on how the listener’s sensitivity or susceptibility to sound changes at different frequencies. For humans, the most common weighting function is called “A-weighting” (see Figure D-8). A-weighted sound levels are specified in units of “dBA” (A-weighted decibels). For example, if the unweighted received level of a 500 Hz tone at a human receiver was 90 dB re 20 μ Pa, the A-weighted sound level would be 90 dB – 3 dB = 87 dBA because the A-weighting function amplitude at 500 Hz is -3 dB. Many measurements of sound in air appear as A-weighted decibels in the literature because the intent of the authors is to assess noise impacts on humans.

The auditory weighting concept can be applied to other species. When used in analyzing the impacts of sound on an animal, auditory weighting functions adjust received sound levels to emphasize ranges of best hearing and de-emphasize ranges of less or no sensitivity. Auditory weighting functions were developed for marine mammals and sea turtles and are used to assess acoustic impacts. For more information on weighting functions and their derivation for this analysis see technical report *Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis* (U.S. Department of the Navy, 2017).

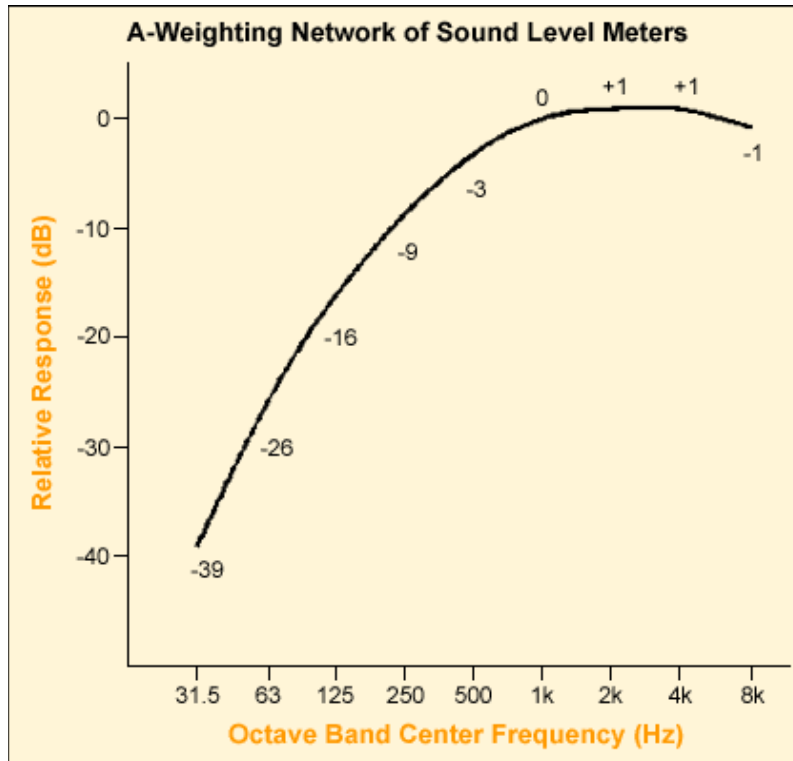


Figure D-8: A-weighting for Human Hearing of Sounds in Air (OSHA). The Numbers Along the Curve Indicate How a Received Sound Level Would Be Adjusted at that Frequency.

D.5 Explosives

Explosive materials used in Navy testing and training activities are either (1) “high explosives,” sometimes referred to as HE, which means that the explosive material has a very fast rate of detonation (exceeding the speed of sound), or (2) low explosives, which exhibit a relatively slow burn, or deflagration, such as black powder. Because low explosives are typically used in small quantities and have less destructive power, the below discussion focuses on high explosives.

This rate of detonation of a high explosive is highly supersonic, producing a high pressure, steep instantaneous shock wave front travelling through the explosive material. This shock front is produced by the supersonic expansion of the explosive products, but as the shock front travels away from the immediate area of the detonation, it begins to behave as an acoustic wave front travelling at the speed of sound.

The near-instantaneous rise from ambient to an extremely high peak pressure is what makes the explosive shock wave potentially damaging. The area under this positive pressure duration is calculated as the positive impulse.

The positive pressure produced by an explosion is also referred to as the overpressure. As the shock front passes a location, the positive pressure exponentially decays, as shown in Figure D-9. As the shock front travels away from the detonation, the waveform is stretched—the peak pressure decreases while the positive duration increases. The reduction in peak pressure reduces the rate at which the positive impulse is received. Both the reduction in peak pressure and stretching of the positive impulse reduce

the potential for injury. In addition, absorption losses of higher frequencies over distance results in a softening of the shock front, such that the rise to peak pressure is no longer near-instantaneous.

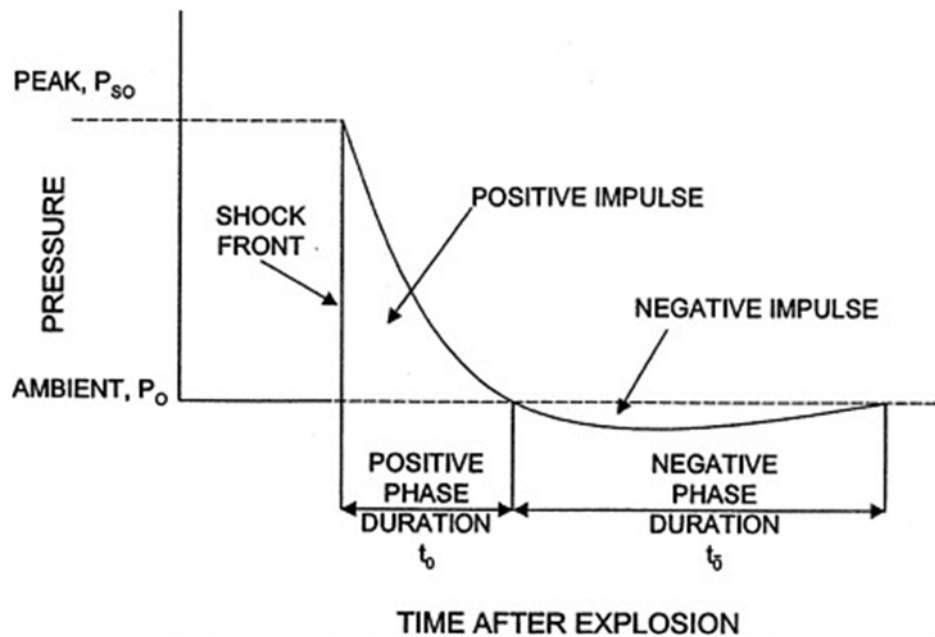


Figure D-9: Impulse Shown as a Function of Pressure over Duration at a Specific Location

The peak pressure experienced by a receptor (i.e., an animal) is a function of the explosive material, the net explosive weight, and the distance from the charge. Net explosive weight (NEW) is a way to classify and compare quantities of different explosive compounds. The net explosive weight for a charge is the energetic equivalent weight of trinitrotoluene (TNT). In general, shock wave effects near an explosive charge increase in proportion to the cube root of the explosive weight (Young, 1991). For example, shock wave impacts will double when the explosive charge weight is increased by a factor of eight (i.e., cube root of eight equals two). This relationship is known as the similarity principle, and the corresponding similitude equations allow for prediction of various explosive metrics for a given charge weight and material.

The similitude equations allow for a simple prediction of peak pressure in a uniform free field environment, and sources are provided below for using these equations for estimating explosive effects in air and in water. However, at longer distances or in more complex environments with boundaries and variations in the propagation medium, explosive propagation modeling is preferred.

D.5.1 Explosions in Air

Explosions in air produce an initial blast front that propagates away from the detonation. When pressure waves from an explosion in air meet the water surface, the pressure wave can be transmitted across the air-water boundary and reflected off the water surface. When pressure waves in air meet the water at a perpendicular angle (e.g., straight down from an in-air source to a flat water surface), the sound waves are both transmitted directly across the water surface in the same direction of travel and reflected 180° back toward the original direction of travel. For acoustic waves, this can create a localized condition at the water surface where the incident and reflected waves sum, doubling the in-air overpressure (+ 6 dB). For shock waves with high incident pressures travelling at supersonic speeds, the reflection from the water surface depends on the angle of incidence and the speed of the shock wave,

and the reflected shock wave pressure can be greater than the incident shock wave pressure (Kinney & Graham, 1985; U.S. Department of the Navy, 1975).

In certain explosive geometries, depending on the size of the explosive and its height of detonation, a combined shock wave, called a Mach stem, can be created by the summing of the direct and reflected shock waves at larger angles of incidence (Kinney & Graham, 1985). In instances where this specific geometry does not occur, only the direct path wave is experienced because there is no surface reflection (waves are parallel to or angled away from the water surface, such as would occur when an explosive is detonated at the water surface), or separate direct and reflected pressure waves may be experienced.

D.5.1.1 Fragmentation

Missiles, rockets, projectiles, and other cased weapons will produce casing fragments upon detonation. These fragments may be of variable size and are ejected at supersonic speed from the detonation. The casing fragments will be ejected at velocities much greater than debris from any target due to the proximity of the casing to the explosive material. Unlike detonations on land targets, detonations during Navy training and testing would not result in other propelled materials such as crater debris.

Fragment density can be simply assumed to follow an inverse-square law with distance, in which the possibility of fragment strike is reduced by the square of the distance from the original detonation point. The forces of gravity and drag will further reduce the likelihood of strike with increasing distance than is accounted for in the inverse-square relationship (Zaker, 1975). The possible area of strike risk at any given distance from the detonation point is limited to the surface area of produced fragments, with drag and gravity reducing the number of produced fragments that travel to greater distances.

D.5.2 Explosions in Water

At the instant of explosion underwater, gas byproducts are generated at high pressure and temperature, creating a bubble. The heat causes a certain amount of water to vaporize, adding to the volume of the bubble. This action immediately begins to force the water in contact with the blast front in an outward direction, creating an intense, supersonic pressure shock wave. As the high-pressure wave travels away from the source, it slows to the speed of sound and acts like an acoustic wave similar to other impulsive sources that lack a strong shock wave (e.g., air guns). Explosions have the greatest amount of energy in lower frequencies below 500 Hz, although energy is present in frequencies exceeding 10 kHz (Urick, 1983). The higher frequency components exhibit more attenuation with distance due to absorption (see Section D.3.3.2, Absorption).

The shock wave caused by an explosion in deeper water may be followed by several bubble pulses in which the explosive byproduct gases expand and contract, with correlated high- and low-pressure oscillations. These bubble pulses lack the steep pressure front of the initial explosive pulse, but the first bubble pulse may still contribute to the total energy released at frequencies below 100 Hz (Urick, 1983). Subsequent bubble pulses contribute little to the total energy released during the explosion (Urick, 1983). If the detonation occurs at or just below the surface, a portion of the explosive power is released into the air and a pulsating gas bubble is not formed.

The pressure waves from an explosive can constructively add or destructively cancel each other in ocean environments with multi-path propagation, as described for acoustic waves in Section D.3.3.3 (Refraction) and Section D.3.3.4 (Reflection and Multipath Propagation). The received impulse is affected by the depth of the charge and the depth of the receiving animal. Pressure waves from the

detonation may travel directly to the receiver or be reflected off the water surface before arriving at the receiver. If a charge is detonated closer to the surface or if an animal is closer to the surface, the time between the initial direct path arrival and the following surface-reflected tension wave arrival is reduced, resulting in a steep negative pressure cut-off of the initial direct path positive impulse exposure. Two animals at similar distances from a charge, therefore, may experience the same peak pressure but different levels of impulse at different depths.

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Appendix E Estimated Marine Mammal and Sea Turtle Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities

Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement

Northwest Training and Testing

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Appendix E Estimated Marine Mammal and Sea Turtle Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities

Navy training and testing activities would result in the incidental takes of marine mammals and sea turtles within the Study Area. The following appendix provides the estimated number of marine mammal and sea turtle impacts. Specifically, estimated impacts are derived from the quantitative analysis for activities under Alternatives 1 and 2 that involve the use of acoustic or explosive stressors. The quantitative analysis takes into account Navy activities, marine species density layers, acoustic modeling, and other environmental parameters. A detailed explanation of the quantitative analysis is provided in the technical report *Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing* (U.S. Department of the Navy, 2018). It is important to note that *impacts*, as discussed in this appendix, represent the estimated instances of take of marine mammals or sea turtles, not necessarily the number of individuals impacted (i.e., some marine mammals or sea turtles could be impacted several times, while others would not experience any impact). The take tables below represent the minimum and maximum impacts under Alternative 1, and the maximum impacts under Alternative 2 for any given year and across a consecutive seven-year period. Because the level of certain activities may vary annually as described in Chapter 2 (Description of Proposed Action and Alternatives), estimated impacts under Alternative 1 will also vary between nominal and maximum years. The variation in activity level under Alternative 2 is negligible therefore the difference in impacts are not presented. In addition, across training and testing activities, the seven-year total impacts in each table may be more or less than seven times the maximum impact in any year. Estimated impacts are provided over the duration of the Marine Mammal Protection Act (MMPA) Regulations and Letters of Authorization, which would be valid for a seven-year period.

E.1 Estimated Marine Mammal Impacts from Sonar and Other Transducers Under Navy Training Activities

Table E-1 provides a summary of the estimated number of marine mammal impacts from exposure to sonar and other transducers used during Navy training activities under Alternatives 1 and 2 over the course of a year.

Table E-1: Estimated Marine Mammals Impacts per Year from Sonar Training Activities

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Order Cetacea										
Suborder Mysticeti (baleen whales)										
Family Balaenopteridae (rorquals)										
Blue whale*	Eastern North Pacific	2	0	0	2	0	0	2	0	0
Fin whale*	Northeast Pacific	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	41	13	0	41	13	0	42	13	0
Sei whale*	Eastern North Pacific	16	14	0	16	14	0	16	14	0
Minke whale	Alaska	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	51	58	0	52	58	0	54	58	0
Humpback* whale	Central North Pacific	3	2	0	3	2	0	3	2	0
	California, Oregon, & Washington	3	1	0	3	1	0	3	2	0
Family Eschrichtiidae (gray whale)										
Gray whale	Eastern North Pacific	1	0	0	2	0	0	2	0	0
	Western North Pacific [†]	0	0	0	0	0	0	0	0	0

Table E-1: Estimated Marine Mammals Impacts per Year from Sonar Training Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Suborder Odontoceti (toothed whales)										
Family Delphinidae (dolphins)										
Bottlenose dolphin	California, Oregon, & Washington, Offshore	5	0	0	5	0	0	5	0	0
Killer whale	Alaska Resident	0	0	0	0	0	0	0	0	0
	Eastern North Pacific Offshore	67	1	0	67	1	0	69	1	0
	Northern Resident	0	0	0	0	0	0	0	0	0
	West Coast Transient	73	2	0	76	2	0	79	2	0
	Southern Resident [†]	2	0	0	3	0	0	3	0	0
Northern right whale dolphin	California, Oregon, & Washington	7,765	156	0	7,785	156	0	7,985	156	0
Pacific white-sided dolphin	North Pacific	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	5,149	85	0	5,198	86	0	5,311	87	0
Risso’s dolphin	California, Oregon, & Washington	2,234	46	0	2,240	46	0	2,301	46	0
Short-beaked common dolphin	California, Oregon, & Washington	1,133	25	0	1,140	25	0	1,152	25	0

Table E-1: Estimated Marine Mammals Impacts per Year from Sonar Training Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Short-finned pilot whale	California, Oregon, & Washington	57	0	0	57	0	0	58	0	0
Striped dolphin	California, Oregon, & Washington	424	13	0	426	13	0	432	13	0
Family Kogiidae (Kogia spp.)										
Kogia whales	California, Oregon, & Washington	203	178	0	204	178	0	209	178	0
Family Phocoenidae (porpoises)										
Dall's porpoise	Alaska	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	6,871	6,346	5	6,911	6,368	6	7,088	6,419	6
Harbor porpoise	Southeast Alaska	0	0	0	0	0	0	0	0	0
	Northern Oregon/ Washington Coast	212	87	0	212	87	0	273	99	0
	Northern California/ Southern Oregon	21	0	0	21	0	0	21	0	0
	Washington Inland Waters	6,607	3,409	12	8,010	4,244	16	9,977	5,196	19

Table E-1: Estimated Marine Mammals Impacts per Year from Sonar Training Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Physeteridae (sperm whale)										
Sperm whale*	California, Oregon, & Washington	508	2	0	510	2	0	519	2	0
Family Ziphiidae (beaked whales)										
Baird’s beaked whale	California, Oregon, & Washington	553	0	0	556	0	0	559	0	0
Cuvier’s beaked whale	California, Oregon, & Washington	1,456	1	0	1,461	1	0	1,497	1	0
Mesoplodon spp	California, Oregon, & Washington	648	1	0	651	1	0	666	1	0
Suborder Pinnipedia										
Family Otariidae (sea lions and fur seals)										
California sea lion	U.S. Stock	3,578	9	0	3,615	9	0	3,698	9	0
Steller sea lion	Eastern U.S.	103	1	0	107	1	0	114	1	0
Guadalupe fur seal*	Mexico	603	3	0	605	3	0	617	3	0
Northern fur seal	Eastern Pacific	2,125	4	0	2,130	4	0	2,162	4	0
	California	43	0	0	43	0	0	44	0	0

Table E-1: Estimated Marine Mammals Impacts per Year from Sonar Training Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Phocidae (true seals)										
Harbor seal	Southeast Alaska - Clarence Strait	0	0	0	0	0	0	0	0	0
	Oregon/ Washington Coastal	0	0	0	0	0	0	1	0	0
	Washington Northern Inland Waters	262	112	0	436	203	0	509	227	0
	Hood Canal	2,298	332	0	2,334	348	0	2,881	417	0
	Southern Puget Sound	464	279	1	730	360	1	822	398	1
Northern elephant seal	California	1,691	209	0	1,698	209	0	1,735	209	0

* ESA-listed species (all stocks) within the NWTT Study Area. †Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.2 Estimated Marine Mammal Impacts per 7-Year Period from Sonar and Other Transducers Under Navy Training Activities

Table E-2 provides a summary of the estimated number of marine mammal impacts from exposure to sonar and other transducers used during Navy training activities under Alternatives 1 and 2 over the course of seven years.

Table E-2: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Training Activities

Species	Stock	Alternative 1 – 7-year			Alternative 2 – 7-year		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Order Cetacea							
Suborder Mysticeti (baleen whales)							
Family Balaenopteridae (rorquals)							
Blue whale*	Eastern North Pacific	11	0	0	11	0	0
Fin whale*	Northeast Pacific	0	0	0	0	0	0
	California, Oregon, & Washington	285	92	0	291	92	0
Sei whale*	Eastern North Pacific	111	95	0	114	95	0
Minke whale	Alaska	0	0	0	0	0	0
	California, Oregon, & Washington	360	407	0	376	407	0
Humpback whale*	Central North Pacific	18	13	0	20	13	0
	California, Oregon, & Washington	22	10	0	23	11	0
Family Eschrichtiidae (gray whale)							
Gray whale	Eastern North Pacific	10	0	0	14	0	0
	Western North Pacific ^[†]	0	0	0	0	0	0
Suborder Odontoceti (toothed whales)							
Family Delphinidae (dolphins)							
Bottlenose dolphin	California, Oregon, & Washington, Offshore	33	0	0	33	0	0

**Table E-2: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Training Activities
(continued)**

<i>Species</i>	<i>Stock</i>	<i>Alternative 1 – 7-year</i>			<i>Alternative 2 – 7-year</i>		
		<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>	<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>
Killer whale	Alaska Resident	0	0	0	0	0	0
	Eastern North Pacific Offshore	470	8	0	481	8	0
	Northern Resident	0	0	0	0	0	0
	West Coast Transient	525	13	0	554	15	0
	Southern Resident ^[7]	15	0	0	21	0	0
Northern right whale dolphin	California, Oregon, & Washington	54,399	1,094	0	55,894	1,095	0
Pacific white-sided dolphin	North Pacific	0	0	0	0	0	0
	California, Oregon, & Washington	36,187	601	0	37,180	606	0
Risso's dolphin	California, Oregon, & Washington	15,649	323	0	16,110	323	0
Short-beaked common dolphin	California, Oregon, & Washington	7,947	177	0	8,062	177	0
Short-finned pilot whale	California, Oregon, & Washington	398	0	0	403	0	0
Striped dolphin	California, Oregon, & Washington	2,970	89	0	3,026	89	0
<i>Family Kogiidae (Kogia spp.)</i>							
Kogia whales	California, Oregon, & Washington	1,278	1,120	0	1,316	1,124	0

**Table E-2: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Training Activities
(continued)**

Species	Stock	Alternative 1 – 7-year			Alternative 2 – 7-year		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Phocoenidae (porpoises)							
Dall's porpoise	Alaska	0	0	0	0	0	0
	California, Oregon, & Washington	48,192	44,506	39	49,614	44,930	39
Harbor porpoise	Southeast Alaska	0	0	0	0	0	0
	Northern Oregon/ Washington Coast	1,485	607	0	1,910	692	0
	Northern California/ Southern Oregon	145	0	0	145	0	0
	Washington Inland Waters	52,137	27,369	103	69,828	36,364	134
Family Physeteridae (sperm whale)							
Sperm whale*	California, Oregon, & Washington	3,562	12	0	3,636	12	0
Family Ziphiidae (beaked whales)							
Baird's beaked whale	California, Oregon, & Washington	3,875	0	0	3,913	0	0
Cuvier's beaked whale	California, Oregon, & Washington	10,202	7	0	10,480	7	0
Mesoplodon spp	California, Oregon, & Washington	4,544	5	0	4,662	5	0
Suborder Pinnipedia							
Family Otariidae (sea lions and fur seals)							
California sea lion	U.S. Stock	25,179	64	0	25,884	64	0
Steller sea lion	Eastern U.S.	738	5	0	799	5	0
Guadalupe fur seal*	Mexico	4,226	21	0	4,322	21	0
Northern fur seal	Eastern Pacific	14,885	26	0	15,137	26	0
	California	300	0	0	305	0	0

**Table E-2: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Training Activities
(continued)**

Species	Stock	Alternative 1 – 7-year			Alternative 2 – 7-year		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Phocidae (true seals)							
Harbor seal	Southeast Alaska - Clarence Strait	0	0	0	0	0	0
	Oregon/ Washington Coastal	0	0	0	5	0	0
	Washington Northern Inland Waters	2,564	1,165	0	3,561	1,591	0
	Hood Canal	16,238	2,394	0	20,167	2,916	0
	Southern Puget Sound	4,364	2,293	6	5,749	2,788	6
Northern elephant seal	California	11,851	1,462	0	12,142	1,464	0

* ESA-listed species (all stocks) within the NWTT Study Area. [†] Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.3 Estimated Marine Mammal Impacts from Sonar and Other Transducers Under Navy Testing Activities

Table E-3 provides a summary of the estimated number of marine mammal impacts from exposure to sonar and other transducers used during Navy testing activities under Alternatives 1 and 2 over the course of a year.

Table E-3: Estimated Marine Mammals Impacts per Year from Sonar Testing Activities

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Order Cetacea										
Suborder Mysticeti (baleen whales)										
Family Balaenopteridae (rorquals)										
Blue whale*	Eastern North Pacific	2	3	0	3	4	0	4	5	0
Fin whale*	Northeast Pacific	1	1	0	1	1	0	1	1	0
	California, Oregon, & Washington	24	17	0	44	29	0	58	35	0
Sei whale*	Eastern North Pacific	10	21	0	16	35	0	21	43	0
Minke whale	Alaska	0	1	0	1	1	0	1	1	0
	California, Oregon, & Washington	33	74	0	55	131	0	70	166	0
Humpback whale*	Central North Pacific	31	43	0	44	65	0	55	83	0
	California, Oregon, & Washington	26	32	0	36	51	0	44	65	0
Family Eschrichtiidae (gray whale)										
Gray whale	Eastern North Pacific	16	5	0	25	13	0	32	19	0
	Western North Pacific [†]	0	0	0	0	0	0	0	0	0

Table E-3: Estimated Marine Mammals Impacts per Year from Sonar Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Suborder Odontoceti (toothed whales)										
Family Delphinidae (dolphins)										
Bottlenose dolphin	California, Oregon, & Washington, Offshore	2	0	0	3	0	0	5	0	0
Killer whale	Alaska Resident	27	0	0	34	0	0	40	0	0
	Eastern North Pacific Offshore	47	3	0	85	4	0	111	4	0
	Northern Resident	0	0	0	0	0	0	0	0	0
	West Coast Transient	90	18	0	134	20	0	166	22	0
	Southern Resident ^[†]	28	1	0	46	2	0	60	2	0
Northern right whale dolphin	California, Oregon, & Washington	7,649	711	1	12,885	872	1	16,742	975	1
Pacific white-sided dolphin	North Pacific	80	0	0	101	0	0	117	0	0
	California, Oregon, & Washington	8,727	1,088	1	14,394	1,285	1	18,674	1,421	1
Risso's dolphin	California, Oregon, & Washington	2,309	181	0	3,840	228	0	4,994	260	0
Short-beaked common dolphin	California, Oregon, & Washington	329	3	0	963	21	0	1,316	24	0

Table E-3: Estimated Marine Mammals Impacts per Year from Sonar Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Short-finned pilot whale	California, Oregon, & Washington	14	0	0	30	1	0	40	1	0
Striped dolphin	California, Oregon, & Washington	125	3	0	337	7	0	466	8	0
Family Kogiidae (Kogia spp.)										
Kogia whales	California, Oregon, & Washington	110	179	0	160	336	0	197	447	1
Family Phocoenidae (porpoises)										
Dall's porpoise	Alaska	140	341	0	179	459	0	204	574	0
	California, Oregon, & Washington	4,620	7,461	17	6,440	13,729	24	7,766	18,074	29
Harbor porpoise	Southeast Alaska	79	28	0	92	38	0	102	47	0
	Northern Oregon/ Washington Coast	21,978	13,305	14	31,335	20,529	19	39,753	26,283	23
	Northern California/ Southern Oregon	1,545	134	0	1,579	134	0	1,582	134	0
	Washington Inland Waters	6,952	9,651	131	7,136	10,092	137	8,211	10,699	147

Table E-3: Estimated Marine Mammals Impacts per Year from Sonar Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Physeteridae (sperm whale)										
Sperm whale*	California, Oregon, & Washington	164	3	0	324	3	0	427	4	0
Family Ziphiidae (beaked whales)										
Baird's beaked whale	California, Oregon, & Washington	188	0	0	420	0	0	578	1	0
Cuvier's beaked whale	California, Oregon, & Washington	589	3	0	1,074	3	0	1,399	4	0
Mesoplodon spp	California, Oregon, & Washington	256	1	0	468	2	0	609	2	0
Suborder Pinnipedia										
Family Otariidae (sea lions and fur seals)										
California sea lion	U.S. Stock	11,399	314	0	20,140	330	0	27,015	340	0
Steller sea lion	Eastern U.S.	1,405	3	0	2,124	5	0	2,701	6	0
Guadalupe fur seal*	Mexico	480	9	0	877	10	0	1,152	10	0
Northern fur seal	Eastern Pacific	5,681	122	0	9,332	126	0	12,102	128	0
	California	116	1	0	188	1	0	244	1	0

Table E-3: Estimated Marine Mammals Impacts per Year from Sonar Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum			Alternative 1 – Maximum			Alternative 2 – Maximum		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Phocidae (true seals)										
Harbor seal	Southeast Alaska - Clarence Strait	1,497	238	0	2,077	275	0	2,513	312	0
	Oregon/ Washington Coastal	439	390	0	531	629	0	602	801	0
	Washington Northern Inland Waters	434	144	0	434	144	0	434	144	0
	Hood Canal	33,742	21,619	0	36,096	22,688	0	37,814	25,594	0
	Southern Puget Sound	2,505	3,196	3	2,544	3,204	3	2,565	3,204	3
Northern elephant seal	California	1,440	291	0	2,429	491	0	3,149	612	0

* ESA-listed species (all stocks) within the NWT Study Area. [†] Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.4 Estimated Marine Mammal Impacts per 7-Year Period from Sonar and Other Transducers Under Navy Testing Activities

Table E-4 provides a summary of the estimated number of marine mammal impacts from exposure to sonar and other transducers used during Navy testing activities under Alternatives 1 and 2 over the course of seven years.

Table E-4: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Testing Activities

Species	Stock	Alternative 1 – 7-year			Alternative 2 – 7-year		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Order Cetacea							
Suborder Mysticeti (baleen whales)							
Family Balaenopteridae (rorquals)							
Blue whale*	Eastern North Pacific	14	21	0	20	27	0
Fin whale*	Northeast Pacific	5	5	0	7	6	0
	California, Oregon, & Washington	201	140	0	308	191	0
Sei whale*	Eastern North Pacific	78	168	0	113	230	0
Minke whale	Alaska	4	5	0	5	6	0
	California, Oregon, & Washington	264	617	0	379	858	0
Humpback whale*	Central North Pacific	234	341	0	316	462	0
	California, Oregon, & Washington	189	257	0	248	346	0
Family Eschrichtiidae (gray whale)							
Gray whale	Eastern North Pacific	124	47	0	172	85	0
	Western North Pacific ^[†]	0	0	0	0	0	0

**Table E-4: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Testing Activities
(continued)**

Species	Stock	Alternative 1 – 7-year			Alternative 2 – 7-year		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Suborder Odontoceti (toothed whales)							
Family Delphinidae (dolphins)							
Bottlenose dolphin	California, Oregon, & Washington, Offshore	14	0	0	22	0	0
Killer whale	Alaska Resident	202	0	0	279	0	0
	Eastern North Pacific Offshore	389	23	0	581	26	0
	Northern Resident	0	0	0	0	0	0
	West Coast Transient	699	132	0	950	150	0
	Southern Resident [†]	217	11	0	311	13	0
Northern right whale dolphin	California, Oregon, & Washington	61,209	5,235	7	87,574	5,961	7
Pacific white-sided dolphin	North Pacific	603	0	0	817	0	0
	California, Oregon, & Washington	69,057	7,911	8	97,964	8,821	8
Risso's dolphin	California, Oregon, & Washington	18,293	1,341	0	26,052	1,555	0
Short-beaked common dolphin	California, Oregon, & Washington	3,385	57	0	6,426	126	0
Short-finned pilot whale	California, Oregon, & Washington	124	2	0	204	4	0
Striped dolphin	California, Oregon, & Washington	1,265	29	0	2,268	43	0

**Table E-4: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Testing Activities
(continued)**

Species	Stock	Alternative 1 – 7-year			Alternative 2 – 7-year		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Kogiidae (Kogia spp.)							
Kogia whales	California, Oregon, & Washington	756	1,359	0	1,013	2,039	3
Family Phocoenidae (porpoises)							
Dall's porpoise	Alaska	1,047	2,664	0	1,417	4,015	0
	California, Oregon, & Washington	34,733	62,364	126	44,969	92,058	162
Harbor porpoise	Southeast Alaska	576	218	0	708	332	0
	Northern Oregon/ Washington Coast	160,360	103,888	107	219,562	138,853	133
	Northern California/ Southern Oregon	9,930	671	0	10,078	673	0
	Washington Inland Waters	48,155	67,615	930	56,479	73,624	1,022
Family Physeteridae (sperm whale)							
Sperm whale*	California, Oregon, & Washington	1,424	19	0	2,233	22	0
Family Ziphiidae (beaked whales)							
Baird's beaked whale	California, Oregon, & Washington	1,738	0	0	2,947	2	0
Cuvier's beaked whale	California, Oregon, & Washington	4,959	20	0	7,379	24	0
Mesoplodon spp	California, Oregon, & Washington	2,161	11	0	3,207	12	0
Suborder Pinnipedia							
Family Otariidae (sea lions and fur seals)							
California sea lion	U.S. Stock	91,662	2,225	0	136,474	2,294	0

**Table E-4: Estimated Marine Mammals Impacts per 7-Year Period from Sonar Testing Activities
(continued)**

Species	Stock	Alternative 1 – 7-year			Alternative 2 – 7-year		
		Behavioral Response	TTS	PTS	Behavioral Response	TTS	PTS
Family Otariidae (sea lions and fur seals)							
Steller sea lion	Eastern U.S.	10,715	27	0	15,075	34	0
Guadalupe fur seal*	Mexico	3,958	64	0	5,915	68	0
Northern fur seal	Eastern Pacific	44,953	860	0	63,540	877	0
	California	911	9	0	1,281	9	0
Family Phocidae (true seals)							
Harbor seal	Southeast Alaska - Clarence Strait	11,630	1,754	0	17,511	2,181	0
	Oregon/ Washington Coastal	3,024	3,098	0	3,545	4,209	0
	Washington Northern Inland Waters	2,221	1,006	0	2,221	1,006	0
	Hood Canal	242,342	154,541	0	263,785	179,157	0
	Southern Puget Sound	17,124	22,387	24	17,506	22,431	24
Northern elephant seal	California	11,638	2,385	0	17,479	3,307	0

* ESA-listed species (all stocks) within the NWTT Study Area. [†] Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.5 Estimated Marine Mammal Impacts from Explosives Under Navy Training Activities

Table E-5 provides a summary of the estimated number of marine mammal impacts from exposure to explosives used during Navy training activities under Alternatives 1 and 2 over the course of a year.

Table E-5: Estimated Marine Mammals Impacts per Year from Explosive Training Activities

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Order Cetacea													
Suborder Mysticeti (baleen whales)													
Family Balaenopteridae (rorquals)													
Blue whale*	Eastern North Pacific	0	0	0	0	0	0	0	0	0	0	0	0
Fin whale*	Northeast Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Sei whale*	Eastern North Pacific	0	0	0	0	0	0	0	0	0	0	0	0
Minke whale	Alaska	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Humpback whale*	Central North Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Family Eschrichtiidae (gray whale)													
Gray whale	Eastern North Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	Western North Pacific ^[†]	0	0	0	0	0	0	0	0	0	0	0	0

Table E-5: Estimated Marine Mammals Impacts per Year from Explosive Training Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Suborder Odontoceti (toothed whales)													
Family Delphinidae (dolphins)													
Bottlenose dolphin	California, Oregon, & Washington, Offshore	0	0	0	0	0	0	0	0	0	0	0	0
Killer whale	Alaska Resident	0	0	0	0	0	0	0	0	0	0	0	0
	Eastern North Pacific Offshore	0	0	0	0	0	0	0	0	0	0	0	0
	Northern Resident	0	0	0	0	0	0	0	0	0	0	0	0
	West Coast Transient	0	0	0	0	0	0	0	0	0	0	0	0
	Southern Resident [†]	0	0	0	0	0	0	0	0	0	0	0	0
Northern right whale dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	1	0	0
Pacific white-sided dolphin	North Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	1	0	0
Risso's dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Short-beaked common dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0

Table E-5: Estimated Marine Mammals Impacts per Year from Explosive Training Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Short-finned pilot whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Striped dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Family Kogiidae (Kogia spp.)													
Kogia whales	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	1	1	0
Family Phocoenidae (porpoises)													
Dall's porpoise	Alaska	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	2	6	1	0	4	16	2	0	4	39	6	0
Harbor porpoise	Southeast Alaska	0	0	0	0	0	0	0	0	0	0	0	0
	Northern Oregon/ Washington Coast	0	0	0	0	0	0	0	0	0	0	0	0
	Northern California/ Southern Oregon	0	0	0	0	0	0	0	0	0	0	0	0
	Washington Inland Waters	0	61	27	0	0	61	27	0	0	102	45	0

Table E-5: Estimated Marine Mammals Impacts per Year from Explosive Training Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Family Physeteridae (sperm whale)													
Sperm whale*	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Family Ziphiidae (beaked whales)													
Baird's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Cuvier's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Mesoplodon spp	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Suborder Pinnipedia													
Family Otariidae (sea lions and fur seals)													
California sea lion	U.S. Stock	0	0	0	0	0	0	0	0	0	0	0	0
Steller sea lion	Eastern U.S.	0	0	0	0	0	0	0	0	0	0	0	0
Guadalupe fur seal*	Mexico	0	0	0	0	0	0	0	0	0	0	0	0
Northern fur seal	Eastern Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	California	0	0	0	0	0	0	0	0	0	0	0	0

Table E-5: Estimated Marine Mammals Impacts per Year from Explosive Training Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Family Phocidae (true seals)													
Harbor seal	Southeast Alaska - Clarence Strait	0	0	0	0	0	0	0	0	0	0	0	0
	Oregon/ Washington Coastal	0	0	0	0	0	0	0	0	0	0	0	0
	Washington Northern Inland Waters	0	30	5	0	0	30	5	0	0	50	8	0
	Hood Canal	0	4	1	0	0	4	1	0	0	7	1	0
	Southern Puget Sound	0	0	0	0	0	0	0	0	0	0	0	0
Northern elephant seal	California	0	1	0	0	0	2	1	0	0	5	2	0

* ESA-listed species (all stocks) within the NWTT Study Area. [†] Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.6 Estimated Marine Mammal Impacts per 7-Year Period from Explosives Under Navy Training Activities

Table E-6 provides a summary of the estimated number of marine mammal impacts from exposure to explosives used during Navy training activities under Alternatives 1 and 2 over the course of seven years.

Table E-6: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Training Activities

Species	Stock	Alternative 1 – 7-year				Alternative 2 – 7-year			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Order Cetacea									
Suborder Mysticeti (baleen whales)									
Family Balaenopteridae (rorquals)									
Blue whale*	Eastern North Pacific	0	0	0	0	0	0	0	0
Fin whale*	Northeast Pacific	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Sei whale*	Eastern North Pacific	0	0	0	0	0	0	0	0
Minke whale	Alaska	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Humpback whale*	Central North Pacific	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Family Eschrichtiidae (gray whale)									
Gray whale	Eastern North Pacific	0	0	0	0	0	0	0	0
	Western North Pacific [†]	0	0	0	0	0	0	0	0
Suborder Odontoceti (toothed whales)									
Family Delphinidae (dolphins)									
Bottlenose dolphin	California, Oregon, & Washington, Offshore	0	0	0	0	0	0	0	0

**Table E-6: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Training Activities
(continued)**

<i>Species</i>	<i>Stock</i>	<i>Alternative 1 – 7-year</i>				<i>Alternative 2 – 7-year</i>			
		<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>	<i>Injury</i>	<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>	<i>Injury</i>
Killer whale	Alaska Resident	0	0	0	0	0	0	0	0
	Eastern North Pacific Offshore	0	0	0	0	0	0	0	0
	Northern Resident	0	0	0	0	0	0	0	0
	West Coast Transient	0	0	0	0	0	0	0	0
	Southern Resident ⁺	0	0	0	0	0	0	0	0
Northern right whale dolphin	California, Oregon, & Washington	0	0	0	0	0	4	0	0
Pacific white-sided dolphin	North Pacific	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	0	0	0	0	0	5	0	0
Risso's dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Short-beaked common dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Short-finned pilot whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Striped dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0
<i>Family Kogiidae (Kogia spp.)</i>									
Kogia whales	California, Oregon, & Washington	0	0	0	0	0	8	3	0

**Table E-6: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Training Activities
(continued)**

Species	Stock	Alternative 1 – 7-year				Alternative 2 – 7-year			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Family Phocoenidae (porpoises)									
Dall's porpoise	Alaska	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	20	75	9	0	25	276	45	0
Harbor porpoise	Southeast Alaska	0	0	0	0	0	0	0	0
	Northern Oregon/ Washington Coast	0	0	0	0	0	0	0	0
	Northern California/ Southern Oregon	0	0	0	0	0	0	0	0
	Washington Inland Waters	0	428	188	0	0	713	313	0
Family Physeteridae (sperm whale)									
Sperm whale*	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Family Ziphiidae (beaked whales)									
Baird's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Cuvier's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Mesoplod on spp	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Suborder Pinnipedia									
Family Otariidae (sea lions and fur seals)									
California sea lion	U.S. Stock	0	0	0	0	0	0	0	0
Steller sea lion	Eastern U.S.	0	0	0	0	0	0	0	0
Guadalupe fur seal*	Mexico	0	0	0	0	0	0	0	0
Northern fur seal	Eastern Pacific	0	0	0	0	0	0	0	0
	California	0	0	0	0	0	0	0	0

**Table E-6: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Training Activities
(continued)**

Species	Stock	Alternative 1 – 7-year				Alternative 2 – 7-year			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Family Phocidae (true seals)									
Harbor seal	Southeast Alaska - Clarence Strait	0	0	0	0	0	0	0	0
	Oregon/ Washington Coastal	0	0	0	0	0	0	0	0
	Washington Northern Inland Waters	0	209	35	0	0	348	59	0
	Hood Canal	0	30	5	0	0	50	8	0
	Southern Puget Sound	0	0	0	0	0	0	0	0
Northern elephant seal	California	0	11	1	0	0	32	12	0

* ESA-listed species (all stocks) within the NWTT Study Area. [†] Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.7 Estimated Marine Mammal Impacts from Explosives Under Navy Testing Activities

Table E-7 provides a summary of the estimated number of marine mammal impacts from exposure to sonar and other transducers used during Navy testing activities under Alternatives 1 and 2 over the course of a year.

Table E-7: Estimated Marine Mammals Impacts per Year from Explosive Testing Activities

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Order Cetacea													
Suborder Mysticeti (baleen whales)													
Family Balaenopteridae (rorquals)													
Blue whale*	Eastern North Pacific	1	0	0	0	1	0	0	0	1	0	0	0
Fin whale*	Northeast Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	6	2	0	0	6	2	0	0	6	2	0	0
Sei whale*	Eastern North Pacific	1	1	0	0	1	1	0	0	1	1	0	0
Minke whale	Alaska	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	4	2	0	0	4	2	0	0	4	2	0	0
Humpback whale*	Central North Pacific	0	1	0	0	0	1	0	0	0	1	0	0
	California, Oregon, & Washington	1	1	0	0	1	1	0	0	1	1	0	0
Family Eschrichtiidae (gray whale)													
Gray whale	Eastern North Pacific	1	2	0	0	1	2	0	0	1	2	0	0
	Western North Pacific [†]	0	0	0	0	0	0	0	0	0	0	0	0

Table E-7: Estimated Marine Mammals Impacts per Year from Explosive Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Suborder Odontoceti (toothed whales)													
Family Delphinidae (dolphins)													
Bottlenose dolphin	California, Oregon, & Washington, Offshore	0	0	0	0	0	0	0	0	0	0	0	0
Killer whale	Alaska Resident	0	0	0	0	0	0	0	0	0	0	0	0
	Eastern North Pacific Offshore	0	0	0	0	0	0	0	0	0	0	0	0
	Northern Resident	0	0	0	0	0	0	0	0	0	0	0	0
	West Coast Transient	0	0	0	0	0	0	0	0	0	0	0	0
	Southern Resident [†]	0	0	0	0	0	0	0	0	0	0	0	0
Northern right whale dolphin	California, Oregon, & Washington	1	1	0	0	1	1	0	0	1	1	0	0
Pacific white-sided dolphin	North Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	1	1	0	0	1	1	0	0	1	1	0	0
Risso's dolphin	California, Oregon, & Washington	0	1	0	0	0	1	0	0	0	1	0	0
Short-beaked common dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0

Table E-7: Estimated Marine Mammals Impacts per Year from Explosive Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Short-finned pilot whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Striped dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Family Kogiidae (Kogia spp.)													
Kogia whales	California, Oregon, & Washington	1	3	2	0	1	3	2	0	1	3	2	0
Family Phocoenidae (porpoises)													
Dall's porpoise	Alaska	0	0	0	0	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	52	177	66	0	52	177	66	0	52	177	66	0
Harbor porpoise	Southeast Alaska	0	0	0	0	0	0	0	0	0	0	0	0
	Northern Oregon/ Washington Coast	55	194	84	0	55	194	84	0	55	194	84	0
	Northern California/ Southern Oregon	91	214	86	0	91	214	86	0	91	214	86	0
	Washington Inland Waters	0	0	0	0	0	0	0	0	0	0	0	0

Table E-7: Estimated Marine Mammals Impacts per Year from Explosive Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Family Physeteridae (sperm whale)													
Sperm whale*	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Family Ziphiidae (beaked whales)													
Baird's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Cuvier's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Mesoplodon spp	California, Oregon, & Washington	0	0	0	0	0	0	0	0	0	0	0	0
Suborder Pinnipedia													
Family Otariidae (sea lions and fur seals)													
California sea lion	U.S. Stock	1	3	1	0	1	3	1	0	1	3	1	0
Steller sea lion	Eastern U.S.	0	1	0	0	0	1	0	0	0	1	0	0
Guadalupe fur seal*	Mexico	0	0	0	0	0	0	0	0	0	0	0	0
Northern fur seal	Eastern Pacific	0	0	0	0	0	0	0	0	0	0	0	0
	California	0	0	0	0	0	0	0	0	0	0	0	0

Table E-7: Estimated Marine Mammals Impacts per Year from Explosive Testing Activities (continued)

Species	Stock	Alternative 1 – Minimum				Alternative 1 – Maximum				Alternative 2 – Maximum			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Family Phocidae (true seals)													
Harbor seal	Southeast Alaska - Clarence Strait	0	0	0	0	0	0	0	0	0	0	0	0
	Oregon/ Washington Coastal	9	11	2	0	9	11	2	0	9	11	2	0
	Washington Northern Inland Waters	0	0	0	0	0	0	0	0	0	0	0	0
	Hood Canal	0	0	0	0	0	0	0	0	0	0	0	0
	Southern Puget Sound	0	0	0	0	0	0	0	0	0	0	0	0
Northern elephant seal	California	7	8	3	0	7	8	3	0	7	8	3	0

* ESA-listed species (all stocks) within the NWTT Study Area. ^[†] Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.8 Estimated Marine Mammal Impacts per 7-Year Period from Explosives Under Navy Testing Activities

Table E-8 provides a summary of the estimated number of marine mammal impacts from exposure to sonar and other transducers used during Navy testing activities under Alternatives 1 and 2 over the course of seven years.

Table E-8: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Testing Activities

Species	Stock	Alternative 1 – 7-year				Alternative 2 – 7-year			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Order Cetacea									
Suborder Mysticeti (baleen whales)									
Family Balaenopteridae (rorquals)									
Blue whale*	Eastern North Pacific	3	0	0	0	3	0	0	0
Fin whale*	Northeast Pacific	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	39	9	0	0	40	11	0	0
Sei whale*	Eastern North Pacific	8	3	0	0	8	4	0	0
Minke whale	Alaska	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	24	8	0	0	25	10	0	0
Humpback whale*	Central North Pacific	0	2	0	0	0	3	0	0
	California, Oregon, & Washington	5	5	0	0	7	7	0	0
Family Eschrichtiidae (gray whale)									
Gray whale	Eastern North Pacific	3	7	0	0	6	12	0	0
	Western North Pacific [†]	0	0	0	0	0	0	0	0
Suborder Odontoceti (toothed whales)									
Family Delphinidae (dolphins)									
Bottlenose dolphin	California, Oregon, & Washington, Offshore	0	0	0	0	0	0	0	0

**Table E-8: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Testing Activities
(continued)**

<i>Species</i>	<i>Stock</i>	<i>Alternative 1 – 7-year</i>				<i>Alternative 2 – 7-year</i>			
		<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>	<i>Injury</i>	<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>	<i>Injury</i>
Killer whale	Alaska Resident	0	0	0	0	0	0	0	0
	Eastern North Pacific Offshore	0	0	0	0	0	0	0	0
	Northern Resident	0	0	0	0	0	0	0	0
	West Coast Transient	0	0	0	0	0	0	0	0
	Southern Resident [†]	0	0	0	0	0	0	0	0
Northern right whale dolphin	California, Oregon, & Washington	7	5	0	0	8	5	0	0
Pacific white-sided dolphin	North Pacific	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	6	4	0	0	7	5	0	0
Risso's dolphin	California, Oregon, & Washington	0	2	0	0	0	3	0	0
Short-beaked common dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Short-finned pilot whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Striped dolphin	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Family Kogiidae (Kogia spp.)									
Kogia whales	California, Oregon, & Washington	5	18	9	0	6	20	9	0

**Table E-8: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Testing Activities
(continued)**

Species	Stock	Alternative 1 – 7-year				Alternative 2 – 7-year			
		Behavioral Response	TTS	PTS	Injury	Behavioral Response	TTS	PTS	Injury
Family Phocoenidae (porpoises)									
Dall's porpoise	Alaska	0	0	0	0	0	0	0	0
	California, Oregon, & Washington	236	908	330	0	299	1,074	397	0
Harbor porpoise	Southeast Alaska	0	0	0	0	0	0	0	0
	Northern Oregon/ Washington Coast	167	584	252	0	275	970	418	0
	Northern California/ Southern Oregon	278	646	261	0	459	1,071	432	0
	Washington Inland Waters	0	0	0	0	0	0	0	0
Family Physeteridae (sperm whale)									
Sperm whale*	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Family Ziphiidae (beaked whales)									
Baird's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Cuvier's beaked whale	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Mesoplodon spp	California, Oregon, & Washington	0	0	0	0	0	0	0	0
Suborder Pinnipedia									
Family Otariidae (sea lions and fur seals)									
California sea lion	U.S. Stock	3	11	4	0	5	14	5	0
Steller sea lion	Eastern U.S.	0	2	0	0	0	3	0	0
Guadalupe fur seal*	Mexico	0	0	0	0	0	0	0	0

**Table E-8: Estimated Marine Mammals Impacts per 7-Year Period from Explosive Testing Activities
(continued)**

<i>Species</i>	<i>Stock</i>	<i>Alternative 1 – 7-year</i>				<i>Alternative 2 – 7-year</i>			
		<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>	<i>Injury</i>	<i>Behavioral Response</i>	<i>TTS</i>	<i>PTS</i>	<i>Injury</i>
Northern fur seal	Eastern Pacific	0	0	0	0	0	0	0	0
	California	0	0	0	0	0	0	0	0
<i>Family Phocidae (true seals)</i>									
Harbor seal	Southeast Alaska - Clarence Strait	0	0	0	0	0	0	0	0
	Oregon/ Washington Coastal	27	33	6	0	46	54	11	0
	Washington Northern Inland Waters	0	0	0	0	0	0	0	0
	Hood Canal	0	0	0	0	0	0	0	0
	Southern Puget Sound	0	0	0	0	0	0	0	0
Northern elephant seal	California	41	46	17	0	46	51	18	0

* ESA-listed species (all stocks) within the NWTT Study Area. †Only designated stocks are ESA-listed.

Notes: PTS = permanent threshold shift, TTS = temporary threshold shift

E.9 Estimated Sea Turtle Impacts from Sonar and Other Transducers Under Navy Training and Testing Activities

Based on the quantitative analysis, no sea turtle impacts are anticipated from exposure to sonar and other transducers used during Navy training and testing activities under Alternatives 1 and 2 over the course of a year or seven years.

E.10 Estimated Sea Turtle Impacts from Explosives Under Navy Training and Testing Activities

Based on the quantitative analysis, no sea turtle impacts are anticipated from exposure to explosives used during Navy training and testing activities under Alternatives 1 and 2 over the course of a year or seven years.

REFERENCES

U.S. Department of the Navy. (2018). *Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing* (Technical Report prepared by NUWC Division Newport, Space and Naval Warfare Systems Center Pacific, G2 Software Systems, and the National Marine Mammal Foundation). Newport, RI: Naval Undersea Warfare Center.

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Appendix F Military Expended Material and Direct Strike Impact Analyses

Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement Northwest Training and Testing

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APPENDIX F MILITARY EXPENDED MATERIAL AND DIRECT STRIKE IMPACT ANALYSES

F.1 ESTIMATING THE IMPACT OF MILITARY EXPENDED MATERIALS AND UNDERWATER EXPLOSIONS ON ABIOTIC SUBSTRATES AS A HABITAT FOR BIOLOGICAL RESOURCES

This section describes the calculation of the disturbance footprint (i.e., military expended material footprint or explosive crater footprint) of an instantaneous impact of military expended materials or explosions on the substrate. The actual instantaneous impact on the bottom will depend on the number and location of military expended materials expended and not recovered, which is likely much lower and more concentrated than either scenario being analyzed. Longer-term impacts on the bottom are far more difficult to quantify—refer to the Marine Habitats section (3.3) of Chapter 3 (Affected Environment and Environmental Consequences) for qualitative discussion. The approach described in this appendix is consistent with the approach taken in the 2015 Northwest Training and Testing (NWTT) Final Environmental Impact Statement (EIS)/Overseas Environmental Impact Statement (OEIS) (see Appendix H, Statistical Probability Analysis for Estimating Direct Air Strike Impact and Number of Potential Exposures).

The analysis requires a tabular summary of the military expended material or crater (underwater explosions) footprints expected in training and testing areas. The data comes from the NWTT action proponents and represents the most locational flexibility with regard to expenditure of military expended materials and underwater explosions. The data for both expended and recovered material are reported in Table F-1 below. Appendix A (Navy Activities Descriptions) of the 2015 NWTT Final EIS/OEIS provides basic descriptions of military expended materials, and Chapter 3 (Section 3.0.3.2, Explosive Stressors) provides basic descriptions of explosive categories. The data for number of military expended materials and underwater explosions are then multiplied by an estimate of the footprint size documented in Table F-1.

To determine the potential level of disturbance of military expended materials on marine substrates, it was assumed that the impact area (footprint) of the expended material on the seafloor is twice the size of its physical size (unless specified otherwise in Appendix F notes). By doubling the footprint, the results should more accurately reflect the potential disturbance to soft bottom habitats (i.e., to account for sediment plumes), but should overestimate disturbance to hard bottom habitats (i.e., because sediment plumes are not expected). These calculations do not consider the Navy's mitigation measures for seafloor resources, which are detailed in Appendix K (Geographic Mitigation Assessment). Items with casings (e.g., small-, medium-, and large-caliber munitions; flares; sonobuoys) have their impact footprints further doubled to account for both the item and its casing. To be conservative (i.e., worst case), items and their casings were assumed to be the same size, although in reality the items are a smaller size in order to fit in their casing.

Additionally, highly explosive munitions that explode either at the surface or in the water column were treated in the same manner as non-explosive practice munitions, although in reality, the explosions would result in smaller fragments reaching the substrate than expected by the fully intact non-explosive practice munitions.

Table F-1: Categories and Footprints for Various Materials and Underwater Explosions

<i>Material Group</i>	<i>Material Category</i>	<i>Bottom Frequency¹</i>	<i>Crater Footprint² (ft.²)</i>	<i>MEM Size (ft.²)</i>	<i>MEM Footprint (ft.²)</i>	<i>Material Specific Notes</i>
Bomb	Bombs (Explosive)	NA	NA	8.1203	112.9048	The MEM footprint was calculated using the bomb with the largest footprint in terms of material fragments.
	Bombs (Non-explosive)	NA	NA	8.1203	112.9048	
Countermeasure	Acoustic Countermeasures	NA	NA	0.31107	1.2432	Includes all type of non-recoverable Acoustic Countermeasures
	Chaff-Air Cartridge	NA	NA	0.0012	0.0022	Chaff is a radar reflector material made of thin, narrow, metallic strips cut in various lengths to elicit frequency responses, which deceive enemy radars. Chaff-Air is fired from an aircraft using a small cartridge.
	Chaff-Ship Cartridge	NA	NA	2.000	4.000	Chaff-ship serves the same purpose of chaff-air. It is fired from a ship in cartridges.
	Anti-torpedo Torpedo	NA	NA	4.5424	9.0847	The Countermeasure Anti-torpedo consists of an anti-torpedo torpedo enclosed within All Up Round Equipment canister. The anti-torpedo torpedo is a 6.75-inch diameter high-maneuverability hard-kill torpedo designed to rapidly intercept and engage an incoming threat torpedo. The All Up Round Equipment consists of a nose sabot, ram plate, launch tube, muzzle cover, and breech mechanism to encapsulate, protect, and ultimately launch the anti-torpedo torpedo. Anti-torpedo torpedoes are frequently recovered; assume all are non-recoverable for worst-case.
Missiles	Missiles (Explosive)	NA	NA	37.3669	74.7338	MEM size based on SM-6
	Missile (Non-explosive)	NA	NA	31.0011	62.0023	MEM size based on Tomahawk

Table F-1: Categories and Footprints for Various Materials and Underwater Explosions (continued)

<i>Material Group</i>	<i>Material Category</i>	<i>Bottom Frequency¹</i>	<i>Crater Footprint² (ft.²)</i>	<i>MEM Size (ft.²)</i>	<i>MEM Footprint (ft.²)</i>	<i>Material Specific Notes</i>
Other	Air-launched Lightweight (Explosive) Torpedo	NA	NA	19.1199	38.2399	MEM size based on MK50/MK54
	Air-launched Lightweight (Non-explosive) Torpedo	NA	NA	19.1199	38.2399	MEM size based on MK50/MK54. Typically recovered
	AMNS/EMNS Neutralizer (Explosive)	50%	430.5564	1.6286	3.2572	AMNS is air deployed whereas EMNS is ship deployed
	AMNS Neutralizer (Non-explosive)	NA	NA	0.1513	0.3026	The neutralizer itself is recovered, but the associated fiber optic cable and the can that holds the fiber optic cable is not.
	Anchor (Expendable)	NA	NA	6.2495	12.5001	Associated primarily with mine shapes.
	Anchor (Recoverable)	NA	NA	6.2495	12.5001	Associated primarily with mine shapes and ships.
	Biodegradable Polymer	NA	NA	NA	NA	A substance composed of molecules that degrade as a result of microorganisms and/or enzymes. Footprint is not applicable because the material breaks up within a couple of hours, depending on the material composition of the polymer. Reference: Karlsson and Albertsson (1998).
	Bottom Placed Instruments	NA	NA	2.0000	4.000	Usually a moored tracking beacon, typically weighing around 50 pounds covering approximately 2 ft. ² of seafloor.
	Buoy (Explosive)	NA	NA	0.9752	3.8987	Explosive buoys including mini-sound source and SUS. MEM-size based on Marine Marker.

Table F-1: Categories and Footprints for Various Materials and Underwater Explosions (continued)

<i>Material Group</i>	<i>Material Category</i>	<i>Bottom Frequency¹</i>	<i>Crater Footprint² (ft.²)</i>	<i>MEM Size (ft.²)</i>	<i>MEM Footprint (ft.²)</i>	<i>Material Specific Notes</i>
Other (continued)	Buoy (Non-explosive)	NA	NA	0.9752	3.8987	These buoys are separate from sonobuoys, and are included for DWADS (expendable). MEM size based on Marine Marker. Can be expended or recovered.
	Concrete Slugs	NA	NA	0.0011	0.0022	Assume similar in dimensions to a chaff cartridge
	Endcaps & Pistons – Non Chaff & Flare	NA	NA	0.0043	0.0086	Applies only to where it cannot be associated to another object (e.g., endcaps and pistons associated with chaff would be covered by chaff). Used for testing.
	Endcaps – Chaff & Flare	NA	NA	0.00215	0.0043	Applies only to Chaff-Air and Flares. 1 Endcap is expended per chaff-air or flare.
	Flare O-Ring	NA	NA	0.0043	0.0086	Assumed similar 2-dimensional footprint as endcaps and pistons. Associated with flares. Assumed 1 Flare O-Ring per flare.
	Fiber Optic Can	NA	NA	0.0011	0.0022	Assumed similar 2-dimensional footprint as chaff-air cartridge. Associated with AMNS Neutralizer fiber optic cable. Can that holds fiber optic cable is expended.
	Bathythermograph – Expended	NA	NA	0.0258	0.0516	An instrument that is deployed from a ship to record temperature and depth measurements. Small wires transmit the temperature data from the probe to the ship. This item is fairly standard in terms of footprint; these are off the shelf Commercial products. Reference: NOAA 2015. http://www.aoml.noaa.gov/goos/uot/xbt-what-is.php . Accessed November 3, 2015.
	Fiber Optic Cables	NA	NA	NA	NA	Associated with some rockets and AMNS neutralizers, security, underwater communication, power transmission (e.g., with UUVs, torpedoes, UAVs)
	Guidance Wires	NA	NA	0	0	Fragments created for relatively small portion associated with explosive devices (associated with heavyweight torpedoes).

Table F-1: Categories and Footprints for Various Materials and Underwater Explosions (continued)

<i>Material Group</i>	<i>Material Category</i>	<i>Bottom Frequency¹</i>	<i>Crater Footprint² (ft.²)</i>	<i>MEM Size (ft.²)</i>	<i>MEM Footprint (ft.²)</i>	<i>Material Specific Notes</i>
Other (continued)	Bathythermograph – Expended Wire	NA	NA	NA	NA	Single vertical wire
	Heavyweight (Explosive) Torpedo	NA	NA	39.6155	79.2299	MEM size based on MK-48
	Heavyweight Torpedo Accessories	NA	NA	0.1615	3.2367	MEM includes ballast weights, flex tubing
	Heavyweight (Non-explosive) Torpedo	NA	NA	NA	NA	Typically recovered
	Illumination Flares	NA	NA	1.2196	4.8782	Flares that have a large parachute; MEM size based on half the surface area of an 18 ft. diameter parachute used with an LUU-2 illumination flare.
	Lightweight Torpedo Accessories	NA	NA	1.0107	2.0215	MEM includes ballast weights, flex tubing (parachute size not included)
	Marine Marker	NA	NA	0.9752	3.8987	MEM footprint based on two Navy marine markers (MK25 and MK58)
	Parachute (Large)	NA	NA	353.4289	706.8578	MEM size based on diameter of drone main parachute (30 ft. diameter).
	Parachute (Medium)	NA	NA	283.9961	567.9932	Associated with Illumination flares (18 ft. diameter)
	Small Decelerator/ Parachute	NA	NA	2.8438	5.6876	Associated with launched sonobuoys, lightweight torpedoes, and drones (drag parachute)
	Sabot	NA	NA	1.2195	4.8782	An accessory used during projectile firing. Footprint similar in size to the projectile.

Table F-1: Categories and Footprints for Various Materials and Underwater Explosions (continued)

<i>Material Group</i>	<i>Material Category</i>	<i>Bottom Frequency¹</i>	<i>Crater Footprint² (ft.²)</i>	<i>MEM Size (ft.²)</i>	<i>MEM Footprint (ft.²)</i>	<i>Material Specific Notes</i>
Other (continued)	Sonobuoys (Non-explosive)	NA	NA	1.2206	2.4413	Sonobuoys have an extra item footprint (half the dimensions of the sonobuoy) added in addition to the actual sonobuoy and casing to account for the items that are discarded from the sonobuoy following its release. MEM size does not include the associated Small Decelerator/Parachute (noted in table above)
	Sonobuoys (Explosive)	0%	NA	1.2206	2.4413	
	Sonobuoy Wires	NA	NA	NA	NA	One wire is associated with each sonobuoy
	Surface-Launched Lightweight (Explosive) Torpedo	0%	NA	10.0782	20.1576	MEM size based on MK50/MK54
	Surface-Launched Lightweight (Non-Explosive) Torpedo	NA	NA	10.0782	20.1576	Typically recovered
Projectile	Grenades (Explosive)	0	NA	0.1044	0.2088	None
	Large Caliber (Explosive)	NA	NA	1.0097	4.0386	Item assumed to have a projectile and casing
	Large Caliber (Non-explosive)	NA	NA	1.0097	4.0386	Item assumed to have a projectile and casing
	Large caliber (Casing Only)	NA	NA	0.5048	1.0097	Used when the target is on land; no MEM from projectile
	Medium Caliber (Explosive)	NA	NA	0.0560	0.2239	Item assumed to have a projectile and casing
	Medium Caliber (Non-explosive)	NA	NA	0.0560	0.2239	Item assumed to have a projectile and casing
	Small Caliber (Non-explosive)	NA	NA	0.0301	0.1216	Item assumed to have a projectile and casing

Table F-1: Categories and Footprints for Various Materials and Underwater Explosions (continued)

<i>Material Group</i>	<i>Material Category</i>	<i>Bottom Frequency¹</i>	<i>Crater Footprint² (ft.²)</i>	<i>MEM Size (ft.²)</i>	<i>MEM Footprint (ft.²)</i>	<i>Material Specific Notes</i>
Projectile	Small Caliber (Casing Only)	NA	NA	0.0151	0.0301	Used only for small caliber blanks. All other small caliber rounds are included under NEPM.
	Kinetic Energy Round	NA	NA	0.5048	1.0097	Item assumed to only have a projectile (no casing) – size of Large Caliber round.
Target	Aerial Drones – Expendable	NA	NA	294.6082	589.2164	MEM when specifically known it is an aerial drone; MEM size based on Firebee.
	Aerial Drones – Recovered	NA	NA	294.6082	589.2164	MEM when specifically known it is an aerial drone; MEM size based on Firebee. Typically recovered.
	Air Target – Expended (Non-Drone)	NA	NA	42.1622	84.3244	MEM when specifically known it is an air launched decoy. MEM size based on dimensions of Tactical Air Launched Decoy or Miniature Air-Launched Decoy.
	Metal Plates	NA	NA	2.7782	5.5563	Charges are secured to a 20" X 20" X 1/2" ferrous metal plate The target unit (concrete blocks, metal plate, and any debris) is brought to the surface and analyzed.
	Surface Target – Expended	NA	NA	5.7522	11.5034	Includes remote controlled or towed targets
	Surface Target – Recovered	NA	NA	NA	NA	Reported as recovered.
	Surface Target (Mobile) – Expended	NA	NA	5.7522	11.5034	Includes remote controlled or towed targets
	Surface Target (Stationary) – Expended	NA	NA	96.8752	193.7504	MEM when specifically known it is a stationary surface target. MEM size based on Killer Tomato.
	Subsurface Target (Mobile) – Expended	NA	NA	1.2206	2.4412	MEM when specifically known it is a sub-surface Motorized Autonomous Target

Table F-1: Categories and Footprints for Various Materials and Underwater Explosions (continued)

<i>Material Group</i>	<i>Material Category</i>	<i>Bottom Frequency¹</i>	<i>Crater Footprint² (ft.²)</i>	<i>MEM Size (ft.²)</i>	<i>MEM Footprint (ft.²)</i>	<i>Material Specific Notes</i>
Target	Mine Shape – Expended	NA	NA	25.7903	51.5807	Mine shapes that were specifically identified as non-recoverable; footprint based on size of explosive mine; size not including anchor
	Mine Shape – Expended	NA	NA	25.7903	51.5807	Mine shape and associated anchor block that are recovered. The vast majority of practice mines have built-in anchors for placing on the bottom; relatively few are moored/floating, and none are drifting.

¹Bottom frequencies (%) are only listed for underwater explosions;

²Crater footprints are only listed for material that may be detonated on the bottom.

Notes: MEM = Military Expended Materials, AMNS/EMNS = Airborne Mine Neutralization System/Expendable Mine Neutralization System, NA = Not Applicable, DWADS = Deep Water Active Distributed System, NEPM = Non-explosive Practice Munitions, UAV = Unmanned Aerial Vehicle, UUV = Unmanned Underwater Vehicle

F.1.1 MILITARY EXPENDED AND RECOVERED MATERIAL – TRAINING ACTIVITIES

Table F-2 shows military expended and recovered materials and impact footprints within the NWTT Study Area for a single year.

Table F-2: Number and Impacts¹ of Military Expended Materials Proposed for Use During Training Activities in a Single Year Under Alternatives 1 and 2

Military Expended Materials	Size (ft. ²)	Impact Footprint (ft. ²)	Offshore Area				Inland Waters			
			Alternative 1		Alternative 2		Alternative 1		Alternative 2	
			Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)
Bombs										
Bombs (Explosive)	8.1203	112.9048	2	0.00518	2	0.00518	0	0	0	0
Bombs (Non-Explosive)	8.1203	112.9048	84	0.21772	90	0.23327	0	0	0	0
Grenade (Explosive)	0.1044	0.2088	130	0.00062	130	0.00062	0	0	0	0
Projectiles										
Small-Caliber (Non-Explosive)	0.0301	0.1216	121,000	0.33778	121,000	0.33778	0	0	0	0
Small-Caliber (Casing Only)	0.0151	0.0301	3,036	0.00210	6,057	0.00419	0	0	0	0
Medium-Caliber (Explosive)	0.056	0.2239	250	0.00129	6,490	0.03336	0	0	0	0
Medium-Caliber (Non-Explosive)	0.056	0.2239	26,410	0.13575	43,112	0.22160	0	0	0	0
Large-Caliber (Explosive)	1.0097	4.0386	112	0.01038	390	0.03656	0	0	0	0
Large-Caliber (Non-Explosive)	1.0097	4.0386	2,800	0.25960	9,520	0.88263	0	0	0	0
Large-Caliber (Casing only)	0.5048	1.0097	9,562	0.22164	9,910	0.22971	0	0	0	0
Missiles (Explosive)	37.6691	74.7338	14	0.02402	27	0.04632	0	0	0	0
Missiles (Non-Explosive)	37.6691	74.7338	4	0.00686	15	0.02573	0	0	0	0
Countermeasures										
Chaff- Air Cartridge	0.0011	0.0022	5,000	0.00025	5000	0.00025	0	0	0	0
Flares	1.2196	4.8782	700	0.07839	700	0.07839	0	0	0	0
Targets										
Air Target- Expended Decoy	42.1622	84.3245	35	0.06775	43	0.08324	0	0	0	0
Air Targets- Recovered Drone	NA	NA	98	0	145	0	0	0	0	0
Sub-Surface Targets (Mobile) - Expended	1.2206	2.4412	373	0.02090	373	0.02090	0	0	0	0
Sub-Surface Targets (Mobile) - Recovered	NA	NA	96	0	107	0	0	0	0	0
Surface Targets (Stationary) - Expended	96.8752	193.7504	374	0.09877	370	0.09771	0	0	0	0

Table F-2: Number and Impacts¹ of Military Expended Materials Proposed for Use During Training Activities in a Single Year Under Alternatives 1 and 2 (continued)

Military Expended Materials	Size (ft. ²)	Impact Footprint (ft. ²)	Offshore Area				Inland Waters			
			Alternative 1		Alternative 2		Alternative 1		Alternative 2	
			Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)
Targets (continued)										
Mine Shapes - Recovered	NA	NA	0	0	0	0	112	0	120	0
Mine Shapes - Expended	25.7903	51.5807	0	0	0	0	0	0	0	0
Other										
Anchor - Recovered	6.2495	12.5001	0	0	0	0	40	0.01148	40	0.01148
Sonobuoys (Non-Explosive)	1.2207	2.4413	9,338	0.52334	9,378	0.52559	0	0	0	0
Endcaps	0.0021	0.0043	5,700	0.00056	5,700	0.00057	0	0	0	0
Compression Pad/Piston	0.0043	0.0086	700	0.00014	700	0.00014	0	0	0	0
Fiber Optic Can	0.0011	0.0022	170	0.00001	164	0.00001	0	0	0	0
Flare O-Ring	0.0043	0.0086	704	0.00014	724	0.00014	0	0	0	0
Illumination Flare	1.2196	4.8782	4	0.00045	24	0.00269	0	0	0	0
Heavyweight Torpedo (Non-Explosive)	39.6155	79.2299	2	0.00364	0	0	0	0	0	0
Heavyweight Torpedo (Explosive)	39.6155	79.2299	0	0	2	0.00364	0	0	0	0
Heavyweight Torpedo Accessories	0.1615	3.2367	2	0.00015	2	0.00015	0	0	0	0
Lightweight Torpedo (Non-Explosive)	19.1199	38.2398	16	0.01405	16	0.01405	0	0	0	0
Lightweight Torpedo Accessories	1.1011	2.0215	16	0.00074	16	0.00074	0	0	0	0
Marine Marker	0.9752	3.8987	230	0.02059	232	0.02076	40	0.00358	50	0.00448
Small Decelerator/Parachute	2.8438	5.6876	9,354	1.22135	9,394	1.22657	0	0	0	0
Sonobuoy Wires	0.0000	0.0000	9,338	0	9,378	0	0	0	0	0
Parachutes - Medium	9.0417	18.0834	4	0.00166	24	0.00996	0	0	0	0
Parachutes - Large	283.9961	567.9932	98	1.27785	145	1.89070	0	0	0	0
Total			205,546	6.10074	239,114	7.56672	3,076	0.00568	6,107	0.00866

¹Calculations for "Impact (Acre) Column = [(Impact Footprint) x (Number)]/43,560 sq. ft. per acre; Blue shading indicates numbers and impacts of MEM that differ between Alternatives 1 & 2

F.1.2 MILITARY EXPENDED AND RECOVERED MATERIALS – TESTING ACTIVITIES

Table F-3 shows military expended and recovered materials and impact footprints within the NWTT Study Area for a single year.

Table F-3: Number and Impacts¹ of Military Expended Materials Proposed for Use During Testing Activities in a Single Year Under Alternatives 1 and 2

Military Expended Materials	Size (ft. ²)	Impact Footprint (ft. ²)	Offshore Area				Inland Waters			
			Alternative 1		Alternative 2		Alternative 1		Alternative 2	
			Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)
Projectiles										
Kinetic Energy Round	0.5048	1.0097	80	0.00185	80	0.00185	0	0	0	0
Large-Caliber (Non-Explosive)	1.0097	4.0386	160	0.01483	160	0.01483	0	0	0	0
Large-Caliber (Casing only)	0.5048	1.0097	160	0.00371	160	0.00371	0	0	0	0
Sabot – Kinetic Energy Round	1.2196	4.8782	80	0.00896	80	0.00896	0	0	0	0
Countermeasures										
Acoustic Countermeasures	0.3311	1.2432	751	0.02143	791	0.02258	720	0.02055	720	0.02055
Anti-Torpedo Torpedo	4.524	9.0847	58	0.01210	58	0.01210	176	0.03671	184	0.03837
Targets										
Air Targets - Expended Drone	294.6082	589.2164	162	0.31360	162	0.31360	0	0	0	0
Mine Shapes (Non-Explosive) – Expended	25.7903	51.5807	280	0.33156	280	0.33156	336	0.39787	336	0.39787
Mine Shapes (Non-Explosive) – Recovered	25.7903	51.5807	181	0.21433	181	0.21433	3,776	4.47127	5,266	6.23563
Mines (Explosive)	25.7903	51.5807	5	0.00592	5	0.00592	0	0	0	0
Sub-Surface Target (Mobile) – Recovered	NA	NA	185	0	188	0	1,127	0	1,159	0
Sub-Surface Target (Stationary) – Expended	96.8752	193.7504	4	0.01779	4	0.01779	0	0	0	0
Sub-Surface Target (Stationary) – Recovered	NA	NA	3,331	0	3,331	0	7,317	0	7,317	0
Surface Target (Mobile) – Expended	5.7522	11.5034	162	0.04278	162	0.04278	0	0	0	0
Surface Target (Stationary) – Expended	96.8752	193.7504	172	0.76504	172	0.76504				
Surface Target (Stationary) – Recovered	NA	NA	81	0	81	0	542	0	542	0
Other										
Air-Launched Lightweight Torpedo (Explosive)	19.1199	38.2399	2	0.00176	2	0.00176	0	0	0	0
Air-Launched Lightweight Torpedo (Non-Explosive)	19.1199	38.2399	42	0.03687	42	0.03687	0	0	0	0
AMNS Neutralizer (Explosive)	1.6286	3.2572	36	0.00269	36	0.00269	0	0	0	0
Anchor – Expended	6.2495	12.5001	445	0.12770	445	0.12770	720	0.20661	720	0.20661
Anchor – Recovered	6.2495	12.5001	0	0	0	0	2,527	0.72516	3,107	0.89159
Bathymograph - Expended	0.2771	0.5554	604	0.00770	1,130	0.01441	0	0	0	0
Bottom Placed Instruments	2.0000	4.0000	0	0.00000	0	0.00000	19	0.00174	19	0.00174
Buoy (Explosive)	0.9752	3.8987	80	0.00716	80	0.00716	0	0	0	0

Table F-3: Number and Impacts¹ of Military Expended Materials Proposed for Use During Testing Activities in a Single Year Under Alternatives 1 and 2 (continued)

Military Expended Materials	Size (ft. ²)	Impact Footprint (ft. ²)	Offshore Area				Inland Waters			
			Alternative 1		Alternative 2		Alternative 1		Alternative 2	
			Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)	Number	Impact (Acre)
Other (Continued)										
Buoy (Non-Explosive)	0.9752	3.8987	232	0.02076	392	0.03508	0	0	0	0
Fiber Optic Can	0.0011	0.0022	36	0.00000	36	0.00000	197	0.00001	197	0.00001
Guidance Wire	0.0000	0.0000	152	0	192	0	230	0	230	0
Heavyweight Torpedo (Explosive)	39.6155	79.2299	4	0.00728	4	0.00728	0	0	0	0
Heavyweight Torpedo (Non-Explosive)	39.6155	79.2299	148	0.26919	188	0.34195	230	0.41834	230	0.41834
Heavyweight Torpedo Accessories	0.1615	3.2367	152	0.01129	192	0.01427	230	0.01709	230	0.01709
Lightweight Torpedo Accessories	1.1011	2.0215	82	0.00381	85	0.00394	48	0.00223	48	0.00223
Parachutes (Medium)	9.0417	18.0834	102	0.04234	102	0.04234	176	0.07306	184	0.07639
Decelerator/Parachute (Small)	2.8438	5.6876	1,711	0.22340	1,711	0.22340	48	0.00627	48	0.00627
Sonobuoy (Non-Explosive)	1.2207	2.4413	4,233	0.23724	6,599	0.36984	48	0.00269	48	0.00269
Surface-Launched Lightweight Torpedo (Explosive)	10.0782	20.1576	2	0.00093	2	0.00093	0	0	0	0
Surface-Launched Lightweight Torpedo (Non-Explosive)	10.0782	20.1576	36	0.01666	39	0.01805	48	0.02221	48	0.02221
Total			13,796	2.23364	19,137	2.39152	2,996	0.76483	3,012	0.76982

¹Calculations for "Impact (Acre) Column = [(Impact Footprint) x (Number)]/43,560; Blue shading indicates numbers and impacts of MEM that differ between Alternatives 1 and 2

F.2 STATISTICAL PROBABILITY ANALYSIS FOR ESTIMATING DIRECT STRIKE IMPACT AND NUMBER OF POTENTIAL EXPOSURES FROM MILITARY EXPENDED MATERIALS

This section discusses the methods and results for calculating the probability of a direct strike of an animal from any military items from the proposed training and testing activities falling toward (or directed at) the sea surface. For the purposes of this section, military items include non-explosive practice munitions, sonobuoys, acoustic countermeasures, targets, and high-energy lasers. Only marine mammals and sea turtles will be analyzed using these methods because animal densities are necessary to complete the calculations, and density estimates are currently available only for marine mammals and sea turtles within the Study Area. The analysis conducted here does not account for explosive munitions because impacts from explosives are analyzed within the Navy Acoustic Effects Model as described in the Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing (U.S. Department of the Navy, 2018).

F.2.1 DIRECT IMPACT ANALYSIS

A probability was calculated to estimate the impact probability (P) and number of exposures (T) associated with direct impact of military items on marine animals on the sea surface within the specified training or testing area (R) in which the activities are occurring. The statistical probability analysis is based on probability theory and modified Venn diagrams with rectangular “footprint” areas for the individual animal (A) and total impact (I) inscribed inside the training or testing area (R). The analysis is over-predictive and conservative, in that it assumes: (1) that all animals would be at or near the surface 100 percent of the time, when in fact, marine mammals spend the majority of their time underwater, and (2) that the animals are stationary, which does not account for any movement or any potential avoidance of the training or testing activity.

- $A = \text{length} \times \text{width}$, where the individual animal’s width (breadth) is assumed to be 20 percent of its length for marine mammals and 112 percent of its length for sea turtles. This product for A is multiplied by the number of animals N_a in the specified training or testing area (i.e., product of the highest average month animal density [D] and training or testing area [R]: $N_a = D \times R$) to obtain the total animal footprint area ($A \times N_a = A \times D \times R$) in the training or testing area. As a conservative scenario, the total animal footprint area is calculated for the species with the highest average month density in the training or testing area with the highest use of military items within the entire Study Area.
- $I = N_{\text{mun}} \times \text{length} \times \text{diameter}$, where N_{mun} = total annual number of military items for each type, and “length” and “diameter” refer to the individual military equipment dimensions. For each type, the individual impact footprint area is multiplied by the total annual number of military items to obtain the type-specific impact footprint area ($I = N_{\text{mun}} \times \text{length} \times \text{diameter}$). Each training or testing activity uses one or more different types of military items, each with a specific number and dimensions, and several training and testing activities occur in a given year. When integrating over the number of military items types for the given activity (and then over the number of activities in a year), these calculations are repeated (accounting for differences in dimensions and numbers) for all military items types used, to obtain the type-specific impact footprint area (I). These impact footprint areas are summed over all military items types for the given activity, and then summed (integrated) over all activities to obtain the total impact footprint area resulting from all activities occurring in the training or testing area in a given year.

As a conservative scenario, the total impact footprint area is calculated for the training or testing area with the highest use of military items within the entire Study Area.

Though marine mammals and sea turtles are not randomly distributed in the environment, a random point calculation was chosen due to the intensive data needs that would be required for a calculation that incorporated more detailed information on an animal's or military item's spatial occurrence.

The analysis is expected to provide an overestimation of the probability of a strike for the following reasons: (1) it calculates the probability of a single military item (of all the items expended over the course of the year) hitting a single animal at its species' highest seasonal density, (2) it does not take into account the possibility that an animal may avoid military activities, (3) it does not take into account the possibility that an animal may not be at the water surface, (4) it does not take into account that most projectiles fired during training and testing activities are fired at targets, and so only a very small portion of those projectiles that miss the target would hit the water with their maximum velocity and force, and (5) it does not quantitatively take into account the Navy avoiding animals that are sighted through the implementation of mitigation measures.

The likelihood of an impact is calculated as the probability (P) that the animal footprint (A) and the impact footprint (I) will intersect within the training or testing area (R). This is calculated as the area ratio A/R or I/R, respectively. Note that A (referring to an **individual** animal footprint) and I (referring to the impact footprint resulting from the **total** number of military items N_{mun}) are the relevant quantities used in the following calculations of single-animal impact probability [P], which is then multiplied by the number of animals to obtain the number of exposures (T). The probability that the random point in the training or testing area is within both types of footprints (i.e., A and I) depends on the degree of overlap of A and I. The probability that I overlaps A is calculated by adding a buffer distance around A based on one-half of the impact area (i.e., $0.5 \cdot I$), such that an impact (center) occurring anywhere within the combined (overlapping) area would impact the animal. Thus, if L_i and W_i are the length and width of the impact footprint such that $L_i \cdot W_i = 0.5 \cdot I$ and $W_i/L_i = L_a/W_a$ (i.e., similar geometry between the animal footprint and impact footprint), and if L_a and W_a are the length and width (breadth) of the individual animal such that $L_a \cdot W_a = A$ (= individual animal footprint area), then, assuming a purely static, rectangular scenario (Scenario 1), the total area $A_{tot} = (L_a + 2 \cdot L_i) \cdot (W_a + 2 \cdot W_i)$, and the buffer area $A_{buffer} = A_{tot} - L_a \cdot W_a$.

Four scenarios were examined with respect to defining and setting up the overlapping combined areas of A and I. The results of the following four scenarios were averaged to determine the probability:

1. **Scenario 1:** Purely static, rectangular scenario. Impact is assumed to be static (i.e., direct impact effects only; non-dynamic; no explosions or scattering of military items after the initial impact). Hence the impact footprint area (I) is assumed to be rectangular and given by the product of military items length and width (multiplied by the number of military items).
 $A_{tot} = (L_a + 2 \cdot L_i) \cdot (W_a + 2 \cdot W_i)$ and $A_{buffer} = A_{tot} - L_a \cdot W_a$.
2. **Scenario 2:** Dynamic scenario with end-on collision, in which the length of the impact footprint (L_i) is enhanced by $R_n = 5$ military items lengths to reflect forward momentum.
 $A_{tot} = (L_a + (1 + R_n) \cdot L_i) \cdot (W_a + 2 \cdot W_i)$ and $A_{buffer} = A_{tot} - L_a \cdot W_a$.
3. **Scenario 3:** Dynamic scenario with broadside collision, in which the width of the impact footprint (W_i) is enhanced by $R_n = 5$ military items lengths to reflect forward momentum.
 $A_{tot} = (L_a + 2 \cdot W_i) \cdot (W_a + (1 + R_n) \cdot L_i)$ and $A_{buffer} = A_{tot} - L_a \cdot W_a$.
4. **Scenario 4:** Purely static, radial scenario, in which the rectangular animal and impact footprints are replaced with circular footprints while conserving area. Define the radius (R_a) of the circular

individual animal footprint such that $\pi * R_a^2 = L_a * W_a$, and define the radius (R_i) of the circular impact footprint such that $\pi * R_i^2 = 0.5 * L_i * W_i = 0.5 * I$. Then $A_{tot} = \pi * (R_a + R_i)^2$ and $A_{buffer} = A_{tot} - \pi * R_a^2$ (where $\pi = 3.1415927$).

Static impacts (Scenarios 1 and 4) assume no additional aerial coverage effects of scattered military items beyond the initial impact. For dynamic impacts (Scenarios 2 and 3), the distance of any scattered military items must be considered by increasing the length (Scenario 2) or width (Scenario 3), depending on orientation (broadside versus end-on collision), of the impact footprint to account for the forward horizontal momentum of the falling object. Forward momentum typically accounts for five object lengths, resulting in a corresponding increase in impact area. Significantly different values may result from the static and dynamic orientation. Both of these types of collision conditions can be calculated each with 50 percent likelihood (i.e., equal weighting between Scenarios 2 and 3, to average these potentially different values).

Impact probability P is the probability of impacting one animal with the given number, type, and dimensions of all military items used in training or testing activities occurring in the area per year, and is given by the ratio of total area (A_{tot}) to training or testing area (R): $P = A_{tot}/R$. Number of exposures is $T = N * P = N * A_{tot}/R$, where N = number of animals in the training or testing area per year (given as the product of the animal density [D] and range size [R]). Thus, $N = D * R$ and hence $T = N * P = N * A_{tot}/R = D * A_{tot}$. Using this procedure, P and T were calculated for each of the four scenarios, for Endangered Species Act (ESA)-listed marine mammals and the marine mammal and sea turtle species with the highest average month density (used as the annual density value) and for each military item type. The scenario-specific P and T values were averaged over the four scenarios (using equal weighting) to obtain a single scenario -averaged annual estimate of P and T . The potential number of exposures (t) are reported in Table F-4, Table F-5, and Table F-6.

F.2.2 PARAMETERS FOR ANALYSIS

Impact probabilities (P) and number of exposures (T) were estimated by the analysis for the following parameters:

1. Two action alternatives: Alternative 1 and Alternative 2. Animal densities, animal dimensions, and military item dimensions are the same for the two action alternatives.
2. One training and testing area: The NWTT Offshore Area.
3. The following types of non-explosive items:
 - Small-caliber projectiles: up to and including .50 caliber rounds
 - Medium-caliber projectiles: larger than .50 caliber rounds but smaller than 57 millimeters (mm) projectiles
 - Large-caliber projectiles: includes projectiles greater than or equal to a 57 mm projectile
 - Missiles: includes rockets and jet-propelled munitions
 - Bombs: non-explosive practice bombs and mine shapes, ranging from 10 to 2,000 lb.
 - Torpedoes: includes all aircraft-released lightweight torpedoes
 - Sonobuoys: includes all sonobuoys
 - Targets: includes expended, airborne and surface targets, as well as mine shapes
 - Lightweight torpedo accessories: includes all accessories that are dropped along with the torpedo (e.g., nose cap, air stabilizer)
 - Expended bathythermographs: small sensors deployed from ships
4. High-energy lasers: includes high-energy laser weapons that are directed at a surface target.

5. Animal species of interest: the eight species of ESA-listed marine mammals and the non-ESA listed marine mammal species with the highest average month density in the training and testing area of interest (harbor porpoise and California sea lion), and the only sea turtle species with a possible occurrence in the training and testing area of interest.

F.2.3 INPUT DATA

Input data for the direct strike analysis include animal species likely to be in the area and military items proposed for use under each of the two action alternatives. Animal species data include: (1) species identification and status (i.e., threatened, endangered, or neither), (2) highest average month density estimate for the species of interest, and (3) adult animal dimensions (length and width) for the species with the highest density. The animal's dimensions are used to calculate individual animal footprint areas ($A = \text{length} \times \text{width}$), and animal densities are used to calculate the number of exposures (T) from the impact probability (P): $T = N \times P$. Military items data include: (1) military items category (e.g., projectile, bomb, rocket, target), (2) military items dimensions (length and width), and (3) total number of military items used annually.

Military items input data, specifically the quantity (e.g., numbers of bombs and rockets), are different in magnitude between the two action alternatives. All animal species input data, the military items' identification and category, and the military items' dimensions are the same for the two alternatives; only the quantities (i.e., total number of military items) are different.

F.2.4 OUTPUT DATA

Estimates of impact probability (P) and number of exposures (T) for a given species of interest were made for the specified training or testing area with the highest annual number of military items used for each of the two action alternatives. The calculations derived P and T from the highest annual number of military items used in the Study Area for the given alternative. Differences in P and T between the alternatives arise from different numbers of events (and therefore military items) for the two alternatives.

Results for marine mammals and sea turtles are presented in Tables F-4 through F-6.

Table F-4: Estimated Exposures from Direct Strike of a High-Energy Laser by Area and Alternative in a Single Year

NWTT Offshore Area				
Species	Training		Testing	
	Alternative 1	Alternative 2	Alternative 1	Alternative 2
All Marine Mammals Species	0.000000	0.000000	0.000619	0.000619
Leatherback Sea Turtle	0.000000	0.000000	0.000000	0.000000

Table F-5: Estimated Representative Marine Mammal Exposures from Direct Strike of Military Expended Materials by Area and Alternative in a Single Year

NWTT Offshore Area				
Species	Training		Testing	
	Alternative 1	Alternative 2	Alternative 1	Alternative 2
Humpback Whale	0.000463	0.000534	0.000353	0.000372
Sei Whale	0.000006	0.000007	0.000004	0.000005
Fin Whale	0.000230	0.000265	0.000177	0.000186
Blue Whale	0.000064	0.000073	0.000049	0.000052
Sperm Whale	0.000054	0.000062	0.000041	0.000043
Killer Whale (Southern Resident)	0.000012	0.000014	0.000009	0.000010
Gray Whale	0.000215	0.000249	0.000164	0.000173
Harbor Porpoise	0.010810	0.012568	0.008129	0.008576
California Sea Lion	0.004216	0.004902	0.003170	0.003345
Guadalupe Fur Seal	0.000216	0.000251	0.000162	0.000171

Table F-6: Estimated Leatherback Sea Turtle Exposures from Direct Strike of Military Expended Materials by Area and Alternative in a Single Year

NWTT Offshore Area				
Species	Training		Testing	
	Alternative 1	Alternative 2	Alternative 1	Alternative 2
Leatherback Sea Turtle	0.000001	0.000002	0.000001	0.000001

REFERENCES

Karlsson, S., and A. C. Albertsson. (1998). Biodegradable polymers and environmental interaction. *Polymer Engineering and Science*, 38(8), 1251–1253.

U.S. Department of the Navy. (2018). *Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing* (Technical Report prepared by NUWC Division Newport, Space and Naval Warfare Systems Center Pacific, G2 Software Systems, and the National Marine Mammal Foundation). Newport, RI: Naval Undersea Warfare Center.

Appendix G Federal Register Notices

**Supplemental Environmental Impact Statement/
Overseas Environmental Impact Statement
Northwest Training and Testing**

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APPENDIX G FEDERAL REGISTER NOTICESG-1

List of Figures

There are no figures in this appendix.

List of Tables

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Appendix G Federal Register Notices

Appendix G contains the following *Federal Register* Notices:

1. Notice of Intent to Prepare a Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing
2. Notice of Extension of Scoping Period for the Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing
3. Notice of Public Meetings for the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing
4. Environmental Impact Statements; Notice of Availability
5. Notice of Extension of Public Comment Period for the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing
6. Environmental Impact Statements; Notice of Availability; Amended Notice



Any associated form(s) for this collection may be located within this same electronic docket and downloaded for review/testing. Follow the instructions at <http://www.regulations.gov> for submitting comments. Please submit comments on any given form identified by docket number, form number, and title.

FOR FURTHER INFORMATION CONTACT: To request more information on this proposed information collection or to obtain a copy of the proposal and associated collection instruments, please write to the DSS Office of Information Management, Russell Knox Building, 27130 Telegraph Rd., Quantico, VA 22134 or email dss.niss@mail.mil.

SUPPLEMENTARY INFORMATION:

Title: Associated Form; and *OMB Number:* National Industrial Security System (NISS); OMB Control Number 0704-XXXX.

Needs and Uses: The information collection requirement is necessary for DSS to oversee the National Industrial Security Program (NISP) pursuant to Executive Order 12829. The National Industrial Security System (NISS) will become the repository of records related to the maintenance of information pertaining to contractor facility security clearances (FCL) and contractor capabilities to protect classified information in its possession.

Affected Public: Cleared contractor companies participating in the NISP.

Annual Burden Hours: 11,671.

Number of Respondents: 1,671.

Responses per Respondent: 1.

Annual Responses: 11,671.

Average Burden per Response: 60 minutes.

Frequency: On occasion.

Respondents are security professionals who provide information to DSS in order to process facility security clearances (FCL), report changes of the facility that may affect the FCL, and managing incident response. In addition to this standard processing, NISS will enable security staff to communicate with their DSS representative pursuant to requirement DoD 5220.22-M, National Industrial Security Program Operating Manual. The NISS will be an integrated automated solution that will facilitate efficient execution of the Agency's core mission. NISS will allow users to manage large amounts of information through increased automated workflows to ensure accuracy, create linkages in data, and close the gap of missing data elements.

Dated: August 16, 2017.

Aaron Siegel,
Alternate OSD Federal Register Liaison
Officer, Department of Defense.

[FR Doc. 2017-17686 Filed 8-21-17; 8:45 am]

BILLING CODE 5001-06-P

DEPARTMENT OF DEFENSE

Department of the Navy

**Notice of Intent To Prepare a
Supplemental Environmental Impact
Statement/Overseas Environmental
Impact Statement for Northwest
Training and Testing**

AGENCY: Department of the Navy, DoD.
ACTION: Notice.

SUMMARY: Pursuant to the National Environmental Policy Act (NEPA) of 1969 and regulations implemented by the Council on Environmental Quality, the Department of the Navy (DoN) announces its intent to prepare a supplement to the 2015 Final Northwest Training and Testing (NWT) Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS).

DATES: Public comments will be accepted during the 30-day scoping period from August 22, 2017 to September 21, 2017. Public scoping meetings will not be held. However, public meetings are planned to occur following the release of the Draft Supplemental EIS/OEIS in early 2019.

ADDRESSES: The DoN invites scoping comments on the NWT Supplemental EIS/OEIS from all interested parties. Substantive comments may be provided by mail to the address below and through the project Web site at <http://nwttis.com/>. Comments must be postmarked or received online by September 21, 2017 for consideration during the development of the Draft Supplemental EIS/OEIS.

FOR FURTHER INFORMATION CONTACT: John Mosher, (360) 257-3234, john.g.mosher@navy.mil. Naval Facilities Engineering Command Northwest, Attention: NWT Supplemental EIS/OEIS Project Manager, 3730 North Charles Porter Avenue, Building 385, Oak Harbor, Washington 98278-3500.

SUPPLEMENTARY INFORMATION: The DoN will assess the potential environmental effects associated with ongoing and future at-sea military readiness activities conducted within the NWT EIS/OEIS Study Area (hereafter known as the "Study Area") beyond 2020. Military readiness activities include training and research, development, testing, and

evaluation (hereafter known as "testing"). The Supplemental EIS/OEIS will include an analysis of training and testing activities using new information available after the release of the 2015 Final EIS/OEIS. New information includes an updated acoustic effects model, updated marine mammal density data, and evolving and emergent best available science. Proposed activities are generally consistent with those analyzed in the 2015 Final EIS/OEIS and are representative of training and testing activities the DoN has been conducting in the Study Area for decades.

The Study Area remains unchanged since the 2015 Final EIS/OEIS. The Study Area is comprised of established maritime operating areas and warning areas in the northeastern Pacific Ocean, including areas within the Strait of Juan de Fuca, Puget Sound, and the Western Behm Canal in southeastern Alaska. The Study Area includes air and water space within and outside Washington state waters, air and water space outside state waters of Oregon and Northern California, and DoN pier-side locations where sound navigation and ranging (sonar) maintenance and testing occur. In the supplement to the 2015 Final EIS/OEIS, the DoN will only analyze those training and testing activities conducted at sea within the Study Area.

As part of this process, the DoN will seek the issuance of federal regulatory permits and authorizations under the Marine Mammal Protection Act and Endangered Species Act to support ongoing and future at-sea military readiness activities within the Study Area beyond 2020.

Pursuant to 40 CFR 1501.6, the DoN will invite the National Marine Fisheries Service and the U.S. Coast Guard to be cooperating agencies in preparation of the Supplemental EIS/OEIS.

The DoN's lead action proponent is Commander, U.S. Pacific Fleet. Additional action proponents include Naval Sea Systems Command and Naval Air Systems Command.

The DoN's Proposed Action is to conduct at-sea training and testing activities within the Study Area. Activities include the use of active sonar and explosives while employing marine species protective mitigation measures. The Proposed Action does not alter the DoN's original purpose and need as discussed in the 2015 Final EIS/OEIS.

The purpose of the Proposed Action is to maintain a ready force, which is needed to ensure the DoN can accomplish its mission to maintain, train, and equip combat-ready naval

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forces capable of winning wars, deterring aggression, and maintaining freedom of the seas, consistent with Congressional direction in section 5062 of Title 10 of the U.S. Code. A Supplemental EIS/OEIS is considered the appropriate document, as there is recent scientific information including revised acoustic criteria to consider, in furtherance of NEPA, relevant to the environmental effects of the DoN's Proposed Action. The analysis will support Marine Mammal Protection Act authorization requests.

Proposed training and testing activities are generally consistent with those analyzed in the 2015 Final EIS/OEIS. In the Supplemental EIS/OEIS, the DoN will analyze the proposed changes to the tempo and types of training and testing activities, accounting for the introduction of new technologies, the evolving nature of international events, advances in warfighting doctrine and procedures, and changes in the organization of vessels, aircraft, weapons systems, and DoN personnel. In the NWTT Supplemental EIS/OEIS, the DoN will reflect the compilation of training and testing activities required to fulfill the DoN's military readiness requirements beyond 2020, and therefore includes the analysis of newly proposed activities and changes to previously analyzed activities.

In the Supplemental EIS/OEIS, the DoN will evaluate the potential environmental effects of a no action alternative and action alternatives. Resources to be evaluated include, but are not limited to, marine mammals, sea turtles, essential fish habitat, threatened and endangered species, and American Indian and Alaska Native Traditional Resources.

The scoping process is used to identify public concerns and local issues to be considered during the development of the Draft Supplemental EIS/OEIS. Federal agencies, state agencies, local agencies, the public, and interested persons are encouraged to provide substantive comments to the DoN on environmental resources and issue areas of concern the commenter believes the DoN should consider.

Comments must be postmarked or received online by September 21, 2017 for consideration during the development of the Draft Supplemental EIS/OEIS. Comments can be mailed to: Naval Facilities Engineering Command Northwest, Attention: NWTT Supplemental EIS/OEIS Project Manager, 3730 North Charles Porter Avenue, Building 385, Oak Harbor, Washington 98278-3500. Comments can be submitted online via the project Web

site at <http://www.nwtteis.com/>. Also at this Web site, those interested in receiving electronic project updates can subscribe to receive notifications via email for key milestones throughout the environmental planning process.

Dated: August 16, 2017.

A.M. Nichols,

Lieutenant Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2017-17618 Filed 8-21-17; 8:45 am]

BILLING CODE 3810-FF-P

DEPARTMENT OF EDUCATION

Free Application for Federal Student Aid (FAFSA®) Information To Be Verified for the 2018-2019 Award Year

Correction

In notice document 2017-09167, appearing on pages 21204 through 21208, in the issue of Friday, May 5, 2017, make the following corrections:

1. On page 21207, in the second column, on the second line, the entry that reads "I certify that I ___", should read:

"I certify that I ___ am".

2. On the same page, in the same column, on the nineteenth line, the entry that reads "I certify that I ___", should read:

"I certify that I ___ am".

[FR Doc. C1-2017-09167 Filed 8-21-17; 8:45 am]

BILLING CODE 1301-00-D

DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

[EERE-2017-BT-CRT-0054]

Proposed Agency Information Collection Extension

AGENCY: Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy.

ACTION: Information collection extension, with changes; notice and request for comment.

SUMMARY: The U.S. Department of Energy (DOE) intends to extend with changes for three years with the Office of Management and Budget (OMB), the Certification Reports, Compliance Statements, Application for a Test Procedure Waiver, and Recordkeeping for Consumer Products and Commercial/Industrial Equipment subject to Energy or Water Conservation Standards Package under OMB No.

1910-1400. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

DATES: Written comments and information are requested and will be accepted on or before October 23, 2017.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at <http://www.regulations.gov>. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE-2017-BT-CRT-0054, by any of the following methods:

1. *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

2. *Email:* to InfoCollection2017CRT0054@ee.doe.gov. Include docket number EERE-2017-BT-CRT-0054 in the subject line of the message.

3. *Postal Mail:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, Mailstop EE-5B, 1000 Independence Avenue SW., Washington, DC 20585-0121. Telephone: (202) 287-1445. If possible, please submit all items on a compact disc ("CD"), in which case it is not necessary to include printed copies.

4. *Hand Delivery/Courier:* Appliance and Equipment Standards Program, U.S. Department of Energy, Building Technologies Office, 950 L'Enfant Plaza SW., Suite 600, Washington, DC 20024. Telephone: (202) 287-1445. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

No telefacsimiles (faxes) will be accepted.

Docket: The docket for this activity, which includes Federal Register notices, comments, and other supporting documents/materials, is available for review at <http://www.regulations.gov>. All documents in the docket are listed in the <http://www.regulations.gov> index. However, some documents listed in the index,



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Responses to Disturbance and Climate Variability on DoD Lands (FY18 New Start)—Dr. Scott Ferrenberg, United States Geological Survey; 2:00 p.m. RC18–C2–1021 (RC18–1021): Using Unmanned Aerial Systems to Model Spatially-Mediated Heterogeneity in 3D Microclimate Landscapes (FY18 New Start)—Dr. Anna Carter, Iowa State University; 2:45 p.m. Break; 3:00 p.m. RC18–C2–1108 (RC18–1108): Aquatic Ecosystem Vulnerability to Fire and Climate Change in Alaskan Boreal Forests (FY18 New Start)—Dr. Jeffrey Falke, United States Geological Survey; 3:45 p.m. Resource Conservation and Resiliency Overview—Dr. Kurt Preston, Resource Conservation and Resiliency Program Manager; 3:55 p.m. RC18–C1–1358 (RC18–1358): Using Remotely-sensed Data and Light-level Geolocator Technology to Inform Off-Post Landscape-Scale Conservation Planning for a Migratory Species (FY18 New Start)—Dr. Ashley Long, Texas A&M AgriLife Research; 4:40 p.m. Public Discussion/Adjourn for the day.

Thursday, October 19, 2017: 8:30 a.m.: Convene—Dr. Joseph Hughes, Chair; 8:40 a.m. Weapons Systems and Platforms Overview—Dr. Robin Nissan, WP Program Manager; 8:50 a.m. WP18–C4–1047 (WP18–1047): Development of an Agile, Novel Expeditionary Battlefield Manufacturing Plant using Recycled and Reclaimed Thermoplastic Materials (FY18 New Start)—Dr. Prabhat Krishnaswamy, Engineering Mechanics Corporation of Columbus; 9:35 a.m. WP18–C4–1323 (WP18–1323): Recycling and Reuse of Metal Alloys by a Single Solid-State Additive Manufacturing and Repair Process (FY18 New Start)—Dr. Paul Allison, University of Alabama; 10:20 a.m. Break; 10:35 a.m. Weapons Systems and Platforms Overview—Dr. Robin Nissan, WP Program Manager; 10:45 a.m. WP18–C1–1114 (WP18–1114): Emulsion Characterization Study for Improved Bilgewater Treatment and Management (FY18 New Start)—Ms. Danielle Paynter, Naval Surface Warfare Center; 11:30 a.m. Weapons Systems and Platforms Overview—Dr. Robin Nissan, WP Program Manager; 11:40 a.m. WP18–C3–1193 (WP18–1193): An Integral Hypergolic Hybrid-Solid Fuel Ramjet Concept for AP-Free High Performance Tactical Rocket Motors (FY18 New Start)—Dr. Mark Pfeil, U.S. Army Aviation & Missile Research, Development, and Engineering Center; 12:25 p.m. Lunch; 1:25 p.m. Weapons Systems and Platforms Overview—Dr. Robin Nissan, WP Program Manager; 1:35 p.m. WP18–F2–1439 (WP18–1439) Development and Evaluation of Non-

Chromate LHE ZnNi Passivations for DoD Electrical Connectors (Follow-on to FY15 SEED Project)—Dr. Matthew O'Keefe, Missouri S&T; 2:20 p.m. Munitions Response Overview—Dr. Herbert Nelson, Munitions Response Program Manager; 2:30 p.m. MR18–C1–1233 (MR18–1233): Improved Penetrometer Performance in Stratified Sediment for Cost-Effective Characterization, Monitoring and Management of Submerged Munitions Sites (FY18 New Start)—Dr. Nina Stark, Virginia Tech; 3:15 p.m. Break; 3:30 p.m. Environmental Restoration Overview—Dr. Andrea Leeson, ER Program Manager; 3:40 p.m. ER–2531: Role of Acidophilic Methanotrophs in Long Term Natural Attenuation of VOCs in Low pH Aquifers (Follow On to FY15 Limited Scope Project)—Dr. Paul Hatzinger, Aptim Federal Services; 4:25 p.m. Strategy Session—Dr. Herb Nelson, Acting Executive Director; 4:55 p.m. Public Discussion/Adjourn.

Meeting Accessibility: The meeting location has proper and working facilities for those with disabilities. Please contact the Designated Federal Officer (DFO) if there are any issues.

Written Statements: Pursuant to 41 CFR 102–3.140, and section 10(a)(3) of the Federal Advisory Committee Act of 1972, the public or interested organizations may submit written statements to the Strategic Environmental Research and Development Program, Scientific Advisory Board. Written statements may be submitted to the committee at any time or in response to an approved meeting agenda. All written statements shall be submitted to the DFO for the Strategic Environmental Research and Development Program, Scientific Advisory Board. The DFO will ensure that the written statements are provided to the membership for their consideration. Time is allotted at the close of each meeting day for the public to make comments.

Dated: September 15, 2017.
Aaron Siegel,
Alternate OSD Federal Register Liaison Officer, Department of Defense.
[FR Doc. 2017–20011 Filed 9–19–17; 8:45 am]
BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Extension of Scoping Period for the Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing

AGENCY: Department of the Navy, DoD.
ACTION: Notice.

SUMMARY: A notice of intent was published by the U.S. Environmental Protection Agency in the **Federal Register** (82 FR 39779) on August 22, 2017 for the supplement to the 2015 Final Northwest Training and Testing (NWT) Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). The 30-day scoping period ends on September 21, 2017. This notice announces a 15-day extension of the scoping period until October 6, 2017.

DATES: Public comments will be accepted during the 45-day scoping period from August 22, 2017 to October 6, 2017.

ADDRESSES: Comments may be provided via mail to the address provided below or through the project Web site at <http://nwtteis.com/>. Comments must be postmarked or received online by October 6, 2017 for consideration during the development of the Supplemental EIS/OEIS. Anyone interested in receiving electronic project updates can subscribe on the project Web site to receive notifications via email for key milestones throughout the environmental planning process.

FOR FURTHER INFORMATION CONTACT: Mr. John Mosher, 360–257–3234, john.g.mosher@navy.mil. U.S. Pacific Fleet, Attention: NWT Supplemental EIS/OEIS Project Manager, 3730 North Charles Porter Avenue, Building 385, Oak Harbor, Washington 98278–3500.

Dated: September 14, 2017.

S.E. Milewski,
Deputy Division Director, Administrative Law Division, Judge Advocate General's Corps, U.S. Navy, Alternate Federal Register Liaison Officer.

[FR Doc. 2017–20013 Filed 9–19–17; 8:45 am]

BILLING CODE 3810–FF–P

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Sunshine Act Notice

TIME AND DATE: 12:00 p.m.–3:00 p.m., September 26, 2017.

PLACE: Defense Nuclear Facilities Safety Board Headquarters, 625 Indiana



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After consideration of the relevant matter presented, the Committee has determined that the services listed below are no longer suitable for procurement by the Federal Government under 41 U.S.C. 8501–8506 and 41 CFR 51–2.4.

Regulatory Flexibility Act Certification

I certify that the following action will not have a significant impact on a substantial number of small entities. The major factors considered for this certification were:

1. The action will not result in additional reporting, recordkeeping or other compliance requirements for small entities.

2. The action may result in authorizing small entities to furnish the services to the Government.

3. There are no known regulatory alternatives which would accomplish the objectives of the Javits-Wagner-O'Day Act (41 U.S.C. 8501–8506) in connection with the services deleted from the Procurement List.

End of Certification

Accordingly, the following services are deleted from the Procurement List:

Services

Service Type: Janitorial/Custodial
Mandatory for: Armed Forces Reserve Center:
1702 Tahoma Avenue, Yakima, WA
Mandatory Source of Supply: Yakima
Specialties, Inc., Yakima, WA
Contracting Activity: Dept. of the Navy, U.S.
Fleet Forces Command

Service Type: Janitorial/Custodial
Mandatory for: U.S. Federal Building—
Everett, 3002 Colby Avenue, Everett, WA
Mandatory Source of Supply: AtWork!,
Bellevue, WA

Contracting Activity: General Services
Administration

Patricia Briscoe,
Deputy Director, Business Operations (Pricing
and Information Management).

[FR Doc. 2019-06096 Filed 3-28-19; 8:45 am]

BILLING CODE 6353-01-P

DEPARTMENT OF DEFENSE

Office of the Secretary

Termination of the Secretary of the Navy Advisory Panel

AGENCY: Department of Defense.

ACTION: Termination of Federal
Advisory Committee.

SUMMARY: The Department of Defense is publishing this notice to announce it is terminating the Secretary of the Navy Advisory Panel ("the Panel") along with its permanent subcommittee, the Naval

Research Advisory Committee, on April 1, 2019.

FOR FURTHER INFORMATION CONTACT: Jim Freeman, Advisory Committee Management Officer for the Department of Defense, 703-692-5952.

SUPPLEMENTARY INFORMATION: The Panel is being terminated under the provisions of the Federal Advisory Committee Act (FACA) of 1972 (5 U.S.C., Appendix) and 41 CFR 102-3.55, and the Government in the Sunshine Act of 1976 (5 U.S.C. 552b), effective April 1, 2019.

Dated: March 25, 2019.
Aaron T. Siegel,
Alternate OSD Federal Register Liaison
Officer, Department of Defense.

[FR Doc. 2019-06049 Filed 3-28-19; 8:45 am]

BILLING CODE 5001-06-P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Public Meetings for the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing

AGENCY: Department of the Navy, DoD.
ACTION: Notice.

SUMMARY: Pursuant to section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as implemented by the Council on Environmental Quality, and Presidential Executive Order 12114, the Department of the Navy (DoN) has prepared and filed with the United States Environmental Protection Agency a draft supplement to the 2015 Northwest Training and Testing (NWT) Final Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) to reassess the potential environmental impacts associated with conducting proposed ongoing and future military readiness activities within the NWT Study Area, referred to as the "Study Area." Military readiness activities include training and research, development, testing, and evaluation activities, referred to as "training and testing." In the Draft Supplemental EIS/OEIS, the DoN evaluated new, relevant information, such as more recent marine mammal density data and new scientific information, and updated the environmental analyses as appropriate. The DoN prepared the Draft Supplemental EIS/OEIS to support the issuance of federal regulatory permits and authorizations under the Marine Mammal Protection Act and the Endangered Species Act. The DoN will

consult with the National Marine Fisheries Service (NMFS) and United States Fish and Wildlife Service to renew these authorizations.

Additionally, NMFS and the United States Coast Guard are cooperating agencies for this Supplemental EIS/OEIS.

The DoN's lead action proponent is Commander, United States Pacific Fleet. Additional action proponents include Naval Sea Systems Command and Naval Air Systems Command.

DATES: This notice announces the public review and comment period and the dates and locations of the public meetings, includes information about how the public can review and comment on the document, and provides supplementary information about the environmental planning effort. All comments must be postmarked or received online by May 28, 2019, for consideration in the Final Supplemental EIS/OEIS. Federal, state, and local agencies and officials and interested organizations and individuals are encouraged to provide comments on the Draft Supplemental EIS/OEIS during the public review and comment period or in person at one of the scheduled open house public meetings.

ADDRESSES: Public meetings will be held in an open-house format, with DoN representatives available to provide information and answer questions related to the Draft Supplemental EIS/OEIS. Open house public meetings will be held in Washington, Oregon, Northern California, and southeastern Alaska on the following dates and at the following locations:

1. April 24, 2019, 5:00 to 8:00 p.m., Hampton Inn Seattle/Everett Downtown Salish Room, 2931 W Marine View Drive, Everett, WA 98201-3927.

2. April 25, 2019, 5:00 to 8:00 p.m., Ridgetop Middle School Cafeteria, 10600 Hillsboro Drive NW, Silverdale, WA 98383-7713.

3. April 26, 2019, 5:00 to 8:00 p.m., Naval Elks Lodge #353, 131 E First Street, Port Angeles, WA 98362-2902.

4. April 29, 2019, 5:00 to 8:00 p.m., Astoria High School Student Commons, 1001 W Marine Drive, Astoria, OR 97103-5829.

5. April 30, 2019, 5:00 to 8:00 p.m., Newport Performing Arts Center Lobby, 777 W Olive Street, Newport, OR 97365-3725.

6. May 2, 2019, 5:00 to 8:00 p.m., Red Lion Hotel Eureka Ballroom, 1929 Fourth Street, Eureka, CA 95501-0725.

7. May 3, 2019, 5:00 to 8:00 p.m., Dana Grey Elementary School Multipurpose Room, 1197 Chestnut Street, Fort Bragg, CA 95437-4503.

8. May 8, 2019, 5:00 to 8:00 p.m., Ted Ferry Civic Center Naha and Alava Bays, 888 Venetia Avenue, Ketchikan, AK 99901-6561.

Attendees will be able to submit written comments any time during the open house public meetings. A stenographer will be available for attendees wishing to provide oral comments one-on-one. Equal weight will be given to oral and written comments. Comments may also be mailed to Naval Facilities Engineering Command Northwest, Attention: NWTTC Supplemental EIS/OEIS Project Manager, 3730 N Charles Porter Ave., Building 385, Oak Harbor, WA 98278-3500, or electronically via the project website at www.NWTTEIS.com. All comments, written or oral, submitted during the public review and comment period from March 29, 2019, to May 28, 2019, will become part of the public record, and substantive comments will be addressed in the Final Supplemental EIS/OEIS. All comments must be postmarked or received online by May 28, 2019, for consideration in the Final Supplemental EIS/OEIS.

Concurrent with the NEPA public involvement process, the DoN is identifying additional consulting parties to participate in the Section 106 process under the National Historic Preservation Act regarding potential effects of the Proposed Action and alternatives on historic properties. Historic properties include districts, sites, buildings, structures, or objects listed or eligible for listing in the National Register of Historic Places. During each of the public meetings, an information station will be available where individuals can learn more about the Section 106 process.

Naval Facilities Engineering Command Northwest, Attention: NWTTC Supplemental EIS/OEIS Project Manager, 3730 N. Charles Porter Avenue, Building 385, Oak Harbor, WA 98278-3500.

SUPPLEMENTARY INFORMATION: The Draft Supplemental EIS/OEIS was distributed to federal agencies and federally recognized tribes, with which the DoN consulted. Copies of the Draft Supplemental EIS/OEIS are available for public review at the following public locations:

1. Everett Main Library, 2702 Hoyt Avenue, Everett, WA 98201-3506.
2. Gig Harbor Library, 4424 Point Fosdick Drive NW, Gig Harbor, WA 98335-1700.
3. Jefferson County Library, Port Hadlock, 620 Cedar Avenue, Port Hadlock, WA 98339-5001.

4. Kitsap Regional Library, Poulsbo, 700 NE Lincoln Road, Poulsbo, WA 98370-7688.

5. Kitsap Regional Library, Sylvan Way (Bremerton), 1301 Sylvan Way, Bremerton, WA 98310-3466.

6. North Olympic Library System, Forks Branch, 171 S Forks Avenue, Forks, WA 98331-9023.

7. Lopez Island Library, 2225 Fisherman Bay Road, Lopez Island, WA 98261-8676.

8. Oak Harbor Public Library, 1000 SE Regatta Drive, Oak Harbor, WA 98277-3091.

9. Port Angeles Main Library, 2210 S Peabody Street, Port Angeles, WA 98362-6536.

10. Port Townsend Public Library, 1220 Lawrence Street, Port Townsend, WA 98368-6527.

11. San Juan Island Library, 1010 Guard Street, Friday Harbor, WA 98250-9240.

12. Timberland Regional Library, Aberdeen, 121 E Market Street, Aberdeen, WA 98520-5216.

13. Timberland Regional Library, Hoquiam, 420 Seventh Street, Hoquiam, WA 98550-3616.

14. Astoria Public Library, 450 10th Street, Astoria, OR 97103-4602.

15. Driftwood Public Library, 801 SW Highway 101 #201, Lincoln City, OR 97367-2720.

16. Newport Public Library, 35 NW Nye Street, Newport, OR 97365-3714.

17. Oregon State University, Guin Library Hatfield Marine Science Center, 2030 SE Marine Science Drive, Newport, OR 97365-5300.

18. Tillamook Main Library, 1716 Third Street, Tillamook, OR 97141-2124.

19. Fort Bragg Branch Library, 499 Laurel Street, Fort Bragg, CA 95437-3511.

20. Humboldt County Public Library, Arcata Branch Library, 500 Seventh Street, Arcata, CA 95521-6315.

21. Humboldt County Public Library, Eureka Main Library, 1313 Third Street, Eureka, CA 95501-0546.

22. Redwood Coast Senior Center, 490 N Harold Street, Fort Bragg, CA 95437-3331.

23. Juneau Public Library, Downtown Branch, 292 Marine Way, Juneau, AK, 99801-1361.

24. Ketchikan Public Library, 1110 Copper Ridge Lane, Ketchikan, AK 99901-6250.

The NWTTC Draft Supplemental EIS/OEIS is available for electronic viewing or download at www.NWTTEIS.com. A compact disc of the Draft Supplemental EIS/OEIS will be made available upon written request by contacting: Naval Facilities Engineering Command

Northwest, Attention: NWTTC Supplemental EIS/OEIS Project Manager, 3730 N. Charles Porter Avenue, Building 385, Oak Harbor, WA 98278-3500.

Dated: March 22, 2019.

M.S. Werner,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2019-05891 Filed 3-28-19; 8:45 am]

BILLING CODE 3810-FF-P

DEPARTMENT OF EDUCATION

[Docket No.: ED-2019-ICCD-0040]

Agency Information Collection Activities; Comment Request; Fund for the Improvement of Postsecondary Education (FIPSE) Performance Report

AGENCY: Office of Postsecondary Education (OPE), Department of Education (ED).

ACTION: Notice

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is proposing a revision of an existing information collection.

DATES: Interested persons are invited to submit comments on or before May 28, 2019.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use <http://www.regulations.gov> by searching the Docket ID number ED-2019-ICCD-0040. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at <http://www.regulations.gov> by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. If the [regulations.gov](http://www.regulations.gov) site is not available to the public for any reason, ED will temporarily accept comments at ICDocketMgr@ed.gov. Please include the docket ID number and the title of the information collection request when requesting documents or submitting comments. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 550 12th Street SW, PCP, Room 9086, Washington, DC 20202-0023.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Kelley Harris, 202-453-7346.



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malfunction in the operation of an affected facility, or any period during which the monitoring system is inoperative. These notifications, reports, and records are essential in determining compliance, and are required of all affected facilities subject to NESHAP. This information is being collected to assure compliance with 40 CFR part 63, subpart NNNN.

Form Numbers: None.

Respondents/affected entities:

Facilities that perform surface coating of large household and commercial appliances and related parts.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart NNNN).

Estimated number of respondents: 10 (total).

Frequency of response: Initially, occasionally, and semiannually.

Total estimated burden: 3,870 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: \$429,000 (per year), which includes \$5,400 in annualized capital/startup and/or operation & maintenance costs.

Changes in the Estimates: There is an adjustment decrease in the total estimated burden as currently identified in the OMB Inventory of Approved Burdens. This increase is not due to any program changes. The change in the burden and cost estimates occurred due to a decrease in the total number of facilities subject to the NESHAP. The estimate is based on EPA's recent reevaluation of the source category inventory associated with the recently-proposed amendments to 40 CFR part 63, subpart NNNN (83 FR 46262, September 12, 2018). Per EPA's reevaluation, the number of respondents in the source category has decreased from the estimates in the 2002 final rule because the final rule included assumptions regarding several facilities that were not major sources of HAP. Additionally, there have been changes within the large appliance surface coating industry that result in fewer facilities being subject to the NESHAP. For example, many facilities that used liquid coatings have switched to powder coatings, or have switched to plastic parts and stainless steel instead of painted steel parts, or are using precoated metal coils instead of coating finished parts. As a result, there is a much smaller number of major sources. In addition to the burden decrease from the decreased number of respondents, there is also a burden decrease in the operating and maintenance costs due to the determination that only one affected source uses an emission control device to comply with the NESHAP. These

changes result in an overall decrease in the labor hours O&M costs, and number of responses.

Courtney Kerwin,

Director, Regulatory Support Division.

[FR Doc. 2019-06025 Filed 3-28-19; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL-9044-1]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal Activities, General Information 202-564-5632 or <https://www.epa.gov/nepa/>

Weekly receipt of Environmental Impact Statements

Filed 03/18/2019 through 03/22/2019 Pursuant to 40 CFR 1506.9.

Notice

Section 309(a) of the Clean Air Act requires that EPA make public its comments on EISs issued by other Federal agencies. EPA's comment letters on EISs are available at: <https://cdxnodengn.epa.gov/cdx-enepa-public/action/eis/search>.

EIS No. 20190036, Draft Supplement, NRCS, MO, Supplemental Environmental Impact Statement Little Otter Creek Watershed Plan, Comment Period Ends: 05/13/2019, Contact: Chris Hamilton 573-876-0912.

EIS No. 20190037, Final, FHWA, NC, I-4400/I-4700 I-26 Widening Combined Final Environmental Impact Statement, Final Section 4(f) Evaluation, and Record of Decision, Contact: Clarence W. Coleman, PE 919-747-7014.

Under 23 U.S.C. 139(n)(2), FHWA has issued a single document that consists of a final environmental impact statement and record of decision. Therefore, the 30-day wait/review period under NEPA does not apply to this action.

EIS No. 20190038, Draft Supplement, USN, WA, Northwest Training and Testing Activities Draft Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement, Comment Period Ends: 05/28/2019, Contact: Jacqueline Queen 360-257-3852.

EIS No. 20190039, Final, USFS, ID, Lolo Insect & Disease Project, Review Period Ends: 04/29/2019, Contact: Sara Daugherty 208-926-6404.

EIS No. 20190040, Final, NPS, ME, Acadia National Park Final

Transportation Plan and EIS, Review Period Ends: 04/29/2019, Contact: John Kelly 207-288-8703.

EIS No. 20190041, Final, DOE, TX, ADOPTION—Texas LNG Project—Texas LNG Brownsville LLC, Contact: Brian Lavoie 202-586-2459.

The Department of Energy (DOE) has adopted the Federal Energy Regulatory Commission's Final EIS No. 20190034, filed 02/22/2019 with the EPA. DOE was a cooperating agency on this project. Therefore, recirculation of the document is not necessary under Section 1506.3(c) of the CEQ regulations.

Dated: March 25, 2019.

Robert Tomiak,

Director, Office of Federal Activities.

[FR Doc. 2019-06016 Filed 3-28-19; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[FRL-9991-22-OA]

Meetings of the Local Government Advisory Committee and the Small Communities Advisory Subcommittee

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Local Government Advisory Committee (LGAC) will meet in Washington, DC, on Thursday, May 2, 2019, 9:30 a.m.–5:35 p.m. (EDT), and Friday, May 3, 2019, 10:00 a.m.–12:30 p.m. (EDT). The focus of the Committee meeting will be on issues pertaining to water and water infrastructure issues; Waters of the U.S., emerging contaminants; superfund and brownfields; risk communication and other issues in EPA's Strategic Plan. The Small Communities Advisory Subcommittee (SCAS) will meet in Washington, DC, on Friday, May 3, 2019, 8:00 a.m.–9:00 a.m. (EDT). The Subcommittee will discuss water infrastructure, community revitalization, agricultural issues, and other issues and recommendations to the Administrator regarding environmental issues affecting small communities.

These are open meetings, and all interested persons are invited to participate. The SCAS will hear comments from the public between 8:40 a.m. and 8:45 a.m. on Friday, May 3, 2019. The LGAC will hear comments from the public between 10:20 a.m. and 10:30 a.m. on Friday, May 3, 2019. Individuals or organizations wishing to address the Subcommittee or the



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point; however, if a written statement is not received at least three calendar days prior to the meeting, which is the subject of this notice, then it may not be provided to or considered by the DSB until a later date.

Dated: April 12, 2019.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison
Officer, Department of Defense.

[FR Doc. 2019-07755 Filed 4-17-19; 8:45 am]

BILLING CODE 5001-06-P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Extension of Public Comment Period for the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing

AGENCY: Department of the Navy, DoD.
ACTION: Notice.

SUMMARY: A notice of public meetings was published in the *Federal Register* by the Department of the Navy on March 29, 2019 for the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) for the Northwest Training and Testing (NWT) Study Area.

DATES: This notice announces a 15-day extension of the public comment period from May 28, 2019, to June 12, 2019.

ADDRESSES: Comments may be mailed to Naval Facilities Engineering Command Northwest, Attention: NWT Supplemental EIS/OEIS Project Manager, 3730 N. Charles Porter Avenue, Building 385, Oak Harbor, WA 98278-3500, or electronically via the project website at www.NWTTEIS.com. All comments submitted during the public comment period will become part of the public record and substantive comments will be addressed in the Final Supplemental EIS/OEIS. All comments must be postmarked or received online by June 12, 2019, Pacific Standard Time, for consideration in the Final Supplemental EIS/OEIS.

Naval Facilities Engineering Command Northwest, Attention: NWT Supplemental EIS/OEIS Project Manager, 3730 N. Charles Porter Avenue, Building 385, Oak Harbor, WA 98278-3500.

SUPPLEMENTARY INFORMATION: The Draft Supplemental EIS/OEIS was distributed to federal agencies and federally recognized tribes, with which the DoN consulted. Copies of the Draft Supplemental EIS/OEIS are available for

public review at the following public locations:

1. Everett Main Library, 2702 Hoyt Avenue, Everett, WA 98201-3506.
2. Gig Harbor Library, 4424 Point Fosdick Drive NW, Gig Harbor, WA 98335-1700.
3. Jefferson County Library, Port Hadlock, 620 Cedar Avenue, Port Hadlock, WA 98339-5001.
4. Kitsap Regional Library, Poulsbo, 700 NE Lincoln Road, Poulsbo, WA 98370-7688.
5. Kitsap Regional Library, Sylvan Way (Bremerton), 1301 Sylvan Way, Bremerton, WA 98310-3466.
6. North Olympic Library System, Forks Branch, 171 S. Forks Avenue, Forks, WA 98331-9023.
7. Lopez Island Library, 2225 Fisherman Bay Road, Lopez Island, WA 98261-8676.
8. Oak Harbor Public Library, 1000 SE Regatta Drive, Oak Harbor, WA 98277-3091.
9. Port Angeles Main Library, 2210 S. Peabody Street, Port Angeles, WA 98362-6536.
10. Port Townsend Public Library, 1220 Lawrence Street, Port Townsend, WA 98368-6527.
11. San Juan Island Library, 1010 Guard Street, Friday Harbor, WA 98250-9240.
12. Timberland Regional Library, Aberdeen, 121 E. Market Street, Aberdeen, WA 98520-5216.
13. Timberland Regional Library, Hoquiam, 420 Seventh Street, Hoquiam, WA 98550-3616.
14. Astoria Public Library, 450 10th Street, Astoria, OR 97103-4602.
15. Driftwood Public Library, 801 SW Highway 101 #201, Lincoln City, OR 97367-2720.
16. Newport Public Library, 35 NW Nye Street, Newport, OR 97365-3714.
17. Oregon State University, Guin Library Hatfield Marine Science Center, 2030 SE Marine Science Drive, Newport, OR 97365-5300.
18. Tillamook Main Library, 1716 Third Street, Tillamook, OR 97141-2124.
19. Fort Bragg Branch Library, 499 Laurel Street, Fort Bragg, CA 95437-3511.
20. Humboldt County Public Library, Arcata Branch Library, 500 Seventh Street, Arcata, CA 95521-6315.
21. Humboldt County Public Library, Eureka Main Library, 1313 Third Street, Eureka, CA 95501-0546.
22. Redwood Coast Senior Center, 490 N. Harold Street, Fort Bragg, CA 95437-3331.
23. Juneau Public Library, Downtown Branch, 292 Marine Way, Juneau, AK 99801-1361.

24. Ketchikan Public Library, 1110 Copper Ridge Lane, Ketchikan, AK 99901-6250.

Dated: April 15, 2019.

M.S. Werner,

Commander, Judge Advocate General's Corps,
U.S. Navy, Federal Register Liaison Officer.

[FR Doc. 2019-07815 Filed 4-17-19; 8:45 am]

BILLING CODE 3810-FF-P

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 3451-001]

Notice of Intent To File License Application, Filing of Pre-Application Document, and Approving Use of the Traditional Licensing Process: Beaver Falls Municipal District

a. *Type of Filing:* Notice of Intent to File License Application and Request to Use the Traditional Licensing Process.

b. *Project No.:* 3451-001

c. *Date Filed:* February 12, 2019

d. *Submitted By:* Beaver Falls
Municipal District

e. *Name of Project:* Townsend Water
Power Project

f. *Location:* On the Beaver River, in the Borough of New Brighton, Beaver County, Pennsylvania. No federal lands are occupied by the project works or located within the project boundary.

g. *Filed Pursuant to:* 18 CFR 5.3 of the Commission's regulations.

h. *Applicant Contacts:* Roy Stintzi, Beaver Falls Municipal District, P.O. Box 400, Beaver Falls, Pennsylvania, 15010; Laura Cowan, Project Manager, Kleinschmidt Associates, 2 Thornton Hill, Ossining, New York, 10562, (717) 983-4056, Laura.Cowan@kleinschmidtgroup.com.

i. *FERC Contact:* Emily Carter at (202) 502-6512; or email at emily.carter@ferc.gov.

j. Beaver Falls Municipal District filed its request to use the Traditional Licensing Process on February 12, 2019. Beaver Falls Municipal District provided public notice of its request on February 11, 2019. In a letter dated April 11, 2019, the Director of the Division of Hydropower Licensing approved Beaver Falls Municipal District's request to use the Traditional Licensing Process.

k. With this notice, we are initiating informal consultation with the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act and the joint agency regulations thereunder at 50 CFR, part 402. We also are initiating consultation with the Pennsylvania



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Applicants: Meyersdale Storage, LLC.
Description: § 205(d) Rate Filing:
Meyersdale Storage MBR Tariff
Revisions to be effective 4/19/2019.

Filed Date: 4/18/19.

Accession Number: 20190418-5210.

Comments Due: 5 p.m. ET 5/9/19.

Docket Numbers: ER19-1624-000.

Applicants: Unitol Service Corp.

Description: Unitol Power Corp
submits Statement of all billing
transactions under the Amended Unitol
System Agreement for the period
January 1, 2018 to December 31, 2018.

Filed Date: 4/18/19.

Accession Number: 20190418-5215.

Comments Due: 5 p.m. ET 5/9/19.

Docket Numbers: ER19-1625-000.

Applicants: Northern Indiana Public
Service Company.

Description: § 205(d) Rate Filing:
Filing of a CIAC Agreement to be
effective 4/12/2019.

Filed Date: 4/19/19.

Accession Number: 20190419-5059.

Comments Due: 5 p.m. ET 5/10/19.

Docket Numbers: ER19-1626-000.

Applicants: Midcontinent

Independent System Operator, Inc.

Description: § 205(d) Rate Filing:
2019-04-19 SA 2294 Heritage Garden
Wind Farm-ATC 4th Rev GIA to be
effective 4/4/2019.

Filed Date: 4/19/19.

Accession Number: 20190419-5092.

Comments Due: 5 p.m. ET 5/10/19.

Docket Numbers: ER19-1627-000.

Applicants: PacifiCorp.

Description: Tariff Cancellation:
Termination of Orion Wind E&P

Agreement to be effective 6/27/2019.

Filed Date: 4/19/19.

Accession Number: 20190419-5094.

Comments Due: 5 p.m. ET 5/10/19.

Docket Numbers: ER19-1628-000.

Applicants: Midcontinent

Independent System Operator, Inc.

Description: § 205(d) Rate Filing:
2019-04-19 SA 3296 ITC-Dearborn
Industrial Generation GIA to be effective
4/5/2019.

Filed Date: 4/19/19.

Accession Number: 20190419-5114.

Comments Due: 5 p.m. ET 5/10/19.

The filings are accessible in the
Commission's eLibrary system by
clicking on the links or querying the
docket number.

Any person desiring to intervene or
protest in any of the above proceedings
must file in accordance with Rules 211
and 214 of the Commission's
Regulations (18 CFR 385.211 and
385.214) on or before 5:00 p.m. Eastern
time on the specified comment date.
Protests may be considered, but
intervention is necessary to become a
party to the proceeding.

eFiling is encouraged. More detailed
information relating to filing
requirements, interventions, protests,
service, and qualifying facilities filings
can be found at: <http://www.ferc.gov/docs-filing/efiling/filing-req.pdf>. For
other information, call (866) 208-3676
(toll free). For TTY, call (202) 502-8659.

Dated: April 19, 2019.

Nathaniel J. Davis, Sr.,

Deputy Secretary.

[FR Doc. 2019-08426 Filed 4-25-19; 8:45 am]

BILLING CODE 6717-01-P

ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL-9044-5]

Environmental Impact Statements; Notice of Availability

Responsible Agency: Office of Federal
Activities, General Information 202-
564-5632 or <https://www.epa.gov/nepa/>

Weekly receipt of Environmental Impact
Statements Filed 04/15/2019 Through
04/19/2019 Pursuant to 40 CFR
1506.9.

Notice

Section 309(a) of the Clean Air Act
requires that EPA make public its
comments on EISs issued by other
Federal agencies. EPA's comment letters
on EISs are available at: [https://
cdxnodengn.epa.gov/cdx-enepa-public/
action/eis/search](https://cdxnodengn.epa.gov/cdx-enepa-public/action/eis/search).

EIS No. 20190063, Draft, USFWS, TX,
Authorization of Incidental Take and
Implementation of the LCRA
Transmission Services Corporation
Habitat Conservation Plan, Comment
Period Ends: 06/10/2019, Contact:
Delfinia Montano 505-248-6401.

EIS No. 20190064, Final Supplement,
BLM, CA, West Mojave Route
Network Project Final Supplemental
Environmental Impact Statement
Land Use Plan Amendment, Review
Period Ends: 05/28/2019, Contact:
Matthew Toedtli 760-252-6026.

EIS No. 20190065, Final, FERC, MS,
Gulf LNG Liquefaction Project,
Review Period Ends: 05/28/2019,
Contact: Office of External Affairs
866-208-3372.

EIS No. 20190066, Final, BLM, AZ, San
Pedro Riparian National Conservation
Area Proposed Resource Management
Plan, Review Period Ends: 05/28/
2019, Contact: Amy McGowan 520-
258-7231.

EIS No. 20190067, Draft Supplement,
BLM, WY, Converse County Oil and
Gas Project Supplemental DEIS,

Comment Period Ends: 07/25/2019,
Contact: Mike Robinson 307-261-
7520.

EIS No. 20190068, Draft Supplement,
BLM, CA, Bakersfield Field Office
Hydraulic Fracturing DSEIS,
Comment Period Ends: 06/10/2019,
Contact: Carly Summers 661-391-
6000.

EIS No. 20190069, Final, FERC, TX,
Annova LNG Brownsville Project,
Review Period Ends: 05/28/2019,
Contact: Office of External Affairs
866-208-3372.

EIS No. 20190070, Final, USFS, ID,
Crow Creek Pipeline Project, Review
Period Ends: 05/28/2019, Contact:
Doug Herzog 208-557-5763.

EIS No. 20190071, Draft, USFWS, HI,
Draft Programmatic Environmental
Impact Statement Addressing the
Issuance of Incidental Take Permits
for Four Wind Energy Projects in
Hawai'i, Comment Period Ends: 06/
10/2019, Contact: Michelle Bogardus
808-792-9473.

Amended Notice

EIS No. 20190038, Draft Supplement,
USN, WA, Northwest Training and
Testing Activities Draft Supplemental
Environmental Impact Statement/
Overseas Environmental Impact
Statement, Comment Period Ends: 06/
12/2019, Contact: Jacqueline Queen
360-257-3852. Revision to FR Notice
Published 03/29/2019; Extending the
Comment Period from 05/28/2019 to
06/12/2019.

Dated: April 22, 2019.

Robert Tomiak,

Director, Office of Federal Activities.

[FR Doc. 2019-08379 Filed 4-25-19; 8:45 am]

BILLING CODE 6560-50-P

FEDERAL COMMUNICATIONS COMMISSION

[OMB 3060-0422]

Information Collection Approved by
the Office of Management and Budget

AGENCY: Federal Communications
Commission.

ACTION: Notice.

SUMMARY: The Federal Communications
Commission (FCC) has received Office
of Management and Budget (OMB)
approval for the following public
information collections pursuant to the
Paperwork Reduction Act. An agency
may not conduct or sponsor a collection
of information unless it displays a
currently valid OMB control number,
and no person is required to respond to
a collection of information unless it

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Appendix H: Public Comments and Responses

**Supplemental Environmental Impact Statement/
Overseas Environmental Impact Statement
Northwest Training and Testing**

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Appendix H Public Comments and Responses

H.1 Public Comments and Navy Responses

Comments on the Draft Supplemental Northwest Training and Testing (NWTT) Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) were received via mail, at the public meetings either in writing or orally, and via the project website. The United States (U.S.) Department of the Navy (Navy) also received a number of form letters from the Center for Biological Diversity, the Friends of the Earth and the Noise Pollution Clearinghouse Non-Governmental Organizations as well as a petition submitted by the Washington Environmental Council and Washington Conservation Voters (see Section H.1.1.6 [Form Letters and Petitions]).

Comments covered a wide spectrum of thoughts, opinions, ideas, and concerns. The most commonly addressed themes included impacts to Southern Resident killer whales (SRKWs) and noise impacts due to Growler flight activities over the Olympic Peninsula.

Each row in the following table presents the identification of the commenter, the comment, and the Navy's response to the comment. Because many commenters touched on more than one topic, in some cases the commenter's topics were separated into individual comments, assigned a number, and responded to separately. The commenter's name or organization may be abbreviated when the comment is broken into more than one topic. For example, the comment by the Marine Mammal Commission cover several topics, so these are separated into subsequent comments named MMC-02, MMC-03, etc.

H.1.1 Federal Agencies

This section contains comments from federal agencies received during the public comment period and the Navy's response to those comments.

Table H-1: Responses to Comments from Federal Agencies and Elected Officials

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Marine Mammal Commission (MMC)		
MMC-01	The Commission recommends that the Navy clarify whether and how it incorporated uncertainty in its density estimates for its animat modeling specific to NWTT and if uncertainty was not incorporated, re-estimate the numbers of marine mammal takes based on the uncertainty inherent in the density estimates provided in Department of the Navy (2019) or the underlying references (Jefferson et al. 2017, Smultea et al. 2017, NMFS SARs, etc.).	The Navy did incorporate animal abundance and group size uncertainty when seeding the animats in the Navy's Acoustic Effects Model as was done with other Navy Phase III Training and Testing impact analyses. As discussed in the technical report titled <i>Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing</i> (U.S. Department of the Navy, 2018) available at www.nwtteis.com , marine mammal and sea turtle density data are provided as a 10x10 km grid in which each cell has a mean density and standard error. In the Navy's Acoustic Effects Model, species densities are distributed into simulation areas. Thirty distributions that vary based on the standard deviation of the density estimates are run per season for each species to account for statistical uncertainty in the density estimate.
MMC-02	Therefore, the Commission recommends that the Navy (1) revise the various densities for (a) northern fur seals based on the abundance estimate from 2015 that includes data from Bogoslof Island, (b) Steller sea lions, California sea lions, Guadalupe fur seals, and elephant seals based on growth rates up to at least 2020, and (c) harbor seals in the Strait of Juan de Fuca and the San Juan Islands based on 46 rather than 37 percent of the animals being in the water at a given time based on Huber et al. (2001) and (2) re-estimate the numbers of takes accordingly in the final SEIS and its LOA application.	(a) The Navy used the estimate provided by Bob DeLong/NMFS and did not integrate the 2015 data mentioned based on advice from SMEs at the NMFS Alaska Fisheries Science Center due to a volcanic eruption at the rookery on Bogoslof Island where a portion of the counts are made, which in the opinion of the Alaska Fisheries Science Center experts skewed the 2015 data, making it not the best available science. (b) The density estimates are based on sighting numbers from surveys over many years to encompass variation and are not future predictions. It would not be appropriate to base densities on growth rates. The densities do not incorporate abundances or estimates of growth rate since the abundances for population and their population trend (reduction or growth) are not directly applicable to the density within a given area. SMEs at the NMFS Alaska Fisheries Science Center advised in 2015 and again in 2019 that growth/decline rates provided in the SARs should not be used to project future population numbers for use in the Navy's analysis where abundance have been integrated into the analysis. (c) There were also specific haulout factors for other areas within the Study Area that gave lower estimates throughout the Inland Waters. Subject matter experts from the Alaska Fisheries Science Center and the Northwest Fisheries Science Center concurred with the Navy's use of 37 percent as being most representative. (2) No re-estimation required for the reasons stated in the responses above.

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
MMC-03	Therefore, the Commission recommends that the Navy provide the method(s) by which species-specific densities were calculated for Western Behm Canal and cite the primary literature from which those data originated in Navy (2019) for the final SEIS, as well as all technical reports that underpin its density databases for future Phase III and IV DSEISs and DEISs.	There were two primary sources of density data used to establish cetacean density estimates for Behm Canal: (1) U.S. Department of the Navy 2010 (Marine mammal occurrence/density report prepared in support of Navy activities at the Southeast Alaska Acoustic Measurement Facility), and (2) Density estimates derived by the National Marine Mammal Laboratory, Alaska Fisheries Science Center based on systematic surveys conducted in Southeast Alaska (e.g., Dahlheim et al. 2015). These sources were cited as appropriate in the species-specific sections of Department of the Navy (2019); methods by which species-specific density estimates were calculated are described in these reports. Multiple sources were used to establish pinniped density estimates for Behm Canal. All are cited as appropriate and methods described within the species-specific sections of Department of the Navy, 2019 (U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area: Technical report. Naval Facilities Engineering Command Pacific, Pearl Harbor, Hawaii. 258 pages).
MMC-04	The Commission understands that developing weighting functions and associated thresholds is an extensive process and that the Navy cannot amend them with each new published dataset. However, the Navy should discuss within the final SEIS, whether all newer data corroborate the current weighting functions and associated thresholds.	The Navy and NMFS thoroughly reviewed new information available since the development of the Phase III weighting functions and determined that no new research would fundamentally change the assessment of impacts or conclusions. Relevant new research is summarized in Section 3.4.2.1.1.2 (Hearing Loss). New research will be quantitatively incorporated into future auditory criteria, as appropriate.
MMC-05	For all these reasons, the Commission recommends that the Navy refrain from using cut-off distances in conjunction with the Bayesian BRFs and re-estimate the numbers of marine mammal takes based solely on the Bayesian BRFs. Use of cut-off distances could be perceived as an attempt to reduce the numbers of takes, which is discussed in a subsequent section of this letter.	The consideration of proximity (cut-off distances) was part of the criteria developed in consultation with NMFS and was applied within the Navy's acoustic effects model. Cut-off distances were used to better reflect the take potential for military readiness activities as defined in the MMPA. As stated in Draft Supplemental EIS/OEIS Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Sonar and Other Transducers), the derivation of the behavioral response functions and associated cut-off distances is provided in the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III). Briefly, much of the data used to derive the behavioral response functions was from nearby, scaled sources, thereby potentially confounding results since it is difficult to tell whether the focal marine mammal is reacting to the sound level or the proximity of the source and/or vessel amongst other potentially confounding contextual factors that are unlike actual Navy events for which the BRFs are being derived. To account for these non-

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		applicable contextual factors, all available data on marine mammal reactions to actual Navy activities and sound sources (or other large scale activities such as seismic surveys when information on proximity to sonar sources is not available for a given species group, i.e. harbor porpoises) were reviewed to find the farthest distance to which significant behavioral reactions were observed. These distances were rounded up to the nearest 5 or 10 km interval, and for moderate to large scale activities using multiple or louder sonar sources, these distances were greatly increased --- doubled in most cases. The Navy's BRFs applied within these distances is currently the best know method for providing the public and regulators with a more realistic (but still conservative where some uncertainties exist) estimate of impact and potential take under military readiness for the proposed actions within this Draft Supplemental EIS/OEIS.
MMC-06	The Navy provided no evidence that an animal would exhibit a significant behavioral response to two 5-lb charges detonated within a few minutes of each other but would not exhibit a similar response for a single detonation of 50 lbs., let alone detonations of more than 500 lbs. The Commission maintains that the Navy has not provided adequate justification for ignoring the possibility that single underwater detonations can cause a behavioral response and therefore again recommends that the Navy estimate and ultimately request authorization for behavior takes of marine mammals during all explosive activities, including those that involve single detonations.	Marine mammals may be exposed to isolated impulses in their natural environment (e.g., lightning). There is no evidence to support the assertion that animals have significant behavioral responses (rising to the level of 'harassment' under the MMPA definition for military readiness activities) to temporally and spatially isolated explosions, regardless of charge size. Still, the analysis conservatively assumes that any modeled instance of temporally or spatially separated detonations occurring in a single 24-hour period would result in harassment under the MMPA for military readiness activities. Further, the criteria do not preclude the consideration of animals being behaviorally disturbed during single explosions if they are exposed above the TTS threshold, which is only 5 dB higher than the behavioral harassment threshold. The range to effect for TTS would be correlated to the size of the explosive. The Navy has been monitoring detonations since the 1990s and has not observed these types of reactions. To clarify, this monitoring has occurred under the monitoring plans developed specifically for shock trials, the detonations with the largest net explosive weight conducted by the Navy (no shock trials are proposed in this Study Area) rise to the level of 'harassment' under the MMPA for military readiness activities.
MMC-07	The Commission notes that the constants and exponents associated with the impulse metrics for both onset mortality and onset slight lung injury have been amended from those used in TAP I and Phase II activities. The Navy did not explain why the constants and exponents have changed while the underlying data remain the same. Therefore, the Commission again recommends that the Navy in its final	The technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i> , available at www.nwttteis.com , provides the derivation of the explosive injury equations. The Navy points the Commission to this technical report for (1) why the constants and exponents for onset mortality and onset slight lung injury thresholds for Phase III have

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	SEIS (1) explain why the constants and exponents for onset mortality and onset slight lung injury thresholds for Phase III have been amended, (2) ensure that the modified equations are correct, and (3) specify any additional assumptions that were made.	been amended and (3) any additional assumptions that were made. The modified equations are correct.
MMC-08	The Commission recommends that the Navy use onset mortality, onset slight lung injury, and onset GI tract injury thresholds to estimate both the numbers of marine mammal takes and the respective ranges to effect.	The Navy used the range to 1 percent risk of mortality and injury (referred to as “onset” in the Supplemental EIS/OEIS) to inform the development of mitigation ranges for explosions. In all cases, the proposed mitigation ranges for explosives extend beyond the range to 1 percent risk of non-auditory injury, even for a small animal (representative mass = 5 kg). In the Final Supplemental EIS/OEIS, the Navy has clarified that the “onset” non-auditory injury and mortality criteria are actually 1 percent risk criteria. Over-predicting impacts would occur with the use of 1 percent non-auditory injury risk criteria in the quantitative analysis. The Navy, in coordination with NMFS, has determined that the mean threshold of onset is a reasonable representation of a potential effect. Rather, ranges to effect based on 1 percent risk criteria were examined to ensure that explosive mitigation zones would encompass the range to any potential mortality or non-auditory injury, affording actual protection against these effects. Although the commenter implies that the Navy did not use extensive lung hemorrhage as indicative of mortality, that statement is incorrect. Extensive lung hemorrhage is assumed to result in mortality, and the explosive mortality criteria are based on extensive lung injury data [See the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)].
MMC-09	Therefore, the Commission again recommends that the Navy use passive and active acoustic monitoring, whenever practicable, to supplement visual monitoring during the implementation of its mitigation measures for all activities that could cause injury or mortality beyond those explosive activities for which passive acoustic monitoring already was proposed—at the very least, sonobuoys that are expended and active sources and hydrophones that are used during an activity should be monitored for the presence of marine mammals.	The Navy currently uses and will continue to use passive acoustic devices (e.g., remote acoustic sensors, expendable sonobuoys, passive acoustic sensors on submarines) to complement visual observations for marine mammals when passive acoustic assets are already participating in an activity, as discussed in Section 5.2.1.1 (Lookouts). As discussed in Section 5.5.3 (Active and Passive Acoustic Monitoring Devices), there are significant manpower and logistical constraints that make constructing and maintaining additional passive acoustic monitoring systems or platforms for each training and testing activity impractical. The Navy’s existing passive acoustic monitoring devices (e.g., sonobuoys) are designed, maintained, and allocated to specific training units or testing programs for specific mission-essential purposes. Reallocating these assets to different training unit or testing programs for the purpose of monitoring for marine mammals would prevent the Navy from using its equipment for its intended mission-essential

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>purpose. Diverting platforms that have integrated passive acoustic monitoring capabilities would impact their ability to meet their Title 10 requirements and reduce the service life of those systems. Furthermore, adding a passive acoustic monitoring capability to additional explosive activities (either by adding a passive acoustic monitoring device to a platform already participating in the activity, or by adding an additional platform to the activity) for mitigation is not practical. For example, all platforms participating in an explosive bombing exercise (e.g. firing aircraft, safety aircraft) must focus on situational awareness of the activity area and continuous coordination between multiple training components for safety and mission success. Therefore, it is impractical for participating platforms to divert their attention to non-mission essential tasks, such as deploying sonobuoys and monitoring for acoustic detections during the event (e.g., setting up a computer station). The Navy does not have available manpower or resources to allocate additional aircraft for the purpose of deploying, monitoring, and retrieving passive acoustic monitoring equipment during a bombing exercise.</p> <p>As stated in Section 5.5.3 (Active and Passive Acoustic Monitoring Devices) of the Navy's 2019 Draft Supplemental EIS/OEIS, to develop an estimated position for an individual marine mammal, the animal's vocalizations must be detected on at least three hydrophones. As stated in Section 5.2.1 (At-Sea Procedural Mitigation Development), "Based on the number and type of passive acoustic devices that are typically used, passive acoustic detections do not provide range or bearing to a detected animal in order to determine its location or confirm its presence in a mitigation zone." The commenter took this sentence out of context to imply that the Navy indicated passive acoustic detections do not provide range or bearing to marine mammals in general. The Navy re-emphasizes that the passive acoustic monitoring devices typically used during its training and testing activities do not provide range or bearing to marine mammals, based on the number (e.g., one or two) and type of assets used.</p> <p>As discussed in Section 5.5.3 (Active and Passive Acoustic Monitoring), although the Navy is continuing to improve its capabilities to use range instrumentation to aid in the passive acoustic detection of marine mammals, at this time it would not be effective or practical for the Navy to monitor instrumented ranges for real-time mitigation or to construct additional instrumented ranges as a tool to aid in the implementation of mitigation.</p>

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
MMC-10	Therefore, the Commission recommends that the Navy conduct additional pre-activity overflights, barring any safety issues (e.g., low fuel), before conducting any activities involving detonations.	As described in Section 5.3.3 (Explosive Stressors) of the Navy's 2019 Draft Supplemental EIS/OEIS, the Navy developed a new mitigation for the Proposed Action requiring additional platforms already participating in explosive activities to support observations of the mitigation zone before, during, and after the activity while performing their regular duties. There are typically multiple platforms in the vicinity of activities that use explosives (e.g., safety aircraft). When available, having additional personnel support observations of the mitigation zone will help increase the likelihood of detecting biological resources.
MMC-11	The Commission recommends that the Navy conduct post-activity monitoring for activities involving medium- and large-caliber projectiles, missiles, rockets, and bombs.	As described in Section 5.3.3 (Explosive Stressors) of the Navy's 2019 Draft Supplemental EIS/OEIS, the Navy developed a new mitigation measure for the Proposed Action requiring the Lookout to observe the mitigation zone after completion of explosive activities when practical. If additional platforms are supporting an explosive activity (e.g., providing range clearance), those assets will assist in the post-event visual observation of the area where detonations occurred. The Navy will continue to follow the incident reporting procedures outlined in Section 5.1.2.2.3 (Incident Reports) if an incident is detected at any time during the event, including during the post-activity observations.
MMC-12	Therefore, the Commission again recommends that the Navy (1) specify the total numbers of model-estimated Level A harassment (PTS) and mortality takes rather than reduce the estimated numbers of takes based on the Navy's post-model analyses and (2) include the model-estimated Level A harassment and mortality takes in its LOA application to inform NMFS's negligible impact determination analyses.	<p>As stated in Draft Supplemental EIS/OEIS Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Sonar and Other Transducers) and in Section 3.4.2.2.2.1 (Methods for Analyzing Impacts from Explosives), the consideration of marine mammal avoidance and mitigation effectiveness is integral to the Navy's overall analysis of impacts from sonar and explosive sources.</p> <p>As described in the 2017 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing, animals in the Navy's acoustic effects model do not move horizontally or 'react' to sound in any way. The current best available science based on a growing body of behavioral response research shows that animals do in fact avoid the immediate area around sound sources to a distance of a few hundred meters or more depending upon the species. Avoidance to this distance greatly reduces the likelihood of impacts to hearing such as temporary and permanent threshold shift (TTS and PTS, respectively). Specifically, the ranges to PTS for most marine mammal groups are within a few tens of meters and the ranges for the most sensitive group, the HF cetaceans, average about 200 m, to a maximum of 270 m in limited cases; however HF cetaceans such as harbor porpoises, have been observed</p>

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>reacting to anthropogenic sound at greater distances than other species and are likely to avoid their zones to hearing impacts (TTS and PTS) as well.</p> <p>The Navy's acoustic effects model also does not consider procedural mitigation (i.e., power-down or shut-down of sonars, or ceasing explosive detonations when animals are detected in specified mitigation zones around a sound source or detonation location), which necessitates consideration of mitigation in the Navy's overall acoustic analysis process. Credit taken for mitigation effectiveness is extremely conservative. Not considering animal avoidance and mitigation effectiveness would lead to an overestimate of injurious impacts. The NMFS has concurred with the analytical approach used.</p>
<i>U.S. Department of Interior (DOI)</i>		
DOI-01	<p>The purpose and need states, "These proposed activities are generally consistent with those analyzed in the 2015 NWTT Final EIS/OEIS, and are representative of activities the military has conducted in the Study Area for decades" (pg 1-1). While this may be true given the Olympic Military Operating Areas (MOAs) were established by the Federal Aviation Administration (FAA) in the late 70s, the difference between past activities and the proposed activities is not minor. The changes include an increase in the number and type (Growlers vs. Prowlers) of aircraft and an increase in training days and times over the Olympic MOA. Additional changes include the connected action of training utilizing emitters in park-adjacent U.S. Forest Service (USFS) areas, specifically concentrating the aircraft and noise disturbance within and immediately adjacent to western portions of Olympic National Park (OLYM), including portions of the western interior, and nearly the entire coastal portion, of the Daniel J. Evans Wilderness (Evans Wilderness). The Department recommends that this increased level of activities should be appropriately reflected in the FEIS.</p>	<p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year. When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. The Navy, along with other U.S. military forces, have trained over and off the Olympic Peninsula since World War II. The Olympic MOA, one of about 460 MOAs across the United States, was established in 1977. 3. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 4. An increase in the number of aircraft based in the area does not equate to a one-to-one increase in flights in the Olympic MOA; the Navy conducts many different types of training activities across a number of locations. 5. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 6. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers.

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>Far more training events then involved low-level maneuvers due to the type of aircraft involved.</p> <p>7. Electronic Warfare training, which may use emitters in park-adjacent U.S. Forest Service areas, typically occurs at higher altitudes, usually greater than 20,000 feet, while other training activities, about 30 percent involve a variety of maneuvers that may include a portion of flight time at lower elevations. The location of the emitters has no bearing on where the aircraft will fly during electronic warfare training flights; aircraft will standoff from the emitters, not congregate over or near them.</p>
DOI-02	<p>The Department – through the National Park Service (NPS) commented in phases I and II of this project noting the need to identify affected NPS units on all maps within the SEIS. The majority of the maps do not identify federal or tribal lands. For greater transparency and public understanding, the Department recommends that the maps included in the FEIS should depict the locations of all federal and tribal lands within the training and testing ranges for all three states.</p> <p>More specifically, the maps should, at minimum, identify the location and extent of OLYM. The only map included in the document that shows OLYM (and also shows Ebey’s Landing National Historical Reserve (EBLA)) is on page 3.12-21 (aside from those in Appendix J) in Volume 2 of the SEIS. Subsequently, the only references found for OLYM are within the cultural resources section of the affected environment as well as in Appendix J.</p>	<p>The Navy has depicted National Park Service units and other federal and tribal lands on all maps where appropriate and where it supports the discussion the maps were provided for. Each map in the document has a specific purpose, with some focused on other areas. Where aircraft noise is analyzed such as in Appendix J, and where recreation is discussed, such as in Section 3.12, the reader will find the appropriate areas depicted, including the Olympic National Park. The Navy is aware of the relationship of its activities to these areas, and analyzed them accordingly in the Supplemental EIS/OEIS.</p> <p>The Navy agrees that maps identifying tribal lands would be useful in the discussion of American Indian and Alaska Native Traditional Resources and has added them in Section 3.11 accordingly.</p>
DOI-03	The Department recommends that the FEIS include an analysis that accurately reflects the presence of park visitors throughout the week, especially from May through September.	The description in Section 3.12.2.3.1 has been revised to reflect available information regarding park visitors.
DOI-04	The FEIS should include an analysis of the effect of the noise on visitors who come to the park specifically to experience the natural environment, including those natural sounds, and without the interruption of anthropogenic factors beyond the presence and subsequent noise of other park visitors.	The analysis in Section 3.12.3.2 (Airborne Noise) has been revised to reflect available information regarding park visitors.
DOI-05	The SEIS also states, “In a worst case scenario with an individual located at an elevation of 4,000-4,500 ft. and an EA-18G flying directly over that individual at an altitude of 6,000 MSL, the analysis shows that the maximum noise level would be 100.6 dBA, and noise at this level would last for an average of 0.12 second per flight. (pg 3.12-28)” From within the OLYM Headquarters building, located in Port Angeles, with an open office window near moderate traffic, the high school, and nearby residential areas, Growlers are seen flying over the area and the sound is	The duration of the Lmax metric is very brief as it represents the maximum level of a transient noise event, such as an aircraft flyover. However, the actual event will be heard for a longer duration depending on the altitude of the aircraft, distance to a receiver, local background sounds, and local atmospheric conditions. Text has been added to explain the difference between Lmax and audibility.

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	readily detectible for approximately 3 minutes at minimum. The Growlers can be heard on approach, as they fly over, and long after they're out of sight. So, either the modeling is incorrect or aircraft flies lower than the noted 10,000 ft. MSL (page 3.12-28 of the SEIS states that "multiple aircraft flying above the Olympic Peninsula would generate, on average, low level (37 dBA) noise, because more than 95 percent of overflights would occur above 10,000 ft. Mean Sea Level (MSL), placing the source of the noise, an aircraft, and the receptor, a person on the ground, thousands of feet apart.)."	
DOI-06	Additionally, averaging sounds over a 24-hour day-night period to assess cumulative sound levels within national park and wilderness land designations, is counter to what visitors actually experience on-the-ground. As properly noted in Appendix J, nighttime overflights have a greater adverse effect on the natural soundscape and visitor experience. Visitors, researchers, and staff tend to reference overflights by total number witnessed vs. 24-hour averages. Complaints have been shared in regard to low and loud flights occurring along the wilderness coast during the day and high and loud flights occurring over the interior wilderness at night. Researchers have noted that low flying Growlers have impacted their coastal studies due to wildlife being startled and suddenly dispersing.	<p>No cumulative noise metric has been recommended by NPS for looking at potential impacts to noise in a wilderness setting other than general statements about aircraft overflights.</p> <p>To avoid all potential for impacts identified by NPS general statements, the Navy would need to stop using the airspace, which would prevent the Navy from meeting its training and preparedness requirements.</p> <p>In terms of aircraft altitudes, the majority of time is spent above 10,000 ft MSL, but a portion of the flights occur at altitudes between 6,000 and 10,000 ft MSL.</p>
DOI-07	The FEIS should reflect the importance of aircraft keeping to their designated incoming flight path (depending on the width of that path), to control where aircraft are seen and heard.	All aircraft normally fly the planned flight path, and the flight path into the Olympic MOA is typically used by the EA-18G as planned. However, the transition airspace to and from the Olympic MOA is highly congested with commercial and general aviation traffic in addition to the EA-18G. FAA controls the airspace to and from the Olympic MOA, and during a normal weekday a mass of aircraft are departing or arriving from multiple airports on the Olympic Peninsula and surrounding Puget Sound. Military aircraft make up only about 7% of that traffic. The FAA has a planned traffic scheme and the EA-18Gs are safely blended into that traffic scheme. At times, due to the dynamic nature of the traffic scheme, aircraft are given air traffic control instructions that take them off their planned flight routes. These instructions must be followed unless the pilot deems the instruction unsafe. There are a number of reasons for air traffic control to issue instructions that take an aircraft off its planned flight route; e.g., safety, orderly flow of traffic, or a more expeditious route of flight. Any or all of the reasons could apply in a given situation.

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
DOI-08	“From 2015 through 2017, the average annual number of Navy EA-18G aircraft transits to and from the Olympic MOAs was 2,224. Under Alternative 1 [the preferred alternative], EA-18G transits to and from the Olympic MOAs are proposed to increase by 300 per year. This proposed increase equates to, on average, less than one additional transit per day over a calendar year.” We note that the proposal would result in roughly 7 total “events” per day, with much louder aircraft than previously experienced. A visitor who is in the park for 5 days would experience noise from military overflights at least 35 times in one visit.	The comparison of EA-18G as “much louder” to EA-6B noise levels in this paragraph appears to be a subjective evaluation between the old EA-6B operations and the new EA-18G operations. In fact, as shown in Table 4-3 of Appendix J (Airspace Noise Analysis for the Olympic Military Operations Areas) from the 2015 NWT Final EIS/OEIS, the EA-18G Growler is audible at shorter ranges than the EA-6B Prowler.
DOI-09	Page 3-20, Affected Environment and Environmental Consequences - For overall noise from the EA-18G while training within the OMOA, the Appendix J noise analysis shows an increase of 11 dBA for a total of 37 dBA estimated for the preferred Alternative 1. The discussion in Appendix J did not appear to account for a baseline of 26 dBA, then an increase to 37 dBA, and so it is unclear where the initial measurement came from. The FEIS should clarify whether the 26 dBA is intended to measure natural ambient and 37 dBA is the proposed ambient under the preferred alternative. The FEIS should reflect that the increase of 11 dB to any soundscape would reduce the listening area for humans and visitors by 92% which would be a very significant impact on the soundscape and ability for wildlife to function and communicate in their environment.	This comment regards the proposed scenario as adding new operations to the area relative to the baseline scenario, which is not accurate. The proposed operations provide an increase to current operations that only raises the noise exposure from 36 to 37 dBA DNL, which aligns with the 13.5% increase in sorties/flight hours.
DOI-10	Appendix J, Page J-26, J.7 Acoustic Monitoring Report. The Department recommends that the FEIS provide the metric(s) for the natural daytime ambient acoustic baseline in the second paragraph (i.e., L50 or Leq).	Appendix J in the Final Supplemental EIS/OEIS has been revised to include the L _{A50} metric for clarity.
DOI-11	Appendix J.6.3 provides estimated L _{max} durations. As noted in the report, L _{max} may only occur for a fraction of a second. So as to provide more context about duration of jet noise, the FEIS should include the percent time above metrics at the threshold levels in Table J-18 per year (Table J-13) for all combined missions, and for the time period when the training exercises are occurring. This information will be more representative of what a national park visitor would actually experience.	Time Above is not feasible for noise calculations from MR_NMap, which is the noise model used, and approved by the FAA for these types of analyses. Operations at airfields have established flight patterns, which allow for detailed noise analysis, including metrics like percent time above. However, flight activities in special use airspace vary from sortie to sortie; there are no predictable flight paths within the MOA. Therefore, percent time above cannot be calculated for flight activities within special use airspace.
DOI-12	The Department recommends that the Navy provide soundscape monitoring assistance to capture real-time baseline sound levels with and without Growler overflights and continue to conduct on-the-ground monitoring for the duration (indefinitely) of all naval training and testing activities within and immediately adjacent to the Olympic MOA, wilderness area outside of the MOA, and especially along the park’s very	DoD’s position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses ¹ . The following text ² states DoD’s position regarding the preference for modeling:

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	popular wilderness coast. This would be a measured outcome and would provide transparency to the public regarding commitments made by the Navy with respect to the number, timing, and the extent of overflights in this specific area, as well as whether the aircraft regularly maintained the AGL and MSL levels as identified in the SEIS.	<p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015. ² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
<i>U.S. Environmental Protection Agency (EPA)</i>		
EPA-01	We recommend that the Final Supplemental include revised information on Section 312(n) of the Clean Water Act, as set forth below. First, regarding Phase I of the Uniform Discharge Standards Rulemaking Process, we recommend replacing the phrase in the Draft Supplemental stating that, " ... the results of Phase I analysis concluded that discharges addressed under the Uniform National Discharge Standards program will not have adverse impacts to water quality; sediments, or other resources, including biological resources" with language from the EPA's website on the UNDS Rulemaking Process to avoid inaccurately characterizing the Phase I analysis. The EPA website states that: The Phase I Rule identified all discharges incidental to the normal operation of vessels of the Armed Forces and characterized each discharge to determine if it required control. The determination was	The language regarding the Uniform Discharge Standards has been revised in coordination with the EPA.

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>made based on the potential of the discharge to have an environmental impact. The rule determined the types of vessel discharges that require control by a marine pollution control device (MPCD) and those that do not require control. The EPA and the DOD identified 39 discharges, 25 of which would require control by an MPCD.⁷</p> <p>We also recommend revising the following sentence in the Draft Supplemental:</p> <p>The U.S. Navy adheres to regulations outlined in the Uniform National Discharge Standards program; as such, the analysis of impacts in this Supplemental will be limited to potential impacts from training and testing activities, including impacts from military expended materials, but not impacts from discharges addressed under the Convention for the Prevention of Pollution from Ships (incorporated into U.S. law as 33 U.S.C. sections 1901-1915) or the Uniform National Discharge Standards program.</p>	
EPA-02	<p>We recommend addressing potential UNDS-related water quality impacts in the EIS, rather than considering such impacts to be outside the scope of analysis. Doing so will ensure that potential water quality impacts from incidental vessel discharges during the proposed training and testing activities are disclosed to the public and decision makers, as contemplated by NEPA. Such impacts may be addressed by referencing the relevant Nature of Discharge Reports, which appear in the Phase I UNDS for Vessels of the Armed Forces Technical Development Document, and which address the environmental effects of the discharges identified as candidates for regulation under UNDS. ⁹ We recommend these revisions to the water quality section because - unless the Navy provides other information in the Final Supplemental EIS/OEIS - the best available information on potential water quality effects of certain incidental discharges is included in the UNDS Phase I Nature of Discharge reports.</p>	<p>The language regarding the Uniform Discharge Standards has been revised in coordination with the EPA.</p>
EPA-03	<p>Additional Noise Metrics</p> <p>While it is useful to understand the average sound level and the loudest events, we recommend two additional noise metrics that would further enhance public understanding and provide a clearer basis for decision makers when choosing a preferred alternative and considering potential mitigation. We specifically recommend additional metrics that more fully disclose the frequency and duration of aircraft overflight noise above certain levels.</p> <p>The two additional metrics we recommend are described in the</p>	<p>The additional metrics referenced in the DNWG Tech Bulletin are for NoiseMap (not MR_NMap). NoiseMap is for airfield noise analysis. Operations at airfields have established flight patterns, which allow for detailed noise analysis. MR_NMap is for noise analysis of special use airspace. Time Above (TA) is not feasible within MR_NMap and the variation within airspace operations.</p>

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	December 2009 Department of Defense Noise Working Group's Technical Bulletin - Using Supplemental Noise Metrics and Analysis Tools. Specifically, the "Number-of-Events Above" metric would provide a useful measure of the frequency of events and help answer questions of " ... how many aircraft fly over a given location or area at or above a selected threshold noise level." Similarly, the "Time Above a Specified Level" metric would provide a useful measure of the duration of noise exposure and help decision makers and the public understand the number of minutes that certain sound levels are exceeded. We note that, according to the DOD Technical Bulletin, time above analysis is usually conducted along with number above analysis to show both how many events occur above a selected threshold and the total duration of those events for a selected time-period.	
EPA-04	<p>Aircraft Noise and Social Resources</p> <p>According to the Draft Supplemental, the impact to social resources (including enjoyment of a natural setting such as the Olympic National Park) from aircraft overflights would be negligible because the training activities " ... would be temporary, of short duration, localized, and generally far enough from areas popular with tourists and residents ... " The Draft Supplemental does not sufficiently define "temporary," "short duration," "localized," and "areas popular with tourists and residents." Without definitions, it is unclear whether the conclusion that the airborne acoustics impacts to social resources would be negligible is accurate. We therefore recommend that the Final Supplemental define these terms in the context of noise impact to the social resource of quiet and natural places. We are providing thoughts on these terms for your consideration:</p> <ul style="list-style-type: none"> • Temporary: Airborne noise (or any stressor/impact) would be considered temporary if it is expected to last for a limited time. • Short duration: Although the disturbance from an aircraft overflight may last only a few seconds relative to a fixed point, from an area-wide perspective the disturbance is longer (the aircraft leaves a track of noise). To better communicate the noise disturbance from aircraft overflights, please see our noise metrics recommendations, above. • Localized: Disturbance from one aircraft overflight has localized impacts on a fixed point. However, aircraft training and testing activities would be distributed throughout the MOA and the associated noise impacts would also be distributed throughout and potentially beyond the MOA. If the aircraft training and testing, and associated noise tended 	<p>The FEIS was updated to include definitions of the terms, "transient" (replacing "temporary"), "short duration," "localized," and "areas popular with tourists and residents" as the comment recommended. The suggested definitions for these terms provided in the comment were adopted, at least in part if not wholly, and introduced at the beginning of the discussion on noise impacts. Regarding the definitions of "short duration" and "localized," the suggested definitions are somewhat problematic given that the duration of the noise is typically very brief (seconds) and localized to a particular receiver (i.e., a person on the ground) and then abruptly no longer detectable or, presumably, no longer a disturbance at that one location. It is true that the same aircraft continues to fly over the NP generating noise with the potential to cause a noise disturbance on the ground in other locations during its flight. However, the initial disturbance and any subsequent disturbances are very brief and isolated spatially such that an associated disturbance, if one were to occur, on the ground would be equally brief and isolated. The fact that the aircraft continues to fly over the NP does not mean that noise from the aircraft is continuously causing a disturbance on the ground throughout the NP. The occurrence of a disturbance is dependent on a receiver (i.e., a person on the ground) being present and reacting to noise from the aircraft. A more distant noise, which is the most likely scenario, would not necessarily cause a disturbance. The phrase "areas popular with tourists and residents" is intended to refer to areas in the NP where people are more likely to be found (e.g., near the visitors center or on popular hiking trails). These areas are at lower elevations and would not experience peak sound levels from Navy aircraft and are also likely to have other sources of anthropogenic noise (e.g., noise</p>

Table H-1: Responses to Comments from Federal Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>to occur over only one or a few fixed points, they would then be considered localized.</p> <ul style="list-style-type: none"> • Areas popular with tourists and residents: We suggest that, from the perspective of analyzing the potential significance of impacts in the MOAs, what matters is the proportion of activities impacting the MOA versus the proportion of activities occurring farther away. 	<p>from vehicles, other people talking and making sounds) such that the level of disturbance from aircraft noise may be reduced or less noticeable. By contrast, areas that would experience peak sound levels are at the highest elevations in the NP (above 4,000 ft.) and are less frequented by people.</p>
EPA-05	<p>Average Busy Day The Supplemental's characterization of the timing and duration of aircraft noise could be improved with additional information on impacts from an average busy training day. It is useful for decision makers and the public to understand average noise levels - including, for example, that 60 dBA would be exceeded less than two percent of the time during daytime and nighttime hours. Current descriptions of noise impacts from a daytime plus nighttime perspective, however, do not sufficiently capture the fact that, "Visitors to the national park, national forests, and wilderness areas on weekends or at night will rarely hear an EA-18G aircraft, because EA-18G training flights typically occur Monday through Friday and during daylight hours." Training flights may also be rare on holidays and Department of Defense 3-day and 4-day weekend schedules. Disclosure of the impact and exposure information from an average busy training day would help clarify that there may be periods of more focused flight activity and associated impacts.</p>	<p>The Average Busy Day is used for commercial airfields, is not applicable to military activities, and is not used by DoD. However, based on historical use, the Navy expects the average busy day in the Olympic MOA to be approximately 17 aircraft sorties.</p>

H.1.2 American Indian Tribes, Nations, and Tribal Organizations

This section contains comments from American Indian Tribes, nations, and tribal organizations received during the public comment period and the Navy's response to those comments.

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
<i>Cher-Ae Heights Indian Community of the Trinidad Rancheria (Trinidad)</i>		
Trinidad-01	Thank you for contacting the Trinidad Rancheria and initiating consultation on this project. The project area is outside of the geographic area of concern for the Rancheria and therefore we have no interest in this project and no information to provide. However, I would be interested in a report after the project for our records.	Thank you. The Navy will keep you informed of future updates to this project.
<i>Intertribal Sinkyone Wilderness Council (ITSWC)</i>		
ITSWC-01	While the Marine Species Coastal Mitigation Area provides a measure of protection against harm from Navy training and testing, the Tribes urge the Navy to expand the prohibited activities to include use of sonar, considering the impact such devices have on the health and wellbeing of whales and other marine mammals.	Training and testing with active sonar is essential to national security. The Navy uses active sonar during military readiness activities only when it is essential to training missions or testing program requirements since active sonar has the potential to alert opposing forces to the operating platform's presence. Passive sonar and other available sensors are used in concert with active sonar to the maximum extent practicable. The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from active sonar on marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on marine mammals in important foraging and migration areas. Additional information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
ITSWC-02	<p>1. Best Available Information</p> <p>One of the Navy's rationales for updating the 2015 Final EIS with a supplemental EIS is the need to incorporate analyses based on the most current and best available science and analytical methods. The Tribes disagree with this rationale because "best available science" is not defined in the Draft SEIS. The working definition should take into account the Tribal Traditional Knowledge (sometimes referred to as "Traditional Ecological Knowledge" or "TEK") of the Tribes. Since time immemorial, Tribes have used and managed their traditional marine environment, including the southern portion of the Navy's Northwest Training and Testing Range. The deep-seated understanding of this environment, acquired and passed down for generations, is an epistemology that informs sustainable management, and ensures abundant, healthy and biologically diverse ecosystems. It represents a vitally important complement to the western science that the Navy is required to utilize when analyzing impacts to Tribal cultural, spiritual and marine resources. Tribal Traditional Knowledge should be meaningfully taken into account for this purpose, while fully respecting the need for cultural sensitivity and confidentiality.</p>	<p>The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy will consider additional tribal and traditional knowledge provided, maintaining respect for cultural sensitivity and confidentiality.</p> <p>The Navy recognizes such requests for specific traditional knowledge in the format of planning for an individual action may be regarded as extractive. In the context of world events, the Navy also asks that the value of the scientific method also be respected, especially when the results of it are not laid bare by the current pandemic. The optimal situation is the integration of traditional knowledge. The Navy is committed to strike a complementary balance between the two ways of understanding and the integration of traditional knowledge built on mutual respect for both ways of understanding.</p> <p>As stated in the Supplemental EIS/OEIS, the term "traditional resources" is used to encompass protected tribal resources.</p>
ITSWC-03	<p>2. Marine Species Monitoring Program</p> <p>The Draft Supplemental EIS includes an environmental baseline against which to assess potential impacts of the training and testing is essential to a thorough environmental review. Draft SEIS at 3-2. Accuracy in the baseline in turn depends on a robust monitoring program that is designed to fully encompass the marine species populations in the Study Area. The Navy's shift in priorities "towards assessing the potential response of individual species to training and testing activities" directly results from InterTribal Sinkyone Wilderness Council et al v. National Marine Fisheries Service et al. The Tribes strongly urge the Navy to expand its application of this approach. Id.</p> <p>In addition, the Tribes require that the monitoring program be expanded to include effects of training and testing beyond potential harm to species population levels. Population level effects are insufficient to fully take into account the potential harm that Navy training and testing may cause, because this standard does not fully incorporate the concept that impacts to Tribal cultural and spiritual resources may not be manifested in physical impacts on marine species. Moreover, the courts have clarified that a finding of "negligible impact" does not fully satisfy the Navy's obligation under the Marine Mammal Protection Act, and that the Navy is subject to an independent statutory requirement to ensure that mitigation measures</p>	<p>The Navy understands there may be limitations of the Endangered Species Act and Marine Mammal Protection Act protecting cultural and spiritual resources. The Navy's monitoring program does address impacts beyond the potential for harm at the population level. The Navy uses cutting edge research to improve the science in a number of areas, including marine mammal densities, species occurrence, exposure and response, and habitat use. The Navy has consulted with the National Marine Fisheries Service pursuant to the Endangered Species Act and Marine Mammal Protection Act, and the resulting mitigation measures achieve the least practicable adverse impact.</p> <p>As a federal agency, the Navy owes a fiduciary duty to Indian tribes. The nature of that duty depends on the underlying substantive laws creating the duty. The Navy discharges its trust responsibility by complying with specific statutes, even when they require separate analysis and consideration of interconnected resources, which may not reflect a tribal perspective. The Navy is committed to address these challenges through good faith consultation in the context of the government-to-government relationships, which endures beyond consultations limited to a specific law or project.</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	are sufficient to achieve the “least practicably adverse impact.” Natural Resources Defense Council v. Pritzker, 823 F. 3d 1125, 1133 (9th Cir. 2016). The Navy’s obligation under the federal trust responsibility to act in the best interests of Indian Tribes likewise includes the requirement to reduce impacts to the lowest possible level. See, Pyramid Lake Paiute Tribe v. Department of the Navy, 898 F. 2d 1410 (9th Cir. 1990) (a “no jeopardy” finding of the Endangered Species Act does not preclude a finding that the Navy breached its fiduciary duty to the Tribe to conserve water for the Tribe’s endangered fishery). To meet this standard, a more expansive definition of harm is required.	
ITSWC-04	<p>3. Environmental Consequences</p> <p>The Draft SEIS identifies three stressors to be analyzed: access, availability of marine resources or habitat, and loss or damage to Tribal fishing gear. Draft SEIS at 3-9. The Tribes note first that this list does not appear to be a set of stressors but rather a list of the kinds of resource-related issues implicated by the Navy’s training and testing. The list should be revised to address that confusion. Second, this list is insufficient to capture the unique relationship of Northern California Indian Tribes to the Pacific Ocean, as it seems geared more specifically to those Tribes in the Pacific Northwest that exercise off-reservation treaty fishing rights through access to Usual and Accustomed Fishing Grounds. The Tribes request the Navy to expand the list of “stressors” to include those parts of the Study Area offshore from Northern California that encompass cultural and spiritual resources of the Tribes, and the concept that those resources have intangible features, such as spiritual connections, that will be impacted by the training and testing.</p>	<p>The Navy acknowledges the spiritual connections, as stated in Section 3.10.1 (Affected Environment) of the Draft Supplemental EIS/OEIS, “Sociocultural elements, such as traditions, lifeways, religious practices, community values, and social institutions may be considered by some groups to be types of cultural resources, especially within tribal communities whose traditional interaction with the natural world is integral to their culture. However, the Navy has completed this Draft Supplemental EIS/OEIS within the framework of NEPA, providing impacts as determined using the best available science. As stated in Section 3.10.1, this supplement is organized “to consider cultural and historic elements of the human environment within and between the three following sections: Section 3.10 (Cultural Resources), Section 3.11 (American Indian and Alaska Native Traditional Resources), and Section 3.12 (Socioeconomic Resources). Combined, these sections seek to provide a full analysis of the potential impacts from the Proposed Action on sociocultural elements of American Indian/Alaska Native communities and American history.”</p>
ITSWC-05	<p>4. Climate Change and Water Quality</p> <p>The Draft SEIS concludes that the assessment in the 2015 Final EIS that impacts to water quality from explosives and explosives byproducts in training and testing remains valid and does not need to be reconsidered. Draft SEIS at 3.1-19 to 3.1-36. Based on the studies conducted since 2015, this conclusion neglects to take into account the effect that changes in the climate may have on the corrosive power of an increasingly acidic ocean. Specifically, the Draft SEIS does not consider the likelihood that acidification of the ocean waters will accelerate the corrosion of explosive devices and byproducts that remain after training and testing is complete. The cumulative effect of this dynamic should also be considered.</p>	<p>The Navy discusses ocean acidification in the context of climate change in Section 3.1.3.3 (Climate Change and Sediments) and 3.1.3.6 (Climate Change and Marine Water Quality) of the Draft Supplemental EIS/OEIS and includes information from scientific studies conducted since 2015. The Navy acknowledged in Section 3.1.3.3 (Climate Change and Sediments) that “metals tend to dissociate” in more acidic ocean conditions. The Navy added a reference back to these two sections in the sections analyzing the impacts of explosives (Section 3.1.4.1) and metals (Section 3.1.4.2). Note that corrosion can also act to insulate ordnance and other metal items from contact with seawater and sediments, slowing or even halting further corrosion and movement of metals into the adjacent sediments and water column. The effects of climate change on the ocean environment, particularly effects specific to a particular region like ocean waters in the Pacific Northwest,</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		continue to be researched and to evolve and are not necessarily predictable. For example, as described in Section 3.1.3.6 (Climate Change and Marine Water Quality), increases in ocean acidity are believed to reduce the availability of carbonate in the water column, which is needed by organisms to generate calcium carbonate structures. However, increases in sea surface temperature associated with climate change appear to stimulate calcification at an even greater rate, essentially overriding the inhibiting effects of lower pH levels and leading to unexpected high abundance of cocolithophores (which build protective scales from calcium carbonate) in some ocean regions.
Lummi Indian Business Council (Lummi)		
Lummi-01	<p>1. DEIS Statement: Navy actions were not the sources for any of the identified threats in the report by the Southern Resident Orca Task Force (Office of the Washington Governor, 2018) (DEIS page 3.4-46). Lummi Response: The Navy's use of sonar equipment was raised as a concern at the very first SRKW Task Force meeting. As participants in the Washington State Governor's SRKW Task Force, we take exception to the erroneous statement in the DEIS that, "Navy actions were not the sources for any of the identified threats" in the report by the Southern Resident Orca Task Force (Office of the Washington Governor, 2018) (page 3.4-46). In point of fact, concerns about the Navy's use of sonar equipment impacting the Southern Residents was raised in the very first Orca Task Force meeting on May 1, 2018. In addition, the Task Force's final report recommended coordinating with the Navy to "discuss reduction of noise and disturbance affecting Southern Resident areas from military exercises and Navy aircraft." The final report went on to recommend that Governor Inslee:</p> <p>should meet with the U.S. Navy's Commanding Officer for the region that includes Washington state to address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state. The Governor should request the Navy participate on the Vessels working group in Year Two and identify actions to reduce the Navy's impacts to Southern Resident areas.</p>	<p>The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force, and the Navy was not made aware of conversations held during meetings in 2018. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force's working groups on prey and vessel traffic. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.</p>
Lummi-02	<p>2. DEIS Statement: The use of sonar and other transducers during training activities as described under [preferred] Alternative 1 will result in the unintentional taking of killer whales incidental to those activities (page 3.4-190). Lummi Response: This is not the first instance in the DEIS where the Navy adopts a cavalier and seemingly naïve attitude towards the complex</p>	<p>Behavioral response severity is described herein as "low," "moderate," or "high." These are derived from the Southall et al. (2007) severity scale. Some reactions estimated using the behavioral criteria are likely to be low severity, which are behavioral responses that fall within an animal's range of typical (baseline) behaviors and are unlikely to disrupt an individual to a point where natural behavior patterns are significantly altered or abandoned (e.g., an</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>behavior of the <i>qwe lhol mechen</i>. It is widely known that harmful harassment to a single area-whether intentional or inadvertent will likely lead to a population-wide effect.</p> <p>The EIS Fact Sheet Booklet states that 99.84% of all estimated takes of marine mammals would be Level B harassment. This would include disrupting and altering natural behavior patterns such as feeding, surfacing, nursing, breeding, sheltering or migration. All of these activities, but in particular feeding, breeding, and nursing, are critical for the distressed SRKW population. Level B harassment that interferes with both feeding and breeding or displaces areas from preferred foraging areas is of significant concern and will further contribute to the Southern Resident orcas' low reproductive success.</p> <p>We are also concerned with new and increased impacts to Southern Resident orcas from mine explosives. It is well known that this can cause injury, disorientation, or death for an orca population. Moreover, the use of mid-frequency sonar can impact orca and other marine mammals within 2,000 square miles, an area well outside the reasonable area that even highly trained marine mammal observers are able to survey.</p>	<p>orientation or startle response). Responses estimated using the Navy's quantitative analysis are most likely to be moderate severity (e.g. alteration of a natural behavior pattern), which are not expected to lead to long-term consequences for the individual or population based on the nature of the Proposed Action (e.g., short-term, transient, temporary sound sources). Best available science indicates that based on the types of sound sources used by the Navy under the Proposed Action, the probability of high severity responses occurring is very low. Furthermore, no significant behavioral responses such as panic, stranding or other severe reactions have been observed during monitoring of actual training or testing activities.</p> <p>Since the Draft Supplemental EIS/OEIS, the Navy has incorporated new estimates of Southern Resident killer whale densities and distributions in the NWTT Offshore Area into the quantitative analysis of impacts. The revised density estimates are shown in the technical report U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area (amended September 20, 2019), available at www.nwtteis.com. As a result, the Navy has revised the number of harassment (behavioral and TTS) of Southern Resident killer whales due to sonar exposure in Appendix E (Estimated Marine Mammal and Sea Turtle Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities) of this Final Supplemental EIS/OEIS.</p> <p>Mine Countermeasure and Neutralization Testing (a new testing activity in Phase III) is the only explosive activity in the NWTT Offshore Area that would occur within 50 NM from shore and within areas that Southern Resident killer whales may be present. The quantitative analysis of impacts predicts no incidental takes due to this activity after incorporating the above best available information about recent Southern Resident killer whale presence in the NWTT Offshore Area.</p> <p>As described in Chapter 3.4 (Marine Mammals), a single or even a few moderate TTS to an individual marine mammal per year are unlikely to have any long-term consequences for that individual. Based on the best available science, long-term consequences for marine mammal species or stocks, including Southern Resident killer whales, would not be expected from Navy training and testing activities under the Proposed Action.</p> <p>As described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment), the Navy worked cooperatively with NMFS to develop a suite of mitigation to avoid or reduce potential impacts on Southern Resident killer</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		whales to the maximum extent practicable. The Navy developed numerous new mitigation measures for the Final Supplemental EIS/OEIS in areas particularly important to Southern Resident killer whales for feeding, breeding, and migration. The Navy will implement procedural mitigation whenever and wherever applicable active sonar and explosive activities occur in the Study Area. The active sonar mitigation zones (i.e., area of observation) include a 1,000 yd. and 500 yd. power down and/or a 200 yd. shut down, depending on the sonar source; therefore, Lookouts are not required to survey 2,000 square miles as the commenter suggests.
Lummi-03	<p>3. DEIS Statement: Long-term consequences to marine mammal populations from Vessels, in-water devices, military expended materials, and seafloor devices associated with Navy training and testing activities are not anticipated. The use of in-water electromagnetic devices and high-energy lasers have the potential to result in impacts on marine mammals but would not result in long-term impacts on marine mammal populations. Lummi Response: It is mystifying how the Navy can reach these conclusions on the long term impacts of the proposed activities on the SRKW. The fact that the Navy can come to these conclusions while stating that tests may present risks to individual marine mammals, "can cause injury or result in the death of an animal", or that "the numbers of marine mammals potentially impacted by explosives are small as compared to each species' respective abundance, long-term consequences for the species or stocks would not be expected," demonstrates a willful ignorance or a reductionist understanding and modeling of the complexity of orca communication and communality.</p> <p>a. The DEIS wording of would not result in long-term impacts" and "are not anticipated," are not substantiated by the Navy's own data and are conclusions that cannot be drawn from the information in the DEIS. There are documented cases in this region of U.S. and Canadian naval activities, including active sonar training and explosive testing, have caused—and continue to cause—direct short, near, and long-term harm to <i>qwe lhol mechen</i>.</p> <p>b. Every individual orca in the current SRKW population matters if the population is to avoid extinction. It is well documented that among the orca, with their strong, intergenerational bonds, the loss of one orca will also directly affects the others' chance of survival. Researcher Jeff Foster, for example, demonstrated that when a female resident orca dies, it increases the mortality risk of her male offspring under age 30 by 3.1 times, and the mortality risk of her male offspring over age 30 by 8.3 times.</p>	<p>Using best available science, the Navy's analysis predicts that no Southern Resident killer whales would be killed or experience PTS during Navy training and testing activities, including active sonar and explosives. As described in Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III) (U.S. Department of the Navy, 2017h), the Navy's analysis incorporates conservative assumptions to account for uncertainty and therefore likely overestimates potential impacts of TTS and behavioral responses. As described in Chapter 3.4 (Marine Mammals), a single or even a few minor TTS to an individual marine mammal per year are unlikely to have any long-term consequences for that individual. Based on the best available science, long-term consequences for marine mammal species or stocks, including Southern Resident killer whales, would not be expected from Navy training and testing activities under the Proposed Action. The Navy has been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and their salmon prey species. No significant behavioral responses such as panic, stranding or other severe reactions have been observed during monitoring of actual training or testing activities.</p> <p>In May 2003, killer whales in Haro Strait, Washington, exhibited what were believed by some observers to be aberrant behaviors, during which time the USS Shoup was in the vicinity and engaged in mid-frequency active sonar operations. Sound fields modeled for the USS Shoup transmissions (Fromm, 2009; National Marine Fisheries Service, 2005; U.S. Department of the Navy, 2004) estimated a mean received SPL of approximately 169 dB re 1 µPa at the location of the killer whales at the closest point of approach between the animals and the vessel (estimated SPLs ranged from 150 to 180 dB re 1 µPa). Per the Phase III behavioral response function for odontocetes, the estimated received level during this exposure would likely have resulted in a behavioral response. However, attributing the observed behaviors to any one cause is</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>c. An active sonar training exercise conducted by the U.S. Navy in 2003 in the eastern Strait of Juan de Fuca and Haro Strait caused members of the SRKW J-pod to stop foraging. Their behavioral pattern became disoriented and they eventually grouped together in shallow water where they are at increased risk of stranding. (Sonar could clearly be heard above the water in a video recording of the incident.)</p> <p>d. A juvenile Southern Resident female was stranded in 2012 with evidence of trauma consistent with an explosion or high-pressure impact, a week after the Canadian Navy had been conducting sonar exercises in the region. Experts in underwater noise who continue to review her case believe that the most likely cause of death was an underwater military explosion.</p> <p>e. In 2017, explosives detonated by the Canadian Navy near a group of Southern Residents (L pod) caused the whales to group together suddenly and flee the area. These examples show that just one incident of training and testing activities impacting Southern Residents can cause significant harm, death, or displacement from preferred habitat.</p>	<p>problematic given there were six nearby whale watch vessels surrounding the pod, and subsequent research has demonstrated that “Southern Residents modify their behavior by increasing surface activity (breaches, tail slaps, and pectoral fin slaps) and swimming in more erratic paths when vessels are close” (National Oceanic and Atmospheric Administration Fisheries, 2014). For more details about this incident, please refer to the <i>Marine Mammal Strandings Associated with U.S. Navy Sonar Activities</i> technical report (May 2017), available at www.nwtteis.com. Under the Proposed Action, the use of hull-mounted sonars in the Inland Waters portion of the Study Area is limited, and the Navy would follow the mitigations prescribed for the Puget Sound and Strait of Juan de Fuca Mitigation Area as described in Chapter 5 (Mitigation).</p> <p>The National Marine Fisheries Service investigated the stranding of Southern Resident killer whale L-112 (NOAA Technical Memorandum NMFS-NWFSC-133). No U.S. Navy training activities involving sonar or explosives were conducted between 1 and 11 February 2012 in the Northwest Training Range Complex (which includes Washington, Oregon, and northern California). Other anthropogenic activity, including other U.S. military, Royal Canadian Navy, fishing, or construction activities, were also ruled out as potential causes of the observed injuries. The investigation was unable to determine the cause of the observed injuries, although blast injury was deemed unlikely. The Navy worked collaboratively with NMFS during the MMPA and ESA consultation processes to develop mitigation to avoid or reduce potential impacts from Southern Resident killer whales to the maximum extent practicable. With implementation of mitigation, such as using Lookouts to observe for marine mammals before and during explosive activities, and avoiding explosives in key habitat areas, the Navy does not expect to cause “significant harm, death, or displacement from preferred habitat” to any individual Southern Resident killer whale, as was asserted by the commenter.</p>
Lummi-04	<p>f. The DEIS acknowledges the potential for marine mammals to experience non-auditory injury and mortality as a result of its activities. Nonetheless, the assumptions the Navy has made in modeling these types of harm result in 'take estimates' that both underestimate effects and are inconsistent with the Marine Mammal Protection Act.</p> <p>The DEIS also fails to account for the findings such as those contained in Wieland, M., A. Jones, and S. C. P. Renn. 2010. This study, like a number of others, found that because the SRKW are adjusting their behavior, "we must consider the very real possibility that engine noise is hindering their</p>	<p>In compliance with the regulations implementing the Marine Mammal Protection Act, the Navy relied on best available science to estimate potential impacts on marine mammals, including marine mammal density data, acoustic impact criteria, and modeling of predicted effects incorporating emerging science since Phase II. Additionally, as described in Section 3.0.1.2 (Navy's Quantitative Analysis to Determine Impacts to Sea Turtles and Marine Mammals) in Chapter 3.0 (Affected Environment and Environmental Consequences), the Navy's analysis makes conservative assumptions when data is limited. The estimate of take, therefore, is unlikely to be under-</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	ability to communicate, and may well impact their efficiency at using acoustics to forage and navigate, as well." The use of mid-frequency sonar has also been linked to separation of killer whale and calf from its group (Olson, JK, J Wood, RW Osborne, L Barrett-Lennard, S Larson. 2018). The SRKW simply cannot afford any further decrease in their already very low recruitment rates, an increase in distress in their foraging opportunities, or disorientation among its members.	<p>estimated. The quantitative analysis predicts no mortalities or non-auditory injuries of any marine mammal species.</p> <p>The Navy considered the best available science in its analysis of each stressor, including the articles suggested by the commenter. Please note that Olson et al. 2018 was cited in Section 3.4.1.16.3, and Wieland et al., 2010 was incorporated in Section 3.4.1.7.4 of the Final Supplemental EIS/OEIS. The Navy consulted with the National Marine Fisheries Service, as required under the Marine Mammal Protection Act and Endangered Species Act, and will implement a suite of mitigation to avoid potential impacts on Southern Resident killer whales under the Proposed Action to the maximum extent practicable.</p>
Lummi-05	<p>6. DEIS Statement: Foraging during the spring-in Salish Sea by Southern Resident killer whales has declined in recent years as they shift their range and forage for Chinook salmon or other prey species elsewhere in response to reduced prey availability in that historically used inland waters foraging area. (DEIS p. 3.4-26).</p> <p>Lummi Response: In actual fact, Olson et al. (2018) noted that K and L pods have been increasing the duration of their stay in the inland waters by staying in the Salish Sea through the fall and into the early winter. Furthermore, any short-term variations in their presence in the Salish Sea should not be a rationale for exercising less caution in the inland waters. It is difficult to predict orca presence on a long-term or even annual basis, and the Navy should not assume that the shift outside of the Salish Sea in the spring and summer is a permanent change.</p> <p>Moreover, the DEIS fails to acknowledge that even spending time elsewhere, Southern Resident orcas are not getting enough food and are showing signs of malnutrition. The DEIS also implies that changes in the Southern Residents' presence in the Salish Sea mean that protections there are less important than they used to be. This is a misleading and dangerous, assumption; one of several that lead us to question to motives and aim of the DEIS. On the contrary, the inland waters remain a critical foraging area for the future of the SRKW. For that reason, tribal, state and federal governments are actively working to restore salmon populations in the inland waters as well as reduce vessel traffic noise.</p> <p>Additionally, the Navy should take into consideration that when the Southern Resident orcas are not in inland waters, they are likely to be in their offshore area, which is subject to additional training and testing activities that do not occur in the Salish Sea (see Southern Resident Killer</p>	<p>The inclusion of references from Shields et al., 2018 was not included to imply that impacts in the Inland Waters would be reduced or otherwise avoided because of the changing presence of Southern Resident killer whales within their summer-core habitat areas, but rather to present best available science on the species current status, including prey availability. This is a critical component of the environmental baseline the Navy then uses to estimate potential impacts resulting from the Navy's activities.</p> <p>As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The commenter incorrectly asserts that the Navy suggests that protective measures in the Salish Sea are less important; however, the Navy has not suggested that and does not consider that to be true. The mitigation measures developed for both NWTT Inland Waters and the NWTT Offshore Area for the Proposed Action represent an increase over the mitigation developed for the 2015 NWTT Final EIS/OEIS.</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Whale migration route at right). The Navy should consider additional mitigation and monitoring in the orcas' offshore habitat given the potential increased use of this area and the unique activities—such as active sonar—that take place in this portion of their range.	
Lummi-06	7. Additional and Related Lummi Comments a. Unless there is strategic alignment across tribal, state, and federal agencies, the SRKW are likely to go extinct within our lifetimes. The DEIS demonstrates an increase in the threat to the SRKW from ocean noise, direct harm, disorientation and displacement for an already stressed population. The Navy must consider the current crisis facing the endangered Southern Resident orcas and make new adjustments in its testing and training activities.	Please see response to Lummi-02 above. Navy agrees that alignment of efforts across all stakeholders is important. As NMFS has determined previously and as the current analysis presents, Navy's actions are not likely to contribute to the extinction of SRKW and has incorporated mitigation measures that are designed to avoid or reduce impacts to SRKW that may result from Navy's activities.
Lummi-07	b. The EIS should detail the times of year during which the proposed activities will take place. The Southern Resident orcas have exhibited seasonality in their movements, and information from tagging studies, coastal surveys, and passive acoustic monitoring allows some degree of prediction for when and where they may be traveling and foraging. Any overlap in their seasonal movements and the Navy's testing and training activities will increase impacts on these species. Information about timing should be made public in the EIS and the Navy should seek to adjust the timing of their activities to minimize such overlap. c. The intended duration of the EIS is not clear. It is not stated in this EIS whether the proposed activities were analyzed for impacts over a five-year time period or for the extended seven-year time period.	As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment). The duration of the Supplemental EIS/OEIS is for the foreseeable future, while the Marine Mammal Protection Act permits would be in place for seven years.
Lummi-08	d. The designation for Southern Resident orca critical habitat is likely to change later this year. The Navy should not make final decisions about training and testing in the potential new critical habitat areas off the coasts of Washington, Oregon and California until this designation has been made. The Navy should wait until NMFS makes its final designation for expanded critical habitat before pursuing activities that would adversely affect the area. Changes in the Navy's mitigation measures are likely to be necessary so that the proposed action does not "result in destruction or adverse modification of critical habitat." e. It is incumbent upon the Navy to be rigorous, transparent, and conservative in assessing potential impacts on these populations. 40 C.F.R. §§ 1502.22, 24 (requiring agencies, inter alia, to obtain information	The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	essential to a reasoned choice among alternatives and to ensure the professional integrity of their analyses).	
Makah Tribe (Makah)		
Makah-01	<p>1) Protection of Makah Trust Resources</p> <p>The Makah Tribe would bring to the Navy's attention the need to further review the impacts of the NWTT on the Makah Tribe's trust resources and the environments on which they depend. In order to more accurately evaluate impacts to fish, marine mammals, and other wildlife from the existing, new, and increased training and testing activities, we need the Navy to clarify the times of year in which the proposed activities will occur. These discussions should occur with our policy and technical staff to better assess impacts to tribal trust resources, especially those with seasonal movements and/or who rely on sound to feed, communicate, breed, and navigate (i.e., gray whales, humpback whales, halibut, salmon, rockfish, southern resident killer whales, etc.). The Makah Tribe has significant expertise in fisheries, marine mammals, cultural resource protection, vessel traffic safety, oil spill response, and policy development and are the most appropriate ones to determine potential impacts to the Makah Tribe. The Makah Tribe looks forward to working with the Navy to fully understand the scope and impacts of the proposed activities on our treaty resources.</p>	<p>As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).</p> <p>Building on a foundation of over a decade of candid dialog about the Northwest Training Range Complex, prior training and testing planning (NWTT II), Electronic Warfare Range, and other actions potentially affecting Makah traditional territory and treaty resources, the Navy is committed to continuing good faith and meaningful consultation.</p>
Makah-02	<p>The Makah Tribal Council has been engaged on the Governor's SRKW Task Force in both the prey and vessels working groups, which provided a recommendation (Recommendation #25) for the Navy to "address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state. "For example, recent acoustic data from NOAA's hydrophone network show high use of the Cape Flattery Offshore area by southern resident killer whales (SRKW) in the spring compared to other areas of the coast. As such, we recommend this area be removed for sonar and explosive testing and training to avoid impacts or incidental take of SRKW, as well as other tribal trust resources. Acoustic, or noise impacts of vessel traffic, have also been demonstrated to negatively impact orca behavior, echolocation, and foraging success. Primary sources of acoustic impacts include sonar, acoustic devices, vessel traffic, and construction. Killer whales use echolocation to locate prey, communicate, and navigate underwater. Underwater anthropogenic noise can impair SRKW ability to successfully engage in these important behaviors and/or cause them to compensate in an energetically expensive manner.</p>	<p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>The Navy does not frequently conduct training or testing activities in the location of the Cape Flattery Offshore hydrophone since that area is highly utilized by commercial vessel traffic, making it an undesirable location for the Navy to conduct activities, especially sonar training or testing.</p> <p>The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas, as described in Appendix K (Geographic Mitigation Assessment). For the Final Supplemental EIS/OEIS, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery, as recommended by the commenter. The Navy's mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will further help avoid potential impacts from vessel movements and training and testing activities on this species.
Makah-03	The Makah Tribal Council recommends including sonar as a prohibited activity within 50nm mitigation area as sonar negatively impacts marine mammals, a trust resource of the Makah Tribe.	<p>Training and testing with active sonar is essential to national security. The Navy uses active sonar during military readiness activities only when it is essential to training missions or testing program requirements since active sonar has the potential to alert opposing forces to the operating platform's presence. Passive sonar and other available sensors are used in concert with active sonar to the maximum extent practicable.</p> <p>The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from active sonar on marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on marine mammals in important foraging and migration areas. For the Final Supplemental EIS/OEIS, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, in part to reduce potential impacts from active sonar on Southern Resident killer whales. The Navy will conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation Area. Additional geographic mitigation for active sonar beyond what is detailed in Section K.3 (Mitigation Areas to be Implemented), such as prohibiting all active sonar within 50 NM from shore, would be impractical to implement for the reasons described in Appendix K (Geographic Mitigation Assessment) and Section 5.5.1 (Active Sonar).</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Makah-04	2) Adequate Spill Response and Clean up Preparedness Any changes in testing or movement of Naval vessels needs to be accompanied by appropriately scaled improvements in oil spill response and other potential hazardous materials. The Makah Tribe is willing to work with the Navy to determine whether or not the Navy is adequately prepared to address a response to hazardous materials in our marine area, considering the recent incident of 4,000 gallons of sewage spilled into Puget Sound in March, 2019. The Makah Tribe has experienced over 1 million gallons of oil spilled in our treaty area since the early 1970s; we have witnessed firsthand the devastating effects of oil spilled by the General Miegg, the Nesstucca barge and the Tenyo Mam. While we recognize that there has been progress towards reducing the risk of oil spills or spills of other hazardous materials, we remain concerned about risks of catastrophic spills and, in particular, the limited capability to clean up spills, especially in remote areas such as the Washington Coast.	The Navy takes very seriously its response to oil spills and is committed to maintain a clean environment, even after a spill might occur. The Navy's policy is to respond to Navy spills and to undertake direct and immediate action to minimize the spill's effect. The Navy owns and maintains a large supply of spill response equipment throughout their facilities in the Puget Sound area, and has a well-trained full-time staff that that can rapidly respond to a spill, regardless of its source. The Navy is a spill response resource in Puget Sound that can support other agencies as needed during oil spills in this area.
Makah-05	3) Testing and Training new technology and Environmental Research Within the SEIS, the Navy is proposing the use of high-energy lasers, kinetic energy weapons, and biodegradable polymer, the effects of which are unknown. The Makah Tribal Council recommends the Navy conduct rigorous testing and monitoring of these new technologies to assess and avoid impacts to fish, marine mammals, wildlife, and Makah's treaty protected trust resources. We would also like to be updated on the results of these monitoring efforts to ensure the protection of our trust resources. Additionally, the Navy Northwest has funded, and will continue to fund, research in this region. The Makah Tribal Council is interested in becoming more involved in the development of the research objectives and the research design for ongoing, planned, and future research off of the Washington coast.	<p>The Navy's use of high-energy lasers, kinetic energy weapons, and biodegradable polymer, while new to the NWTT Study Area, have been tested on other Navy ranges and evaluated in previous environmental documents. Their use in the NWTT Study Area has been thoroughly analyzed in this NWTT Supplemental EIS/OEIS for impacts specific to their use in this environment. In each case, as described throughout Chapter 3, impacts are expected to be minimal to undetectable.</p> <p>As a federal agency, the Navy owes a fiduciary duty to Indian tribes. The nature of that duty depends on the underlying substantive laws creating the duty. The Navy discharges its trust responsibility by complying with specific statutes, even when they require separate analysis and consideration of interconnected resources, which may not reflect a tribal perspective. The Navy is committed to address these challenges through good faith consultation in the context of the government-to-government relationship with the Makah Tribe, which endures beyond consultations limited to a specific law or project.</p> <p>Marine species monitoring reports are available on the Navy's Marine Species Monitoring website (https://www.navymarinespeciesmonitoring.us/). The Navy looks forward to engaging with the tribe to discuss future research projects.</p>
Makah-06	4) Inclusion of Tribal and Traditional Knowledge The Navy should expand their use of data and information to include tribal and traditional knowledge. The Makah Tribe has lived on the Washington	The Navy is committed to pursuing optimal management processes and results in a supportive environment of mutual respect, collaboration, and confidentiality. However, it also must be recognized that such a goal is

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	coast since time immemorial, as such our knowledge would enhance the SEIS and complement the western science used. The Navy should solicit and include traditional knowledge and assessments from tribes when analyzing the NWTT impacts to tribal cultural, ceremonial, spiritual, and economic marine resources, as determined by each Tribe. The Makah Tribal Council recommends that in order for the SEIS to be complete, tribal traditional knowledge and impacts as determined by the Makah Tribe should be taken into account in a meaningful and respectful manner, while respecting the need for cultural sensitivity and confidentiality.	challenging owing to the Navy's role and mission. For the current action, the Navy is not fulfilling the role of resource manager. While subject to the same fiduciary and trust responsibilities shared by all federal agencies, the Navy differs from land and resource managing agencies who are better positioned to develop optimal integration of traditional knowledge into meaningful resource management. Through the government-to-government consultation process, the Navy considers tribal and traditional knowledge provided in its monitoring program while maintaining respect for cultural sensitivity and confidentiality. Resource management is best achieved when traditional knowledge is integrated into a management process, and not just a source of information for a particular project or program.
Makah-07	5) Climate Change Impacts The Makah Tribal Council believes the current SEIS is deeply flawed by under representing the importance of and the impact upon marine areas, habitats, and species as well as how projected climate and ocean changes are and may affect these resources. Our oceans are experiencing multiple environmental stressors, including temperature increases, ocean acidification, hypoxia, and harmful algal blooms. Washington State is projected to be hit especially hard by ocean acidification due to strong natural upwelling processes, resulting in significant impacts to pteropods, juvenile crab, shellfish, finfish, deep-sea corals, etc. A cumulative impacts analysis of NWTT needs to incorporate changing ocean conditions, treaty-reserved rights, coastal communities, and existing industries (i.e., commercial, subsistence, and recreational fishing as well as tourism) as well as thorough consideration of alternatives. The Makah Tribal Council also recommends the Navy conduct water quality testing to determine the impact of the NWTT, especially explosives and explosives byproducts, in the face of changing ocean conditions.	In the Draft Supplemental EIS/OEIS, the Navy considered the multiple stressors on the marine environment described in the comment, and thoroughly analyzed the potential impacts to marine areas and habitats (Section 3.3, Marine Habitats), species (Section 3.4, Marine Mammals; Section 3.5 Sea Turtles; Section 3.6 Birds; Section 3.7, Marine Vegetation; Section 3.8, Marine Invertebrates; and Section 3.9, Fishes), and climate/ocean changes (Section 3.1.3.6, Climate Change and Marine Water Quality). The Navy evaluated other impacts to water quality in Section 3.1.4.1. In the analysis, the Navy considered water quality testing at various sites where expended materials were much more concentrated than any conditions that could be found in NWTT.
Makah-08	6) Meaningful Consultation The Makah Tribe is a sovereign tribal government with reserved rights under the Treaty of Neah Bay. The Makah Tribal Council believes the Navy has not conducted comprehensive and meaningful consultation with the Makah Tribal Council in the development of the NWTT SEIS. Notification letters and limited discussions are not meaningful consultation. The Navy has outlined that they will work to "to ensure that timely notice and appropriate consultation with tribes occurs prior to taking any actions that may have the potential to significantly affect protected tribal resources, treaty rights, or Indian lands protected by a statute, regulation or executive order. 16	Building on a foundation of over a decade of candid dialog about the Northwest Training Range Complex, prior training and testing planning (NWTT II), Electronic Warfare Range, and other actions potentially affecting Makah traditional territory and treaty resources, the Navy is committed to pursuing optimal management processes and results in a supportive environment of mutual respect, collaboration, and confidentiality. However, it also must be recognized that such a goal is challenging owing to the Navy's role and mission. For the current action, the Navy is not fulfilling the role of resource manager.

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>"In addition to the National Historic Preservation Act, Section 106, requirements for impacts to cultural resources, the Makah Tribe emphasizes that fish, marine mammals, seabirds, invertebrates, etc. are cultural and trust resources and we should be consulted as a cooperating agency with the Navy and other federal agencies in determining impacts under the Marine Mammal Protection Act, Endangered Species Act, Magnuson-Stevens Act, etc. as we are co-managers of the resources. We request the Navy conduct more meaningful consultation with the Makah Tribe prior to finalizing the SEIS.</p> <p>The Makah Tribal Council is also interested in including the National Oceanic and Atmospheric Administration (NOAA) in our consultation request, as NOAA's consultation in reviewing this SEIS did not include consultation with the Makah Tribe on the impacts to treaty resources, including, but not limited to, fisheries, marine mammals, and the habitats they depend on.</p> <p>The Makah Tribal Council understands, given our unique legal, spiritual, and cultural connection to the ocean, there is a disproportionate and unacceptable risk to the Makah Tribe and our treaty protected resources. The Makah Tribal Council requests formal government-to-government consultation with the Navy and NOAA on this draft SEIS. We recommend informal staff meetings occur prior to the formal consultation taking place. The SEIS needs to incorporate more input from the Makah Tribe, a coastal treaty tribe with extensive ocean history, knowledge, and dependence, to aid the Navy in meeting their federal trust responsibility to the Makah Tribe.</p>	
Port Gamble S'Klallam Tribe (PGST)		
PGST-01	<p>The Supplemental DEIS/OEIS proposes to increase the number of pier side sonar testing events at Bangor from 67 events per year to < 174 events per year; the number of unmanned underwater vehicle tests at Dabob Bay from 253 events per year to < 400 events; and the number of NEPM torpedoes tested at Dabob Bay from 41 events per year to 61 events per year, in addition to other increases in the tempo and intensity of training and testing activities throughout the Puget Sound. Every five years, as the Navy increases the existing NWTT exercises and adds new exercises, the environmental impacts to natural and cultural resources will increase. The Tribe is concerned that these NWTT activities will directly, indirectly and cumulatively impact tribal access and treaty resources within its usual and accustomed fishing area. We are concerned that the NWTT program</p>	<p>Each analysis is unique. Some activities have increased, some have decreased, some are new, and some have been deleted. The proposed activities have been analyzed, and despite the increases in some activities, and based on current science, training and testing activities in the Inland Waters do not contribute significantly to long-term impacts on marine habitats, marine sediment, water chemistry or air quality; so there would be no change in the conclusions regardless of the number of activities.</p> <p>In the Draft Supplemental EIS/OEIS, the Navy analyzed the direct, indirect, and cumulative impacts to sediments, water quality, air quality, and marine habitat. (See Sections 3.1, 3.2, 3.3, and Chapter 4.)</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	incrementally threatens the Tribe's treaty right leading to damaged marine sediment, declining water and air quality, and degraded marine habitat.	
PGST-02	<p>Cumulative effects from increased acoustic sonar and other acoustic devices, underwater explosions, weapons firing, aircraft noise, vessel noise, electromagnetic signals, target strikes, in-water device strikes, expended materials, seafloor devices, cables and wires, release of air pollutants, explosives, metals, chemicals and other materials, physical disturbance, limited accessibility, underwater energy and physical interactions will impact natural and cultural resources and tribal fisheries in the Tribe's usual and accustomed area. The NWTT explosions and byproducts of explosions and combusted propellants, as well as unexploded ordnance, non-combusted propellant, metals, chemicals and other materials will have impacts to water quality. Increased criteria pollutant emissions and hazardous air pollutant emissions from vessels, aircraft and munitions will impact air quality. Acoustic stressors (underwater detonations) and physical disturbance or strikes (interactions with vessels and in-water devices, military expended materials, or seafloor devices) will affect marine habitats.</p> <p>Potential impacts include localized disturbance of the seafloor, cratering of softbottom sediments, and structural damage to hard-bottom habitats. Impacts on marine mammals may include mortality, injury, and disturbance or behavioral modification, caused by underwater explosions or vessel strikes, sonar use, noise and pollution. Cumulative impacts to sea turtles may include mortality, injury, disturbance or behavior modification caused by underwater explosions, vessel strikes, sonar use, noise, pollution and habitat loss.</p> <p>Impacts to birds may include mortality, injury, disturbance or behavioral modification from underwater explosions, air strikes or vessel strikes, noise, pollution, and habitat loss. NWTT activities such as underwater explosions, interactions with vessels and in-water devices, military expended materials or seafloor devices could also affect marine vegetation, including localized disturbance and mortality. Acoustic stressors (tactical acoustic sonar, other acoustic devices, pile driving, underwater explosions, weapons firing noise, aircraft noise, vessel noise), electromagnetic stressors, physical disturbance or strikes (vessels and in-water devices, military expended materials, seafloor devices), entanglement (cables and wires, parachutes), and ingestion (military expended materials) may affect marine invertebrates. Underwater explosions or vessel strikes, sonar use,</p>	All of the concerns listed in the comment were analyzed in the Draft Supplemental EIS/OEIS. Chapter 3 includes analysis of potential direct and indirect impacts to resources and Chapter 4 analyzes cumulative impacts.

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	noise and pollution may cause fish mortality, injury, disturbance or behavioral modification.	
PGST-03	In addition to the NWTT exercises, the increased vessel traffic associated with these exercises will have a significant cumulative effect. Vessel activity from all projects in aggregate will impact tribal fisheries and access to traditional fishing and harvesting areas throughout Hood Canal. Cumulative vessel traffic limits harvesting and fishing during scheduled fish and shellfish openings, by requiring that fishing boats leave or stay away from particular areas of the Hood Canal to avoid vessel activity. Tribal fishers and harvesters also face the increased threat of lost or damaged gear from increase vessel traffic through fishing and harvesting areas.	Navy vessel traffic in the Study Area is not expected to increase. As shown in Table 3.0-12, activities that include vessels could increase slightly for testing activities, and decrease for training activities, but that is a function of more activities being conducted aboard the vessels while they are underway, not an increase in the level of vessel activity.
PGST-04	Having promised to secure the Tribes their fisheries, the Navy has a fiduciary duty to fulfill that promise and protect the Tribe's treaty rights. Exercising that trust responsibility requires the Navy to analyze and select action alternatives that do not add to the collective impact of the Navy's actions on the Port Gamble S'Klallam Tribe's treaty rights. The Navy should consider the cumulative impacts of vessel traffic, waves, and wakes, the cumulative destruction of habitat, stresses on aquatic species, risks of spills and releases, and other impacts from vessel activities on the Tribe's fisheries. In the aggregate, the Navy's projects and many other activities in the Hood Canal have a significant effect on the timing, location, quality and quantity of harvest for tribal members. The DEIS/OEIS for the proposed NWTT should take account of contributions toward the cumulative effects of activities encroaching on tribal resources and fisheries within the PGST's usual and accustomed areas.	The Navy reviewed its analysis of cumulative effects on tribal resources and fisheries in Section 4.4.11 and believes the analysis presented appropriately addressed the concerns expressed in the comment.
Potter Valley Tribe (Potter Valley)		
Potter Valley-01	My biggest concern is health problems and the effect the testing has on the marine life. Also growing up I see a dramatic change in the marine life. When I was younger I can remember smelt fish flopping all over the beaches when it was running season. Now we are lucky to even get a gallon ziploc bag full. Same goes with the abalone. Where is it all disappearing to? Etc!	Potential impacts of Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. The analysis, which is based on the best available science, indicates that Navy activities are not expected to result in population-level impacts on marine species. Information about general threats to fish from non-Navy activities is presented in Section 3.9.2.2 (General Threats). As described in Chapter 5 (Mitigation), the Navy will implement mitigation measures to avoid or reduce potential impacts from training and testing activities on marine species, including fish. In cooperation with NMFS during the MMPA and ESA consultation processes, the Navy developed several new mitigation measures for the Final Supplemental EIS/OEIS to further avoid potential impacts on fish from the Proposed Action.

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
<i>Squaxin Island Tribe (Squaxin)</i>		
Squaxin-01	While the Marine Species Coastal Mitigation Area provides a measure of protection against harm from Navy training and testing, the Tribe urges the Navy to expand the prohibited activities to include use of sonar , considering the impact such devices have on the health and wellbeing of whales and other marine mammals.	Training and testing with active sonar is essential to national security. The Navy uses active sonar during military readiness activities only when it is essential to training missions or testing program requirements since active sonar has the potential to alert opposing forces to the operating platform's presence. Passive sonar and other available sensors are used in concert with active sonar to the maximum extent practicable. The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from active sonar on marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on marine mammals in important foraging and migration areas. Additional information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).
Squaxin-02	The Tribe requests that the Navy's monitoring program be expanded to include effects of training and testing beyond potential harm to species population levels. Population level effects are insufficient to fully consider the potential harm that Navy training and testing may cause, because this standard does not fully incorporate the concept that impacts to Tribal cultural resources may not be manifested in physical impacts on marine species. In addition, impacts upon already depressed populations may not adequately address the concomitant impacts on Tribal rights and resources.	<p>The Navy understands there may be limitations of the Endangered Species Act and Marine Mammal Protection Act protecting cultural and spiritual resources. The Navy's monitoring program does address impacts beyond the potential for harm at the population level. The Navy uses cutting edge research to improve the science in a number of areas, including marine mammal densities, species occurrence, exposure and response, and habitat use. The Navy has consulted with the National Marine Fisheries Service pursuant to the Endangered Species Act and Marine Mammal Protection Act, and the resulting mitigation measures achieve the least practicable adverse impact.</p> <p>The Navy recognizes and respects the significance the Squaxin Tribe ascribes to natural resources and properties of traditional or customary religious or cultural importance, and as they relate to tribal rights and protected tribal resources. The Navy follows DoD and Navy policies and instructions for protecting natural and cultural resources to the fullest extent possible while meeting its mission. As a federal agency, the Navy owes a fiduciary duty to Indian tribes. The nature of that duty depends on the underlying substantive laws creating the duty. The Navy discharges its trust responsibility by complying with specific statutes, even when they require separate analysis</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		and consideration of interconnected resources, which may not reflect a tribal perspective. The Navy is committed to address these challenges through good faith consultation in the context of the government-to-government relationship with the Squaxin Tribe, which endures beyond consultations limited to a specific law or project.
Squaxin-03	To evaluate the impacts to fish and wildlife species from existing, new, and increased training and testing activities more accurately, we request that the Navy clarify the times of year in which proposed activities will occur. This is especially important when assessing impacts to fish and wildlife, which have seasonal movements and behaviors that will greatly determine whether Navy activities significantly affect each species in the proposed areas.	As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).
Suquamish Tribe (Suquamish)		
Suquamish-01	The time period of activities specified in the 2019 DSEIS is "beyond 2020 into the reasonable foreseeable future". A specific time period should be defined to fully evaluate training-specific and cumulative impacts of these proposed activities.	The duration of the Supplemental EIS/OEIS is for the foreseeable future. The analysis would remain valid unless the Navy makes substantial changes in the proposed action that are relevant to environmental concerns, or there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. The Marine Mammal Protection Act permits would be in place for seven years.
Suquamish-02	Marine Debris The Tribe is concerned of unrecovered training and testing materials associated with these training activities. These materials may include, but are not limited to, sonobuoys, remote operated vehicles, torpedoes, targets, and associated lithium batteries. On August 20, 2018, a floating mine was discovered in waters adjacent to the Port Madison Indian Reservation and required the deployment of Navy officials and emergency response personnel. Although the floating mine was determined to be one of two mines left unrecovered from a previous training activity and considered marine debris, it had a direct effect on the Suquamish community. <u>The Tribe requests that the 2019 SEIS include detailed Standard Operating Procedure (SOP) protocols to recover and account for all training and testing materials placed into the inland waters of Salish Sea, including Dabob Bay.</u> The SOP protocols for recovery should not be limited to physical debris such as mines or lithium batteries, but should also	Thank you for your comment regarding the recovery of training and testing materials. Relative to the August 2018 discovery of a test and evaluation exercise shape, the Navy has taken actions to verify location of and, where appropriate, recover, exercise shapes within the Port Orchard reach. Although operating procedures addressing varying circumstances are properly under the cognizance of individual commands, in its 2015 NWTT Final EIS/OEIS and this Draft Supplemental EIS/OEIS, the Navy has expressly identified some common elements relating to retrieval of materials placed in water. For more information, including information on retrieval of exercise torpedoes and items with lithium batteries, please see Section 3.1 of the 2015 NWTT Final EIS/OEIS and section 2.3.3.3 of the 2019 Draft Supplemental EIS/OEIS.

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	provide a detailed account for the recovery of toxic liquids such as unspent torpedo OTTO fuel.	
Suquamish-03	<p>NWTT Impacts to the Southern Resident Killer Whale SRKW depend on sound to navigate, find food, and communicate with each other. Underwater noise from sonar, training technologies implemented during training, and vessels can impair communication, mask echolocation signals, modify behavior, and permanently damage hearing sensitivity among SRKW. These impacts carries both energetic and physiological costs to SRKW; requiring the whales to expend more energy to communicate and locate prey.</p> <p>NMFS prepared a Biological Opinion (Bi Op) in 2015 assessing NWTT impacts on Killer Whales and issued Letters of Authorization for incidental take of three distinct Killer Whale populations, including the SRKW through the year 2020. Since the 2015 Bi Op, NMFS has designated SRKW as a "Species in the Spotlight" and emerging science has further refined the assessment of underwater noise impacts on the declining SRKW population 1 2 3. <u>The Tribe requests that impacts of NWTT activities on SRKW are reevaluated with a detailed analysis of training-specific and cumulative impacts to SRKW.</u></p>	<p>Utilizing the latest science and technology, the Navy completed extensive analyses and computer-based modeling to determine impacts and develop science-based protective measures to reduce or avoid potential impacts on marine life, including southern resident killer whales. Specific to the quantitative analysis of potential impacts to southern resident killer whales, the Navy used the latest best available science to predict the abundance and distribution of the stock and data from controlled sonar exposures to killer whales was used to derive the behavioral response functions. All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS.</p> <p>Behavioral responses by southern resident killer whales are predicted by the Navy's acoustic effects model. Based on these results, individual animals are expected to be exposed to these levels on average about once per year. Research cited in the Draft Supplemental EIS/OEIS indicates that behavioral responses by marine mammals exposed to underwater sound vary from no response to an immediate change in behavior (e.g., change in swimming direction). Behavioral changes are temporary and not necessarily repeated. Animals frequently return to and continue their prior behavior after the initial interruption. The Navy has addressed recent research on possible long-term effects in Section 3.4.2.1.1.7 (Long-Term Consequences) of the Draft Supplemental EIS/OEIS. Based on this research, long-term effects to individuals and populations from short-term, intermittent noise exposures are not anticipated.</p> <p>As described in Chapter 5 (Mitigation), the Navy will implement mitigation measures to avoid or reduce potential impacts from training and testing activities on marine species, including Southern Resident killer whales to the maximum extent practicable. In cooperation with NMFS during the MMPA and ESA consultation processes, the Navy developed several new mitigation measures for the Final Supplemental EIS/OEIS to further avoid potential impacts on Southern Resident killer whales.</p>
Suquamish-04	<p>Alternatives to Real-life Training and Testing The Tribe requests that the 2019 SEIS consider virtual training and testing activities within alternatives to avoid or minimize impacts to habitat, biota, and Treaty-reserved fishing activities affected from training activities.</p>	<p>Regarding the use of virtual training and testing, or simulation, Navy already uses simulation in training and testing whenever possible; please see the discussion presented in Section 5.5.1 (Active Sonar) from the Supplemental EIS/OEIS.</p> <p>In addition, see the discussion in Section 2.4.1.4 (Simulated Training and</p>

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Testing Only) of this Supplemental EIS/OEIS that discusses the need for live training specifically for aircrews.
Yurok Tribe (Yurok)		
Yurok-01	The adequacy of the assessment of Tribal cultural impacts as well as environmental impacts from the Navy's training and testing activities is especially important because these activities take place in the Pacific Ocean, which holds great cultural and spiritual significance for the Tribes and is critically important for the wellbeing of all people and lifeforms on this planet. The Navy should work meaningfully with the Tribes to develop measures that will reduce impacts to the Tribes' cultural ways of life, including culturally and spiritually significant marine species and habitat that are vulnerable to Navy training and testing activities.	The Navy recognizes and respects the significance the Yurok Tribe ascribes to natural resources and properties of traditional or customary religious or cultural importance, and as they relate to tribal rights and protected tribal resources.
Yurok-02	The Navy should prohibit use of sonar within the 50-mile mitigation area. Sonar causes serious harm to the health and wellbeing of whales and other marine mammals.	Training and testing with active sonar is essential to national security. The Navy uses active sonar during military readiness activities only when it is essential to training missions or testing program requirements since active sonar has the potential to alert opposing forces to the operating platform's presence. Passive sonar and other available sensors are used in concert with active sonar to the maximum extent practicable. The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from active sonar on marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on marine mammals in important foraging and migration areas. For the Final Supplemental EIS/OEIS, the Navy also developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, in part to reduce potential impacts from active sonar on Southern Resident killer whales. The Navy will conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Area. Additional geographic mitigation for active sonar beyond what is detailed in Section K.3 (Mitigation Areas to be Implemented), such as prohibiting all active sonar within 50 NM from shore, would be impractical to implement for the reasons described in Appendix K (Geographic Mitigation Assessment) and Section 5.5.1 (Active Sonar).
Yurok-03	The “best available science” referenced in the draft SEIS should be expanded to meaningfully take into account Tribal Traditional Knowledge. Since time immemorial, Pacific coast Tribes have used and managed their traditional marine environment, including those areas situated within the Navy’s NWTRC.	The Navy is committed to pursuing optimal management processes and results in a supportive environment of mutual respect, collaboration, and confidentiality. However, it also must be recognized that such a goal is challenging owing to the Navy’s role and mission. For the current action, the Navy is not fulfilling the role of resource manager. While subject to the same fiduciary and trust responsibilities shared by all federal agencies, the Navy differs from land and resource managing agencies who are better positioned to develop optimal integration of traditional knowledge into meaningful resource management. Through the government-to-government consultation process, the Navy considers tribal and traditional knowledge provided in its monitoring program while maintaining respect for cultural sensitivity and confidentiality. Resource management is best achieved when traditional knowledge is integrated into a management process, and not just a source of information for a particular project or program.
Yurok-04	The Navy’s monitoring program should be expanded to include effects of training and testing beyond potential harm to species population levels. Population level effects are insufficient to fully take into account the potential harm that Navy training and testing may cause, because this standard does not fully incorporate the concept that impacts to Tribal cultural resources may not be manifested in physical impacts on marine species.	The Navy understands there may be limitations of the Endangered Species Act and Marine Mammal Protection Act protecting cultural and spiritual resources. The Navy’s monitoring program does address impacts beyond the potential for harm at the population level. The Navy uses cutting edge research to improve the science in a number of areas, including marine mammal densities, species occurrence, exposure and response, and habitat use. The Navy has consulted with the National Marine Fisheries Service pursuant to the Endangered Species Act and Marine Mammal Protection Act, and the resulting mitigation measures achieve the least practicable adverse impact. The Navy recognizes and respects the significance the Yurok Tribe ascribes to natural resources and properties of traditional or customary religious or cultural importance, and as they relate to tribal rights and protected tribal resources. The Navy follows DoD and Navy policies and instructions for protecting natural and cultural resources to the fullest extent possible while meeting its mission. As a federal agency, the Navy owes a fiduciary duty to Indian tribes. The nature of that duty depends on the underlying substantive laws creating the duty. The Navy discharges its trust responsibility by complying with specific statutes, even when they require separate analysis and consideration of interconnected resources, which may not reflect a tribal

Table H-2: Responses to Comments from American Indian Tribes, Nations, and Tribal Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		perspective. The Navy is committed to address these challenges through good faith consultation in the context of the government-to-government relationship with the Yurok Tribe, which endures beyond consultations limited to a specific law or project.
Yurok-05	The Navy should expand its list of environmental “stressors” to include those parts of the Study Area that encompass Tribal cultural resources, and the concept that those resources have intangible features, such as spiritual connections, which will be impacted by the training and testing.	The Navy acknowledges the spiritual connections, as stated in Section 3.10.1 (Affected Environment) of the Supplemental EIS/OEIS, “Sociocultural elements, such as traditions, lifeways, religious practices, community values, and social institutions may be considered by some groups to be types of cultural resources, especially within tribal communities whose traditional interaction with the natural world is integral to their culture. As stated in Section 3.10.1, this supplement is organized “to consider cultural and historic elements of the human environment within and between the three following sections: Section 3.10 (Cultural Resources), Section 3.11 (American Indian and Alaska Native Traditional Resources), and Section 3.12 (Socioeconomic Resources). Combined, these sections seek to provide a full analysis of the potential impacts from the Proposed Action on sociocultural elements of American Indian/Alaska Native communities and American history.”
Yurok-06	The cumulative effect of ocean acidification should be considered in the SEIS. The Draft SEIS concludes that the assessment in the Navy’s 2015 Final EIS that impacts to water quality from explosives and explosives byproducts in training and testing remains valid and does not need to be reconsidered. Based on studies conducted since 2015, this conclusion neglects to take into account the effect that changes in climate may have on the corrosive power of an increasingly acidic ocean. Specifically, the Draft SEIS does not consider the likelihood that acidification of ocean waters will accelerate corrosion of explosive devices and byproducts of training and testing.	The Navy discusses ocean acidification in the context of climate change in Section 3.1.3.3 (Climate Change and Sediments) and 3.1.3.6 (Climate Change and Marine Water Quality) of the SEIS and includes information from scientific studies conducted since 2015. The Navy acknowledged in Section 3.1.3.3 (Climate Change and Sediments) that “metals tend to dissociate” in more acidic ocean conditions. The Navy added a reference back to these two sections in the sections analyzing the impacts of explosives (Section 3.1.4.1) and metals (Section 3.1.4.2). Note that corrosion can also act to insulate ordnance and other metal items from contact with seawater and sediments, slowing or even halting further corrosion and movement of metals into the adjacent sediments and water column. The effects of climate change on the ocean environment, particularly effects specific to a particular region like ocean waters in the Pacific Northwest, continue to be researched and to evolve and are not necessarily predictable. For example, as described in Section 3.1.3.6 (Climate Change and Marine Water Quality), increases in ocean acidity are believed to reduce the availability of carbonate in the water column, which is needed by organisms to generate calcium carbonate structures. However, increases in sea surface temperature associated with climate change appear to stimulate calcification at an even greater rate, essentially overriding the inhibiting effects of lower pH levels and leading to unexpected high abundance of cocolithophores (which build protective scales from calcium carbonate) in some ocean regions.

H.1.3 State and Local Agencies and Elected Officials

This section contains comments from state and local agencies and elected officials received during the public comment period and the Navy's response to those comments.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
California Department of Toxic Substances Control (DTSC)		
DTSC-01	Our unit recently received a Responsible Agency Review/Interested Party Document from your department. The documents we received were delayed as they were sent to an incorrect address (Supervising Environmental Planner). Our CEQA unit processes all Responsible Agency Reviews and all reviews/documents should be addressed as follows: Department of Toxic Substances Control, Region 1 Attention: Dave Kereazis Permitting Division-CEQA 8800 Cal Center Drive, 2nd Floor Sacramento, CA 95826	Thank you. The Navy has updated its mailing list for this project.
City of Fort Bragg		
Fort Bragg-01	There are a number of reasons why we oppose testing of this type. First and foremost, we are not convinced of the need to jeopardize and expose our living systems to Naval weapons testing. It is 2019, and technology has progressed well beyond the early technology of WWII. We believe testing today can be simulated in a controlled environment in labs and with giant water tanks. The US Defense Department should re-evaluate these outdated methods of testing.	Regarding the use of simulation, Navy already uses simulation in training and testing whenever possible; please see the discussion presented in Section 5.5.1 (Active Sonar) from the Supplemental EIS/OEIS. In addition, see the discussion in Section 2.4.1.4 (Simulated Training and Testing Only) of this Supplemental EIS/OEIS that discusses the need for live training specifically for aircrews.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Fort Bragg-02	<p>Second, please understand we are a coastal town that depends on healthy oceanic ecosystems to support our fishing, tourism and marine science research industries. The importance of protecting our marine sea life cannot be understated. Our oceanic ecosystems continue to be compromised by warming sea temperatures from global warming, pollution, and overfishing. Sonar and explosive testing only further stresses this frail ecosystem.</p> <p>Again, both the Council and our Community oppose any kind of sonar or explosives testing that could harm marine life, including the whales.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations or other marine species in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As described in Chapter 5 (Mitigation), the Navy will implement mitigation measures to avoid or reduce potential impacts from training and testing activities on marine species. Wildlife-dependent tourism activities, such as wildlife viewing, or whale watching, are discussed in Section 3.12 (Socioeconomic Resources). The impacts of the training and testing activities in NWTT on tourism are discussed in Section 3.12.2.3 (Tourism and Recreation). No negative effects to tourism activities in the Study Area are expected from proposed training and testing activities. Therefore, loss of revenue or employment associated with tourism is not expected to occur.</p> <p>As described in Section 3.10 (Cultural Resources), Section 3.12 (Socioeconomics), and Section 3.13 (Public Health and Safety) of the EIS/OEIS, the Navy's proposed activities are fully compatible with other uses of the ocean space, especially off the coast of Northern California where proposed activities are rare.</p>
<i>Island County Commissioner</i>		
Island-01	<p>Alternatives should reflect updated best available science as they measure for these impacts, as well as reflect the growing dangers to Western Washington's Southern Resident Orca populations. There is no room for intentional "collateral damage" to this threatened species. The recent Governor's Orca Task Force findings make that clear. For this reason, a supplement appears to be warranted.</p> <p>A supplemental EIS should be required to reflect impacts to local marine life from continued or increased military activities as proposed.</p>	<p>The Navy's analysis was completed using the best available, peer-reviewed science. The Navy continues to pursue new scientific data, collected through professional studies and verified through credible, recognized sources. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has conducted active sonar and explosives training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Island-02	The DEIS does not adequately address impacts to the broader, vital, marine food web. This is another reason that a supplement is strongly called for and should consider these impacts as well as the stated impacts to prey.	The Draft Supplemental EIS/OEIS analyzed potential impacts to every component of the food web. See analysis of impacts to marine vegetation, marine invertebrates, and fishes (Sections 3.7, 3.8, and 3.9, respectively).
Island-03	The anecdotal impacts of noise may be subjective, yet the Navy's use of day/night averaging for episodic sounds is equally ineffective in measuring actual impacts of jet flights, or creating adequate mitigation for those impacts. Accurate and ongoing noise monitoring is needed. The current 400% increase in Growler activity has increased the stress response experienced by many. I concur with and support the Washington State Department of Health's (DOH) substantial comments during the 2017 DEIS Growler expansion proposal. The DOH called for updated and increased research on the public health risks of noise and a departure from day/night averaging as a basis for measuring impacts and determining mitigation measures. With the Growler's unique combination of high power, low-frequency sound, the human and non-human impacts are even less understood. Real time measurements are necessary to begin data-based assessments.	<p>DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD's position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Island-04	Page ES-10 states: "The use of explosive munitions in the water or near the water's surface present a risk to marine mammals located in close proximity to the explosion, because the resulting shock waves can cause injury or result in the death of an animal. If a marine mammal is located farther from an explosion, the impulsive, broadband sounds introduced into the marine environment may cause permanent or temporary hearing threshold shifts, auditory masking, physiological stress, or behavioral	The Navy will implement procedural mitigation to avoid or reduce potential impacts from explosives on marine mammals wherever and whenever explosives are used in the Study Area. The Navy conservatively assessed the likelihood that Lookouts would be able to visually observe the range to mortality for impulsive sources for each training or testing scenario. This is influenced by the size of the predicted impact ranges, location of the mitigation zone in proximity to the observation platform, type of observation

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>responses. Because most estimated impacts from explosions are behavioral responses or temporary hearing threshold shifts, and because the numbers of marine mammals potentially impacted by explosives are small as compared to each species' respective abundance, long-term consequences for the species or stocks would not be expected... The use of explosive munitions in the water or near the water's surface present a risk to marine mammals located in close proximity to the explosion, because the resulting shock waves can cause injury or result in the death of an animal."</p> <p>This analysis is based upon the assumption that testing and training activities can minimize impacts to orca and other marine mammals by restricting operations when they are visible. Given the wide distribution of marine mammals, and the varying depths at which they are found, relying solely on sightlines is outdated, inadequate and of very limited efficacy.</p>	<p>platform (e.g., pier, small boat, large vessel, helicopter, fixed-wing aircraft), and number of Lookouts. The Navy also considered the objectives of each training and testing scenario to determine the opportunities for and capabilities of Lookouts to continuously visually observe the impact range.</p> <p>In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals to the maximum extent practicable. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging and migration areas. For the Final Supplemental EIS/OEIS, the Navy also developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, in part to reduce potential impacts from explosive Mine Countermeasure and Neutralization Testing on Southern Resident killer whales. New mitigation prohibits the Navy from conducting explosive Mine Countermeasure and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area and the Olympic Coast National Marine Sanctuary Mitigation Area. Outside of those locations, the Navy also added a new mitigation requirement to limit the number of events seasonally, and to limit the amount of explosives used during explosive Mine Countermeasure and Neutralization Testing annually and over a 7-year period. Additional geographic mitigation for explosives beyond what is detailed in Section K.3 (Mitigation Areas to be Implemented), such as prohibiting all explosives within 50 NM from shore, would be impractical to implement for the reasons described in Appendix K (Geographic Mitigation Assessment) and Section 5.5.3 (Explosives).</p>
Island-05	<p>Page 3-26 "Explosions in Water" states, "Explosive detonations during training and testing involving the use of high-explosive munitions, including bombs, missiles, and naval gun shells, could occur in the air or near the water's surface. Explosive detonations associated with torpedoes and explosive sonobuoys would occur in the water column; mines and demolition charges could be detonated in the water column or on the ocean bottom. Detonations would typically occur in waters greater than 200 ft. in depth, and greater than 50 NM from shore, with the exception of mine countermeasure and neutralization testing proposed in the Offshore Area, and existing mine warfare areas in Inland Waters (i.e., Crescent Harbor and Hood Canal Explosive Ordnance Disposal Training Ranges)". All of the areas identified for these Navy activities are frequented by Orca</p>	<p>Using the best available science, the Navy has thoroughly assessed the potential impacts associated with the proposed training and testing activities. The analysis for impacts to marine mammals is contained in Section 3.4.2.2.2 (for explosive detonations), Section 3.4.2.3.2 (for high-energy lasers), and in Sections 3.7, 3.8, and 3.9 (for marine vegetation, marine invertebrates, and fishes) as components of the food web.</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	and other whales for feeding, mating and communication. With 400 explosive detonations/ year, including Naval Gunfire Muzzle Blasts at 200 dB and high energy lasers, the DEIS does not adequately assess the impacts to fragile marine mammal populations, and the food web they depend upon.	
Island-06	Executive Summary, page ES-7, section 3.1, the DEIS states: “Explosives and explosives byproducts, metals, chemicals, and other materials expended during training and testing described in this Supplemental could result in short-term and long-term impacts on sediments and water quality. Some chemical, physical, or biological changes in sediment or water quality could be measurable, but most would be negligible. Regulatory thresholds and guidelines established for measuring impacts on sediment and water quality would not be exceeded.” The Navy must be held to the same basic framework of the National Environmental Policy Act that the environment will be protected from negative impacts of proposed federal activities. It is unacceptable to use an analysis of possible environmental consequences using words like “could result” and “could be measurable” and this does not met the requirements of NEPA, particularly Section 1502.2(d) the requirement of environmental studies to evaluate environmental impacts. The public is left unclear as to which regulatory thresholds would be exceeded, or which guidelines would be followed for the myriad components of explosives, metals and chemical and the myriad species and habitat affected in these marine environments.	The complete analysis of potential impacts on water is found in Section 3.1.4 of the Supplemental EIS/OEIS. The section quoted in the comment is only a brief summary of the complete analysis.
Jefferson County Board of Commissioners		
Jeff Co-01	However, until recently, little collaboration or communication was initiated by the Navy while impacts to the County and particularly to our East Jefferson County region have increased significantly. Examples of these impacts include: <ul style="list-style-type: none"> • The purchase of conservation easements on thousands of acres of land, permanently extinguishing development rights without consultation with the county to determine long-term land use planning and tax implications. • Our transportation corridors are greatly affected by openings and closures of the Hood Canal Bridge, seemingly with little regard given to the resultant traffic backups, timing during peak usage, and impacts to local residents, travelers and businesses. 	The conservation easements referred to in the comment are outside the scope of this action. The Hood Canal Bridge closures and impacts to traffic were analyzed in the Supplemental EIS/OEIS (Section 3.12.3.4 - Secondary Impacts). Bridge closures related to the Navy’s proposed activities are not expected to increase from those currently occurring.
Jeff Co-02	<ul style="list-style-type: none"> • High impacts with little benefit to our tax base. Jefferson County supports a small installation, Naval Magazine Indian Island, which houses no service members and employs a very limited number of largely out-of-County civilians. With 88% of the proposed activities directly affecting Jefferson 	As described in the Supplemental EIS/OEIS in Section 3.12 (Socioeconomic Resources), the Navy’s activities are expected to have a negligible impact on socioeconomic resources in the Study Area, including Jefferson County.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	County, this level of impact is extraordinarily high in proportion to the economic benefit provided. This is especially obvious when compared to the boost to the tax base in neighboring Island and Kitsap Counties, home to the larger installations performing the proposed activities.	
Jeff Co-03	<p>1. The recent increase in Growler activity warrants new and more accurate noise measurement, monitoring and greater considerations to impact minimization. While the impacts of noise on people and communities may be highly subjective, the use of night/day averaging for episodic sounds is wholly ineffective in measuring impacts of jet flights. We receive complaints regularly from residents of Port Townsend, Marrowstone Island and the Western coast who are distressed by jet noise. The current 400% increase in Growler activity has increased the stress response experienced by many. This is especially true in a region that is rural, and the expectation of quiet is high. We request a departure from current modelling and averaging and request accurate, episodic, on-the-ground monitoring to provide accurate data.</p> <p>Additionally, we concur with and support the Washington State Department of Health's substantial comments during the 2017 DEIS for the expansion of the Growler program calling for updated and increased research on the public health risks of noise and a departure from day/night averaging as a basis for measuring impacts and determining mitigation measures. With the Growler's unique combination of high power and low-frequency sound, the human and non-human impacts are even less understood.</p>	<p>DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD's position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Jeff Co-04	<p>2. Impacts to the highly endangered Southern Resident Orca are understated. While the DEIS contains thorough research on marine mammals, the current crisis as identified by Governor Inslee and his appointed Orca Task Force is not acknowledged, nor are the peer-reviewed strategies considered. In fact, the word "Orca" is not found until page 306. It may be that this draft was too far along to be inclusive of the now well-</p>	<p>To align with the scientific community, the Supplemental EIS/OEIS uses the term "killer whale" instead of "Orca." Killer whales, and specifically the Southern Resident killer whales, are analyzed thoroughly in the Supplemental EIS/OEIS. The Navy is fully aware of the Governor's Task Force and the plight of the Southern Resident killer whale. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>documented serious condition of Western Washington's Southern Resident Orca population. In this instance, a Supplement would clearly be warranted.</p> <p>Southern Resident Orca survival requires a complex ecosystem approach to how we all use the maritime environment. The food web that supports orca is linked to forage fish, small bottom feeders, eel grass and other habitats that support healthy prey species like Chinook, Chum and Coho. The DEIS does an inadequate job of including these well-established facets of the local environment. Again, a Supplement is strongly called for and should consider these impacts as well as the stated impacts to prey.</p> <p>Page ES-10 states:</p> <p>"The use of explosive munitions in the water or near the water's surface present a risk to marine mammals located in close proximity to the explosion, because the resulting shock waves can cause injury or result in the death of an animal. If a marine mammal is located farther from an explosion, the impulsive, broadband sounds introduced into the marine environment may cause permanent or temporary hearing threshold shifts, auditory masking, physiological stress, or behavioral responses. Because most estimated impacts from explosions are behavioral responses or temporary hearing threshold shifts, and because the numbers of marine mammals potentially impacted by explosives are small as compared to each species' respective abundance, long-term consequences for the species or stocks would not be expected... The use of explosive munitions in the water or near the water's surface present a risk to marine mammals located in close proximity to the explosion, because the resulting shock waves can cause injury or result in the death of an animal."</p>	<p>Southern Resident killer whales. Based on comments received, the Navy has provided more information on potential prey impacts to Southern Resident killer whales in the Final Supplemental EIS/OEIS. This discussion can be found in Section 3.4.2.1.2.3 (Impacts from Sonar and Other Transducers During the Action Alternatives). The Draft Supplemental EIS/OEIS analyzed potential impacts to every component of the food web. See analysis of impacts to marine vegetation, marine invertebrates, and fishes (Sections 3.7, 3.8, and 3.9, respectively). Stresses, including behavioral reactions that may divert a Southern Resident killer whale from important behaviors such as feeding, were included in the Navy's analysis.</p>
Jeff Co-05	<p>Further, the DEIS appears to operate from the assumption that testing and training activities can minimize impacts to Southern Resident Orca and other marine mammals by not performing operations where they are visible. Given the wide distribution of marine mammals, and the varying depths at which they are found, relying solely on sightlines is outdated, of very limited efficacy and is wholly inadequate.</p>	<p>The Navy will implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in important habitat areas. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging, breeding, and migration areas. Additionally, the Navy developed the Puget Sound and Strait of Juan de Fuca Mitigation Area to enhance protections of Southern Resident Killer Whales throughout NWTT Inland Waters. Information about the Navy's</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).
Jeff Co-06	<p><u>Explosions</u>: Page 3-26 "<i>Explosions in Water</i>" states, "<i>Explosive detonations during training and testing involving the use of high-explosive munitions, including bombs, missiles, and naval gun shells, could occur in the air or near the water's surface. Explosive detonations associated with torpedoes and explosive sonobuoys would occur in the water column; mines and demolition charges could be detonated in the water column or on the ocean bottom. Detonations would typically occur in waters greater than 200 ft. in depth, and greater than 50 NM from shore, with the exception of mine countermeasure and neutralization testing proposed in the Offshore Area, and existing mine warfare areas in Inland Waters (i.e., Crescent Harbor and Hood Canal Explosive Ordnance Disposal Training Ranges)</i>".</p> <p>All of the horizons affected by these activities are used by Orca and other whales for feeding, mating and communication. With 400 explosive detonations/ year, including Naval Gunfire Muzzle Blasts at 200 dB and high energy lasers, ensuring these will not directly nor indirectly impact exquisitely sensitive orca and other marine mammals is paramount. The DEIS does an inadequate job of assessing these impacts.</p>	<p>In the Supplemental EIS/OEIS, the Navy has conducted its analysis with the understanding of the presence of marine life as mentioned in the comment. Using the best available science, the Navy has thoroughly assessed the potential impacts associated with the proposed training and testing activities. The analysis for impacts to marine mammals is contained in Section 3.4.2.2.2 (for explosive detonations) and Section 3.4.2.3.2 (for high-energy lasers).</p>
Jeff Co-07	<p>3. Sediments and Water Quality regulatory frameworks not identified</p> <p>Jefferson County and its businesses and residents are required to maintain high water quality standards via a strict federal and state regulatory framework to maintain public and environmental health. In the Executive Summary, page ES-7, section 3.1, the DEIS states:</p> <p><i>"Explosives and explosives byproducts, metals, chemicals, and other materials expended during training and testing described in this Supplemental could result in short-term and long-term impacts on sediments and water quality. Some chemical, physical, or biological changes in sediment or water quality could be measurable, but most would be negligible. Regulatory thresholds and guidelines established for measuring impacts on sediment and water quality would not be exceeded."</i></p> <p>The Navy, through this DEIS, is held to the basic framework of the National Environmental Policy Act whose policy is to assure the people of this nation that the environment will be protected from environmental impacts of proposed federal activities. Publishing an analysis of possible environmental consequences using words like "could result" and "could be measurable" is unacceptable and does not met the requirements of NEPA, particularly Section 1502.2(d) the requirement of environmental studies to evaluate environmental impacts. It is unclear which regulatory thresholds</p>	<p>The complete analysis of potential impacts on water is found in Section 3.1.4 of the Supplemental EIS/OEIS. The section quoted in the comment is only a brief summary of the complete analysis. Section 3.1 (Sediments and Water Quality) concludes, based upon the best available science, that chemical, physical, and biological changes to sediment or water quality would be measurable but below applicable standards, regulations, and guidelines, and would be within the existing conditions or designated uses. The Navy's training and testing activities are in compliance with all applicable laws and regulations concerning the impact of military expended materials and associated chemical constituents in the ocean environment.</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	would not be exceeded, nor which guidelines would be followed for the myriad components of explosives, metals and chemical and the myriad infauna, epifaunal and benthic communities of affected marine environments. A Supplemental EIS is clearly warranted to assess impacts and analyze mitigating factors for impacts to sediments and water quality.	
Jeff Co-08	<p>4. Assess and Include Carbon Emissions in FSEIS</p> <p>As stated on page 31 of the Executive Summary, Energy Requirements and Conservation Potential of Alternatives and Mitigation Measures, "Resources that will be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources."</p> <p>This County and many residents are deeply concerned about the local impacts of climate change, particularly sea level rise to our coastal communities, the impacts of ocean acidification on the shellfish industry, and increased risk of wildfire to our forested region. While the NEPA/EIS process does not yet require the consideration of impacts of burning of fossil fuels and resulting addition of carbon to the atmosphere, Jefferson County has, and continues to, inventory its greenhouse gas emissions in an effort to reduce them given the harmful and detrimental impacts. Similarly, we request the Navy report use and emissions in the FSEIS.</p> <p>While the DEIS does not include such figures, it is estimated that Growlers use approximately 1300 gal/ flight. If 2300 flights are flown in a year, that equates to 2,990,000 gallons of jet fuel consumed annually, just for the Growler program alone. If using standard jet fuel, which emits 21 lbs. of carbon/ gallon, this represents the addition of 62,790,000 pounds of carbon into the atmosphere locally. This is a significant contribution to a major environmental threat that should be assessed in this DEIS.</p>	The Navy completed an analysis of carbon emissions in the Draft Supplemental EIS/OEIS. See Section 3.2.3.2 (Greenhouse Gases and Climate).
Jeff Co-09	<p>5. Aircraft Transit Map does not include Jefferson County International Airport</p> <p>Figure 2.3-1, on page 2-18, does not include Port of Port Townsend Airport, Jefferson County's only international and FAA-regulated air field. Please include it in future versions.</p>	Thank you. The figure has been revised to include Jefferson County International Airport.
Jeff Co-10	<p>6. Socioeconomic Resources, including tourism and transportation, are impacted</p> <p>Section 3.12 on page ES-24 states, "<i>Impacts on socioeconomic resources are expected to be minor because inaccessibility to areas of co-use would be localized and temporary, the Navy's strict standard operating procedures</i></p>	Section 3.12 of the Supplemental EIS/OEIS analyzes training and testing activities occurring in the Study Area and considered all potential stressors related to socioeconomic resources including (1) Accessibility (to the ocean and the airspace); (2) Airborne acoustics; (3) Physical disturbance and strike (aircraft, vessels and in-water devices, military expended materials); and

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>would minimize physical disturbance and strikes of commercial and recreational watercraft, most airborne activities would occur well out to sea far from tourism and recreation locations, aircraft activities in the Olympic MOAs are expected to have negligible impacts on socioeconomic resources, and impacts to commercially important marine species are not expected ... There would be no disproportionately high impacts or adverse effects on any low-income populations or minority populations."</p> <p>Jefferson County requests ongoing consultation to discuss impacts to socioeconomic resources. Navy Testing and Training represent significant challenges to both local tourism and transportation sectors, neither of which are adequately represented in the DEIS.</p> <p>With increased Growler activity in Port Townsend, over the Olympic National Park, a UNESCO World Heritage Site, and at the Pacific Coast (home of the Olympic National Marine Sanctuary), tourists who frequent these areas (and locals alike) are experiencing unexpected levels of jet noise. This is particularly felt where there is an expectation for quiet, such as in wilderness areas and at night. While impacts from Growler activity are difficult to link to decrease in tourism revenues, constituents in the tourism industry have complained that customers are deterred and choose to leave prematurely due to noise. With tourism one of the largest sectors of the economy here, this impact is critical to assess and mitigate.</p>	<p>(4) Secondary (availability of resources). The analysis in Section 3.12.3.2 (Airborne Noise) has been revised to reflect available information regarding park visitors. The Navy is committed to being a good neighbor with the communities surrounding our installations and in proximity to where training and testing activities occur. Navy leadership will continue to meet with Jefferson County officials to discuss their concerns as requested.</p>
Jeff Co-11	<p>Additionally, closures of the Hood Canal Bridge for the passage of submarines seems to be increasing and continues during high traffic periods, such as Sunday afternoons when thousands of vehicles are attempting to leave the Olympic Peninsula. As injury traffic incidents increase on State Route 104, long back-ups and delays due to submarine closures are less tolerated and further implicated in the inaccessibility of Jefferson County, a huge blow to both doing business and tourism here. We request further collaboration to limit bridge impacts and to mitigate impacts to tourism in Olympic National Park and its 4 million visitors annually.</p>	<p>The Hood Canal Bridge closures and impacts to traffic were analyzed in the Supplemental EIS/OEIS (Section 3.12.3.4, Secondary Impacts). Bridge closures related to the Navy's proposed activities are not expected to increase from those currently occurring.</p>
Jeff Co-12	<p>7. Discussions regarding the No Action alternative. We recommend that this DEIS base the No Action alternative on the same No Action standard that was used in the 2015 EIS. Curiously, this DEIS uses a different No Action standard, one that is not even fully explored. The No Action alternative is then dismissed as unacceptable to the Navy's mission and declared not viable. We believe in this instance, the same No Action standards should be used in the No Action alternative analysis. In 1981, the Council on Environmental Quality published guidance on the</p>	<p>In regards to providing a No Action Alternative as was used in the 2015 NWTT Final EIS/OEIS, the Navy applied a scenario where no authorizations or permits are issued, the Navy's training and testing activities do not take place, and the resulting environmental effects from taking no action were compared with the effects of the Proposed Action (refer to Section 2.4.2.1, No Action Alternative, of the Draft Supplemental EIS/OEIS). This approach supports NMFS' regulatory process by presenting the scenario where no authorization will be issued. Additionally, this approach responds to comments submitted</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	"no action" alternative to include such cases meaning the proposed activity would not take place and any benefit or consequence of this "no action" alternative should be included in the analysis. "This [no action] analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives." (Yost, Nicholas, General Counsel. "Memorandum for Federal NEPA Liaisons, General, State and Local Officials and Other Persons Involved in the NEPA Process. 40 CFR Parts 1500-1508.1981 CEQ. Washington DC). We support that this DEIS compare the impacts in this manner such that the full magnitude of environmental effects is available regarding all action alternatives. We believe the DEIS does not provide sufficient discussion of the no action alternative. Once again, a Supplemental DEIS is warranted.	at various stages regarding the 2015 NWTT Final EIS/OEIS and during the scoping process of this Draft Supplemental EIS/OEIS. However, Section 2.4.1 (Alternatives Eliminated from Further Consideration) has been expanded in this Final Supplemental EIS/OEIS to include a "Status Quo" Alternative. This alternative considers no change to the training and testing activities as approved in the 2015 NWTT Final EIS/OEIS and the Navy consulting with NMFS under the MMPA. The Navy determined that this alternative did not meet the purpose of and need for the Proposed Action after thorough consideration.
Jeff Co-13	8. Mitigation measures. Since this is a Phase 3 DEIS we believe it is important to summarize the methods and outcomes of mitigation measures deployed for Phase 1 (2010-2015) and for Phase 2 (2015-2020). This would greatly illuminate the more or different mitigation measures that Phase 3 should address. The DEIS discusses mitigation basically in two categories - procedural mitigation measures and mitigation areas. Procedural mitigation is described in lengthy detail across all training and testing activities. Mitigation areas are discussed in Appendix K and describe geographic areas in which more procedures would be followed during training and testing in these areas (coastal, Puget Sound and Straits). We are confused how a mitigation area that triggers more procedures differs from procedural mitigation and moreover what if any impact avoidance technique beyond "obtaining permission from the appropriate designated Command authority prior to commencing the exercise" is going to be included. We find the mitigation areas not materially different from procedural mitigation and are concerned that fauna of the littoral zone will experience significant negative impacts through procedures that do not avoid or minimize impacts. Other mitigations referred to are "through the permitting process" ostensibly in consultation with the NMFS and USFWS. We understand however that all permitting decisions are to be based on mitigation measures published in the EIS so are not able to assess what, if any, additional impact minimizations from permitting there are.	As discussed in Chapter 5 (Mitigation), the mitigation measures developed for both NWTT Inland Waters and the NWTT Offshore Area for the Proposed Action represent an increase over the mitigation developed for the 2015 NWTT Final EIS/OEIS. The Navy works cooperatively with NMFS and the USFWS to develop mitigation specific to each Proposed Action. As discussed in Section 5.1.2.2 (Monitoring, Research, and Reporting Initiatives), the Navy developed its reporting requirements in conjunction with NMFS to be consistent with mission requirements and balance the usefulness of the information to be collected with the practicality of collecting it. The Navy does not maintain records of every instance of mitigation implementation for the reasons described in Section 5.5.7 (Reporting Requirements). The Navy will continue to implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in areas that are particularly important for biological life processes, such as feeding and migration. For example, as described in Appendix K (Geographic Mitigation Assessment), the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging and migration areas. The Navy included several new geographic mitigation measures in the Final Supplemental EIS/OEIS that were developed in coordination with the USFWS or NMFS during the MMPA or ESA consultation processes. For example, the

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy strengthened its mitigation measures for active sonar, explosives, and physical disturbance and strike stressors within the Puget Sound and Strait of Juan de Fuca Mitigation Area. Mitigation area requirements (e.g., prohibiting activities from occurring within an area) are materially different than procedural mitigation requirements (e.g., ceasing explosive activities when marine mammals are observed within a specified distance from the detonation location).
<i>Mendocino County Board of Supervisors</i>		
Mend Co-01	The Mendocino County Board of Supervisors believes that sonar and explosive testing off the Mendocino Coast is detrimental to fauna of the oceanic ecosystem on which we rely. This fragile ecosystem supports migrating whales and a wide variety of sea life and is a key economic source for our county and must not be damaged in any way. We do not want this testing in our coastal waters and believe that all coastal waters should be off limits to this type of testing. Mitigations must be in place to limit possible harm to marine life.	<p>Potential impacts from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. Based on the analysis in the Supplemental EIS/OEIS and monitoring conducted during actual training and testing events, population-level impacts are not expected to result from the Proposed Action. Monitoring reports are publicly available on the U.S. Navy's Marine Species Monitoring website (www.navymarinespeciesmonitoring.us/) and from the NMFS Office of Protected Resources website (www.nmfs.noaa.gov/pr/permits/incidental.htm#applications).</p> <p>As described in Chapter 5 (Mitigation), the Navy will implement mitigation measures to avoid or reduce potential impacts from training and testing activities on marine species, including marine mammals to the maximum extent practicable. In cooperation with NMFS during the MMPA and ESA consultation processes, the Navy developed several new mitigation measures for the Final Supplemental EIS/OEIS to further avoid potential impacts on Southern Resident killer whales, fish, and other marine species.</p>
<i>Port Townsend Mayor</i>		
Port Townsend-01	<p>1. The recent increase in Growler activity warrants new and more accurate noise measurement, monitoring and greater considerations to impact minimization. While the impacts of noise on people and communities may be highly subjective, the use of night/day averaging for episodic sounds is wholly ineffective in measuring impacts of jet flights. We receive complaints regularly from residents of Port Townsend, Marrowstone Island and the Western coast who are distressed by jet noise. The current 400% increase in Growler activity has increased the stress response experienced by many. This is especially true in a region that is rural, and the expectation of quiet is high. We request a departure from current modelling and averaging and request accurate, episodic, on-the-ground monitoring to provide accurate data.</p> <p>Additionally, we concur with and support the Washington State</p>	<p>DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD's position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Department of Health's substantial comments during the 2017 DEIS for the expansion of the Growler program calling for updated and increased research on the public health risks of noise and a departure from day/night averaging as a basis for measuring impacts and determining mitigation measures. With the Growler's unique combination of high power and low-frequency sound, the human and non-human impacts are even less understood. These impacts potentially more severely impact low-income residents who lack the means to harden their homes against these impacts.	<p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Port Townsend-02	<p>2. Impacts to the highly endangered Southern Resident Orca are understated. While the DEIS contains thorough research on marine mammals, the current crisis as identified by Governor Inslee and his appointed Orca Task Force is not acknowledged, nor are the peer-reviewed strategies considered. In fact, the word "Orca" is not found until page 306. It may be that this draft was too far along to be inclusive of the now well-documented serious condition of Western Washington's Southern Resident Orca population. In this instance, a Supplement would clearly be warranted.</p> <p>Southern Resident Orca survival requires a complex ecosystem approach to how we all use the maritime environment. The food web that supports orca is linked to forage fish, small bottom feeders, eel grass and other habitats that support healthy prey species like Chinook, Chum and Coho. The DEIS does an inadequate job of including these well-established facets of the local environment. Again, a Supplement is strongly called for and should consider these impacts as well as the stated impacts to prey.</p> <p>Page ES-10 states: "The use of explosive munitions in the water or near the water's surface present a risk to marine mammals located in close proximity to the explosion, because the resulting shock waves can cause injury or result in the death of an animal. If a marine mammal is located farther from an explosion, the impulsive, broadband sounds introduced into the marine environment may cause permanent or temporary hearing threshold shifts,</p>	<p>To align with the scientific community, the Supplemental EIS/OEIS uses the term "killer whale" instead of "Orca." Killer whales, and specifically the Southern Resident killer whales, are analyzed thoroughly in the Supplemental EIS/OEIS. The Navy is fully aware of the Governor's Task Force and the plight of the Southern Resident killer whale. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. Based on comments received, the Navy has provided more information on potential prey impacts to Southern Resident killer whales in the Final Supplemental EIS/OEIS. This discussion can be found in Section 3.4.2.1.2.3 (Impacts from Sonar and Other Transducers During the Action Alternatives). The Draft Supplemental EIS/OEIS analyzed potential impacts to every component of the food web. See analysis of impacts to marine vegetation, marine invertebrates, and fishes (Sections 3.7, 3.8, and 3.9, respectively). Stresses, including behavioral reactions that may divert a Southern Resident killer whale from important behaviors such as feeding, were included in the Navy's analysis.</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	auditory masking, physiological stress, or behavioral responses. Because most estimated impacts from explosions are behavioral responses or temporary hearing threshold shifts, and because the numbers of marine mammals potentially impacted by explosives are small as compared to each species' respective abundance, long-term consequences for the species or stocks would not be expected... The use of explosive munitions in the water or near the water's surface present a risk to marine mammals located in close proximity to the explosion, because the resulting shock waves can cause injury or result in the death of an animal."	
Port Townsend-03	Further, the DEIS appears to operate from the assumption that testing and training activities can minimize impacts to Southern Resident Orca and other marine mammals by not performing operations where they are visible. Given the wide distribution of marine mammals, and the varying depths at which they are found, relying solely on sightlines is outdated, of very limited efficacy and is wholly inadequate.	The Navy will implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in important habitat areas. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging, breeding, and migration areas. Additionally, the Navy developed the Puget Sound and Strait of Juan de Fuca Mitigation Area to enhance protections of Southern Resident Killer Whales throughout NWTT Inland Waters. Information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).
Port Townsend-04	Explosions: Page 3-26 "Explosions in Water" states, "Explosive detonations during training and testing involving the use of high-explosive munitions, including bombs, missiles, and naval gun shells, could occur in the air or near the water's surface. Explosive detonations associated with torpedoes and explosive sonobuoys would occur in the water column; mines and demolition charges could be detonated in the water column or on the ocean bottom. Detonations would typically occur in waters greater than 200 ft. in depth, and greater than 50 NM from shore, with the exception of mine countermeasure and neutralization testing proposed in the Offshore Area, and existing mine warfare areas in Inland Waters (i.e., Crescent Harbor and Hood Canal Explosive Ordnance Disposal Training Ranges)". All of the horizons affected by these activities are used by Orca and other whales for feeding, mating and communication. With 400 explosive detonations/ year, including Naval Gunfire Muzzle Blasts at 200 dB and high energy lasers, ensuring these will not directly nor indirectly impact	In the Supplemental EIS/OEIS, the Navy has conducted its analysis with the understanding of the presence of marine life as mentioned in the comment. Using the best available science, the Navy has thoroughly assessed the potential impacts associated with the proposed training and testing activities. The analysis for impacts to marine mammals is contained in Section 3.4.2.2.2 (for explosive detonations) and Section 3.4.2.3.2 (for high-energy lasers).

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	exquisitely sensitive orca and other marine mammals is paramount. The DEIS does an inadequate job of assessing these impacts.	
Port Townsend-05	<p>3. Sediments and Water Quality regulatory frameworks not identified Jefferson County and its businesses and residents are required to maintain high water quality standards via a strict federal and state regulatory framework to maintain public and environmental health. In the Executive Summary, page ES-7, section 3.1, the DEIS states:</p> <p><i>"Explosives and explosives byproducts, metals, chemicals, and other materials expended during training and testing described in this Supplemental could result in short-term and long-term impacts on sediments and water quality. Some chemical, physical, or biological changes in sediment or water quality could be measurable, but most would be negligible. Regulatory thresholds and guidelines established for measuring impacts on sediment and water quality would not be exceeded."</i></p> <p>The Navy, through this DEIS, is held to the basic framework of the National Environmental Policy Act whose policy is to assure the people of this nation that the environment will be protected from environmental impacts of proposed federal activities. Publishing an analysis of possible environmental consequences using words like "could result" and "could be measurable" is unacceptable and does not met the requirements of NEPA, particularly Section 1502.2(d) the requirement of environmental studies to evaluate environmental impacts. It is unclear which regulatory thresholds would not be exceeded, nor which guidelines would be followed for the myriad components of explosives, metals and chemical and the myriad infauna, epifaunal and benthic communities of affected marine environments. A Supplemental EIS is clearly warranted to assess impacts and analyze mitigating factors for impacts to sediments and water quality.</p>	<p>The complete analysis of potential impacts on water is found in Section 3.1.4 of the Supplemental EIS/OEIS. The section quoted in the comment is only a brief summary of the complete analysis. Section 3.1 (Sediments and Water Quality) concludes, based upon the best available science, that chemical, physical, and biological changes to sediment or water quality would be measurable but below applicable standards, regulations, and guidelines, and would be within the existing conditions or designated uses. The Navy's training and testing activities are in compliance with all applicable laws and regulations concerning the impact of military expended materials and associated chemical constituents in the ocean environment.</p>
Port Townsend-06	<p>4. Assess and Include Carbon Emissions in FSEIS</p> <p>As stated on page 31 of the Executive Summary, Energy Requirements and Conservation Potential of Alternatives and Mitigation Measures, "Resources that will be permanently and continually consumed by project implementation include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources."</p> <p>This County and many residents are deeply concerned about the local impacts of climate change, particularly sea level rise to our coastal communities, the impacts of ocean acidification on the shellfish industry, and increased risk of wildfire to our forested region. While the NEPA/EIS</p>	<p>The Navy completed an analysis of carbon emissions in the Draft Supplemental EIS/OEIS. See Section 3.2.3.2 (Greenhouse Gases and Climate).</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>process does not yet require the consideration of impacts of burning of fossil fuels and resulting addition of carbon to the atmosphere, Jefferson County has, and continues to, inventory its greenhouse gas emissions in an effort to reduce them given the harmful and detrimental impacts. Similarly, we request the Navy report use and emissions in the FSEIS.</p> <p>While the DEIS does not include such figures, it is estimated that Growlers use approximately 1300 gal/ flight. If 2300 flights are flown in a year, that equates to 2,990,000 gallons of jet fuel consumed annually, just for the Growler program alone. If using standard jet fuel, which emits 21 lbs. of carbon/ gallon, this represents the addition of 62,790,000 pounds of carbon into the atmosphere locally. This is a significant contribution to a major environmental threat that should be assessed in this DEIS.</p>	
Port Townsend-07	<p>5. Aircraft Transit Map does not include Jefferson County International Airport</p> <p>Figure 2.3-1, on page 2-18, does not include Port of Port Townsend Airport, Jefferson County's only international and FAA-regulated air field. Please include it in future versions.</p>	Thank you. The figure has been revised to include Jefferson County International Airport.
Port Townsend-08	<p>6. Socioeconomic Resources, including tourism and transportation, are impacted</p> <p>Section 3.12 on page ES-24 states, <i>"Impacts on socioeconomic resources are expected to be minor because inaccessibility to areas of co-use would be localized and temporary, the Navy's strict standard operating procedures would minimize physical disturbance and strikes of commercial and recreational watercraft, most airborne activities would occur well out to sea far from tourism and recreation locations, aircraft activities in the Olympic MOAs are expected to have negligible impacts on socioeconomic resources, and impacts to commercially important marine species are not expected ... There would be no disproportionately high impacts or adverse effects on any low-income populations or minority populations."</i></p> <p>Along with Jefferson County, Port Townsend requests ongoing consultation to discuss impacts to socioeconomic resources. Navy Testing and Training represent significant challenges to both local tourism and transportation sectors, neither of which are adequately represented in the DEIS.</p> <p>With increased Growler activity in Port Townsend, over the Olympic National Park, a UNESCO World Heritage Site, and at the Pacific Coast (home of the Olympic National Marine Sanctuary), tourists who frequent these areas (and locals alike) are experiencing unexpected levels of jet noise. This is particularly felt where there is an expectation for quiet, such as in wilderness areas and at night. While impacts from Growler activity are</p>	<p>Section 3.12 of the Draft Supplemental EIS/OEIS analyzes training and testing activities occurring in the Study Area and considered all potential stressors related to socioeconomic resources including (1) Accessibility (to the ocean and the airspace); (2) Airborne acoustics; (3) Physical disturbance and strike (aircraft, vessels and in-water devices, military expended materials); and (4) Secondary (availability of resources). The analysis in Section 3.12.3.2 (Airborne Noise) has been revised to reflect available information regarding park visitors. The Navy is committed to being a good neighbor with the communities surrounding our installations and in proximity to where training and testing activities occur. Navy leadership will continue to meet with Jefferson County officials to discuss their concerns as requested.</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	difficult to link to decrease in tourism revenues, constituents in the tourism industry have complained that customers are deterred and choose to leave prematurely due to noise. With tourism one of the largest sectors of the economy here, this impact is critical to assess and mitigate.	
Port Townsend-09	Additionally, closures of the Hood Canal Bridge for the passage of submarines seems to be increasing and continues during high traffic periods, such as Sunday afternoons when thousands of vehicles are attempting to leave the Olympic Peninsula. As injury traffic incidents increase on State Route 104, long back-ups and delays due to submarine closures are less tolerated and further implicated in the inaccessibility of Jefferson County, a huge blow to both doing business and tourism here. We request further collaboration to limit bridge impacts and to mitigate impacts to tourism in Olympic National Park and its 4 million visitors annually.	The Hood Canal Bridge closures and impacts to traffic were analyzed in the Supplemental EIS/OEIS (Section 3.12.3.4 - Secondary Impacts). Bridge closures related to the Navy's proposed activities are not expected to increase from those currently occurring.
Port Townsend-10	7. Discussions regarding the No Action alternative. The DEIS dismisses wholesale the concept of a No Action alternative other than maintain existing levels of testing, training, explosions and warfare exercises. In 1981, the Council on Environmental Quality published guidance on the "no action" alternative to include such cases meaning the proposed activity would not take place and any benefit or consequence of this "no action" alternative should be included in the analysis. "This [no action] analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives." (Yost, Nicholas, General Counsel. "Memorandum for Federal NEPA Liaisons, General, State and Local Officials and Other Persons Involved in the NEPA Process. CFR Parts 1500-1508.1981 CEQ. Washington DC). We believe the DEIS does not provide sufficient discussion of the no action alternative such that the magnitude of environmental effects is available regarding all action alternatives. Once again, a Supplemental DEIS is warranted.	In regards to providing a No Action Alternative as was used in the 2015 NWTT Final EIS/OEIS, the Navy applied a scenario where no authorizations or permits are issued, the Navy's training and testing activities do not take place, and the resulting environmental effects from taking no action were compared with the effects of the Proposed Action (refer to Section 2.4.2.1 [No Action Alternative] of the Draft Supplemental EIS/OEIS). This approach supports NMFS' regulatory process by presenting the scenario where no authorization will be issued. Additionally, this approach responds to comments submitted at various stages regarding the 2015 NWTT Final EIS/OEIS and during the scoping process of this Draft Supplemental EIS/OEIS. However, Section 2.4.1 (Alternatives Eliminated from Further Consideration) has been expanded in this Final Supplemental EIS/OEIS to include a "Status Quo" Alternative. This alternative considers no change to the training and testing activities as approved in the 2015 NWTT Final EIS/OEIS and the Navy consulting with NMFS under the MMPA. The Navy determined that this alternative did not meet the purpose of and need for the Proposed Action after thorough consideration.
Port Townsend-11	8. Mitigation measures. Since this is a Phase 3 DEIS we believe it is important to summarize the methods and outcomes of mitigation measures deployed for Phase 1 (2010-2015) and for Phase 2 (2015-2020). This would greatly illuminate the more or different mitigation measures that Phase 3 should address. The DEIS discusses mitigation basically in two categories - procedural mitigation measures and mitigation areas. Procedural mitigation is described in lengthy detail across all training and testing activities. Mitigation areas are discussed in Appendix K and describe	As discussed in Chapter 5 (Mitigation), the mitigation measures developed for both NWTT Inland Waters and the NWTT Offshore Area for the Proposed Action represent an increase over the mitigation developed for the 2015 NWTT Final EIS/OEIS. The Navy works cooperatively with NMFS and the USFWS to develop mitigation specific to each Proposed Action. As discussed in Section 5.1.2.2 (Monitoring, Research, and Reporting Initiatives), the Navy developed its reporting requirements in conjunction with NMFS to be consistent with mission requirements and balance the usefulness of the

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>geographic areas in which more procedures would be followed during training and testing in these areas (coastal, Puget Sound and Straits). We are confused how a mitigation area that triggers more procedures differs from procedural mitigation and moreover what if any impact avoidance technique beyond "obtaining permission from the appropriate designated Command authority prior to commencing the exercise" is going to be included. We find the mitigation areas not materially different from procedural mitigation and are concerned that fauna of the littoral zone will experience significant negative impacts through procedures that do not avoid or minimize impacts. Other mitigations referred to are "through the permitting process" ostensibly in consultation with the NMFS and USFWS. We understand however that all permitting decisions are to be based on mitigation measures published in the EIS so are not able to assess what, if any, additional impact minimizations from permitting there are.</p>	<p>information to be collected with the practicality of collecting it. The Navy does not maintain records of every instance of mitigation implementation for the reasons described in Section 5.5.7 (Reporting Requirements).</p> <p>The Navy will continue to implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in areas that are particularly important for biological life processes, such as feeding and migration. For example, as described in Appendix K (Geographic Mitigation Assessment), the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging and migration areas. The Navy included several new geographic mitigation measures in the Final Supplemental EIS/OEIS that were developed in coordination with the USFWS or NMFS during the MMPA or ESA consultation processes. For example, the Navy strengthened its mitigation measures for active sonar, explosives, and physical disturbance and strike stressors within the Puget Sound and Strait of Juan de Fuca Mitigation Area. Mitigation area requirements (e.g., prohibiting activities from occurring within an area) are materially different than procedural mitigation requirements (e.g., ceasing explosive activities when marine mammals are observed within a specified distance from the detonation location).</p>
<i>Puget Sound Partnership</i>		
PSP-01	<p>Concern: (1) Recent acoustic monitoring evidence shows considerable temporal and spatial overlap between high-use testing areas for active sonar and explosives and high-use areas by SRKWs off the north coast of Washington—which current and proposed activities do not appear to recognize.</p> <p>The Draft EIS does not appear to integrate the latest analyses from NOAA's hydrophone network that were provided to the Navy in March (Emmons et al. 2019). One key takeaway from the report is that SRKWs show disproportionately high use of the Cape Flattery Offshore (CFO) area in spring compared to other areas of the coast. Extrapolating from four years of recent data (Fig. 18), it appears that annually, on average, SRKWs are detected near CFO about 4 days in April, and about 2 days per month in</p>	<p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>In their comment, Puget Sound Partnership indicates that the Cape Flattery Offshore region is a "high use" area for the Navy based on findings from Emmons et al. 2019 and asks that the Navy considers moving activities away from the Cape Flattery area in the spring (April, May, and June) when SRKW detections were highest. The Navy would like to clarify that it does not frequently conduct training or testing activities in the location of the Cape Flattery Offshore hydrophone since that area is highly utilized by commercial</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>May and June. Moreover, those totals are likely to reflect lower-than-actual use because SRKWs now travel in smaller groups and smaller groups are more likely to be silent. The frequency and consistency in SRKW use is comparable to or exceeds levels seen in Puget Sound’s designated “critical habitat” at various times of year. The same acoustic monitoring results show the CFO area to have the highest evidence of mid-frequency sonar and explosions along the Washington coast—also in spring. To minimize potential adverse effects on SRKWs, such testing and training should be moved to another location or another season, or both.</p> <p>The Draft EIS proposes new activities that would substantially increase the amount of testing of explosives in the water column in/near that area (i.e., >1800 tests of HF4 Mine detection, classification, and neutralization). While those activities would likely use relatively small munitions, Table 3.0-7 also indicates that both alternatives would authorize use of a few much larger explosives in the offshore area. Given the higher force and impact-spread of large explosives, and the potential to mortally wound SRKWs in an area of heightened SRKW use – we suggest fundamentally examining the timing and/or placement of explosives testing, especially to avoid the spring season and to re-examine the findings that both alternatives would not result in (or significantly risk) the incidental taking of killer whales.</p>	<p>vessel traffic, making it an undesirable location for the Navy to conduct activities, especially sonar training or testing.</p> <p>Emmons et al. 2019 reported a number of detections at Cape Flattery Offshore, but this was not normalized for effort, which was also highest at the Cape Flattery Offshore hydrophone location. This would have the effect of overstating detections in that area. Emmons et al. 2019 reported on detections of MFA sonar, but did not distinguish between various sources (U.S. versus Canadian navies, among other users). Historically, the annual usage of MF1 sonar by the U.S. Navy in the Olympic Coast National Marine Sanctuary (which overlaps with the Cape Flattery Offshore hydrophone) over the last 10 years has been minimal.</p> <p>The commenter asked the Navy to “re-examine the findings that both alternatives would not result in (or significantly risk) the incidental taking of killer whales.” The paragraph leading into this request indicates confusion regarding more than “1,800 tests.” For clarification, the Navy’s Proposed Action does not include 1,800 explosive testing events, but rather 1,800 hours of high-frequency acoustic testing during non-explosive mine detection, classification, and neutralization systems. The Navy re-examined its effects analysis and affirmed that explosives used under the Proposed Action will not result in incidental taking of Southern Resident killer whales, as discussed in Section 3.4 (Marine Mammals).</p> <p>As described in Appendix K (Geographic Mitigation Assessment), the Navy developed new mitigation for the Final Supplemental EIS/OEIS to further avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas. For example, the Navy developed a new mitigation area known as the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery as recommended by the commenter. The Navy’s mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		further help avoid potential impacts from vessel movements and training and testing activities on this species.
PSP-02	<p>Concern (2): Potentially widespread opportunity for mitigation of testing exercises conducted at night may be missed.</p> <p>Emmons et al. (2019) report that roughly one quarter of the explosions detected in spring near Cape Flattery Offshore occurred at night. The Draft EIS does not appear to indicate the time of day for current and proposed testing activities for active sonar and the use of explosives in mine neutralization, etc. In the Draft EIS, Table 5.6-1 describes the use of what appears to be lookouts in the daytime, while section 5.5.4 covers “Thermal Detection Systems.” However, there doesn’t appear to be any description of whether or how the Navy might deploy marine mammal lookouts during training and testing at night. Due to the contrast between cold, ocean water and large, higher-temperature dorsal fins (and blows) of orcas—the potential for detecting and avoiding orcas at night using night-vision optics or other thermal imaging technology seems high. We urge the Navy to (A) provide more information on which exercises (and/or what percentage) are expected to occur at night and (B) require spotters to use night-vision optics or similar mitigation during nighttime testing and training, particularly when using explosives and active sonar.</p>	<p>The U.S. Navy has not used explosives in or near the Cape Flattery area in the past; therefore, detections reported by Emmons et al. 2019 should not be incorrectly attributed to U.S. Navy training and testing. In waters off Alaska, Washington, and California, passive acoustic monitoring efforts since 2009 have documented the routine use of non-military explosives at-sea (Baumann-Pickering et al., 2013; Debich et al., 2014; Emmons et al., 2019a; Kerosky et al., 2013; Rice et al., 2015; Trickey et al., 2015; Wiggins et al., 2019). Based on the spectral properties of the recorded sounds and their correspondence with known fishing seasons or activity, the source of these explosions has been linked to the use of explosive marine mammal deterrents known as “seal bombs,” which are intended to be used by commercial fishers to deter marine mammals, particularly pinnipeds, from preying upon their catch and to prevent marine mammals from interacting and potentially becoming entangled with fishing gear (Baumann-Pickering et al., 2013; Bland, 2017; (National Marine Fisheries Service, 2015; Wiggins et al., 2019).</p> <p>The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy developed mitigation to not conduct explosive Mine Countermeasure and Neutralization Testing at night, as described in Chapter 5 (Mitigation) and suggested by the commenter. As described in Section 5.5.1 (Active Sonar), the Navy has a requirement to conduct some active sonar training and testing at night due to environmental differences between day and night and varying weather conditions that affect sound propagation and the detection capabilities of sonar. Temperature layers that move up and down in the water column and ambient noise levels can vary significantly between night and day. This affects sound propagation and could affect how sonar systems function and are operated. It would not be practical to develop mitigation to prohibit all active sonar activities from being conducted at night due to impacts on mission requirements; however, after sunset and prior to sunrise, Lookouts and other Navy watch personnel employ night visual search techniques, which could include the use of night vision devices, as described in Section 5.2.1 (Procedural Mitigation Development).</p> <p>Analysis of the potential for thermal detection systems as a mitigation tool was presented in Section 5.5.4 (Thermal Detection Systems and Unmanned Aerial Vehicles) of the Draft Supplemental EIS/OEIS. The Office of Naval</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Research Marine Mammals and Biology program funded a project (2013–2018) to test the thermal limits of infrared-based automatic whale detection technology. The Navy has also been investigating the use of thermal detection systems with automated marine mammal detection algorithms for future mitigation during training and testing, including on autonomous platforms. For example, the Defense Advanced Research Projects Agency funded six initial studies to test and evaluate infrared-based thermal detection technologies and algorithms to automatically detect marine mammals on an unmanned surface vehicle. Based on the outcome of these initial studies, the Navy is planning additional follow-on efforts and testing. The Navy plans to continue researching thermal detection systems to determine their effectiveness and compatibility with Navy applications. If the technology matures to the state where thermal detection is determined to be an effective mitigation tool during training and testing, the Navy will assess the practicality of using the technology during training and testing events and retrofitting its observation platforms with thermal detection devices. The Navy will provide information to NMFS about the status and findings of Navy-funded thermal detection studies and any associated practicality assessments at the annual adaptive management meetings. Information about the Navy’s adaptive management program is included in Section 5.1.2.2.1.1 (Adaptive Management).
PSP-03	Concern (3): A new category of sonar tests with hundreds of repetitions has been proposed, but has not been adequately described in the Draft EIS. The draft EIS describes an additional 257 tests of a “Weapon-emulating sonar source.” However a word search of the document revealed no clarification of what that activity is, or where and when it would occur. We believe that should be clarified before review by NOAA/NMFS.	The comment is referring to the description provided in the Draft Supplemental EIS/OEIS (Table 3.0-2) of the HF9 sonar source. This sound source is proposed to be used approximately 257 hours per year, mostly in the Inland Waters of Puget Sound with some minimal use (less than 10 hours) in the Western Behm Canal, Alaska. The description in Table 3.0-2 has been revised in the Final Supplemental EIS/OEIS to clarify that HF9 sonar sources are active sources which emulate the acoustic signals produced by lightweight torpedoes.
PSP-04	Concern (4): Although the cumulative total amount of time that mid frequency sonar (MFS) may be used off the north coast is relatively low per year (33 hours), each use likely has a multiplicative effect on the disturbance to SRKWs. The MFS pulses emitted by the Navy on any given day may range from minutes to hours (Emmons et al. 2019), and the EIS suggests that the cumulative annual total is likely to be less than 33 hours. Although the total use of MFS is not high, each occurrence has the potential to trigger SRKWs to abandon an area for an entire day or more (as seen in other cetaceans’ reactions to MFS per Tyack et al. 2011). The Draft EIS asserts that a	The Navy does not generally schedule training and testing near Cape Flattery due to the high volume of commercial vessel traffic in that portion of the Study Area. The Navy developed procedural mitigation to avoid or reduce potential impacts on marine mammals from active sonar whenever and wherever training or testing activities occur within the Study Area, as described in Chapter 5 (Mitigation). The Navy developed mitigation areas to further avoid potential impacts in important foraging, breeding, and migration areas, as described in Appendix K (Geographic Mitigation Assessment). The Navy developed new mitigation for the Final Supplemental EIS/OEIS to further avoid or reduce potential impacts from mid-frequency

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	significant behavioral response is expected for toothed whales, like orcas, out to 16 km. This means that intermittent Navy MFS testing repeatedly casts a wide, harsh underwater noise that could displace/deter/delay SRKWs from entering a large, preferred area. This could lead to the cumulative loss of many days of potentially productive foraging and cost SRKWs lost energy—via extra calories expended to exit an area to avoid the noise (Williams et al. 2017), and in lost foraging opportunities. We suggest that MFS testing not be done in/near CFO or other areas where SRKWs are regularly found, and shift such testing to distant-and-deep offshore waters. We hope that you find these comments helpful in your EIS process. Please contact me or my staff with any questions. The Partnership looks forward to continuing to work with the Navy to ensure protections for Southern Resident Killer Whales, the environment and our national security.	active sonar on Southern Resident killer whales to the maximum extent practicable. The Navy will conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation Area.
San Juan County Council		
SJCC-01	Training Area Map The training area map is inaccurate. It depicts NASWI as well south of San Juan County. It is actually due east of the south end of Lopez Island. This is important because almost all air operations impact the soundscape on Lopez and San Juan Islands. It distorts where operations will occur.	The maps in the Supplemental EIS/OEIS are accurate and no changes are necessary. It is likely that the map the commenter is looking at is (as are all aviation maps) based on Magnetic North, while the maps used in this document use True North. There is a significant magnetic variation in the area (approximately 18 degrees), so comparing magnetic north-based maps and true north-based maps would appear to show a discrepancy of almost 20 degrees. If the Supplemental EIS/OEIS maps were rotated 18 degrees to account for the magnetic variation, the southern end of Lopez Island would appear to be due west of NASWI.
SJCC-02	Training Area/ Flight Operations In the record of decision for additional Growlers based at NASWI, the focus of increased flight operations was on the field carrier landing practice (FCLP). Please clarify if the number of flight operations in the training area is in addition to those stated in the record of decision for NASWI.	The EA-18G flight activities proposed in the NWTT EIS/OEIS include those that transit to and operate in the Olympic MOA or offshore in W-237. The Final Supplemental EIS/OEIS has been revised to clarify that the increased number of proposed activities in these areas results in approximately 300 additional aircraft flights per year (see Note 2 on Table 2.5-1).
SJCC-03	Sound Growler operations produce large amounts of noise. The DEIS relies on noise “modeling” not “testing” which understates the magnitude and length of time of the noise as well as the impacts on wildlife and humans. Ground tests have shown that the actual sound impact is above levels allowed in state statute in both decibels and duration. Occurrences that last several minutes can harm marine and land animals. We ask that actual testing and measurements be done.	DoD’s position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses ¹ . The following text ² states DoD’s position regarding the preference for modeling: 5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
SJCC-04	<p>Sonar</p> <p>Southern Resident Killer Whales are an endangered species and on the brink of extinction. Governor Jay Inslee convened a task force last year, which San Juan County participated to find solutions. After many meetings, a series of short and long term recommendations were made. The recommendations are backed by science. Studies show that certain sonar frequencies interfere with the whales’ ability to locate prey. The whales then move on without feeding. It is not accurate to state that there will be no long-term effects from sonar. For obvious reasons sonar levels are not described in the DEIS, however [sic]</p>	<p>In 2019, a team of Navy Officers and biologists participated with the Governor of Washington’s Southern Resident Killer Whale Task Force, including the Prey Working Group and Vessels Working Group. As described in Appendix K (Geographic Mitigation Assessment), the Navy has incorporated Southern Resident killer whale mitigation recommendations made by the Task Force into the Final Supplemental EIS/OEIS to the maximum extent practical, and will continue to engage with future protection and recovery efforts of this priority species.</p> <p>Although the hearing range of killer whales overlaps with some frequencies used in sonar, sonar use is unlikely to interfere with the whale’s ability to locate prey because 1) killer whales are able to distinguish and preferentially attend to sounds with different source locations (i.e., spatial release from masking), and 2) because of the low-duty cycles that are used by most sonars. As stated in the Final Supplemental EIS/OEIS (Section 3.4.1.1.4, Masking, subsection entitled “Masking by Sonar and Other Transducers”), masking due to high-duty cycle sonars is likely analogous to masking produced by other continuous sources (e.g., vessel noise), and will likely have similar short-term consequences. These may include changes to vocalization amplitude and frequency and behavioral impacts such as avoidance of the area and interruptions to foraging or other essential behaviors. Long-term consequences (e.g., changes to vocal behavior and vocalization structure, abandonment of habitat if masking occurs frequently enough to significantly</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		impair communication, and a potential decrease in recruitment if masking interferes with reproductive activities or mother-calf communication) are not expected to occur for reasons described in Section 3.4.2.1.2.3 (Impacts from Sonar and Other Transducers Under the Action Alternatives) subsection "Killer Whales."
SJCC-05	Explosives Pg ES-10 As stated above orcas populations are very low. Many of the task force recommendations were to reduce stressors on the whales. Stresses alter feeding patterns, which are already precariously dependent on Chinook salmon, a federally listed endangered species. It is imperative that the Navy as well as the private and public sectors, impose no further threats to this iconic population.	The Navy's proposed activities and their potential to impact the Southern Resident killer whale are thoroughly analyzed in the appropriate section of the document, Section 3.4 (Marine Mammals). The Draft Supplemental EIS/OEIS analyzed potential impacts to every component of the food web, including Chinook salmon (see analysis of impacts to fishes in Section 3.9). Stresses, including behavioral reactions that may divert a Southern Resident killer whale from important behaviors such as feeding, were included in the Navy's analysis.
SJCC-06	Further, the DEIS appears to operate from the assumption that testing and training activities can minimize impacts to orca and other marine mammals by not performing operations where they are visible. Relying solely on sightlines is outdated, of very limited efficacy, and seems wholly inadequate. It is out of sync with the purpose of the training area which is to test the most up to date equipment.	The Navy will implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in important habitat areas. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging, breeding, and migration areas. Additionally, the Navy developed the Puget Sound and Strait of Juan de Fuca Mitigation Area to enhance protections of Southern Resident Killer Whales throughout NWTT Inland Waters. Information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).
SJCC-07	Socioeconomic Resources, including tourism are impacted Tourism is affected by Growler operations. Deception Pass State Park has tracked and quantified the amount of cancelled reservations and camping fees returned directly linked to extensive Growler operations from NASWI. This should be examined impact determined.	The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Deception Pass State Park. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources.
Seattle Mayor (letter)		
Seattle-01	<ul style="list-style-type: none"> The Draft EIS does not appear to integrate the latest analysis from NOAA's hydrophone network that were provided to the Navy in March. This research indicates that the Navy is already altering the soundscape in areas where orcas are present and to minimize adverse effects on Southern 	The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	resident orcas, testing and training in the Cape Flattery Offshore should be reexamined and potentially moved.	<p>finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>The Navy does not frequently conduct training or testing activities in the location of the Cape Flattery Offshore hydrophone since that area is highly utilized by commercial vessel traffic, making it an undesirable location for the Navy to conduct activities, especially sonar training or testing.</p> <p>The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas, as described in Appendix K (Geographic Mitigation Assessment). For the Final Supplemental EIS/OEIS, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery, as recommended by the commenter. The Navy's mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will further help avoid potential impacts from vessel movements and training and testing activities on this species.</p>
Seattle-02	<ul style="list-style-type: none"> The Draft EIS does not appear to reflect the fact that the Southern resident orca critical habitat is likely to expand later this year. The National Marine Fisheries Service (NMFS) is committed to proposing a rule to expand the designation of critical habitat off Washington, Oregon, and California by early October 2019. The Navy will need to adjust its plans accordingly. 	<p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p>
Seattle-03	<ul style="list-style-type: none"> The Draft EIS inaccurately states that Governor Inslee's Orca Task Force did not identify Navy actions as a source for any of the identified threats to Southern resident orca. Recommendation #25 from the Task Force report outlines the need to "address the acoustic and physical impacts to 	<p>The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor's Task Force</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Southern Resident orcas from Naval exercises in waters and air of Washington state.”	in 2018, was not previously requested to participate in the Task Force. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force’s working groups on prey and vessel traffic, to develop solutions to issues pointed out in recommendation #25. The Navy participated in the Governor’s Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.
Seattle-04	<ul style="list-style-type: none"> • The Navy should clarify and potentially adjust the times of year in which proposed activities will occur. This is especially important when assessing impacts to fish and wildlife, which have seasonal movements and behaviors that will greatly determine whether Navy activities significantly affect each species in the proposed areas (e.g. rockfish, Southern resident orca). 	As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).
Seattle-05	<ul style="list-style-type: none"> • Whale report alert systems should be used for real-time sightings and advance warnings, complementing the limited visual range of lookouts. There are new real-time whale presence alert systems that the Navy should use to expand and speed up their awareness of likely imminent presence of Southern resident orcas beyond what the lookouts can do visually. 	The Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales, as described in Section K.3.3 (Mitigation Areas for Marine Species in NWTT Inland Waters). The Navy will also continue to assess the practicality of other available monitoring techniques as technologies advance.
Seattle-06	<ul style="list-style-type: none"> • The Navy should include rigorous analysis, testing, and monitoring of newer technologies outlined in the Draft EIS—such as high-energy lasers, kinetic energy weapons, and biodegradable polymer—as these are new and their effects are unknown. 	The Navy’s use of high-energy lasers, kinetic energy weapons, and biodegradable polymer, while new to the NWTT Study Area, have been tested on other Navy ranges and evaluated in previous environmental documents. Their use in the NWTT Study Area has been thoroughly analyzed in this NWTT Supplemental EIS/OEIS for impacts specific to their use in this environment. In

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		each case, as described throughout Chapter 3, impacts are expected to be minimal to undetectable.
Seattle-07	<ul style="list-style-type: none"> The Navy should prioritize an increase in protections to reduce noise and disturbance affecting the Southern resident orca immediately. Many other agencies and operators are taking new, meaningful steps to reduce noise and disturbance affecting Southern resident orcas. There are documented cases in this region of United States and Canadian naval activities—including active sonar training and explosive testing—causing direct harm, death, or displacement to the Southern resident orcas. Given the dire situation, it is critical the Navy immediately stop or adjust these activities. The City of Seattle is bringing forward a resolution (draft attached to this letter) to express its concerns with the Navy’s proposed activities and underscore our commitment to working with our partners to ensure protections for Southern resident orcas and the restoration of Puget Sound. Our orcas face incredible environmental pressures, and we must do better protecting these irreplaceable members of our region. I call on the U.S. Navy to do their part to keep our waters healthy and safe for all sea life in the Puget Sound. Thank you for the opportunity to comment. Sincerely, Jenny A. Durkan Mayor of Seattle 	<p>As described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment), the Navy developed several new mitigation measures for the Final Supplemental EIS/OEIS to further avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas. For example, in the NWT Offshore Area, the Navy developed a new mitigation area known as the Juan de Fuca Eddy Marine Species Mitigation Area where it will limit annual hours of hull-mounted mid-frequency active sonar and will prohibit explosive Mine Countermeasures and Neutralization Testing.</p> <p>As described in Section K.3.3. (Mitigation Areas for Marine Species in NWT Inland Waters), the Navy also developed enhanced mitigation measures in NWT Inland Waters for Southern Resident killer whales, gray whales, and other marine species for the Final Supplemental EIS/OEIS. The Navy’s new Puget Sound and Strait of Juan de Fuca Mitigation Area requirements will result in training and testing activities being conducted in NWT Inland Waters only when necessitated by mission-essential training or testing program requirements. Furthermore, the Navy will implement additional geographic mitigation for activities that are conducted in the mitigation area as applicable, such as seasonal awareness messages, communication with sighting information networks, limitations on the type and location of active sonar and explosive activities, and prohibition of live fire activities. The Navy’s mitigation as described in the Final Supplemental EIS/OEIS represents the maximum level of mitigation practical to implement under the Proposed Action, and any further mitigation in NWT Inland Waters would be impractical due to implications for safety, sustainability, and mission requirements for the reasons described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).</p>
Seattle-08	Section 1. The City of Seattle requests the Navy reconsider aspects of its Northwest testing and training proposal and take meaningful steps to reduce noise and disturbance affecting marine mammals, including the Southern resident orca.	Several new mitigation measures developed in cooperation with NMFS during the ESA and MMPA consultation process will help the Navy reduce potential impacts from active sonar and explosives. For example, as described in Section 5.3.3.6 (Explosive Mine Countermeasure and Neutralization Activities), the Navy is reducing the total number of explosive Mine Countermeasure and Neutralization Testing detonations over the course of a 7-year period from 180 to 108 for bin E4 and from 25 to 15 for bin E7. This reduction in the total number of allowable detonations will result in a reduction in potential impacts on Southern Resident killer whales and their

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		prey fish species. The Navy also developed a new mitigation to conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation Area.
Seattle-09	Section 2. The City of Seattle urges the Navy to use the most recent science about Puget Sound marine mammals in its analysis to prevent further harm to endangered Southern resident orcas, endangered Western North Pacific humpback whales, and other marine animals impacted by its activities.	The Navy will continue to use the best available science in the analysis of impacts resulting from its activities.
Seattle-10	Section 3. The City of Seattle urges the Navy to expand habitat protections and cease training and testing activities when endangered Southern resident orcas, endangered Western North Pacific humpback whales, and other priority marine animals are present.	In addition to the numerous mitigation areas developed, the Navy will continue to implement procedural mitigation whenever and wherever applicable activities occur in the Study Area. Procedural mitigation involves powering down or shutting down active sonar, and ceasing explosive or non-explosive activities if a marine mammal is observed within a specified distance from a sound source or target location.
Seattle-11	Section 4. The City of Seattle affirms its continued support for the collective work of the scientific community, environmental organizations, agency partners, and the work of Puget Sound tribes, to restore and protect Puget Sound and to reduce critical threats to the survival of Southern resident orcas, including diminished salmon, toxic contaminants, and disturbance from noise and vessel traffic.	The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.
<i>Washington Counsel for Environmental Protection</i>		
WCEP-01	<p>The Navy Should Consider an Alternative that Would Minimize Environmental Impacts</p> <p>To ensure that it considers an adequate range of alternatives, the Navy should develop and consider in detail an alternative designed to reduce impacts to marine mammals, fish, and other wildlife while also meeting the Navy's training, testing, and military readiness needs. At a minimum, this alternative should limit the amount of impulsive sound to reduce impacts on marine mammals and Endangered Species Act listed species, decrease sonar exposure at-sea and pier side, and incorporate seasonal and/or geographical restrictions to reduce impacts on wildlife, including tufted puffin, marbled murrelets, ESA-listed rockfish and salmon, harbor porpoises, and Southern Resident killer whales.</p> <p>The Navy's current range of alternatives fails to analyze an alternative that would minimize impacts to marine mammals, fish, and other wildlife. Instead, the two action alternatives are the same or very similar with</p>	The Navy's alternatives were developed in order to satisfy the Navy's purpose and need related to fulfilling its Title 10 requirements. The Navy has explored and evaluated all reasonable alternatives. Details regarding the development of reasonable alternatives are provided in Section 2.4 (Action Alternatives Development) and Section 2.4.2 (Alternatives Carried Forward). Consistent with 40 C.F.R. 1502.14, the Navy proposes a robust suite of mitigation measures, including geographic mitigation areas, which will be implemented in both action alternatives (i.e., whichever alternative is selected). These mitigation measures, as well as standard operating procedures that the Navy routinely employs, are discussed in detail and specifically inform the decision maker and the public how the Navy can avoid or minimize adverse impacts.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	respect to many training and testing activities. For example, both Alternative 1 and 2 include the same number of air combat maneuvers, maritime patrol aircraft tracking exercises, 16 aircraft electronic warfare training exercises, anti-submarine warfare testing activities, torpedo testing, unmanned aerial system testing, acoustic component testing in inland waters, radar and other system testing, semi-stationary equipment testing in inland waters, simulant testing, track testing, intelligence, surveillance, reconnaissance electronic warfare triton testing, and high-energy laser testing. In addition, the two action alternatives contemplate the same maximum level of training and testing activities for surface-to-air missile exercises, submarine torpedo exercises submarine tracking exercises, precision anchoring, and unmanned underwater vehicle testing in the offshore area. The two action alternatives also apply the same mitigation measures, which the Navy contends is the "maximum level of mitigation that is practicable for the Navy to implement when balanced against impacts to safety, sustainability, and the ability to continue meeting its mission requirements." Given the similarity between these two action alternatives, they do not provide sufficient information for the Navy and NFMS to engage in informed decisionmaking. Accordingly, the Navy should develop and consider an alternative that contemplates a level of training and testing that will reduce impacts to marine mammals and other wildlife consistent with the purpose and need of the proposed action.	
WCEP-02	<p>To satisfy its NEPA obligations, the Navy should revise its analysis of environmental impacts to better reflect the impacts of its training and testing operations. In particular, the Navy should more thoroughly analyze the environmental impacts of its use of emerging technologies, including the use of unmanned underwater systems in Puget Sound and off the Washington coastline and the use of sonar, high-energy lasers, payload systems, kinetic energy weapons, and biodegradable polymers. Moreover, the Navy should clarify any time-of-year restrictions on its training and testing activities to provide a better understanding of the potential impacts to marine mammals, fish, and other wildlife.</p> <p>In addition, the Navy should engage in a more robust analysis of the impacts of mid-frequency sonar and mine explosives to marine mammals, fish, and other wildlife. As WDFW observed, mid-frequency sonar can impact wildlife within 2,000 square miles and mine explosives can cause death or injury. Although these activities may impact a wide range of wildlife, the impact of these activities on endangered Southern Resident killer whales is of particular concern, given their dangerously low</p>	<p>The thorough analysis requested in this comment is included in this Supplemental EIS/OEIS and in the 2015 NWTT Final EIS/OEIS that this document supplements. As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	population size and the significant efforts of the State, Tribes, and Washingtonians to ensure orca survival.	the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
WCEP-03	The Navy's revised analysis also should respond to the concerns expressed by WDFW in Appendix A to its comments, including concerns about impacts of underwater explosions on tufted puffins; impacts of noise, sonar, and other disturbances from Navy activities on Southern Resident killer whales; impacts to short-tailed albatross from ingestion of post-explosive target fragments, debris, and other materials; impacts to marbled murrelets from underwater sound pressure levels and in-water and above-water explosions, and increased vessel traffic; disruptions to ESA-listed rockfish reproductive activities; and the accuracy of estimates of marine mammal densities in the action area.	The Navy responded to the concerns expressed by the Washington Department of Fish and Wildlife below. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
WCEP-04	Finally, the Navy should engage in a more robust analysis of the noise impacts from its increased aircraft operations in Puget Sound and across the Olympic Peninsula. Both action alternatives consider significant increase in aircraft training activity. These aircraft activities affect communities, rural areas, and pristine landscapes across the Northwest, including in and around Olympic National Park, off the Washington Coast, and in Puget Sound.	The Navy is proposing an increase in training flights in the Olympic MOA by approximately 300 total flights per year by 2023; approximately 1 additional flight per day. The Navy conducted a thorough analysis of the impacts of the additional flight activity in the Draft Supplemental EIS/OEIS.
WCEP-05	The Navy should revise its discussion of mitigation measure to fairly evaluate the environmental consequences of its proposed training and testing activities. Specifically, the Navy's mitigation measures should be modified to establish seasonal limits on Navy activities in certain areas to reduce risks to marine mammals, fish, and wildlife; encompass marine preserves, marine protected areas, and other conservation areas as mitigation areas; include efforts to increase forage fish populations for marine mammals; avoid the release of plastics into the environment; and carefully test and monitor the implementation of new technologies that may have unanticipated impacts on marine mammals, fish, and other wildlife.	Discussions about the level of benefit of the Navy's mitigation measures are presented throughout Section 5.3 (Procedural Mitigation to be Implemented) and Appendix K (Geographic Mitigation Assessment). The Navy will implement procedural mitigation to avoid or reduce potential impacts from applicable acoustic, explosive, and physical disturbance and strike stressors on marine species wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals, sea turtles, birds, and fish in important habitat areas. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine species in important foraging and migration areas. Within the Puget Sound and Strait of Juan de Fuca Mitigation Area, during Mine Neutralization – Explosive Ordnance Disposal Training activities, the Navy will implement

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>seasonal mitigation to avoid potential impacts on fish. For example, at the Crescent Harbor Explosive Ordnance Disposal Range, the Navy will conduct explosive activities at least 1,000 m from the closest point of land to avoid or reduce impacts on fish (e.g., bull trout and juvenile Chinook salmon) in nearshore habitat areas. At the Hood Canal Explosive Ordnance Disposal Range, the Navy will implement seasonal restrictions on explosive charge sizes to avoid impacts on juvenile and adult Hood Canal summer-run chum and Puget Sound Chinook. The Navy worked cooperatively with NMFS and the USFWS during the MMPA and ESA consultation processes and determined that the mitigation developed for the Final Supplemental EIS/OEIS is the maximum level of mitigation that is practical for the Navy to implement under the Proposed Action.</p> <p>In NWTT Inland Waters, the Navy's expanded suite of mitigation developed for the Final Supplemental EIS/OEIS will help avoid or reduce potential impacts on marine protected area resources located within or along the shoreline of the Puget Sound and Strait of Juan de Fuca Mitigation Area, such as the San Juan Islands Marine Preserve, San Juan Island National Historical Park, San Juan County/Cypress Island Marine Biological Preserve, Ebey's Landing National Historical Reserve, Protection Island National Wildlife Refuge, Dungeness National Wildlife Refuge, Zella M. Schultz/Protection Island Seabird Sanctuary, and Nisqually National Wildlife Refuge. For example, the Navy's mitigation requires explosives to be limited to two designated Explosive Ordnance Disposal ranges in NWTT Inland Waters, neither of which overlap marine protected areas.</p> <p>In the NWTT Offshore Area, mitigation within the Marine Species Coastal Mitigation Area and Olympic Coast National Marine Sanctuary Mitigation Area will also help the Navy avoid or reduce potential impacts from explosives and other Navy activities on marine protected area resources. The Flattery Rocks National Wildlife Refuge, Quillayute Needles National Wildlife Refuge, and Copalis National Wildlife Refuge are located in the nearshore portion of the Study Area that abuts the Washington shoreline, well within 12 NM from shore. Additional information on marine protected areas is presented in Section 6.1.2 (Marine Protected Areas) of this Final Supplemental EIS/OEIS.</p> <p>Through its marine species research and monitoring programs, the Navy is one of the nation's largest sponsors of scientific research on and monitoring of marine species. Detailed information on these programs is provided in Section 3.0.1.1.1 (Marine Species Monitoring and Research Programs). Navy</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		research programs focus on investments in basic and applied research that increase fundamental knowledge and advance naval technological capabilities. Navy monitoring programs focus on the potential impacts of training and testing activities on biological resources. For example, the Navy Living Marine Resources Program is sponsoring an ongoing study on hearing and estimated acoustic impacts in three species of auk, which will help the Navy refine its assessment of potential impacts from training and testing activities on seabirds, including the marbled murrelet. The Navy has also sponsored several projects on seabird density and distribution to improve baseline knowledge about ESA-listed seabirds in the Study Area. Additionally, for decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that significantly benefit Southern Residents.
<i>Washington Department of Fish and Wildlife</i>		
WDFW-01	To evaluate the impacts to fish and wildlife species from existing, new, and increased training and testing activities more accurately, we request the Navy clarify the times of year in which proposed activities will occur. This is especially important when assessing impacts to fish and wildlife, which have seasonal movements and behaviors that will greatly determine whether Navy activities significantly affect each species in the proposed areas (e.g. Tufted puffin, rockfish, Southern Resident killer whale).	As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).
WDFW-02	The Draft EIS inaccurately states that Governor Inslee's Orca Task Force did not identify Navy actions as a source for any of the identified threats to SRKW. Recommendation #25 from the Task Force report outlines the need to "address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state." WDFW appreciates the Navy's recent engagement in the Task Force process and welcomes continued coordination and engagement to identify and implement measures to minimize impacts to SRKW.	The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force's working groups on prey and vessel traffic, to develop solutions to issues pointed out in recommendation #25. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		improvement projects on its installations in Puget Sound that benefit the Southern Residents.
WDFW-03	<p>Our major concerns for new and increased impacts to SRKW lie around the use of midfrequency sonar, which can impact wildlife within 2,000 square miles, and mine explosives, which could cause immediate injury or death. Since SRKW travel in larger pods, it is unlikely that Navy activities would affect only one or two individual animals. However, in this declining and endangered population, even the loss of one single SRKW could greatly undermine recovery efforts for decades. We request that the Navy: 1) use the latest, most seasonally specific distribution and hotspot information for SRKWs in their analysis of proposed activities, 2) clarify the timing of their proposed activities to better understand potential impacts to SRKW, and 3) accomplish Navy objectives while minimizing impacts to SRKW by shifting these most concerning activities in time and space. In particular, we encourage the Navy to integrate recent acoustic monitoring evidence from NOAA's hydrophone network (Emmons et al. 2019) into their planning efforts. This information shows considerable temporal and spatial overlap between high-use testing areas for active sonar and explosives and high-use areas by SRKWs off the north coast of Washington-which current and proposed activities do not appear to recognize. One key takeaway from the report is that SRKWs show disproportionately high use of the Cape Flattery Offshore area in spring compared to other areas of the coast. To minimize potential adverse effects on SRKWs, sonar and explosives testing and training should be moved to another location or another season, or both. In addition, we request that the Navy re-examine the finding that neither alternatives would not result in (or significantly risk) the incidental taking of killer whales.</p>	<p>The Navy has conducted active sonar and explosives training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. The Navy's analysis was completed using the latest information, the best available, peer-reviewed science, and includes results from recently completed acoustic modeling. The Navy continues to pursue new scientific data, collected through professional studies and verified through credible, recognized sources. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy does not generally schedule training and testing near Cape Flattery due to the high volume of commercial vessel traffic in that portion of the Study Area.</p> <p>The commenter asked the Navy to "re-examine the findings that both alternatives would not result in (or significantly risk) the incidental taking of killer whales." The Navy re-examined its effects analysis and affirmed that explosives used under the Proposed Action will not result in incidental taking of Southern Resident killer whales, as discussed in Section 3.4 (Marine Mammals). Since the Draft Supplemental EIS/OEIS, the Navy has incorporated new estimates of Southern Resident killer whale densities and distributions in the NWT Offshore Area into the quantitative analysis of impacts. The revised density estimates are shown in the technical report <i>U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area (amended September 20, 2019)</i>, available at www.nwtteis.com. As a result, the Navy has revised the number of behavioral takes of Southern Resident killer whales in Appendix E (Estimated Marine Mammal and Sea Turtle</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities) of the Final Supplemental EIS/OEIS.</p> <p>The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas, as described in Appendix K (Geographic Mitigation Assessment). For the Final Supplemental EIS/OEIS, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery, as recommended by the commenter. The Navy's mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will further help avoid potential impacts from vessel movements and training and testing activities on this species.</p>
WDFW-04	Underwater acoustic testing and electronic warfare may have significant impacts to fish behavior and migration (e.g. salmon and forage fish) or result in auditory injury to the threatened marbled murrelet. Similarly, surface and underwater explosions could directly impact short-tailed albatross, marbled murrelets, or tufted puffins, all of which forage in offshore areas greater than 30-50 nautical miles from shore, especially seasonally. These potential impacts also include the ingestion of post-explosive fragments and debris at the surface, and disturbance caused by high underwater sound pressure levels (barotrauma). WDFW encourages a more thorough analysis using recent data on distributions (See Appendix A for suggestions) and reconsideration of increases of these activities where they are most likely to coincide in space and time with these sensitive fish and birds.	The Navy did conduct a thorough analysis, using the best available science. Please see Section 3.6 (Birds) and Section 3.9 (Fishes).
WDFW-05	Finally, the use of high-energy lasers, kinetic energy weapons, and biodegradable polymer outlined in the EIS are new and their effects are unknown. It is critical that the Navy pair these new technologies, which are potential energy and entanglement stressors or sources of mortality, with rigorous testing and monitoring to avoid impacts to fish and wildlife. We hope that you find these comments helpful in your EIS process and	The Navy's use of high-energy lasers, kinetic energy weapons, and biodegradable polymer, while new to the NWTT Study Area, have been tested on other Navy ranges and evaluated in previous environmental documents. Their use in the NWTT Study Area has been thoroughly analyzed in this NWTT Supplemental EIS/OEIS for impacts specific to their use in this environment.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	welcome any questions regarding our comments. WDFW looks forward to continuing to cooperate with the Navy to ensure protections for Washington's fish and wildlife.	
WDFW-06	Underwater explosions may impact foraging Tufted Puffins, which often forage at the continental shelf break >50 km offshore; see Menza et al. (2016). Tufted Puffin foraging activity during the breeding season overlaps the area where explosive training activity could occur. The report by Menza et al. (https://repository.library.noaa.gov/view/noaa/9329) provides similar maps for several bird and mammal species. This information should be used when evaluating potential impacts of activities on species of conservation concern. The USFWS is currently evaluating whether or not to list the Puffin under the ESA.	The Supplemental EIS/OEIS includes an analysis of potential impacts to marine birds found in the NWTT Study Area. The Navy has consulted with USFWS on Federally protected species, including diving birds such as the marbled murrelet. The information from Menza et al., 2016 was incorporated into the Final Supplemental EIS/OEIS. As noted above, all but one of the offshore proposed activities using explosives are conducted at least 50 nautical miles (92.6 km) offshore, well outside the shelf break.
WDFW-07	Underwater explosions may impact foraging Tufted Puffins, which often forage >50 km offshore	See previous response.
WDFW-08	"Navy actions were not the sources for any of the identified threats" in the SRKW Task Force report." This statement is incorrect. Recommendation #25 from the Task Force outlining the need to "address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state." Early in the Task Force process several members and the Vessels working group indicated the need for direct engagement with the Navy, which was reinforced in hundreds of public comments on the draft report. "Recommendation 25: Coordinate with the Navy in 2019 to discuss reduction of noise and disturbance affecting Southern Resident orcas from military exercises and Navy aircraft. Implementation details: The governor should meet with the U.S. Navy's Commanding Officer for the region that includes Washington state to address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state. The governor should request the Navy participate on the Vessels working group in Year Two and identify actions to reduce the Navy's impacts to Southern Resident orcas."	The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force's working groups on prey and vessel traffic, to develop solutions to issues pointed out in recommendation #25. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.
WDFW-09	Throughout the EIS, the number of Southern Resident killer whales needs to be updated. There are currently 74 adult individuals and one young of the year (not usually counted until 1 year of age).	There are several sources of abundance numbers for marine mammal species. For consistency, the Navy uses abundance numbers of Southern Resident killer whales (as well as other marine mammal species) provided by NMFS in the most recent Stock Assessment Report. The Navy tracks this species closely and will continue to use the most recent available data.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
WDFW-10	<p>Omitted from EIS</p> <p><i>Wieland, M, A. Jones, and S. C. P. Renn. 2010. Changing durations of southern resident killer whale 23 (Orcinus orca) discrete calls between two periods spanning 28 years. Mar. Mam. Sci. 26(1): 195-201.</i></p> <p>"The increase of mean durations of discrete calls demonstrated here indicates that the Southern Residents are making a behavioral adjustment as a result of vessel noise. Because they are adjusting their vocal behavior, we must consider the very real possibility that engine noise is hindering their ability to communicate, and may well impact their efficiency at using acoustics to forage and navigate, as well." This should be incorporated into 3.4.2.1.1.4 on masking (which talks about other species but not killer whales)- as well as the odontocete discussion on page 3.4-120.</p> <p><i>Emmons, C.K., M.B. Hanson, and MO. Lammers. 2019. Monitoring the occurrence of Southern resident killer whales, other marine mammals, and anthropogenic sound in the Pacific Northwest. Prepared for: US. Navy, US. Pacific Fleet, Pearl Harbor, HI. Prepared by: National Oceanic and Atmospheric Administration, Northwest Fisheries Science Center under MIPR N00070-I 7-MP-4C419. 25 February 2019. 23p.</i></p> <p>There were 148 mid-frequency active sonar events detected between 2011 and 2017, with peak overlapping with occurrence of the three killer whale communities (southern residents, northern residents, and transients). Reasons for concern:</p> <ul style="list-style-type: none"> • Separation of an orca calf from its group during exposure to mid-frequency sonar playback was observed (Miller et al 2011) (page 125 marine mammal chapter). • Newer high-duty or continuous active sonars have more potential to mask vocalizations, particularly for delphinids and other mid-frequency cetaceans. (pg. 116 marine mammal chapter/pg. 3.4-102). Consequences may include avoidance of the area and interruptions to foraging or other essential behaviors. Longer-term consequences could include potential decrease in recruitment if masking interferes with reproductive activities or mother-calf communication. • Mass strandings of cetaceans have been linked to mid-frequency active sonar activity. (3.4.2.1.1.6) 	<p>The Navy considered the best available science in its analysis of each stressor, including both peer-reviewed articles suggested by the commenter. Additional language has been added to sections on Masking by Vessel Noise (3.4.2.1.1.4) in the Final Supplemental EIS/OEIS, as recommended. However, Wieland et al. (2010) does not state that discrete calls exclusively increased duration; rather, of the 16 call types that showed a change in duration, 14 calls were longer and 2 calls (S37i and S19) were shorter. In addition, the authors include possible caveats of the study which should be considered as well (e.g., changing group membership; cultural drift; motorized boats present in nearly all recordings; unable to conclude if the observed change was a result of short-term behavioral plasticity or long-term behavioral adaptation). It should also be noted that there are other articles regarding masking in killer whales (e.g., Williams et al., 2014b; Holt et al., 2008; Holt et al., 2011) discussed in the 3.4.2.1.1.4 section on Masking. The odontocetes section on Behavioral Reaction to Vessel Noise (3.4.2.1.1.5) does not include vocal response to vessel noise, as that is covered in the Masking section. Given the breadth of information covered in this document, the Navy would like to avoid repetition where possible.</p> <p>Emmons et al. (2019) was unavailable at the time of the publication of the Draft Supplemental EIS/OEIS and has since been incorporated into the analysis in this Final Supplemental EIS/OEIS.</p> <p>While it is accurate that Miller et al. (2011) observed a temporary mother-calf separation during a study of killer whales exposed to a sonar, the Navy would not conduct activities in a manner similar to the experiment that resulted in the separation. The researchers purposely approached a killer whale pod, including a known neonate, with an active sonar source near the end of a narrow fjord with limited avoidance pathways and high reverberation. The experimental exposure continued for approximately six minutes after the mother-calf separation. The Navy, on the other hand, would not intentionally approach a pod of killer whales and, in fact, employs a suite of mitigations to avoid impacts to marine mammals. The Navy has worked cooperatively with NMFS to develop an extensive suite of mitigation to avoid or reduce potential impacts to protected species, such as the Southern Resident killer whale, to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS, as discussed in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment). Additionally, the use of sonars in portions of the Study Area utilized by Southern Resident killer whales is relatively limited. Based on the best</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>available science, long-term consequences for marine mammal species or stocks, including Southern Resident killer whales, would not be expected from Navy training and testing activities under the Proposed Action.</p> <p>As explained in the Navy's technical report on marine mammal strandings, <i>Marine Mammal Strandings Associated with U.S. Navy Sonar Activities</i> (2017) available at www.nwtteis.com, marine mammal strandings have been a historic and ongoing occurrence attributed to a variety of causes, both natural and anthropogenic. Over the last 50 years, increased awareness and reporting has led to more information about species affected and raised concerns about anthropogenic sources of stranding. While there have been limited numbers marine mammal mortalities potentially associated with U.S. Navy activities, the root causes are not clear in most cases. In addition, none of the limited number of mass strandings of cetaceans linked to mid-frequency active sonar activity have involved any killer whales. The Navy is committed to protecting marine life by implementing mitigation measures when training or testing using active sonar, working with regulatory agencies, and furthering our understanding of marine mammals through research and monitoring.</p>
WDFW-11	<p>An estimation of two to three behavioral impacts to SRKW per year from sonar and other transducers was cited, however SRKW spend most of their time travelling in larger pods close together. This estimate does not seem realistic. The estimate could be zero if the Navy activity occurs in a time of year in which SRKWs are infrequently found in the area, but much larger if SRKW s are present due to their close proximity to one another. Suggest that the Navy should more closely analyze the time of year for their activities and overlay with the most up to date seasonal and hotspot SR.KW distribution information from NOAA (instead of extrapolating across the year and geography).</p>	<p>Since the Draft Supplemental EIS/OEIS, the Navy has incorporated new estimates of Southern Resident killer whale densities and distributions in the NWT Offshore Area into the quantitative analysis of impacts. The revised density estimates are shown in the technical report <i>U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area (amended September 20, 2019)</i>, available at www.nwtteis.com. As a result, the Navy has revised the number of behavioral takes of Southern Resident killer whales in Appendix E (Estimated Marine Mammal and Sea Turtle Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities) of the Final Supplemental EIS/OEIS.</p>
WDFW-12	<p>In multiple locations in the EIS, there is discussion about SRKWs shifting their range to forage less in the Salish Sea because of a shift in availability of Chinook salmon.</p> <p>"As a result, foraging during the spring in Salish Sea by Southern Resident killer whales has declined in recent years as they shift their range and forage for Chinook salmon or other prey species elsewhere in response to reduced prey availability in that historically used inland waters foraging area (Shields et al., 2018b). "</p> <p>"The use of the Inland Waters portion of the NWT Study Area by Southern Resident killer whales has declined in recent years as they shift their range and forage for Chinook salmon or other prey species elsewhere and outside</p>	<p>The inclusion of references from Shields et al., 2018 was not included to imply that impacts in the Inland waters would be reduced and/or otherwise avoided because of the species changing presence of SRKW within their summer-core habitat areas, but rather to present best available science on the species current status, including prey availability. This is a critical component of the environmental baseline the Navy then uses to estimate potential impacts resulting from the Navy's activities. We recognize that the Salish Sea remains a critical foraging area for the SRKW, and the Navy is committed to not only carrying protective measures forward from Phase 2, but is also proposing additional mitigations, as described in the Strait of Juan de Fuca and Puget</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	the currently designated critical habitat in response to prey availability (Shields et al., 2018b)." While the SRKW's may have been forced to forage further and differently more recently to meet their nutritional needs, decreasing noise and disturbance to increase access to the prey that is available in the Salish may result in their return to that area. In addition, WDFW and our partners are working to increase prey availability for SRKW's in the Salish sea. Therefore, the recent information on foraging distribution should not be seen as a reason to discontinue the avoidance of impacts to SRKW's in the Salish sea.	Sound Mitigation Area (Appendix K), aimed at further reducing the potential for impact to SRKW within the Inland waters.
WDFW-13	Short-tailed Albatross (STAL) could be directly impacted by ingestion of post-explosive target fragments and debris, chaff, neutralizer and mine fragments, and other expended materials visible at the surface. Any surface or underwater explosions could directly impact foraging STAL by death or injury.	The Navy's analysis of potential impacts to marine birds in general and to the short-tailed albatross in particular are included in Section 3.6.2.6 (Ingestion Stressors) and Section 3.6.2.2 (Explosive Stressors) of the Final Supplemental EIS/OEIS. This same analysis was also included in the Draft Supplemental EIS/OEIS. Regarding the ingestion risk, as the location and level of training and testing proposed is similar to that previously analyzed in the 2015 NWT Final EIS/OEIS, those determinations remain valid; that "based on the dispersed nature of chaff and flare use and the small number of birds that are likely to occur in this area at any given time, it is extremely unlikely that individual albatross would be exposed to ingestion risk." The risk of injury from explosives is analyzed in Section 3.6.2.2.1 (Impacts from Explosives). Also, the Navy consulted with the U.S. Fish and Wildlife Service regarding its activities on listed species, including the short-tailed albatross. The Navy previously completed consultation with the 2016 U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service 2016, 2018).
WDFW-14	Marbled Murrelets (MAMU) in offshore areas <35 nautical miles from shore (Adams et al. 2014) and in all of Puget Sound operations areas are very likely susceptible to impacts from disturbances caused by high underwater sound pressure levels (barotrauma) from in-water and above-water explosions (especially in the Explosive Ordinance Disposal areas) depending on the locality and distance of the detonation. Underwater explosions will likely result in mortality of some MAMU prey resources and possible disruption of foraging by breeding adults, which could create additional indirect impacts by increased probability of mortality to nestlings by missed feedings (USFWS 2009 and ref. therein). In addition, increased vessel traffic (USFWS 2009) and disturbance by extended helicopter rotor wash over foraging areas could have direct impacts on MAMU foraging activity. Auditory injury impacts to MAMU are expected to occur at Low and Mid Frequency active sonars at decibel levels ≥ 220 dB SEL re: 1 μPa^2 -	Explosive stressors are analyzed for potential impacts to marbled murrelets in Section 3.6.2.2.1 Impacts from Explosives (In-Air and In-Water Explosions). While susceptible to impacts from explosions, marbled murrelets are "rarely encountered at sea > 5-km from shore" (Adams et al. 2014, pp. 32–33), so geographic mitigation implemented for explosives (see Chapter 5, Mitigation) greatly decreases the likelihood that military readiness activities involving explosions will overlap with marbled murrelet presence in the NWT Offshore Area. Within 50 NM from shore in the Marine Species Coastal Mitigation Area, the Navy will not conduct: (1) explosive training activities, (2) explosive testing activities (with the exception of explosive Mine Countermeasure and Neutralization Testing activities), and (3) non-explosive missile training activities. Mine Neutralization – Explosive Ordnance Disposal Training is the only activity involving explosives that would occur in Inland Waters. For this activity, all explosives are positive control (i.e., there is no delay between pre-

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	sec (thresholds: USFWS 2016: Table 18), and high probability of impact to MAMU at close range at active sonar frequencies MF1, MF8, ASW4 in the Puget Sound areas (USFWS 2016:Table 20).	<p>detonation surveys and detonation of explosives), which improves procedural mitigation for birds (see discussion on page 3.6-54 of the Draft Supplemental EIS/OEIS).</p> <p>According to Falaxa & Raphael (2016), prey abundance in close proximity to breeding habitat was likely a contributing factor in the decline of the marbled murrelet population (see 3.6-15). Activities in the Inland Waters are analyzed for impacts to marbled murrelet prey resources in Section 3.6.2.5 (Secondary Stressors): “The abundances of fish and invertebrate prey species near the detonation point could be diminished for a short period of time before being repopulated by animals from adjacent waters. Secondary impacts from underwater explosions would be temporary, and no lasting impact on prey availability or the pelagic food web would be expected. Indirect impacts of underwater detonations and explosive ordnance use under the proposed action would not result in a decrease in the quantity or quality of bird populations or habitats, or prey species and habitats, in the Study Area.”</p> <p>Foraging activity may be temporarily disrupted by stressors such as explosives, sonar and other transducers, vessel noise, and aircraft noise, but these disruptions are not expected to result in long-term fitness consequences. For example, instances of murrelets diving under water, coinciding at the time and location of maintenance activities, would be improbable; and birds would have to be located in very close proximity to a sonar source for any auditory injury to occur. Marbled murrelets typically forage very close to shore, and activities involving sonar, explosives, and other stressors typically occur much farther from shore with few exceptions. The Navy reinitiated Section 7 consultation with the USFWS for activities described in the Supplemental EIS/OEIS for potential impacts on marbled murrelets. As part of this consultation, the Navy presented the most current information since the publication of the USFWS 2016 BO to estimate potential impacts on the marbled murrelet.</p>
WDFW-15	Rockfishes in Puget Sound generally mate in the fall. Courtship is complex and requires potential mates to first locate one another. Though detailed information about how this occurs is lacking, it is clear that rockfishes utilize sound to communicate with one another both prior to and during courtship. Any Navy activity that increases submarine sound proximate to deep, rocky habitats has the potential to disrupt reproductive activity of ESA-listed rockfishes. At a minimum, monitoring should occur to evaluate changes in sound intensity and temporal frequency in areas of documented Yelloweye and Bocaccio occurrence.	The Navy's analysis of potential impacts to fishes from the use of sonar can be found in Section 3.9.3.1.2 (Impacts from Sonar and Other Transducers) of the Supplemental EIS/OEIS. As depicted in Figure 3.9-5 in that section, the Navy's mid- and high-frequency sonar sources are outside the hearing range (best sensitivity) of rockfishes. While all marine fish species can likely detect low-frequency sonars and other transducers, low frequency active sonar use is rare during proposed training and testing activities and most low-frequency active operations are conducted in deeper waters, usually beyond the continental shelf break.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		In the 2015 Biological Opinion, NMFS determined that "the activities the Navy plans to conduct annually in the NWTT Action Area would not appreciably reduce the likelihood of ESA-listed rockfish surviving and recovering in the wild."
WDFW-16	The impact of noise and sonar on SRKW s should not be underestimated. Behavior change occurs at much lower received levels in killer whales than other marine mammals and responses to mid-frequency sonar have been observed over 25 miles from the source. Mid-frequency sonar also has the potential to have impacts on wildlife within a 2,000 sq. mi. radius. WDFW encourages the Navy to decrease potential impacts on SRKW by limiting activities to the seasons in which SRKW are the least likely to be present and by ensuring an adequate spatial buffer for SRKWs leaving the Strait of Juan De Fuca and heading south along the coastline to allow sound to attenuate before it reaches the whales.	<p>The Navy is very aware of the plight of the Southern Resident killer whales in the Pacific Northwest. In fact, the Navy plans its activities with consideration given to the possible presence of killer whales. The Navy's current and planned sonar and explosives activities occur largely in areas not frequented by Southern Resident killer whales. In addition, the Navy applies mitigation areas and mitigation measures that directly reduce the likelihood of harm to Southern Resident killer whales. As a result, the Navy anticipates no injuries to Southern Resident killer whales from proposed activities.</p> <p>For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that significantly benefit Southern Residents. The Navy's partnerships with federal, state, and local agencies; tribes; and nongovernmental organizations include restoration of aquatic lands and streams. The Navy participated with the Governor's Southern Resident Killer Whale Task Force working groups in 2019 on prey and vessel traffic. The Navy has been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and their salmon prey species.</p> <p>The Navy developed new marine mammal behavioral response functions in 2016 to help estimate instances of behavioral response. Killer whales are included within the Odontocete behavioral response group, which included observations from several killer whales exposed to mid-frequency sonar. No harm to Southern Resident Killer Whales is anticipated from proposed training and testing activities. Potential impacts to marine mammals from acoustic and explosive sources, which are part of the proposed action, are analyzed in Section 3.4.2.1 and Section 3.4.2.2, respectively. The Navy's acoustic and explosive effects analysis looks at multiple factors such as the southern resident killer whales abundance across the study area in each season, the levels of sound that may cause certain effects, and the Navy's proposed time and space use of noise producing activities.</p> <p>The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		from active sonar on Southern Resident Killer Whales and other marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area and in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on killer whales in important foraging and migration areas. Additional information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).
WDFW-17	The current estimates of marine mammal densities may be underestimated, therefore leading to an underestimation of potential impacts to these species. WDFW requests that the Navy better analyze their potential impacts on marine mammals and SRKW in particular with the most recent available data on distributions and hotspots (not currently in the EIS). In addition, these estimates along with information on timing of Navy activities should be seasonally specific (at least at some level) instead extrapolating across the year.	The Navy remodeled the estimated takes using newly available density information. Please see the U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area Technical Report (Amended September 2019), found on the NWTT project website at: https://www.nwttteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/2019-Supplemental-EIS-OEIS-Supporting-Technical-Documents . Densities, modeling, and activities are all seasonally specific.
WDFW-18	Omitted from EIS In addition to the use of viewing platforms and other measures to detect wildlife before conducting activities, WDFW encourages the Navy to explore using the new whale report alert system for more information on marine mammal movements. This new network includes hydrophones and sightings information network.	The Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales, as described in Section K.3.3 (Mitigation Areas for Marine Species in NWTT Inland Waters). The Navy will also continue to assess the practicality of other available monitoring techniques as technologies advance.
WDFW-19	The Executive Summary the document identifies mitigation areas around live hard bottom, artificial reefs, and shipwrecks where anchoring and use of explosives will not occur. WDFW would like the addition of Marine Preserves, Marine Protected Areas, and other Conservation Areas added to this list.	In NWTT Inland Waters, the Navy's expanded suite of mitigation developed for the Final Supplemental EIS/OEIS will help avoid or reduce potential impacts on marine protected area resources located within or along the shoreline of the Puget Sound and Strait of Juan de Fuca Mitigation Area, such as the San Juan Islands Marine Preserve, San Juan Island National Historical Park, San Juan County/Cypress Island Marine Biological Preserve, Ebey's Landing National Historical Reserve, Protection Island National Wildlife Refuge, Dungeness National Wildlife Refuge, Zella M. Schultz/Protection Island Seabird Sanctuary, and Nisqually National Wildlife Refuge. For example, the Navy's mitigation requires explosives to be limited to two designated

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>Explosive Ordnance Disposal ranges in NWTT Inland Waters, neither of which overlap marine protected areas.</p> <p>In the NWTT Offshore Area, mitigation within the Marine Species Coastal Mitigation Area and Olympic Coast National Marine Sanctuary Mitigation Area will also help the Navy avoid or reduce potential impacts from explosives and other Navy activities on marine protected area resources. The Flattery Rocks National Wildlife Refuge, Quillayute Needles National Wildlife Refuge, and Copalis National Wildlife Refuge are located in the nearshore portion of the Study Area that abuts the Washington shoreline, well within 12 NM from shore. Additional information on marine protected areas is presented in Section 6.1.2 (Marine Protected Areas) of this Final Supplemental EIS/OEIS.</p>
WDFW-20	Marine Species Mitigation Areas- The table discusses max number of hours training will occur. Time of year training conducted will greatly influence impact to marine mammals and birds, especially SRKW.	The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).
WDFW-21	Omitted from EIS Plastics are mentioned as a potential contaminant associated with ordinance detonation and other activities. The focuses on the harmful chemicals in plastics, but these is also a detrimental effect of filling up gut space with plastic particles. Organisms feel full, but do not gain any nutrients, so their body condition degrades over time. This also results in more risky foraging and other behavioral alterations as organisms seek to satisfy their nutritional needs. A gut full of plastic also occupies space that would otherwise be filled by developing gonads, decreasing reproductive potential. Release of plastics should be avoided at all cost in all environments.	The Navy's analysis did consider the issue described in the comment. Because this Supplemental EIS/OEIS is an update to information provided in the previous 2015 NWTT Final EIS/OEIS, information from that 2015 document that is still valid was not necessarily repeated. In Section 3.6.3.3 (Ingestion Stressors) of the 2015 NWTT Final EIS/OEIS, is the following: "As summarized by Pierce et al. (2004) and Azzarello and Van Vleet (1987), documented consequences of plastic ingestion by birds include blockage of the intestines and ulceration of the stomach; reduction in the functional volume of the gizzard, leading to a reduction of digestive capability; and distention of the gizzard, leading to a reduction in hunger."

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Washington Department of Natural Resources		
WDNR-01	<p>From Table ES-1, page ES-10: "The use of sonar and other transducers have the potential to expose marine mammals to sound-producing activities that would present risks to individual marine mammals that could include temporary or permanent hearing threshold shift, auditory masking, physiological stress, or behavioral responses. A small number of minor to moderate behavioral reactions or temporary hearing threshold shifts to an individual animal over the course of a year are unlikely to have any significant costs or long-term consequences for that individual. Considering these factors and the mitigation measures that would be implemented as described in Chapter 5 (Mitigation), long-term consequences for the species or stocks would not be expected."</p> <p>DNR Response: For populations that are on the brink of collapse, such as the Southern Resident Killer Whales, a small number of minor to moderate behavioral reactions or temporary hearing threshold shifts may indeed have significant costs or long-term consequences. Particularly for species that rely on sonar to feed, the loss of even a few feeding opportunities may be significant.</p>	<p>Although the hearing range of killer whales overlaps with some frequencies used in sonar, sonar use is unlikely to interfere with the whale's ability to locate prey because 1) killer whales are able to distinguish and preferentially attend to sounds with different source locations (i.e., spatial release from masking), and 2) because of the low-duty cycles that are used by most sonars. As stated in the Final Supplemental EIS/OEIS (Section 3.4.1.1.4, Masking, subsection entitled "Masking by Sonar and Other Transducers"), masking due to high-duty cycle sonars is likely analogous to masking produced by other continuous sources (e.g., vessel noise), and will likely have similar short-term consequences. These may include changes to vocalization amplitude and frequency and behavioral impacts such as avoidance of the area and interruptions to foraging or other essential behaviors. Long-term consequences (e.g., changes to vocal behavior and vocalization structure, abandonment of habitat if masking occurs frequently enough to significantly impair communication, and a potential decrease in recruitment if masking interferes with reproductive activities or mother-calf communication) are not expected to occur for reasons described in Section 3.4.2.1.2.3 (Impacts from Sonar and Other Transducers Under the Action Alternatives, subsection "Killer Whales").</p>
WDNR-02	<p>From page ES-26: "The use of sonar and other non-impulsive sound sources under Alternative 1 and Alternative 2 has the potential to disturb or injure marine mammals and sea turtles. However, the incremental contribution of Alternatives 1 or 2 to cumulative impacts would be negligible."</p> <p>DNR Response: From the Navy's own analysis, the Navy expects to see: 212 behavioral shifts and 22 temporary threshold shifts per year for West Coast Transient Killer Whales 15,363 behavioral shifts, 14,528 temporary threshold shifts, and 153 permanent threshold shifts per year for WA Inland Waters Harbor Porpoise 43,405 behavioral shifts, 27,926 temporary threshold shifts, and 4 permanent threshold shifts per year for harbor seals in and around Puget Sound (WA Northern Inland Waters Harbor Seal, Hood Canal Harbor Seal, Southern Puget Sound Harbor Seal) While these species have seen increasing numbers in recent years, DNR contests the assumption that this level of disturbance would be negligible for these populations.</p>	<p>The excerpt from the Executive Summary referred to the Cumulative Impacts analysis in Chapter 4 (Cumulative Impacts). Per the reasons described in Section 4.4.4 (Marine Mammals), recognizing the difficulties with measuring trends in marine mammal populations, the focus has been on indicators for adverse impacts, including health and other population metrics (National Academies of Sciences Engineering and Medicine, 2017). This recommended use of population indicators is the approach Navy has presented in the previous environmental analyses of Navy training and testing activities; see in particular the 2015 NWTT Final EIS/OEIS Section 3.4.4.1 (Summary of Monitoring and Observations During Navy Activities) and the update to that information in this Supplemental (Section 3.4.3.4, Summary of Monitoring and Observations During Navy Activities Since 2015). Since the 2015 analyses, neither the present nor the reasonably foreseeable actions detailed in Table 4.3-1 change the previous assessment that the Navy's contribution to any cumulative impacts on marine mammal populations would be negligible.</p>
WDNR-03	<p>From page ES-26: "In summary, based on the analysis presented in Sections 3.4 (Marine Mammals), 3.5 (Sea Turtles), 3.6 (Birds), 3.9 (Fishes), and 3.11 (American Indian and Alaska Native Traditional Resources), the current</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>aggregate impacts of past, present, and other reasonably foreseeable future actions are not significantly different than the assessment in the 2015 NWT Final EIS/OEIS. For these resource sections Alternatives 1 or 2 would contribute to and increase cumulative impacts, but the relative contribution would be negligible compared to other non-Navy actions."</p> <p>DNR Response: It is true that other non-Navy actions have contributed and continue to contribute stressors to marine mammals and that each of these sources, when considered in isolation, may appear negligible. However, when taken together, the cumulative impacts of all of these sources are indeed significant. Therefore, we must aspire to reduce the impacts on all fronts, including Navy-related actions.</p>	<p>the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
WDNR-04	<p>From page 3.4-400: "To date, the findings from the research and monitoring and the regulatory conclusions from previous analyses by NMFS in the MMPA authorization (National Oceanic and Atmospheric Administration, 2015b) and the NMFS Biological Opinion for the 2015 NWT Final EIS/OEIS (National Marine Fisheries Service, 2014) have been that the majority of impacts from military readiness activities are not expected to have deleterious impacts on the fitness of any individuals or long-term consequences to populations of marine mammals and not likely to jeopardize listed species or destroy or adversely modify critical habitat."</p> <p>DNR Response: With Southern Resident Killer Whale populations on the brink of collapse, and some native salmon populations approaching critical levels, it may only take a small contribution of stressors to result in the irreversible decline of these species. While DNR agrees that there are other non-Navy contributions to this problem, we must seek to reduce these stressors wherever possible.</p>	<p>The Navy is fully aware of the plight of the Southern Resident killer whales. In 2019 a team of Navy subject matter experts and Navy officers began to participate with the Governor's Southern Resident Killer Whale Task Force working groups on prey and vessel traffic. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales.</p> <p>The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.</p>
WDNR-05	<p>From page 3.4-402: "The majority of the training and testing activities the Navy is proposing for the foreseeable future in the Study Area are similar if not nearly identical to activities that have been occurring in the same locations for decades."</p> <p>DNR Response: Recent decades have also seen substantial decline in the health and fitness of species such as Southern Resident Killer Whales and native salmon. While this is likely due to a number of factors, many of them non-Navy related, DNR does not agree with the assumption that Navy actions over the last few decades have had negligible impact.</p>	<p>As stated in a previous response, there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. The Navy will continue to contribute to marine species monitoring projects to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on, and to implement habitat improvement projects that benefit the Southern Residents. In addition, the Navy will continue to update protective measures related to the important training and testing conducted in the region.</p>
WDNR-06	<p>From page 3.4-404: "It was the Navy's assessment in the 2015 NWT Final EIS/OEIS and that of NMFS as reflected in their analysis of previous Navy training and testing in the Study Area (National Marine Fisheries Service, 2014; National Oceanic and Atmospheric Administration, 2015b), that it</p>	<p>The Navy agrees that absence of direct evidence does not prove that there is no relationship. The Navy's analysis does not assume that there is no impact on marine mammal populations due to the absence of direct causal links. The</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>was unlikely there would be impacts to populations of marine mammals (such as whales, dolphins, and pinnipeds) having any long-term consequences as a result of the proposed continuation of training and testing in the Study Area. This assessment of likelihood is based on four indicators from areas in the Pacific where Navy training and testing has been ongoing for decades: (1) evidence suggesting or documenting increases in the numbers of marine mammals present, (2) examples of documented presence and site fidelity of species and long-term residence by individual animals of some species, (3) use of training and testing areas for breeding and nursing activities, and (4) 13 years of comprehensive monitoring data indicating a lack of any observable effects to marine mammal populations such as direct mortalities or strandings occurring as a result of Navy training and testing activities. Consistent with the presentation in the 2015 NWTT Final EIS/OEIS, the evidence from Navy range complexes to date and since 2015 continues to suggest the viability of marine mammal populations where Navy trains and tests, and an absence of any direct evidence suggesting Navy training and testing has had or may have any long-term consequences to marine mammal populations."</p> <p>DNR Response: Absence of direct evidence does not prove that there is no relationship. The Navy has stated in its own words that causation is difficult to prove due to the complex nature of these aquatic environments and the species involved; therefore, it would be contradictory to assume that because a direct causal link cannot be proven, that there is no influence on marine mammal populations from Navy actions.</p>	<p>Navy states the absence of any direct evidence as only one of several points that determine its activities are not negatively affecting marine species.</p>
WDNR-07	<p>From page ES-10: "The use of explosive munitions in the water or near the water's surface present a risk to marine mammals located in close proximity to the explosion, because the resulting shock waves can cause injury or result in the death of an animal. If a marine mammal is located farther from an explosion, the impulsive, broadband sounds introduced into the marine environment may cause permanent or temporary hearing threshold shifts, auditory masking, physiological stress, or behavioral responses. Because most estimated impacts from explosions are behavioral responses or temporary hearing threshold shifts, and because the numbers of marine mammals potentially impacted by explosives are small as compared to each species' respective abundance, long-term consequences for the species or stocks would not be expected."</p> <p>DNR Response: The Navy does not expect to see any impacts to Killer Whale populations (Alaska Resident, Eastern North Pacific Offshore,</p>	<p>Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Northern Resident, West Coast Transient, Southern Resident) from explosive activities. However, even a single unexpected event impacting Southern Resident Killer Whales could have long-term consequences for the stock due to their small population size, lack of reproductive success, and other stressors impacting their survival.	
WDNR-08	<p>From page 3-26: "Detonations would typically occur in waters greater than 200 ft. in depth, and greater than 50 NM from shore, with the exception of mine countermeasure and neutralization testing proposed in the Offshore Area, and existing mine warfare areas in Inland Waters (i.e., Crescent Harbor and Hood Canal Explosive Ordnance Disposal Training Ranges). Section 5.3.3 (Explosive Stressors) outlines the procedural mitigation measures for explosive stressors to reduce potential impacts on biological resources."</p> <p>DNR Response: While the bulk of explosive activities are planned to occur in waters that are not typically frequented by Southern Resident Killer Whales, these whales are known to range up and down the coast. Locating explosive activities in waters greater than 200 ft. in depth and greater than 50 NM from shore reduces the likelihood of contact with Southern Residents, but does not eliminate the risk completely.</p>	In consultation with the National Marine Fisheries Service, the Navy developed an expanded suite of mitigation to further avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales. For example, that Navy developed additional mitigation for explosive Mine Countermeasure and Neutralization Testing in the NWTT Offshore Area and for explosive Mine Neutralization Activities Involving Navy Divers in NWTT Inland Waters, as described in Appendix K (Geographic Mitigation Assessment).
WDNR-09	<p>From page K-10: "As a result of the Navy's biological and operational assessments, the Navy will implement mitigation within the mitigation areas detailed in Table K-1 and Table K-2 to avoid or reduce potential impacts on biological or cultural resources under the Proposed Action. Figure K-2 shows the locations of mitigation areas developed for marine species."</p> <p>DNR Response: These areas, and the seasonal restrictions associated with them, are based on historical data. However, changing ocean conditions may be driving whales into new territories, forcing them to change migration patterns, or requiring them to occupy habitats during different times of the year. The Navy's mitigation measures do not describe what, if any, measures will be taken to reduce impacts to whales if they are encountered outside of geographic mitigation areas or outside of historically typical seasons.</p>	As described in Appendix K (Geographic Mitigation Assessment), the Navy completed an extensive assessment of the Study Area to develop the mitigation areas. The assessment involved an analysis of the best available science, including recent monitoring papers published after development of the Biologically Important Areas. In addition to implementing mitigation within mitigation areas, the Navy will implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area, as detailed in Chapter 5 (Mitigation).
WDNR-10	<p>From 5-65: "Table 5.6-1 summarizes the procedural mitigation measures that the Navy will implement under Alternative 1 or Alternative 2 of the Proposed Action."</p> <p>DNR Response: For the majority of activities (10 out of 15), the procedural mitigation measures are limited to 1 lookout and mitigation zones ranging from 100 yards to 2500 yards wherein activities will be ceased or reduced if</p>	The Navy developed procedural mitigation for 14 activity categories. The number of Lookouts specified for each activity in Section 5.3 (Procedural Mitigation to be Implemented) represents the maximum number of Lookouts that can be designated for those activities without requiring additional personnel already assigned to that platform or reassigning duties, which would be impractical due to implications for safety, sustainability, and the

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	certain species are spotted. DNR contests that one lookout is sufficient to adequately identify a marine mammal or sea turtle for the stated mitigation zones. Sufficient lookouts should be posted to provide full visual coverage of mitigation zones. https://www.westcoast.fisheries.noaa.gov/protected-species/marine-mammals/monitoring-plan-guidance.html .	Navy's ability to meet mission requirements. Regardless of the number of dedicated Lookouts required for explosive activities, if additional platforms are participating in the activity, personnel positioned in those assets (e.g., safety observers, evaluators) will support observing the mitigation zone for applicable biological resources while performing their regular duties. Explosive activities typically involve multiple platforms. For example, during typical explosive missile exercises, two aircraft circle the activity location. One aircraft clears the intended impact location while the other fires, and vice versa. A third aircraft is typically present for safety or proficiency inspections. When available, having these additional personnel support observations of the mitigation zone will help increase the likelihood of detecting biological resources.
WDNR-11	From page 3.4-104: "Forney et al. (2017) also point out that an apparent lack of response (e.g., no displacement or avoidance of a sound source) may not necessarily mean there is no cost to the individual or population, as some resources or habitats may be of such high value that animals may choose to stay, even when experiencing stress or hearing loss. Forney et al. (2017) recommend considering both the costs of remaining in an area of noise exposure such as TTS, PTS, or masking, which could lead to an increased risk of predation or other threats or a decreased capability to forage, and the costs of displacement, including potential increased risk of vessel strike or bycatch, increased risks of predation or competition for resources, or decreased habitat suitable for foraging, resting, or socializing. DNR Response: Each type of impact is evaluated separately in the SEIS. However, the impacts are not wholly separate but have potential to affect and compound upon each other. For example, hearing loss as a result of noise exposure may increase the risk of vessel strike. These interactions are introduced but not considered when discussing likelihood of impacts to species.	Aggregate impacts are assessed in Draft Supplemental EIS/OEIS, Section 3.4.3 (Summary of Impacts [combined Impacts of All Stressors]) on Marine Mammals. Predicting cumulative impacts of multiple stressors currently relies on speculation ("hearing loss as a result of noise exposure may increase the risk of vessel strike"), but substantial efforts are underway to better understand possible compounding impacts through data collection. These efforts are not limited solely to long-term monitoring, but also include theoretical approaches and research methods generally accepted in the scientific community such as the Population Consequences of Disturbance model (see Section 3.4.2.1.1.7, Long-Term Consequences). Until there are sufficient data to inform such models, the best assessment of long-term consequences from Navy training and testing activities will be to monitor the populations over time on Navy ranges. The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area or at any Navy Range Complex. In addition, the Navy's research and monitoring programs, described in Section 3.0.1.1.1 (Marine Species Monitoring and Research Programs) in Chapter 3.0 (Introduction), are focused on filling data gaps and obtaining the most up-to-date science to inform impact assessment. Information about prior and current research being conducted on marine mammals on Navy ranges is in Chapter 3.4 (Marine Mammals) and can be found at www.navy-marinespeciesmonitoring.us . To date, the findings from the research and monitoring and regulatory conclusions from recent analyses by NMFS have been that the majority of impacts from military readiness activities are not expected to be deleterious with regard to fitness of any

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		individuals, and long-term consequences to any populations of marine mammals are not expected.
WDNR-12	<p>From page 3.4-381: "These factors and adaptation of additional mitigation measures since 2009 makes the period since 2009 the most appropriate for calculation of future expected strikes; while the Navy does not anticipate vessel strikes to marine mammals within the NWTI Study Area during the proposed activities, Navy vessel strikes in the Study Area for the period between 2009 and 2018 can be used to determine a statistical probability of future Navy vessel strike as a rate parameter of a Poisson distribution. To estimate the probability of 0, 1, 2, 3, ... n vessel strikes involving Navy vessels over the time period considered in this Supplemental, a simple computation can be generated: $P(X) = P(X-1)\mu/X$, where $P(X)$ is the probability of occurrence in a unit of time (or space) and μ is the number of occurrences in a unit of time (or space). For the 10-year period from 2009 through 2018, if μ is based on two strikes over 10 years ($2/10=0.20$) then $\mu = 0.20$. Plugging 0.20 into the $P(0) = e^{-\mu}$ yields a values of $P(0)=0.20$ strikes per year; and estimated probability of 1.40 Navy vessel strikes over a 7-year period in NWTI. As shown in Table 3.4-108, within any given year during the period of time considered in this Supplemental, there is approximately a 25 percent probability that no Navy vessel strikes will occur, a 35 percent chance one strike would occur, a 24 percent chance of two strikes, and an 11 percent chance of three strikes occurring per year."</p> <p>DNR Response: The Navy does not expect a vessel or in-water device strike to occur. However, the probability model indicates that there is a significant chance of a strike. In addition, the Navy states that vessel and in-water device activity will increase under Alternatives 1 and 2 and numbers of marine mammals present has increased. DNR has stated in previous comments that changes in whale behavior and timing have been observed and are expected to continue. The probability model is based on historical data and does not factor in the increased vessel activity, increased marine mammal presence, or changes in marine mammal behavior. DNR does not agree that a strike is unlikely to occur and believes the probability of a strike may be underestimated in the SEIS.</p>	<p>As stated in Section 3.4.2.4.1 (Impacts from Vessels and In-Water Devices), "projected Navy vessel use has not significantly changed over time and is not projected to significantly change under the proposed alternatives." However, based on the analysis presented above, the Navy is seeking authorization for a take to account for the possibility of an accidental strike.</p>
WDNR-13	<p>From page K-12: "Within the Puget Sound and Strait of Juan de Fuca Mitigation Area, the Navy will require units to obtain approval from the appropriate designated Command authority prior to: (1) the use of hull-mounted mid-frequency active sonar during training while underway, and (2) conducting ship and submarine active sonar pierside maintenance or testing. Within the Puget Sound and Strait of Juan de Fuca Mitigation Area</p>	<p>As described in Section K.3.3. (Mitigation Areas for Marine Species in NWTI Inland Waters), the Navy developed enhanced mitigation measures in NWTI Inland Waters for Southern Resident killer whales, gray whales, and other marine species for the Final Supplemental EIS/OEIS. The Navy's new Puget Sound and Strait of Juan de Fuca Mitigation Area requirements will result in training and testing activities being conducted in NWTI Inland Waters only</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>for Civilian Port Defense - Homeland Security Anti-Terrorism/Force Protection Exercises, Navy event planners will coordinate with Navy biologists during the event planning process. Navy biologists will work with NMFS to determine the likelihood of gray whale and Southern Resident Killer Whale presence in the planned training location. Navy biologists will notify event planners of the likelihood of species presence as they plan specific details of the event (e.g., timing, location, duration). The Navy will ensure environmental awareness of event participants. Environmental awareness will help alert participating ship and aircraft crews to the possible presence of marine mammals in the training location, such as gray whales and Southern Resident Killer Whales."</p> <p>DNR Response: The Puget Sound and Strait of Juan de Fuca Mitigation Area was established to protect killer whales and gray whales. The Puget Sound and Strait of Juan de Fuca Mitigation Area only requires additional approval, special event planning, and environmental training measures. Avoidance measures are not identified for situations where NMFS believes gray whale or Southern Resident Killer Whale presence is likely or one of these animals is observed in or near the area. These mitigation measures are already considered procedural mitigation measures for some activities, and the mitigation area does not include seasonal or activity-specific limitations like those provided in other mitigation areas. Mitigation within the Puget Sound and Strait of Juan de Fuca Mitigation Area is a continuation from the 2015 Final EIS and has not been updated. Since 2015, new information has shown that the Southern Resident Killer Whale population is in severe jeopardy and at risk of extinction. At this critical time, even a single unexpected event impacting Southern Resident Killer Whales could have long-term consequences for the stock due to their small population size, lack of reproductive success, and other stressors impacting their survival. The mitigation measures for the Puget Sound and Strait of Juan de Fuca Mitigation Area are not adequate to address the needs of the Southern Resident Killer Whale population at this time.</p>	<p>when necessitated by mission-essential training or testing program requirements. Furthermore, the Navy will implement additional geographic mitigation for activities that are conducted in the mitigation area as applicable, such as seasonal awareness messages, communication with sighting information networks, limitations on the type and location of active sonar and explosive activities, and prohibition of live fire activities. For example, the Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales. The Navy's mitigation as described in the Final Supplemental EIS/OEIS represents the maximum level of mitigation practical to implement under the Proposed Action, and any further mitigation in NWTT Inland Waters, such as mitigation for aircraft overflights, would be impractical due to implications for safety, sustainability, and mission requirements for the reasons described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).</p>
Washington Governor		
Governor-01	<p>1. Limit the amount of impulsive sound. The physiological effect of impulsive sound to marine life can cause injury, such as ruptured swim bladders and hemorrhaging of other gas-filled organs. I recommend that you seasonally limit training that involves underwater explosions. Doing so reduces any adverse effects during the critical timeframe when fish migration takes place.</p>	<p>The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine mammals, sea turtles, birds, and fish in areas that are particularly important for biological life process, such as feeding, reproduction, and migration. For example, the Navy will restrict all but one type of explosive activity from occurring year-round within 50 NM from shore in the Marine Species Coastal Mitigation Area, which will help the Navy avoid potential impacts from explosives on all species that occur within</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		this expansive swath of water in the NWTT Offshore Area. In the Puget Sound and Strait of Juan de Fuca Mitigation Area within NWTT Inland Waters, the Navy does not conduct explosives except during Mine Neutralization – Explosive Ordnance Disposal Training activities in the Crescent Harbor and Hood Canal explosive ordnance disposal ranges. During these activities, the Navy will implement additional seasonal mitigation to avoid potential impacts on fish. For example, at the Crescent Harbor Explosive Ordnance Disposal Range, the Navy will conduct explosive activities at least 1,000 m from the closest point of land to avoid or reduce impacts on fish (e.g., bull trout and juvenile Chinook salmon) in nearshore habitat areas. At the Hood Canal Explosive Ordnance Disposal Range, the Navy will implement seasonal restrictions on explosive charge sizes to avoid impacts on juvenile and adult Hood Canal summer-run chum and Puget Sound Chinook.
Governor-02	Part of the current plan includes using lookouts on surface vessels and aircraft, as well as an expanded mitigation zone, but only has post-event monitoring of the detonation site when practical. This portion of the mitigation plan should be mandatory to ensure no marine mammals or Endangered Species Act-listed species were injured or killed.	In accordance with 2015 NWTT Final EIS/OEIS consultation requirements, the Navy currently conducts (and will continue to conduct) mandatory post-activity observations after the use of explosive mines. When developing mitigation for the Proposed Action, the Navy determined that it could expand this requirement to other explosive activities for enhanced consistency and to help determine if any resources were injured during explosive events, when practical. It is not practical to require Lookout platforms to remain on station after these additional explosive events in all circumstances. For example, it may be unsafe for aircraft with fuel constraints to remain on station after an event. However, as stated throughout Section 5.3.3 (Explosive Stressors), if additional platforms are supporting an activity (e.g., providing range clearance), those assets will assist in the visual observation of the area where detonations occurred. The Navy will follow the incident reporting procedures outlined in Section 5.1.2.2.3 (Incident Reports) if an incident is detected at any time during an event, including during the post-activity observations. In addition to the newly enhanced post-explosive observation mitigation, the Navy added a requirement that additional platforms already participating in the activity will support observing explosive mitigation zones before and during the activity while performing their regular duties. There are typically multiple platforms in the vicinity of activities that use explosive sonobuoys (e.g., safety aircraft). When available, having additional personnel support observations of the mitigation zone will help increase the likelihood of detecting biological resources prior to and during the activity.
Governor-03	2. Decrease sonar exposure at-sea and pier side. Marine mammals can temporarily or permanently lose their hearing when they get exposed to sonar. This exposure also increases their behavioral	As described in Chapter 5 (Mitigation), the Navy implements procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area.

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>reactions, physiological stress, and masks the sounds they need to hear for communication or hunting. I urge you to reduce exposure time, reduce power settings on sonar, or develop shielding to reduce sonar range during maintenance and testing.</p>	<p>Procedural mitigation involves powering down active sonar source levels or shutting down active sonar if a marine mammal is observed within a specified distance from the sound source. As described in Appendix K (Geographic Mitigation Assessment), the Navy developed enhanced mitigation measures in NWTT Inland Waters and the NWTT Offshore Area for Southern Resident killer whales, gray whales, and other marine species for the Final Supplemental EIS/OEIS. For example, the Navy's new Puget Sound and Strait of Juan de Fuca Mitigation Area requirements will result in training and testing activities being conducted in NWTT Inland Waters only when necessitated by mission-essential training or testing program requirements. Furthermore, the Navy will implement additional geographic mitigation for activities that are conducted in the mitigation area as applicable, such as seasonal awareness messages, communication with sighting information networks, limitations on the type and location of active sonar and explosive activities, and prohibition of live fire activities. For example, the Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales. The Navy's mitigation as described in the Final Supplemental EIS/OEIS represents the maximum level of mitigation practical to implement under the Proposed Action, and any further mitigation in NWTT Inland Waters, such as mitigation for aircraft overflights, would be impractical due to implications for safety, sustainability, and mission requirements for the reasons described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).</p> <p>Pierside sonar locations offer a controlled environment most suitable for conducting certain types of active sonar training and testing activities. The locations where pierside sonar activities occur are in areas where Southern Resident killer whales are not known to be present or are extremely rare. Over the past several years, the Navy's ongoing sonar reporting program has gathered classified data regarding the number of hull-mounted mid-frequency active sonar hours used to meet antisubmarine warfare requirements. These data allow for a more accurate projection of the number of active sonar hours required to meet anti-submarine warfare training requirements from 2020 into the reasonably foreseeable future. It is not practical to reduce the amount of sonar hours under the Proposed Action because doing so would</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		preclude the Navy from meeting its mission requirements. As described in Section 5.5.1 (Active Sonar), sonar operators must train to effectively handle bottom bounce and sound passing through changing currents, eddies, and across changes in ocean temperature, pressure, salinity, depth, and in surface ducting conditions. Sonar systems must be tested in these conditions to ensure functionality and accuracy in military mission and combat conditions.
Governor-04	<p>While at-sea sonar affects marine species differently, exposure can result in the inability to communicate within the pod or group, reduce their ability to avoid predators or locate prey, and push marine animals to leave the area for less desirable locations.</p> <p>The mitigation strategy proposed in the SEIS does not sufficiently address this issue. Please consider including the following in the mitigation plan:</p> <p>1.) Establish seasonal limitations on sonar use in certain locations to reduce risk of marine mammals leaving their preferred habitat. This is most apparent with the Southern Resident Killer Whales hunting Chinook salmon off the coast in the spring.</p>	<p>As described in Appendix K (Geographic Mitigation Assessment), the Navy completed an extensive assessment to develop mitigation areas for the NWT Study Area. The Navy considered the range of Southern Resident Killer Whale habitat in its assessment, including coastal habitat. The Navy developed several mitigation areas that will help further avoid or reduce potential impacts from active sonar on marine mammals, including Southern Resident Killer Whales, in important habitat areas. The Navy developed a new mitigation measure for the Final Supplemental EIS/OEIS to conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the newly developed Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation Area. The Navy will also restrict certain active sonar activities or sources year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to avoid potential impacts from active sonar on killer whales, humpback whales, and gray whales in important foraging and migration areas.</p>
Governor-05	<p>2.) Increase the forage fish population for marine mammals. I encourage the United States Navy and the Department of Defense to work with the State's Southern Resident Killer Whale Task Force to improve prey forage stock.</p>	<p>The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force's working groups on prey and vessel traffic. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that increase forage fish</p>

Table H-3: Responses to Comments from State and Local Agencies and Elected Officials (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		populations for the Southern Residents. The Navy also monitors for forage fish spawning at its installations.
Governor-06	3. Better understand the effects of testing and training unmanned systems. I am concerned about the rapid increase of unmanned underwater systems and their use in the Puget Sound and the offshore coastline. The proposed activities in the SEIS includes a broad array of activities [sic], including possible use of sonar, lasers, and payload systems. As the Navy tests emerging technology and trains on new systems, it is critical that we understand the implications of this testing and training on our undersea environment. A more thorough analysis of the proposed activities is requested.	<p>The Navy researches, develops, tests, and evaluates new platforms, systems, and their corresponding technologies. The Navy uses different testing methods, including computer simulation and analysis, throughout the development of platforms and systems. During these developmental stages, the Navy better understands how the systems operate and what their effects to the environment may be as they move from concept phase to laboratory tests, systems integrations and testing, confined moon pools, and finally the open-water environment. Navy platforms and systems must undergo at-sea testing at some point in the development process, to be evaluated within the broadest range of operating conditions available (e.g., bathymetry, topography, geography) because Navy personnel must be capable of performing missions within the wide range of operating conditions that exist worldwide. Navy personnel must be assured that platforms and systems will meet performance specifications in the real-world environment in which they will be operated.</p> <p>The Navy thoroughly analyzed potential impacts of the Proposed Action on marine species in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. For marine mammals, see Section 3.4.2.4.1 (Impacts from Vessel and In-Water Devices) for the potential of unmanned underwater vehicles to impact marine mammals; Section 3.4.2.1.1 (Impacts from Sonar and Other Transducers) for the potential of sonar to impact marine mammals; Section 3.4.2.3.2 (Impacts from High-Energy Lasers) for the potential of high-energy lasers to impact marine mammals. Other resource areas such as fishes or birds had similar analyses conducted. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The Navy developed numerous new mitigation areas for the Final Supplemental EIS/OEIS to further avoid or reduce potential impacts on marine species, including marine mammals, in key areas of importance for foraging, breeding, and migration.</p>

H.1.4 Non-Governmental Organizations

This section contains comments from non-governmental organizations received during the public comment period, and the Navy's response to those comments. Form letters received from non-governmental organizations are found in Section H.1.4.1.

Table H-4: Responses to Comments from Non-Governmental Organizations

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
<i>Citizens of Ebey's Reserve</i>		
COER-1	Concern for marbled murrelet in a letter to the USFWS related to the USFWS Biological Opinion on the Growler EIS.	Thank you for your comments. The Navy consulted with USFWS under section 7 of the Endangered Species Act to address potential impacts to marbled murrelets with implementation of the preferred alternative. During the consultation process, the Navy considered the most current information and data from USFWS, Washington Department of Fish and Wildlife, and other best available science on the marbled murrelet population within the action area.
<i>Connection Earth</i>		
Connection-1	As an animal rights advocate and activist, representing Connection Earth, a 501 3c charitable organization, I cannot strongly enough voice my objection to use of sonar blasting by the US Navy. Whales and dolphins, as well as other oceanic animals are highly impacted by the blasts. They are dependent on their ability to use echo location to hunt, navigate and communicate. The blasts harm and can even kill these sensitive animals that are protected by international law. I have seen, firsthand the devastating effects of said blasts. I also note that these blasts can deafen these animals, and this is tantamount to a death sentence, because it so extremely impacts their ability to hunt, navigate and communicate. A deaf whale is a dead whale. I implore the Navy to stop testing and use of sonic blasting. Thank you. Gina McBride, Executive Board, Connection Earth.	The Navy has conducted active sonar and explosives training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
<i>Cultural Survival</i>		
Cultural-1	<p>Cultural Survival is an Indigenous Peoples’ rights organization based in Cambridge, MA. We support the Sinkyone Council and its member Tribes as they continue in their efforts to oppose the US Navy’s training and testing activities, and demand stronger protections for the ocean and the Tribes’ cultural ways of life.</p> <p>The Navy activities that take place in the Pacific Ocean impact the local environments as well as local Tribes’ ways of life. The Pacific Ocean holds great cultural and spiritual significance for the Tribes and is critically important for the wellbeing of all people and lifeforms on this planet. With that in mind, Cultural Survival recommends the following:</p> <p>The US Navy must seek the Free, Prior and Informed Consent of the Cahto Tribe of Laytonville Rancheria, Coyote Valley Band of Pomo Indians, Hopland Band of Pomo Indians, Pinoleville Pomo Nation, Potter Valley Tribe, Redwood Valley Band of Pomo Indians, Robinson Rancheria of Pomo Indians, Round Valley Indian Tribes, Scotts Valley Band of Pomo Indians, and Sherwood Valley Rancheria of Pomo Indians, as required by article 19 of the United Nations Declaration on the Rights of Indigenous Peoples, which was endorsed by the United States in 2009. The coastal Tribes hold deep level of traditional environmental knowledge passed down from generation to generation which can be used to indicate how the Navy’s activities would impact the wellbeing of the coastal environment. In respect for the environment, human rights, and Indigenous rights, the Navy holds an obligation to integrate the Tribes’ recommendations based on that knowledge.</p> <p>The US Navy should work with the Tribes to develop and implement measures that will minimize impacts to the Tribes’ cultural ways of life, which includes the wellbeing of the environment. The Navy should also plan to monitor the potential effects of training and testing in a way that is sufficiently thorough and holistic. For instance, harmful effects may manifest in forms besides decreased population levels, and the Navy must address the potential effects of an increasingly acidic ocean.</p> <p>We ask the Navy to fulfil its responsibility to ensure the training and testing activities do not impact the wellbeing of the environment and of the Tribal Nations on the Pacific Coast.</p>	<p>The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy will consider additional tribal and traditional knowledge provided, maintaining respect for cultural sensitivity and confidentiality.</p> <p>As stated in the Supplemental EIS/OEIS, the term “traditional resources” is used to encompass protected tribal resources.</p>
<i>Environmental Protection Information Center</i>		
EPIC-01	<p>On behalf of the Environmental Protection Information Center (EPIC), we are submitting this comment letter in solidarity with the ten Tribes that comprise the Inter-Tribal Sinkyone Wilderness Council that have expressed</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>their concerns over the Draft Supplemental EIS/OEIS (SEIS) for the Navy Northwest Training and Testing (NWTT) activities.</p> <p>The cumulative effects of this project, combined with the impacts of the Navy's historic and ongoing operations, will significantly harm the environment and endangered species. The activities currently being proposed would result in significant harm to whales, dolphins, fish and countless other marine animal species including many species, such as Humpback and Sperm Whales, that are listed as threatened or endangered under the Endangered Species Act.</p>	<p>Area. The Navy thoroughly analyzed potential impacts of the Proposed Action on marine species in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. The analysis considered the full range of potential impacts, including behavioral impacts, such as disruption to feeding and breeding, and other types of potential impacts, such as injury or physiological impacts. Based on the analysis in the Supplemental EIS/OEIS, impacts are likely to be short-term and temporary in nature. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The Navy developed numerous new mitigation areas for the Final Supplemental EIS/OEIS to further avoid or reduce potential impacts on marine species, including marine mammals, in key areas of importance for foraging, breeding, and migration. For information on cumulative effects, please see Chapter 4 (Cumulative Impacts).</p>
EPIC-02	<p>These operations will inflict significant harm the environment and sensitive species and is not in the best interest of the global commons, which is in direct violation of Executive Order 12114.</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS.</p> <p>The Navy is in full compliance with Executive Order 12114, which directs federal agencies to provide for informed environmental decision-making for major federal actions outside the United States and its territories. This Supplemental EIS is also an Overseas EIS under EO 12114, which covers analysis of impacts to the area beyond 12 NM (including U.S. Exclusive Economic Zone and any high seas area) within the Study Area.</p>
EPIC-03	<p>Activities like dumping debris on the seafloor, spreading toxic chemicals, detonating explosives, and blasting high intensity mid-frequency sonar will significantly degrade habitat areas, including many sensitive habitat areas that serve for countless species, and that are critical to the health and survival of dozens of marine mammal populations. This is regardless if the area has had previous impacts to it, as maintained in the SEIS, as repeating those impacts will only increase the pressures on the habitat and species that rely on it.</p>	<p>In the course of the Navy proposed activities (listed in Chapter 2 - Description of Proposed Action and Alternatives of the Supplemental EIS/OEIS), which do include the use of sonar and similar sound sources as well as underwater detonations, some expended materials are left behind in the ocean. The potential impacts of these actions was thoroughly analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS.</p>
EPIC-04	<p>The Navy fails to account for the decades of operations that have negatively affected our oceans, marine mammals, and other species that depend on clean safe waters to survive. The Navy also fails to account for the impact these operations have on the cultural and spiritual ways of the coastal tribes that are inextricably linked to the ocean, the marine species that inhabit it, and the coastline. As well, there lacks any incorporation or input of the Traditional Ecological Knowledge (TEK) from the coastal tribes,</p>	<p>The Navy used the best available science and a comprehensive review of past, present, and reasonably foreseeable actions to develop a robust Cumulative Impacts analysis. See Chapter 4 (Cumulative Impacts) of the Supplemental EIS/OEIS.</p> <p>The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy has discussed Traditional Ecological Knowledge and will continue to consider additional tribal and traditional</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	who have stated their opposition to the project due to continued concerns over spiritual, cultural, and environmental impacts.	knowledge (including traditional ecological knowledge) provided, maintaining respect for cultural sensitivity and confidentiality. As stated in the Supplemental EIS/OEIS, the term “traditional resources” is used to encompass protected tribal resources.
EPIC-05	In conclusion, the SEIS and mitigation measures are severely inadequate and the proposed actions would result in violations of several regulations that are in place to protect the environment and species from these types of harmful activities. All of the actions in the NWTR duplicate operations in other ranges and are therefore unnecessary for “training” purposes. The risk is too large; please rescind the proposed training and testing activities and explore other alternatives to train military personnel that do not put hundreds of thousands of species at risk in the global commons and does not impede the rights of the coastal tribes that have occupied these spaces for millennia.	As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. Please refer to the Supplemental EIS/OEIS Section 2.5.1.1 (Alternative Locations) for an explanation of why this location is necessary for Navy training and testing. As stated in Section 2.5.1.1, "The Navy reevaluated the availability of other suitable locations that can support the training and testing requirements in the Pacific Northwest. The Navy determined that the attributes listed in the 2015 NWTT Final EIS/OEIS are all still required, and that there are no other locations with those attributes."
<i>Friends of the San Juans</i>		
FSJ-1	In addition to comments submitted with other environmental organizations I am writing to address deficiencies in Table 4.3-1: Past, Present, and Reasonably Foreseeable Actions. This table and the Draft Northwest Training and Testing Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement is not inclusive of all the reasonably foreseeable new and expanding terminal and refinery projects whose vessel traffic would transit the Northwest Training and Testing Study Area. Attached please find our June 2019 Salish Sea Vessel Traffic Projections which includes a more comprehensive list of the reasonably foreseeable actions which should be included the cumulative impacts analysis of the Draft Northwest Training and Testing Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement.	Thank you for providing the information in your letter. The Navy has evaluated the information and included those actions that are relevant to the project. As described in Section 4.3 (Past, Present, and Reasonably Foreseeable Actions) in the Supplemental EIS/OEIS, if no potential relationship exists such that the affected resource areas of the Proposed Action might interact with the affected resource area of a past, present, or reasonably foreseeable action, the project was not carried forward into the cumulative impacts analysis. In accordance with CEQ guidance, these actions considered but excluded from further cumulative effects analysis are not catalogued here because the intent is to focus the analysis on the meaningful actions relevant to inform decision making.
<i>Lost Coast League</i>		
Lost Coast-01	1.The US spends 6 times more on its military than its nearest competitor, China. With such an overwhelming advantage, why are we developing even more weapons? 2. Vice Admiral Forrest Faison, surgeon general of the Navy, stated recently that the US is entering an “era of great power competition”. What did he mean? Do you think aggressive US foreign policy has anything to do with accelerating the arms race? 3.Propublica examined the collisions of the USS Fitzgerald outside Tokyo	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>harbor and the USS McCain in the Malacca straits, in which a total of 17 sailors were killed. They found that in both cases, the crews were overworked (20 hours a day) and poorly trained and did not know how to run a destroyer.</p> <p>Were these sailors training in the Northwest Testing & Training program? Do you train sailors or just test weapons?</p>	
Lost Coast-02	<p>4.Are you aware that the oceans are being filled with plastic waste material. Fragments of this plastic are found percolating all the way down to the sea floor and inside the bodies of much of sea life. This plastic is lethal to sea and shore life.</p> <p>What does the Navy plan to do about this?</p> <p>5. Are you concerned about the increasing amounts of heavy metals such as tungsten, mercury and chromium as well as lithium that sonobuoys on the ocean floor are releasing into the water? Do you think they are toxic to marine life and humans?</p> <p>6. Do you think that the thousands of tons of fiberglass and other microfiber</p> <p>Used in making flares, which fall into the sea and disintegrate, have any health effect on sea life?</p> <p>7. Do you believe that climate change is a threat to life on earth as we know it?</p> <p>and</p> <p>7a.Are you aware that the US military is the largest single contributor to greenhouse gases in the world except for 34 entire nations?</p> <p>7b.What do you think the Navy should do about this?</p> <p>8. Are you concerned that phytoplankton, which provides the basis of the whole Hierarchy of ocean life, and provides the oxygen for 2 out of every 3 breaths we take, has diminished by 40% since 1950? Are you concerned that climate change, accelerated by the activities of the Navy, might be responsible for this?</p> <p>9. A CEO at Raytheon one of the largest weapons manufacturers, and who sells weapons to the Navy, observed to shareholders that</p> <p>“ expanded business opportunities will arise as a result of security concerns and the possible challenges of climate change”.</p> <p>Do you think this era of “great power competition” described by Admiral Richardson and Admiral Forrest Faison might be driven by the profit interests of powerful armaments production shareholders?</p>	<p>The relevant issues in these comments are addressed in either Chapter 3 (Affected Environment and Environmental Consequences) or Chapter 4 (Cumulative Impacts).</p>
Lost Coast-03	<p>10.In 2015 the Navy made the following increases from its previous plan: (this is not a complete list):</p>	<p>The level of activities proposed by the Navy include some decreases in addition to some increases. Some activities are proposed to remain the same.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<ul style="list-style-type: none"> - A 778 percent increase in number of torpedoes - A 400 percent increase in air-to-surface missile exercises (including Olympic Coast National Marine Sanctuary) - A 1,150 percent increase in drone aircraft - A 1,150 percent increase in drone surface vehicles - A 1,450 percent increase in expendable devices - A 72 percent increase in electronic warfare operations - A 50 percent increase in explosive ordnance disposal in Crescent Harbor and Hood Canal - A 244 percent increase in air combat maneuvers (dogfighting) - A 400 percent increase in helicopter tracking exercises - A 3- 500 percent increase in number of sonobuoys <p>from none to 284 sonar testing events in inland waters</p> <p>An 11 fold increase in “takes”: 9.6 million instances of loss of hearing of marine mammals and behavior disturbances and up to 100 deaths.</p> <p>What is the level of increase anticipated for the next 5 year period?</p> <p>11. The US spends the greater proportion of its discretionary budget on its military. Meanwhile our infrastructure is falling apart. In this context, do you think this military allocation fails our country’s defense needs?</p> <p>12. The US military’s greenhouse gas emissions are not included in carbon emissions calculations by the UN Committee on Climate Change. What is your understanding of the rationale for this omission, which concerns the largest single contributor to world greenhouse gas emissions?</p> <p>13. Recently a Russian destroyer and a US guided missile cruiser nearly collided in either the Philippine Sea or the South China Sea, the news was unclear.</p> <p>Is this the result of these respective militaries playing the exciting game of cat-and-mouse with a competitor, or the overtiredness and lack of training we saw with the Fitzgerald and the McCain?</p> <p>In either case, do you think the Navy is taking the survival of those they purport to defend too lightly?</p> <p>What is your rationale for the 7th fleet to be behaving in a provocative manner with military games and exercises close to the territorial waters of a number of Asian countries who would like to see the US withdraw from its bases there and cease its interference with their affairs?</p> <p>The ocean has become more acid every year, making it increasingly impossible for sea life to exist. The oceans are dying.</p> <p>Would it not be a better defense of our country, instead of testing ever more powerful weapons and burning ever larger quantities of fossil fuels,</p>	<p>The overall level of training and testing would not be noticeably changed from existing levels. See Chapter 2 of the Supplemental EIS/OEIS for details on the proposed activities. The estimated marine mammal and sea turtle impacts from exposure to acoustic and explosive stressors under proposed Navy training and testing activities are included in Appendix E of the Supplemental EIS/OEIS.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>to try to reverse climate change and clean up the oceans? Our preferred action alternative therefore is to expeditiously decrease the size of the Navy and of the Armed Services in general, to abandon the chimera of Full Spectrum Dominance, and to engage in treaties and armament reduction plans with other countries. This should be combined with a serious effort, employing the entire power of the US Navy which is uniquely situated to perform this task, to avoid planetary catastrophe by reversing climate change and creating a healthful climate for all the peoples of the world whose lives are at grave risk. We would be grateful for a response to the questions contained in our comment letter.</p>	
Meadow Farm Community Land Trust		
Meadow Farm-1	<p>People want to stop the killing of our marine mammals and all of our now so fragile ecosystem. Every individual in every corporation and government department need to act on their conscious and learn the consequences of what their actions are doing that promotes the decline of human habitat. This is the time to stop promoting the war industry and begin to pour our resources into saving ourselves, our families, our communities and the environment that supports us all. We need to wake up and see how “business as usual” is not working for us. Please deeply consider every consequence of your actions. Our farm is trying to help with our remote area’s food security, sequester Carbon, lessen our need for fossil fuels, give a place for farmers to afford living and prepare for the disasters that will come. We have so little money to do this with and yet see money pouring into industries that are pulling us all down. Let bring some balance to this scenario..together.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy’s ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy’s Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research’s Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy’s project website at: www.NWTTEIS.com
National Parks Conservation Association, June 12, 2019		
NPCA-01	<p>The Navy’s DSEIS violates NEPA because it articulates an unduly narrow scope, fails to adequately consider noise impacts, fails to consider impacts on environmental justice communities, fails to properly define the purpose and need of the project and fails to adequately consider a reasonable range of alternatives, including alternatives that would limit or mitigate adverse impacts to the Park, fails to properly evaluate and disclose impacts to recreational and scenic values, fails to adequately consider impacts to wildlife in the Olympic Peninsula, and fails to properly consider the</p>	<p>The Navy has taken the necessary hard look at the potential environmental impacts of its proposed training and testing activities. Specific comments on this issue are responded to below.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	cumulative effects of the Navy's activities. These inadequacies make it impossible for Navy to have taken the necessary "hard look" at its training and testing activities' environmental consequences.	
NPCA-02	<p>Here, the Navy's DSEIS fails to properly identify the scope of its environmental impacts. The very first page of the DSEIS limits the scope of the analysis to the "study area" which it repeatedly discusses in the context of activities "conducted at sea." Only by referencing Figure 1.1-1 can someone understand that, despite these repeated "at sea" references, the Study Area in fact includes large areas of land within its Military Operations Areas (MOAs). Only much later in the DSEIS, in Figure 3.12-10, do we learn that these MOAs also include a large part, over 25%, of Olympic National Park. However, another map, in another part of the DSEIS, Figure 2.3-1, shows that the Navy's activities actually impact far more than just those parts of the Park in the MOAs. The Navy jet transit routes used to access the MOAs require the Navy jets to fly over much larger sections of the Park where they also cause direct, indirect and cumulative impacts. Unfortunately, the analysis undertaken by the Navy only assesses impacts resulting from its training and testing activities within the MOAs and Warning Areas. The Navy provides no explanation for this arbitrary limitation on the scope of its analysis and fails to acknowledge that the Navy jets operating in the MOAs do not just magically appear in that area. They fly over the Park to get to the MOAs, and they make a lot of unnatural noise, directly, and adversely impacting the Park and its visitors when they do so. This limitation is one of the many reasons why the DSEIS is inadequate, because it leads to the Navy's failure to fully consider its impacts on the entire Olympic National Park generally and recreation within the Park specifically, as well as hinders its cumulative impact analysis.</p>	<p>The Navy properly identified the scope of its environmental impacts in this Supplemental EIS/OEIS. As stated throughout this document, this Draft Supplemental EIS/OEIS supplements the 2015 NWTT Final EIS/OEIS. As stated in this Supplemental EIS/OEIS, the Study Area (depicted in Figure 2.2-1) is the same as analyzed in the 2015 NWTT Final EIS/OEIS. The 2015 document is clear that the Offshore Area includes the Olympic Military Operations Area (MOA). The Supplemental EIS/OEIS description in Chapter 2 includes a reference to a figure that shows the Olympic MOA within the Study Area. The MOA is specifically mentioned on p. 2-2 to alert the reader to a designation change made to the MOA by the FAA. Throughout Chapter 2, the Olympic MOA is mentioned over a dozen times, in addition to including it as the location for two proposed activities in Table 2.5-1. The 2015 NWTT Final EIS/OEIS (as does this Supplemental EIS/OEIS) also includes an airspace noise analysis (Appendix J) that clearly shows the relationship of the Olympic MOA to the Olympic National Park. In this Supplemental EIS/OEIS, the Navy has expanded the analysis of impacts of aircraft overflights to include transits to and from the Olympic MOA. For more information about the analysis of transits, please see Section J.6.2 (Transit to/from the Olympic MOA) in Appendix J of the Final Supplemental EIS/OEIS.</p>
NPCA-03	<p>During transits to and from the MOA, Park visitors and wildlife are directly impacted by the deafening noise of the Growler jets passing nearby. In the National Park Services' ("NPS" or "Service") Acoustic Monitoring study within the Park, in areas outside of the MOAs—Hurricane Ridge and Lake Crescent—"other aircraft sounds," meaning military jets, were heard more frequently than in areas within the MOAs; military jets were heard 8.3% and 7.2% of the time at Hurricane Ridge and Lake Crescent, respectively. Further, numerous Park visitors, including NPCA members, visit areas of the Park outside the MOAs and witness and/or hear Growler jets overhead, resulting in complaints and impacts to their park experience. The Olympic National Park is one of the most visited National Parks, with nearly 3</p>	<p>It is incorrect to assume that "other aircraft sounds" means "military jets." The National Park Service study states that "other aircraft sounds" equates to "high altitude jets." The airspace over the Olympic National Park is frequently used by commercial jet aircraft which is likely a significant source of those sounds. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II. Visitation data to the park</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	million annual visitors. Importantly, a number of visitors seek to visit the Park to enjoy its serene natural soundscape; in fact, the Park's Hoh Rainforest is known for containing the "quietest one square inch in the United States." Thus, it is very likely that visitors who seek to experience the Park's tranquil natural sounds will be negatively impacted by the Navy's increased use of Growler jets. By limiting the scope of the DSEIS to the MOAs, the Navy improperly eliminated the entire Park from its analysis, as well as the impacts the Growlers may have on the Park's recreational visitors and wildlife.	does not suggest that the aircraft overflights are impacting tourism, with steady growth over 4 of the last 5 years of data (2013-2018).
NPCA-04	<p>An agency is required to perform an environmental analysis when it is reasonably possible to analyze the environmental consequences. There is no basis for the Navy to exclude the entire Park from its environmental analysis. In the NPS's 2017 Scoping Comments for this DSEIS, the Service explicitly stated it receives complaints from visitors about "low flying military aircrafts within the wilderness areas but outside of the Olympic MOA." The Navy knows its transit routes are directly over the Park and that people are being negatively impacted by the Growler traffic, yet it failed, without explanation, to analyze these impacts.</p> <p>Further, as discussed in detail above, the Navy's decision to narrow the scope of this DSEIS to only its training and testing activities within the MOAs and Warning Areas improperly segments the NEPA analysis. The Navy has been conducting activities, including both aircraft and vessel training, in the Pacific Northwest and Olympic Peninsula for decades. Despite its long and impending presence in the area, the Navy has continually failed to conduct a programmatic NEPA review to cumulatively assess the environmental impacts of all of its activities.</p> <p>The Navy's analysis of impacts within only the MOAs and Warning Areas unduly narrowed the scope of the DSEIS, which caused the Navy to fail to adequately consider the environmental impacts of the its activities. Thus, the DSEIS fails to comply with NEPA.</p>	<p>As stated above (see response to NPCA-02), the Navy did analyze aircraft transits to and from the Olympic MOA in this Supplemental EIS/OEIS, and this Supplemental EIS/OEIS complies with requirements of NEPA. It is important to note that Navy aircraft on these transit routes would be at a minimum altitude of 10,000 ft. Low-flying military aircraft outside the Olympic MOA would not be associated with Navy aircraft transiting to and from the Olympic MOA.</p> <p>The Navy has taken a hard look at the cumulative effects of the incremental impact of its proposed actions when added to other past, present, and future actions, against the appropriate resources and regulatory baselines. The Navy used the best available science and a comprehensive review of past, present, and reasonably foreseeable actions to develop its Cumulative Impacts analysis. As required under NEPA, the level and scope of the analysis is commensurate with the potential impacts of the action as reflected in the resource-specific EIS discussions in Chapter 3 (Affected Environment and Environmental consequences). The EIS/OEIS considered its activities alongside other actions in the region, including other Navy actions, when those impacts are cumulatively significant. Past and present actions are also included in the analytical process as part of the affected environment baseline conditions presented in Chapter 3. The Navy has done so in accordance with the Council on Environmental Quality 1997 guidance. Per the guidance, a qualitative approach and best professional judgment are appropriate where precise measurements are not available. Where precise measurements and/or methodologies were available they were used. Guidance from the Council on Environmental Quality states it "is not practical to analyze cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful."</p>
NPCA-05	The Draft SEIS Fails to Adequately Consider Impacts Relating to the Noise Emitted by the Navy's Aircraft Activities, particularly to the Olympic National Park.	The Navy completed a full analysis of impacts associated with its proposed activities. Where graphics and figures were helpful, they were included in the analysis. Some figures requested by this commenter are not helpful when

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	As the DSEIS states, “[n]oise is one of the most prominent environmental issues associated with military training activities.” Therefore, NPCA is greatly concerned by the Navy’s failure to both properly assess the noise impacts associated with the proposed action and to include relevant and commonplace figures illustrating noise impacts. Such illustrations would allow public comprehension of the impacts of the proposed action as required by NEPA. The DSEIS almost exclusively analyzes noise impacts to marine species. While we believe these impacts are important, the absence of further noise analysis regarding the acoustic effects of the proposed action on the terrestrial environment, especially impacts to Olympic National Park and its visitors is a serious flaw and illegal under NEPA. NPCA is further astounded by the vast discrepancies between the DSEIS and the Whidbey Island FEIS which was published less than a year ago. In order to comply with NEPA, the final SEIS must include a rigorous and factually accurate analysis of the noise impacts associated with Navy’s military training to the MOAs and the surrounding area particularly all of Olympic National Park.	conducting a noise analysis of special use airspace, which is vastly different from analyzing predictable, repeatable aircraft tracks as was the case in the EA-18G Growler Airfield Operations Final EIS referenced in the comment. It would be a mistake to attempt to compare the two documents. As will be described in later comment responses, the noise model used in this NWTT Supplemental EIS/OEIS is the best and most appropriate model to evaluate noise impacts in special use airspace, such as the Olympic MOA.
NPCA-06	The DSEIS Noise Modeling and analysis is scientifically and technically flawed. Because the DSEIS relies heavily on noise modeling to predict the impacts of its Navy jets, NPCA asked Les Blomberg, a noise pollution expert and Executive Director of the Noise Pollution Clearinghouse, to review that modeling and other relevant parts of the DSEIS. Mr. Blomberg found serious scientific and technical defects and omissions in that analysis as is outlined in his attached comment. Perhaps more importantly, Mr. Blomberg explains that he was unable to conduct a more comprehensive evaluation of the Navy’s noise modeling because the Navy failed to provide the public with the underlying data and other necessary information. Les Blomberg created a report detailing the inadequacy of the DSEIS’ acoustic analysis. His twenty page report concluded that the DSEIS is “not a serious or hard look at the impacts of military aircraft overflights on Olympic National Park” due to seven distinct reasons. First, the sound analysis within the DSEIS is incomplete due primarily to a failure to assess impacts to Olympic National Park. A particularly egregious error is the complete absence of noise maps, a commonplace tool used to assess auditory impacts, within the document. This absence serves to “obscure the noise impacts of aircraft in Olympic National Park.” Second, the document’s transit analysis is “fatally flawed” because it again fails to assess impacts to Olympic National Park and is otherwise highly disjointed.	Please see the responses to the Noise Pollution Clearinghouse comments.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Third, the DSEIS does not properly assess cumulative impacts of noise regarding these transit routes. Fourth, the DSEIS does not include vital acoustic monitoring or “actual noise measurements.” Fifth, the noise metrics employed by the DSEIS are not well-suited to assess auditory impacts, particularly those to Olympic National Park. Sixth, the DSEIS does not include “two very obvious alternatives” which would minimize auditory impacts to the national park. Seventh and finally, the document misrepresents data from a 2010 NPS sound report on Olympic National Park which is relied on heavily throughout the DSEIS.	
NPCA-07	The DSEIS fails to adequately consider the importance of Olympic National Park’s natural soundscape. As initially stated in our scoping comments, NPCA again requests that the Navy account for this public value through comprehensive analysis, including on-the-ground noise monitoring, to provide accurate scientific information as required by NEPA. Federal regulations require that the “[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas” must be considered when evaluating the intensity of an action.	The NWTT Supplemental EIS/OEIS adequately considered the importance of the natural soundscape of the Olympic National Park as well as the Olympic peninsula. The Navy conducted a comprehensive noise study (See Appendix J -Airspace Noise Analysis for the Olympic Military Operations Area), for the express purpose of analyzing the impacts of proposed activities on the soundscape of the affected area. The analysis in Appendix J was used to analyze impacts in resource areas such as public health and safety, socioeconomic resources, cultural resources, and birds. On the ground noise monitoring as suggested by the comment has been conducted, but has limited value. It can provide information gathered at the selected site(s) for historical purposes, but has no value as a predictive tool. For that, the Navy used the noise model that is the standard for use in special use airspace, such as the Olympic MOA. As stated in Appendix J, "In this analysis, noise from aircraft training activities within the Olympic MOA was assessed using noise metrics recommended by the Department of Defense (DoD), the Federal Interagency Committee on Aviation Noise (FICAN), ANSI [American National Standards Institute], and the FAA [Federal Aviation Administration]."
NPCA-08	The DSEIS does not include an adequate analysis of noise impacts to residents and visitors of the Olympic Peninsula. Since the Navy’s transition from Northrup Gunman EA-6B “Prowler” jets to Boeing EA-186 “Growler” jets, residents and visitors of Olympic National Park and its surrounding area have reported increased incidents of noise disturbances. The noise pollution associated with the Navy’s military training disrupts these individuals’ daily activities and occasionally the “groaning and shrieking” sounds associated with the jets wakes individuals in the middle of the night. If the number of military training flights increases as proposed in the DSEIS, these noise disturbance events will be more frequent and felt more prevalently in day-to-day life. In addition to the impacts to wildlife as discussed below, NPCA believes the DSEIS did not properly account for noise impacts to human life.	The full sentence from the analysis of impacts to socioeconomic resources that the comment failed to capture is, "In general, airborne acoustics from aircraft overflights only generate an acoustic disturbance at the moment it is heard, and noise from an overflight disturbance would only accumulate for the duration of a specific event." This sentence was followed with several pages of analysis, including examples of various noise levels that people on the Olympic peninsula could be exposed to. There was never a limit to the analysis to "offshore tourism" as stated in the comment. The Olympic MOA is in a portion of the Study Area identified in the document as part of the "Offshore Area" due to its relationship to the nearby Warning Areas that lie completely off the coast of Washington.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	The DSEIS states that acoustic disturbances related to military activity noise will be limited to the exact “moment it is heard” and would not cause a significant impact on offshore tourism as a socioeconomic resource, while ignoring the clear adverse impacts to “onshore” tourism in the Park. This is simply untrue for two distinct reasons. First, the noise pollution associated with military jets is more than a simple auditory sensation. These auditory disturbances have negatively impacted individuals’ daily activities, volunteer and professional pursuits, and tourism opportunities in the area. Second, the actual auditory sensation associated with the Growler jets lasts far longer than a “moment.” Visitor testimonials cite these noise disturbances as exceeding multiple minutes in duration.	The Navy conducted an adequate analysis of noise impacts to residents and visitors of the Olympic peninsula. As stated previously, the Navy is proposing to increase aircraft flights in the Olympic MOA by approximately 300 flights per year, or about 1 additional flight per day. Different individuals will respond differently to the same sounds. What is loud and an annoyance to one person will not be noticed by another. As stated in Appendix J, “In general, scientific studies and social surveys have found a high correlation between the percentages of groups of people highly annoyed and the level of average noise exposure measured in DNL [Day Night Average Sound Level] (Schultz, 1974; Fidell et al., 1991; Finegold et al., 1994).” Therefore, the Navy based much of its analysis on the DNL levels that support a conclusion of negligible impact on socioeconomic resources. In addition to the DNL analysis, the Navy also provided maximum noise level (Lmax) to further consider potential impacts of the temporary effect of individual flyover events. All of this information and analysis is spelled out in Appendix J and in the various resource sections that considered the results of the Noise Study.
NPCA-09	Noise pollution associated with Growler jets impacts both residents and tourists to Olympic National Park and the surrounding area. [T]he DSEIS states that the noise will not greatly impact tourism: “The disturbance from a single aircraft transiting over land or nearshore areas to conduct a training or testing activity in the Offshore Area would...have no lasting impact on socioeconomic resources.” This is blatantly false. Multiple individuals state that the noise pollution associated with military training created such a large disturbance to their trips to the Olympic National Park and its surrounding areas that they do not plan on returning. The noise pollution associated with the Growlers makes tourists feel unsafe in the national park. This greatly inhibits their recreational experience, as discussed in Section II(e), and may further negatively impact their desire to return to the national park and its surrounding area. From these testimonials, it is clear that the Navy’s military training over Olympic National Park already has a profound impact on tourism in the area. An increased number of overhead flights, as proposed by the DSEIS, will inevitably exacerbate the negative impacts on tourists listed above and lead to fewer tourists utilizing the natural spaces in the area, including the national park.	While it is possible that the sound levels experienced beneath the Olympic MOA could have negative impacts to some individuals, as referenced anecdotally in the comment, the facts about the history and use of this airspace as described above (see NPCA-01 and NPCA-04), and the analysis included in the NWTT Supplemental EIS/OEIS point to a conclusion that the proposed increase in activities would have a negligible impact on the vast majority people living near or visiting the Olympic National Park and surrounding areas.
NPCA-10	The noise pollution associated with Growler jets lasts far longer than a “moment.” The DSEIS states that disturbances from overhead aircraft in the Offshore area would be limited to the “moment it is heard” and would “be brief	The Navy’s analysis is an accurate description that does not downplay the effects of aircraft overflights. While an aircraft may be audible for a longer period of time during an overflight, as referenced in the comment, the louder levels of sound that are more likely to result in a disturbance would be much

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>(seconds).” The recent experiences of tourists and residents to the area, clearly contradict these statements. As discussed below, the noise pollution associated with the Navy’s aircraft inhibits individuals’ ability to participate in professional and volunteer settings as the growling noise deafens the surrounding area. Recent visitors to the Olympic National Park reaffirm these sentiments:</p> <p>The Navy’s attempt to downplay the deafening noise pollution associated with military overflights as lasting mere seconds is absurd on its face and not supported by any documentation. As demonstrated above, these “momentary” interruptions occur multiple times a day and last minutes each.</p>	<p>brief, typically a few seconds. However, the entire duration of noise generated from all Navy aircraft was considered in the analysis. Higher altitude aircraft can be heard over greater distances, resulting in longer periods when they are audible; but at the same time these higher altitude aircraft would have lower peak noise levels.</p>
NPCA-11	<p>The final SEIS should include acoustic monitoring to portray the most accurate data available.</p> <p>The DSEIS fails to include updated acoustic monitoring and instead relies on a 2010 report from the National Park Service. This NPS report is significantly outdated and should not be relied upon to establish a baseline acoustic level within the MOAs. Recent more accurate research by Lauren Kuehne, a research scientist at the University of Washington, demonstrates the “feasibility and utility of on-the-ground monitoring.” Additionally, Kuehne’s research disputes many of the facts stated in the DSEIS. These factual discrepancies underscore the importance of including acoustic monitoring in the final SEIS in order to provide an accurate assessment of the effects of the proposed action as required by NEPA.</p> <p>These noise measurements are “critical to determining the existing baseline (soundscape) as well as to confirm and modify noise modeling assumptions.” Furthermore, the very fact that the Navy relied on data from the 2010 NPS Report suggests that the agency believes noise monitoring is relevant to the analysis of the proposed action. There is no justification for the Navy not undertaking such monitoring to create an updated acoustic baseline for analysis within the DSEIS.</p>	<p>DoD’s position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD’s position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>While noise modeling remains the appropriate method of analyzing aircraft noise effects from the use of special use airspace, the Navy has been directed by the FY 2020 National Defense Authorization Act (NDAA) to conduct sound-</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>monitoring at two west-coast naval air installations and their associated outlying landing fields on the west coast of the United States where Navy combat aircraft are based and operate, and noise contours have been developed through noise modeling. The NDAA has directed this sound monitoring in order to provide Congress with a report on the accuracy of the Navy's sound modeling. The following two installations were selected: NAS Whidbey Island, Washington (Ault Field and Outlying Landing Field Coupeville) and NAS Lemoore, California. The NDAA requires consideration of adjacent public lands, and as a result the Navy will conduct noise monitoring at one location on Olympic National Park land which lies beneath the Olympic MOA. Although noise contours were not developed for training in the Olympic MOA due to the random nature of training flights, noise modeling was performed as part of the SEIS/OEIS process (see Appendix J). As directed by the NDAA, the results of the 12-month sound monitoring project and the required report to Congress will be publicly available.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
NPCA-12	<p>Kuehne's report established that military aircraft are "dominant contributor[s] to the soundscape of the Olympic Peninsula, representing 85% of the total time aircraft are audible." Across the sampling days, military noise pollution was audible an average of 6-17% during the daylight hours. This time period routinely approached 20%, or a total of 1 hour and 36 minutes, of daylight hours. As discussed above, these impacts are deafening. Many individuals cannot adequately perform in professional capacities during noise disturbance occasions. Therefore, the time lost to noise pollution may severely hinder the productivity of those in the nearby area.</p> <p>Furthermore, individual locations can expect to receive 80-100 military noise disturbance events in a single day. With numbers such as these, it is highly unlikely that any visitors to the Olympic National Park "may not register [noise disturbance] event[s]."</p>	<p>The noise impacts are not deafening as stated in the comment, and are not near a level that could cause hearing damage. The Navy is aware that aircraft noise can disturb some park visitors; however, military aircraft flights have coexisted for decades with the Olympic National Park, and visits to the park have been increasing, not decreasing.</p>
NPCA-13	<p>NPCA is not alone in our request for updated noise monitoring. In addition to private entities, many federal agencies, including the U.S. Forest Service and the National Park Service ("NPS"), requested that the Navy include this vital scientific analysis throughout the NEPA Process. In previous phases of the NEPA procedure, the Navy failed to comply with these requests due to</p>	<p>Please see response to NPCA-11.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>flawed and inaccurate rationale.</p> <p>In an October 5, 2017 letter to the Navy regarding the Notice of Intent to produce an SEIS, the National Park Service requested that the DSEIS include “baseline ambient acoustic data in the Olympic NP” and then continue to collect data via soundscape monitoring within both the MOAs and Olympic National Park for two years. NPS claimed that this data was necessary “to ensure that noise from increased military overflights does not have an appreciable effect on the natural sounds, wilderness character, visitor experience, and on federally-threatened species within Olympic NP.” The agency suggested that the two agencies, NPS and the Navy, consult and review the subsequent monitoring data “to address impacts to these important soundscapes and other resources within affected NPS units.” As discussed above, the Navy did not heed this request and instead chose not to pursue any noise monitoring within Olympic National Park and therefore failed to establish a factually accurate acoustic baseline of the area for analysis purposes.</p>	
NPCA-14	<p>Further, during the Special Use Permit application process, the Forest Service requested “that the Navy fund a noise monitoring effort related to aircraft noise in the Olympic National Forest.” Also during this application process the Forest Service requested information from the Navy regarding noise monitoring that was “currently underway” or would be completed in the future, the Navy responded that the agency did not plan on completing noise monitoring due to the previous NPS report and “significant limitations and difficulties with noise monitoring in an area like the Olympic NP.” The Navy further stated that it would be “very difficult” to differentiate military aircraft from other types of flights, including commercial and general aviation, as well as from other types of noise. As demonstrated by Lauren Kuehne’s research, this is simply false. Kuehne was able to establish that 85% of flights in the area of a total of 4,644 were classified as military operations. The audio samplings used for the report were processed using “widely available software.” The Navy’s explanation as to why it neither conducted monitoring studies nor planned to monitor the area in the future, is therefore robustly false and without merit.</p>	<p>In its analysis for this Supplemental EIS/OEIS, the Navy used the noise model that is most appropriate for special use airspace as described in Appendix J and above in response to NPCA-11. It is also worth noting that Ms. Kuehne’s research claimed that they could distinguish military from non-military flights; there was nothing in the research that validated that claim. The Navy stands by the statement that it would be difficult to differentiate military aircraft from commercial or general aviation aircraft.</p>
NPCA-15	<p>Due to these clear examples of noise impacts reaching beyond the MOAs and Warning Areas, the Navy must broaden the scope of their environmental analysis. In a new DSEIS, noise monitoring must be included to ensure accurate discussion of environmental consequences of the proposed action. Additionally, this analysis must include the entirety of</p>	<p>The analysis of noise impacts in this Supplemental EIS/OEIS included impacts from all of its activities, wherever those impacts occurred, and was not limited to the MOA and Warning Area.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Olympic National Park to encapsulate all of the areas potentially affected by the Navy's increased military training.	
NPCA-16	<p>The DSEIS Fails to Consider Public Health Implications Associated with Growler Jet Noise Pollution</p> <p>The DSEIS does not include an analysis of any of these effects on local residents or visiting tourists. The DSEIS instead states that "increases in noise levels from the baseline would...not have a noticeable impact on public health and safety." As discussed above, the mental health of residents is already impacted by Growler flights overhead through increased stress levels and negative emotions. The DSEIS includes no mention of these well-documented and thoroughly studied public health implications of military noise pollution. The DSEIS therefore fails to comply with the NEPA requirement that public health implications of a proposed action are adequately assessed and disclosed.</p>	<p>The analysis of impacts of aircraft noise on public health was included in Section 3.13 (Public Health and Safety) in both the 2015 Final EIS/OEIS and this Supplemental EIS/OEIS. Based on the predicted maximum noise levels and cumulative noise levels, the conclusion that changes to impacts to public health and safety would not be noticeable are correct.</p>
NPCA-17	<p>The DSEIS Fails to Include Noise Contour Maps</p> <p>Further underscoring the legal insufficiency of both the DSEIS and the 2015 final EIS, neither document included noise contour maps of the data modeling the Navy completed. Noise contour maps "are generated by a computer model that draws from a library of actual aircraft noise measurements. Noise contours produced by the model allow a comparison of existing conditions and proposed changes or alternative actions that do not currently exist or operate at the installation." Les Blomberg, a noise pollution expert and Executive Director of the Noise Pollution Clearinghouse, describes the following: "Noise maps allow experts and the public to visualize, through color coded contour lines, the noise levels at various locations. They provide the noise footprint of the proposed action. Since people can't hear the noise at each location while reading the DEIS, noise maps are an invaluable evaluation tool, providing both the noise level and the location of resources of concern." The primary purposes of NEPA is "to insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." There is no justification for the DSEIS not including such illustrations as a means by which to provide data regarding the impacts of the proposed action that can be easily comprehended by the public.</p> <p>Noise contour maps are commonplace for NEPA documents that assess the noise impacts of a proposed action. Many military agencies include these illustrations in their environmental impact statements. In fact, many environmental assessments (a less detailed NEPA document) include noise contour maps.</p>	<p>Noise contour maps are not applicable to the noise modeling conducted in the Olympic MOA. Any noise contour map produced based on the results of modeling would simply be a reflection of the terrain elevation and would not be useful.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>The Whidbey Island FEIS was published in September of 2018. The focus of the Whidbey Island FEIS was Naval operations at Whidbey Island Complex. As part of the environmental consequences analysis, the Navy included upwards of 24 noise contour maps. The DSEIS, also produced by the Navy, was released in March of 2019 and includes none of these illustrations. Why would the Department of the Navy include noise contour maps for one area of military training operations and exclude the same, necessary illustrations for another-closely related and affiliated area? There is no reasonable explanation or legal justification for the discrepancy between these two documents. The segmentation of the Navy's operations, as discussed in Section IV, further exacerbates this problem.</p> <p>At a minimum, the Navy must include noise contour maps in a new DSEIS for the following items: current baseline levels of military training noise over the park data for which may be found after on-site acoustic monitoring, the projected noise impacts associated with each of the alternatives, and noise contour maps in relation to environmental justice communities as discussed further in Section II(c).</p>	
NPCA-18	<p>The Navy's DSEIS's noise analysis is flawed, both in terms of its limited scope, and the technical and scientific flaws in its noise modeling. The Navy's failure to conduct monitoring, in spite of multiple federal agencies' request, failure to produce noise contour maps, and failure to properly describe and analyze the impacts people in the Olympic Peninsula face are all evidence of the Navy's failure to properly analyze and disclose impacts relating to the noise emitted by its aircraft activities.</p>	Please see response to NPCA-05 above.
NPCA-19	<p>The Draft SEIS Fails to Consider the Navy's Impact on Environmental Justice Communities</p> <p>The proposed action will inevitably affect residents of Native American reservations along the Washington coast and low-income communities in the area. The boundaries of reservations overlap with the project's MOAs and Warning Areas. As discussed in Section II(b)(v), the project will have serious public health implications for residents and visitors to the Olympic Peninsula. Due to their proximity to the project's location, environmental justice communities, specifically several tribes, will face the brunt of the impacts associated with the Navy's military Growler jet training. NPCA is disappointed and shocked by the disparity between the DSEIS and the Whidbey Island FEIS,¹⁰⁷ published less than a year ago, with regard to environmental justice analysis.</p> <p>The DSEIS's failure to account for disproportionate impacts on minority and low income populations is in opposition to CEQ guidance and DOD strategy</p>	<p>As stated throughout the Supplemental EIS/OEIS and in the previous comment responses, the increased activities would have a negligible effect on the soundscape over the Olympic peninsula. The airspace where the activities would occur has been in use for decades by the same type activities. There are no changes to the activities that would result change the results of the 2015 NWTT Final EIS/OEIS: "Because impacts are negligible, there are no disproportionately high impacts or adverse effects on any low-income populations or minority populations."</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>as well as Executive Order 12898. The DSIES is void of any information regarding environmental justice and instead relies on a tenuously-related and flawed socioeconomic analysis as a substitute for any real analysis regarding the impacts environmental justice communities (low income and minority populations) will face if the proposed project is approved. Instead of dedicating a separate and distinct segment to environmental justice analysis, the DSEIS uses a broad disclaimer that environmental justice is incorporated within the document's socioeconomic analysis section:</p> <p>Human resources considered in this Supplemental include cultural resources (Section 3.10), American Indian and Alaska Native traditional resources (Section 3.11), socioeconomic resources and environmental justice (Section 3.12), public health and safety (Section 3.13), and cumulative impacts (Chapter 4). This wording seems to suggest that Section 3.12 addresses both socioeconomic and environmental justice effects of the proposed action. However, Section 3.12 does not detail the environmental justice implications of the proposed action. In fact, the words "environmental justice" are never used in Section 3.12 of the DSEIS. The Navy cannot conflate socioeconomics with environmental justice; the two topics are separate fields of study entailing different concerns and areas of focus.</p> <p>In a blanket statement regarding socioeconomic impacts within the DSEIS's Executive Summary, the Navy states that the Preferred Alternative will have "no disproportionately high impacts or adverse effects on any low-income populations or minority populations." As discussed below, this is blatantly false.</p> <p>Additionally, the DSEIS does contain a section about tribal treaty rights, but this section is not sufficient from an environmental justice standpoint. Treaty rights are an important component when analyzing environmental justice concerns, but analysis does not and cannot stop there. Treaty rights relate to tribal sovereignty and tribe's status as wholly separate governments, but they do not address disproportionate health and environmental impacts on the tribal members or tribal land. Further, the consultation with the tribes appears sufficient in the DSEIS, but the impact analysis on various treaty rights, such as traditional fishing areas, seems dismissive of the tribe's concerns about impacts on their cultural resources. Due to these inaccuracies and omissions, we request that the final SEIS includes a thorough analysis and description of the environmental justice implications of the Navy's increased military training in order to comply</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>with federal NEPA guidelines and regulations.</p> <p>The land of four Native American tribes are in close proximity to or fall within the boundaries of the project's MOAs: the Makah Indian Tribe, the Quileute Tribe, the Hoh Indian Tribe, and the Quinault Indian Nation. As demonstrated in the figures below, the land of three of these tribes lies directly within the boundaries of the Navy's MOAs. Although the Makah Indian Tribe Reservation is not directly within the project's MOAs residents of the area will experience the impacts of the proposed action. As discussed above, the noise pollution associated with the Navy's military training reaches far beyond the boundaries of the MOAs and Warning Areas.</p> <p>The DSEIS does not include any figures that highlight the proximity of these areas to the Navy's MOAs. Accordingly, members of the public may not be aware of these minority communities in the area and cannot utilize the procedures afforded by NEPA to communicate their concerns over the disproportionate impacts the action may have. This is in opposition to NEPA's goal to allow informed public participation in the comment process and CEQ guidance to provide the public with sufficient information to understand environmental justice issues.</p>	
NPCA-20	<p>Looking to the treaty rights analysis section of the DSEIS, the tribes have various concerns regarding impacts on their traditional fishing grounds, loss of fishing gear and changes in availability of marine resources/habitat. These concerns are seemingly glossed over, and the conclusions by the agency do not adequately address how these impacts would amplify the negative effects of the proposed action. For instance, loss of fishing gear, while not a huge loss economically, would have a great cultural impact on the tribes and on their traditional fishing practices, and this impact is not addressed in the treaty rights analysis section. This should be a component of the environmental justice analysis.</p> <p>By omitting any true environmental justice analysis, the Navy blatantly failed to uphold this responsibility.</p>	The issues described in the comment were addressed in the Draft Supplemental EIS/OEIS in Section 3.11.2 (Environmental Consequences).
NPCA-21	<p>The DSEIS includes no mention of low income communities nor the effects that the proposed increase in military operations will have on these individuals. Due to the prevalence of low income communities in the project area, this is a serious omission by the Navy, and contravenes guidelines on environmental justice analysis throughout the NEPA process, which require that low-income communities be identified.</p> <p>Similarly, the DOD strategy requires that the DOD identify and address "disproportionately high and adverse human health or environmental</p>	The Navy considered environmental justice issues in Section 3.12 (Socioeconomic Resources and Environmental Justice) and Section 3.13 (Public Health and Safety) in both the 2015 NWTT Final EIS/OEIS and this Supplemental EIS/OEIS.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>effects of DoD programs, policies, and activities on minority and low-income populations at DoD U.S. sites and facilities.” DOD also is required to collect and analyze information to “identify any opportunities to avoid or mitigate disproportionately high and adverse human health and environmental impacts” on minority and low income communities, as well as “identify and undertake new or existing model demonstration programs to reduce such effects.” DOD has never identified an alternative that would comply with this regulation.</p> <p>The Draft SEIS’ Environmental Justice Analysis Pales in Comparison to that of the Whidbey Island FEIS</p> <p>As discussed previously, the Department of the Navy released the Whidbey Island FEIS less than a year ago. The Growler jets at the heart of the DSEIS will originate and return to the Navy’s Whidbey Island Complex. Despite the strong connection between these actions, there is a vast, and unexplained, discrepancy between the quality of analysis within the DSEIS and the Whidbey Island FEIS. We request that the disparities between these two documents be addressed in the Navy’s final NWTT SEIS.</p>	
NPCA-22	<p>The Draft SEIS’s Unduly Narrow Statement of Purpose and Need Improperly Limited the Range of Alternatives Analysis.</p> <p>NEPA requires that an EIS shall “specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.” This purpose and need inquiry is crucial for a sufficient EIS because “[t]he stated goal of a project necessarily dictates the range of reasonable alternatives.” The agency cannot define its objectives in unreasonably narrow terms such that the outcome is preordained. Courts evaluate a purpose and need statement under a reasonableness standard and will overturn a statement that is arbitrary and capricious. Here, the Navy interpreted its purpose and need for preparing this supplemental EIS so narrowly that it failed to include the Navy’s obligation to consider ways to eliminate, minimize, and/or mitigate impacts, especially to unique places like the Park.</p> <p>Moreover the Purpose and Need statement and subsequent analysis of alternatives makes it clear that the Navy has no intention of considering changes to the Study area or changes in how it conducts its training, except for possible increases in the frequency of that training or the number of planes involved.</p>	<p>The Navy properly developed its Purpose and Need to ensure that proposed training and testing would allow the Navy to meet its Title 10 requirements. The Navy also considered other training and testing locations, as described in Section 2.4.1.1 (Alternative Training and Testing Locations).</p> <p>The Navy considered but did not develop mitigation for aircraft overflights, such as shifting transit routes, relocating aircrew training activities, or modifying flight altitudes, because such mitigation would not be practical to implement due to implications for safety and mission requirements. Please see response to NPCA-26 and Appendix K in the Final Supplemental EIS/OEIS, Section K.3.4.6 for additional details.</p>
NPCA-23	<p>The alternatives analyzed in this DSEIS include the no action alternative, the preferred alternative, and an alternative that focuses on adding even more training and testing activities than those considered in the preferred</p>	<p>Please see response to NPCA-22.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>alternative (referred to by NPCA as the “preferred plus alternative”). Analyzing only these few alternatives is inadequate as it fails to constitute a reasonable range and fails to consider alternatives with less environmentally damaging impacts. Essentially the Navy improperly interpreted its purpose and need to mean that it would do exactly what it was already doing, in the same way and in the same place, but maybe more often and with more aircraft. This defeats and undermines NEPA’s core purpose of requiring federal agencies to fully evaluate all reasonable alternatives, including in particular alternatives that mitigate or decrease environmental impacts.</p> <p>By limiting its analysis to essentially only the preferred and preferred plus alternative, the Navy failed to fully consider other important and feasible alternatives including an alternative with reduced activities and an alternative that involves the Navy avoiding areas of Olympic National Park outside of the MOAs. The Navy did consider in appendix K “geographic mitigation,” but only regarding impacts from its at sea activities on marine species. That however is not substitute for an alternative that focuses on mitigating all types of adverse impacts, including those caused by noise from its Navy jet overflights. In fact by choosing to use a “no action” alternative that is such a drastic departure from its past and ongoing actions, the Navy, to be consistent, must consider alternatives that fall in the middle between no training, and the increased training that the Navy proposes to do. Such “middle ground” alternatives would include fewer, or even no Navy jet overflights of the Park and alternatives that focus generally on mitigating all adverse impacts from both at sea and in the air Navy actions.</p>	
NPCA-24	<p>The Navy’s use of its “no action” alternative when it compares the impacts of alternatives on specific resources is also very problematic. How the Navy discusses impacts from “airborne acoustics” on recreation generally and in the Park specifically illustrates this. First in the general impacts discussion, the SDEIS recognizes that the Navy jet overflights cause at least some adverse impacts to recreation and to recreation in the Park, although, as NPCA discusses elsewhere, this “analysis” itself has serious flaws. However when the DSEIS discusses the impacts to this same resource under the “no action” alternative all references to land-based recreation generally and to the Park specifically disappear. This discussion begins by asserting that even under the “no action alternative “other military activities not associated with this Proposed Action would continue to occur.” This cryptic reference is never defined or explained in this part of the SDEIS or in its</p>	<p>The Navy revised the No Action Alternative analysis in Section 3.12.3.2.3 (Impacts of Airborne Acoustics Under the No Action Alternative). The new analysis eliminates the statement “Other military activities not associated with this Proposed Action would continue to occur” and clarifies that some environmental benefits to the Olympic Peninsula could result.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>analysis of cumulative impacts. If Navy jet overflights of the Park would in fact continue under the “no action” alternative the Navy needs to clearly say that and explain under what Navy program or action such overflights would continue. But then the SDEIS discussion of impacts to airborne acoustics/recreation continues without any mention of the Park or benefits to the Park and recreation use there if there are no, or at least far fewer navy jet overflights. The Navy has a lengthy discussion on the supposed adverse effects on the local economy if training exercises cease under the “no action” alternative, but its summary of benefits is limited to saying that “environmental conditions would either remain unchanged or improve slightly.” Then the SDEIS discussion of no action impacts adds, confusingly, that “discontinuing training and testing under the No Action Alternative would lessen the potential for disturbance from airborne acoustics, but would not measurably change the frequency of severity of disturbance from airborne acoustics experienced by the public in the Study area. This assertion simply make no sense, but it is clearly designed to create the impression that, while stopping training activity would cause significant harm, it would have little or no environmental benefit.</p> <p>This is not the “rigorous” and objective” evaluation of alternatives required by NEPA. Instead it is a biased and incomplete comparison of alternatives that directly violates NEPA. The Navy is essentially using the “no action” alternative” to showcase what it believes is a “parade of horrors” if training and testing in the planning area were to stop. However, when the Navy does that, at the same time it refuses to acknowledge, and balance against any such detriments, the significant environmental benefits and public health and quality of life benefits that would occur. Without question beneficial impacts to terrestrial wildlife and recreation, especially recreation in the Park, and public health and quality of life for the people who live in the study area, including environmental justice communities, would occur if Navy jet overflights do not occur in the future. NEPA requires an EIS to acknowledge both adverse impacts and benefits when comparing alternatives.</p>	
NPCA-25	<p>In terms of a analyzing an alternative that seeks to reduce Navy activities, while the Navy lists this alternative in the DSEIS, it quickly and in conclusory fashion eliminated it from further consideration. The Navy claims, without explanation that a reduction of training and testing would prevent it from meeting its statutory requirements. NEPA requires agencies to rigorously explore alternatives and these conclusory statements offered by the Navy are insufficient to eliminate this alternative from further analysis. The Navy</p>	<p>The Navy has added further explanation in the Final Supplemental EIS/OEIS as to why a reduction of training or testing would prevent meeting statutory requirements.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	should re-evaluate this alternative in the final EIS and consider the environmental impacts resulting from fewer Navy activities. By analyzing a “reduced activities” alternative, the Navy’s alternatives analysis would better resemble a “range” by including a more environmentally friendly alternative.	
NPCA-26	The Navy also fails to consider an alternative that eliminates impacts to areas of Olympic National Park that lie outside of the MOAs. While a portion of the Park lies within the MOAs, the Navy’s transit flights to and from the MOAs pass directly over areas of the ONP that lie outside of the MOAs, directly impacting the Park’s visitors and wildlife. These transit flights produce significant noise and annoy Park visitors who seek out the area for its natural sounds; despite these impacts, the Navy’s DSEIS fails to ever evaluate and consider impacts to the entire ONP, see Section II(e) for further discussion. The DSEIS is unclear as to why the Navy utilizes transit routes over a National Park; when discussing these routes with Navy personnel at a public meeting, the Navy stated that the Federal Aviation Administration (“FAA”) determined its flight route. It remains unclear to NPCA why the Navy failed to consider an alternative analyzing different transit routes, which would eliminate a significant portion of the impacts within the ONP. The Strait of Juan De Fuca, which lies just north of the Park and MOAs currently routes air carriers to SEATAC and it is likely that military aircrafts could be brought onto that route or a similar route. The Navy failed to consider alternatives that would avoid or minimize adverse effects when it neglected to analyze alternative transit routes.	The Navy considered but did not develop mitigation for aircraft overflights, such as shifting transit routes, relocating aircrew training activities, or modifying flight altitudes, because such mitigation would not be practical to implement due to implications for safety and mission requirements. The Federal Aviation Administration (FAA) controls the National Airspace System and routes that overlap the NWTT Study Area. The FAA designed the routes to efficiently manage air traffic in the region and to safely deconflict military traffic from commercial and general aviation aircraft, with consideration given to the presence of Canadian National Airspace and traffic to the north. The FAA is the responsible federal agency for determining transit routes and any changes to such routes must be approved by the FAA. The Navy is currently in discussions with the FAA exploring the possibility of shifting the FAA-established transit routes for military aircraft transiting to and from the Olympic MOA from Naval Air Station Whidbey Island to the north of the Olympic Peninsula. The purpose of these discussions is to consider the efficient and safe use of navigable airspace. While ultimately any shift in transit routes is the FAA’s decision, it is possible that, if approved, such a shift will have the added benefit of reducing military aircraft noise over the Olympic National Park.
NPCA-27	The Navy used the stated purpose and need to develop only one true “alternative,” which happened to be an increase in proposed flight and vessel activity. The Navy cannot define its objectives in such a way that its desired outcome is the only reasonable alternative. Here, the Navy’s purpose and need was interpreted in such a way that they Navy only looked at alternatives that the Navy desired. The Navy needs to train, NPCA is not disputing that, however, there is no reason that it must train in this way, with these many flights, and in this particular area. There is also no reason at all for why the Navy needs to fly over any, or at least most, of Olympic National Park in order to conduct its necessary training. The Navy’s failure to properly define the DSEIS’s purpose and need to include the Navy’s obligation to consider ways to eliminate, minimize, and/or mitigate impacts to unique places lead to the Navy failing to consider a reasonable range of alternatives. Thus, the Navy’s DSIES’s	As stated above in NPCA-22, the Navy properly developed its Purpose and Need to ensure that proposed training and testing would allow the Navy to meet its statutory requirements. And, as stated in Section 2.4.1.2 (Reduced Training and Testing) of the Final Supplemental EIS/OEIS, Alternative 1 represents “the minimum training for the appropriate number of Naval forces to gain the necessary levels of readiness for the commander to be confident of meeting 10 U.S.C. 8062 requirements.”

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	statement of purpose and need and range of alternatives analysis is inadequate and illegal under NEPA.	
NPCA-28	<p>The Draft SEIS Fails to Protect Scenic, Aesthetic, and Recreational Values. An EIS must include a detailed statement regarding any adverse environmental effects which cannot be avoided should the proposal be implemented. Effects include impacts to aesthetic and social values, such as recreation, whether direct or indirect. The draft SEIS fails to properly consider the impacts the Navy's activities will have on the Park, particularly those areas outside of the MOAs.</p> <p>The Navy's training and testing activities have an extremely negative impact on visitor's experiences at the Park, both in areas within and outside the MOAs. The draft SEIS fails to fully realize these impacts and thus fails to take a hard look at adverse environmental effects resulting from the increased Navy flights.</p>	<p>The Navy considered potential effects to activities both within and outside the area beneath the Olympic MOA. In the Final Supplemental EIS/OEIS, the Navy included additional analysis of aircraft transits to and from the Olympic MOA, which could have impacts beyond the borders of the Olympic MOA.</p>
NPCA-29	<p>The Draft SEIS Fails to Adequately Consider the Impacts Facing Wildlife in the Olympic Peninsula in General, and Particularly Birds.</p> <p>One of the main concerns with the Navy's analysis of impacts to species is the Navy's unduly narrow scope of review. While discussed in more detail above in Section II(a), because the Navy improperly decided to narrow its review to only the MOAs and Warning Areas, a significant amount of a species' range and habitat was eliminated from the analysis. In fact, both the marbled murrelet and northern spotted owl, have designated critical habitat in the Olympic National Park in areas that are outside of the MOAs but still directly impacted by the Navy's transit flights. To properly consider the impacts species face due to the Navy's training and testing activities, the Navy must prepare an EIS that, at a minimum, looks at impacts to species within the entire Olympic National Park, as opposed to species that only occur within the MOAs.</p> <p>The Navy's training and testing activities will have numerous negative impacts on wildlife within the Park, particularly to bird species. The draft SEIS fails to fully realize these impacts and thus fails to take a hard look at adverse environmental effects resulting from the increased Navy flights.</p>	<p>Potential impacts to wildlife in general and birds in particular were analyzed thoroughly in the 2015 NWTT Final EIS/OEIS and that analysis was supplemented with updated research and in consideration of changes to the proposed activities. There is no new research on the northern spotted owl, or any change in activities that would change the analysis of impacts to the spotted owl from the 2015 NWTT Final EIS/OEIS. Therefore, the focus in this Supplemental was to the marbled murrelet and short-tailed albatross. In addition, the Navy consulted with USFWS on potential impacts to ESA-listed species, including marbled murrelet and short-tailed albatross.</p>
NPCA-30	<p>The Draft SEIS Fails to Properly Consider the Cumulative Impacts of the Proposed Action.</p> <p>The draft SEIS first notes that the geographic scope of the cumulative impacts analysis is defined by the "Study Area" which encompasses the MOAs, Warning Areas, and areas within the inland waters. A Figure of the Study Area from the draft SEIS is provided below. This geographic scope is far too narrow. When analyzing project specific impacts, it is often</p>	<p>The Cumulative Impacts of the NWTT Supplemental EIS/OEIS are not limited to the areas described in the comment. The Navy clarified in the Final Supplemental EIS/OEIS that "The Study Area used for the cumulative impacts analysis includes areas far outside of the Study Area used for this Supplemental, because it includes all actions that may add to impacts affecting the resources that were analyzed in this Supplemental."</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	sufficient to analyze effects within the immediate area of the proposed action; however, when analyzing cumulative effects, the geographic boundaries almost always should expand. At a minimum an EIS must explain why it has limited the geographic scope of a cumulative impacts analysis. By limiting the scope of the analysis to only the MOAs, Warning Areas, and inland waters, the Navy improperly narrowed the scope of the cumulative impacts analysis. The scope of the cumulative impacts section should, at a minimum, include impacts to the entire Olympic National Park.	
NPCA-31	The draft SEIS also notes that the time frame for cumulative impacts centers on the timing of the proposed action. The timing of the proposed action consists of training and testing activities that are necessary to meet requirements beyond 2020 and into the reasonably foreseeable future. This time frame is also too narrow. The definition of cumulative impacts explicitly requires agencies to analyze impacts from past, present and reasonably foreseeable future actions. By focusing the time frame from 2020 and into the future, the Navy eliminated decades of Naval activity within the Olympic Peninsula from the cumulative impacts review.	In the cumulative section, the Navy is clear that we looked at past, present, and reasonably foreseeable actions.
NPCA-32	When reviewing the cumulative impacts analysis, NPCA faced additional confusion. While the Navy seemed to improperly narrow the scope of the review, in terms of both geography and timing, the draft SEIS provides a table of “Past, Present, and Reasonably Foreseeable Actions.” This table includes actions that are outside both the specified geographic Study Area and time frame specified for review. Thus it remains unclear to NPCA, and the general public, what the scope of the cumulative impacts review actually consisted of—the improperly narrow geographic scope and time frame designated in the “Scope of Cumulative Analysis” section, or if every action listed in Table 4.3-1 was analyzed?	See responses to NPCA-30 and NPCA-31.
NPCA-33	Overall, the DSEIS addresses cumulative impacts by including a long list of ongoing or future actions. Then, at the end of this table it “analyzes” the cumulative impacts to various resources from this list of actions and the Navy’s training and testing actions with a series of short, almost entirely conclusory paragraphs. Lists of actions are of course not an analysis, especially when those lists, are incomplete, and conclusory assertions of “no cumulative impacts” are equally ineffectual when attempting to comply with NEPA. One obvious omission from its list of ongoing or future actions is commercial logging. Even if limited to the “study area” that area includes large areas of national, state and private forests where there are always ongoing commercial logging operations. Attached below is a map showing	In the Final Supplemental EIS/OEIS, the Navy included the analysis of additional activities that have occurred or will occur in the vicinity of the Study Area, including logging operations. The Navy then considered the cumulative impacts of its activities in addition to all of the activities listed in Table 4.3-1. The Navy also included additional analysis in Section 4.4.12.3 (Cumulative Impacts on Socioeconomic Resources) to describe the occurrence and potential impacts of military, commercial, and general aviation in the vicinity of the Olympic National Park.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>active state timber sales in the region. In terms of noise impacts, commercial logging operations create extensive, localized noise and would create cumulative impacts with the noise from Navy Jet overflights on recreational users and on wildlife, including in particular birds.</p> <p>Another legal concern NPCA has with the draft SEIS's cumulative impacts analysis is the inadequate analysis relating to impacts from all aircraft use within and above the Olympic Peninsula. The Navy does list "commercial and general aviation" as an action that could cause cumulative impacts. However, in its subsequent "analysis paragraphs, it first appears to discuss noise impacts to the Park in the "cultural resources" section. But here it limits its actual discussion to a repeat of its flawed analysis of direct noise impacts from its navy jets, does not mention commercial aircraft as a source for cumulative impacts, and summarily concludes: "when considered with other actions (see Table 4.3-1), the contribution of the Proposed Action of this Supplemental EIS/OEIS to the Olympic National Park soundscape would be short term, intermittent, and temporary." This is a conclusion, not the actual analysis required by NEPA.</p> <p>Cumulative impacts on Park resources from Navy jet overflights and other activities like nearby commercial logging and commercial jet overflights required an actual discussion and quantification of those impacts. The DSEIS' conclusory assertions of "no impacts" violates NEPA.</p>	
NPCA-34	<p>The Navy's Failure to Provide Documents to Both the General Public and NPCA Violates NEPA.</p> <p>When an agency prepares an EIS, it shall incorporate information by reference and/or prepare an appendix. Information that is incorporated by reference includes materials that are not directly related to preparing an EIS, such as other EISs, research papers in the general literature, or technical background papers. Information incorporated by reference "must be made available, either by citing the literature, furnishing copies to central locations, or sending copies directly to commenters upon request." A significant amount of material seems to be incorporated by reference in this draft SEIS yet, although the Navy has an extensive website regarding this</p> <p>DSEIS, NPCA and other members of the public were unable to find the material on that specific website or other Navy websites. During a public meeting held for the draft SEIS, NPCA's counsel asked several Navy personnel where information referenced in the draft SEIS could be found, but no one was able to answer this question. NPCA's counsel sent an email</p>	<p>The requested references, the majority of which are publicly available via the internet, were provided to NPCA. Any references incorporated by reference were made available for inspection to a member of the public (if requested) in accordance with 40 CFR 1502.21.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>on April 30, 2019 again seeking access to this referenced material. Despite NPCA's broad request for access to all referenced material, encompassing references from a total of 25 sections in the draft SEIS, the Navy only provided access to references from one Appendix. On May 24, NPCA's counsel followed up with the NWTT Project Manager noting the requirement to provide access to all reference material, but also narrowed NPCA's request to specific SEIS sections. By the time of submitting this comment, the Navy has yet to respond to this narrowed request for information.</p> <p>In addition to incorporating material by reference, agencies may also prepare an appendix. This appendix shall consist of all materials prepared in connection with the EIS, such as research papers directly relevant to the proposal, lists of affected species, or discussions of the methodology of models used in the analysis of impacts. Importantly that appendix and related information must be circulated with the EIS, or be readily available upon request. NPCA, again, had trouble obtaining any information related to preparing the draft SEIS—this information was not circulated with the EIS nor was it available on the NWTT Project website. In an effort to receive information necessary for its comment, NPCA's counsel sent another email to the Navy requesting information and underlying data and technical information used specifically in the Navy's noise analysis and modeling. It is impossible for NPCA to fully evaluate or replicate the Navy's noise modeling, as it is entitled to do under NEPA, without this information. Again, at the time NPCA submits this comment, the Navy has not responded to this request.</p> <p>Despite requests from NPCA, the only information that was publicly available during the draft SEIS comment period was reference material from one section of the draft SEIS. A vast majority of incorporated materials and other materials/data used in preparing the draft SEIS were unavailable to NPCA and the public during the comment period. The Navy's failure to provide necessary information to the public during this time explicitly violates one of NEPA's core purposes of ensuring that environmental information be available to citizens before decisions are made.</p>	
NPCA-35	<p>Additionally, in an effort to ensure that it had necessary information during the comment period, NPCA sent two Freedom of Information Act ("FOIA") requests to the Navy, one in 2016 and another in 2018 to supplement the earlier 2016 request. The Navy has yet to adequately respond to either request. In fact, NPCA was forced to file suit against the Navy as a result of</p>	<p>The Freedom of Information Act (FOIA) (5 U.S.C. 552) is a separate and distinct statute from the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.). During the development of its analysis under NEPA for this Draft Supplemental EIS/OEIS, the Navy provided NPCA references upon NPCA's request. NPCA was afforded the opportunity to participate in the</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>its failure to sufficiently respond to its 2016 FOIA. In regards to its 2018 FOIA request, NPCA submitted an administrative appeal detailing NPCA's concerns with the Navy's inadequate search and improper redactions. At the time NPCA submitted this comment the FOIA lawsuit remains pending. The 2018 FOIA administrative appeal was granted on June 11, 2019, which remanded the 2018 FOIA request back for a new search. So at the time NPCA submitted this comment, it did not have the documents it requested from either the 2016 or 2018 FOIA requests. Due to the Navy's failure to adequately respond to NPCA's FOIA requests, NPCA was forced to file FOIA requests with other agencies for information regarding the NWTT Project. On May 10, 2019, NPCA sent FOIA requests to the U.S. Forest Service, the U.S. EPA, and the Federal Aviation Administration. These FOIA requests remain pending at the time NPCA submits this comment.</p> <p>Despite its best efforts—filing multiple FOIA requests and seeking documents directly from the NWTT Project Manager—NPCA did not have access to documents necessary for it to fully comment on the draft SEIS. Public scrutiny is essential to the NEPA process, and the Navy's improper withholding of environmental information related to its decision-making process directly violates NEPA.</p>	<p>NEPA process and the NPCA provided comments on the Proposed Action both before and after NPCA's receipt of all references. Separate from this release of references, the Navy, in response to NPCA's FOIA requests, provided NPCA with responsive, releasable information.</p>
NPCA-36	<p>The Navy Cannot Segment the NEPA Analyses</p> <p>The Navy's unreasonable interpretation of the proposed action—where the SEIS attempts to be a narrow environmental analysis concerning only impacts related to true "at sea" activities—is our largest concern and is the foundation for many of our other concerns. Namely, the Navy is illegally piecemealing, segmenting, and improperly limiting its analysis to individual training exercises or actions in an attempt to characterize its activities as "minimal" with respect to its impacts to the Olympic Peninsula. Segmenting related analyses is plainly illegal under NEPA and contravenes the statute's purpose. Yet, throughout its various segmented NEPA analyses addressing its training in the Pacific Northwest, the Navy has done just that.</p> <p>Despite the requirement to evaluate closely related projects within the same EIS, the Navy failed to properly consider all of its activities in the Olympic Peninsula in one comprehensive NEPA document. For example, after preparing what was purported to be a comprehensive analysis in 2010 (an EIS that does not even mention Olympic National Park), the Navy prepared a separate EA in 2014 that addressed electronic warfare activities (another NEPA document that fails to even mention Olympic National Park). Then in October 2015, the Navy issued its Northwest Training and</p>	<p>The Navy prepares Environmental Impact Statements (EIS) and Environmental Assessments (EA) in order to comply with the National Environmental Policy Act (NEPA). These NEPA documents are intended to ensure decision makers consider the potential environmental effects of a proposed action and its alternatives, provide an opportunity for public involvement, and promote transparency by informing the public of these potential environmental effects. Each NEPA document addresses a specific proposed action, separated from other actions by its purpose and need, independent utility, timing, and geographic location. Some NEPA documents are stand-alone documents; others tier off or expand the analyses of other NEPA documents. NEPA documents for training and testing, including this Supplemental EIS/OEIS, focus on training and testing activities occurring within a range complex or military operation area and involve different types of aircraft, ships, and range complex enhancements. NEPA documents for aircraft homebasing actions focus on aircraft operations in and around the airfield and their facility needs. NEPA documents for installations focus on infrastructure enhancements for host and tenant command missions. Importantly, every environmental document considers the cumulative impacts to the environment from other relevant past, present, and reasonably foreseeable</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Testing (“NWTT”) EIS/OEIS analyzing environmental effects related to its “need to support and conduct current, emerging, and future training and testing activities in the [NWTT] Study Area” (in this NEPA document the Navy buried a very limited discussion of impacts to Olympic National Park in an appendix that referenced it as a World Heritage site rather than a national park.). Then, in November 2016, the Navy issued another draft EIS, this time analyzing environmental impacts related to the Navy’s need to “continue and expand existing Growler operations at the Naval Air Station Whidbey Island complex . . . [and] increase electronic attack capabilities by adding 35 or 36 aircraft,” among other things. Clearly, at the time it issued its 2015 NWTT EIS, the Navy knew of its pending action to also add an additional 35–36 EA-18 Growler aircrafts to its fleet. Thus, the two EISes—issued approximately one year apart—analyzed projects that would have “cumulative and synergistic environmental impact[s] upon [the Olympic Peninsula]” and that should have been analyzed together.</p> <p>Rather than assess all of the impacts associated with training activities on and above the Olympic Peninsula in one document, the Navy has split them up into several documents over the course of several years. Between 2010 and the present, the Navy has published at least 6 NEPA documents that separately assess impacts flowing from its activities in the Olympic Peninsula, including the:</p> <ul style="list-style-type: none"> • 2010 Northwest Training Range Complex Environmental Impact Statements/Overseas Environmental Impact Statement • 2015 Northwest Training and Testing Environmental Impact Statement <ul style="list-style-type: none"> o 2019 Northwest Training and Testing Supplemental Environmental Impact Statement • 2016 EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island, Washington Draft Environmental Impact Statement <ul style="list-style-type: none"> o 2018 EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island, Washington Final EIS <p>Here, the Navy has taken effectively one action (or one series of connected or related actions)— its training activities in the Pacific Northwest—and split it up into multiple separate analyses. In doing so, “the public ... can[not] be assured that the [agency] provided the hard look that it is required to provide.” The Navy goes to some length to argue that these various actions are not “connected actions” as defined by 40 C.F.R. Section 1508.25(a)(1). NPCA disagrees, but, in any case, notes that the Navy does not address whether the actions are “related” as defined by 40 C.F.R. Section 1502.4 or “similar” as defined by Section 1508.25(a)(3), which they</p>	<p>future actions (federal, state, local, and private) in addition to the proposed action.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	certainly appear to be. And such related or similar actions also should be addressed in a single NEPA document. The Navy does acknowledge that all these supposedly “unconnected actions” must be included in its cumulative impacts analysis and it claims to have done so in the DSEIS. NPCA explains below why the DSEIS cumulative impacts analysis is inadequate. Moreover, what is really missing from the Navy’s overall approach to NEPA compliance regarding its training and testing activities in the Pacific Northwest is a broad programmatic NEPA document as contemplated by Section 1502.4, that explains the overall training and testing program and addresses its broader, regional and cumulative impacts. That programmatic analysis would then be followed by more specific NEPA documents that tier to the programmatic analysis, see Section 1502.20, and focus on evaluating the more localized and specific impacts of certain types of activities.	
NPCA-37	<p>The DSEIS confuses things even more by calling itself a “supplemental” DEIS but insisting that it is not “incorporating” the analysis from the 2015 FEIS, which it is supposedly supplementing. The DSEIS also does not claim to tier to the 2015 FEIS as a supplemental EIS normally would do in order to avoid any duplicative analysis. Nevertheless, despite this affirmative refusal to “tier” or “incorporate,” the DSEIS cites to the analysis in the 2015 FEIS extensively. This is all unnecessarily confusing and easily avoidable, if the Navy had followed proper NEPA procedures. Despite its label and unreasonable attempt to restrict its scope, the DSEIS is not a “supplemental” DEIS. Because it does not ever expressly tier to any prior Navy NEPA document and explicitly claims not to incorporate by reference the 2015 FEIS, the Navy cannot point to other prior NEPA analyses to satisfy its legal obligations under NEPA. This DSEIS must stand or fall on its own and it “falls” in many respects.</p> <p>Under NEPA, the public deserves a comprehensive review. By piecemealing the analysis out bit by bit, the Navy makes it incredibly difficult, if not impossible, for the public to effectively comment on the proposed training activities, particularly in relation to the extent of the Navy’s cumulative effects on the region. Further, the segmentation undertaken by the Navy forces the public to spend considerable time and effort to parse and understand all of these constantly intertwining analyses.</p> <p>Here, the Navy appears to be continuing its practice of segmenting different (yet interrelated) NEPA analyses. We ask that, instead, the Navy perform one comprehensive EIS that analyzes all of its impacts from all of</p>	<p>In accordance with 23 CFR § 771.130 and 40 CFR section 1502.9(c)(1), the Navy prepared a Supplemental EIS/OEIS to the 2015 NWTT Final EIS/OEIS as the Navy determined: (1) changes to the proposed action would result in significant environmental impacts that were not evaluated in the 2015 NWTT Final EIS/OEIS and (2) new information or circumstances relevant to environmental concerns and bearing on the proposed action or its impacts would result in significant environmental impacts not evaluated in the 2015 NWTT Final EIS/OEIS. This is stated in Chapter One (Purpose and Need) of the Draft Supplemental EIS/OEIS. The Draft Supplemental EIS/OEIS does not purport to tier off or incorporate by reference the 2015 NWTT Final EIS/OEIS because it supplements the 2015 NWTT Final EIS/OEIS. The 2015 NWTT Final EIS/OEIS is not a programmatic or other broader-scope environmental impact statement. See 40 CFR sections 1502.20 and 1502.28 and 43 CFR section 46.140 for CEQ guidance on tiering and using tiered documents.</p> <p>The Navy is not segmenting its different NEPA analyses. The Navy prepares separate NEPA documents covering different proposed activities because each NEPA document is focused on a specific proposed action, is separated from other actions by its respective and distinct purpose and need, has independent utility, has different timing, and involves differing geographic locations. Specifically, this Supplemental, which is designed to address the Navy’s statutory responsibility to maintain, train, and equip combat-ready forces, analyzes the potential impacts of training and testing activities from the year 2020 forward (as stated in Chapter One). This mission is achieved in part by conducting training and testing within the Study Area in accordance with established Navy military readiness requirements. The EIS for EA-18G</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	its testing and training activities in the Pacific Northwest. Until it does so, the Navy will not comply with the requirements of NEPA.	"Growler" Airfield Operations at Naval Air Station Whidbey Island Complex, on the other hand, states that the purpose of the Proposed Action is to augment the Navy's existing Electronic Attack community at NAS Whidbey Island by operating additional Growler aircraft that have been appropriated by Congress in order to maintain and expand Growler operational readiness to support national defense requirements. Therefore, training and testing in the NWT Study Area would continue if regulatory and permitting actions were approved, regardless of the decisions made regarding Growler Airfield Operations or other activities conducted in the Pacific NW and analyzed under separate NEPA documents.
NPCA-38	The Navy must also offer NPCA the opportunity to submit a supplemental comment after NPCA receives all the specific information it has requested regarding the DSEIS references and underlying noise modeling information and after it receives complete responses from the Navy to NPCA's 2016 and 2018 FOIA requests. After the Navy reviews this comment, other comments from the public and NPCA's supplemental comment, NPCA is confident the Navy will conclude that it must prepare a significantly revised and improved second Draft SEIS and that revised document out for additional public comment.	Please see response to NPCA-35.
NPCA-39	NPCA also requests that the Navy as many other federal agencies do, post all comments it receives regarding the DSEIS online so the public can see what issues are raised by other members of the public and other governmental agencies. Indeed, NEPA requires and comments by other Federal agencies on any draft EIS must be made public. Almost all other federal agencies do not treat comments from members of the public on a NEPA document as confidential or entitled to any privacy protections. NEPA commenting is clearly intended to be a public process and an important part of that public process is allowing all members of the public to review comments by other members of the public and other governmental agencies.	The Navy has posted all comments received on the NWT Draft Supplemental EIS/OEIS on the project website at: https://www.nwtteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/Public-Comments .
NPCA-40	I am writing on behalf of the National Parks Conservation Association ("NPCA") to request that the Department of the Navy exercise its discretionary authority under 40 C.F.R. § 1506.10(d) and extend the public comment period for the Northwest Training and Testing Draft Supplemental Environmental Impact Statement (the "Draft SEIS"). As I explain in more detail below, the Navy has repeatedly failed to fully respond to NPCA's valid and timely requests under the Freedom of Information Act ("FOIA") for records that NPCA, and the public generally, needs and is entitled to have in order to prepare comments on that Draft	Jackie responded to this request, so awaiting her response.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	SEIS. NPCA requests that the Navy extend the public comment period by 45 days, until July 26, 2019, or 30 days after the Navy fully responds to NPCA's FOIA requests, whichever extension period is shorter.	
National Parks Conservation Association, Supplemental Comments, November 15, 2019		
NPCA-41	<p>I am responding to your November 10, 2019 email, which I received at 7:54 pm on a Sunday evening during a three-day holiday weekend. Exhibit 1. My response has been delayed somewhat by the timing of your email. You should consider this to be a supplemental comment by my client the National Parks Conservation Association ("NPCA"). But rather than a supplemental comment regarding the substance of and analysis in the Navy's Draft Supplemental Environmental Impact Statement ("EIS/OEIS") (the "2019 DSEIS"), this is a supplemental comment documenting the Navy's continuing deeply flawed and illegal National Environmental Policy Act ("NEPA") public participation process regarding that 2019 DSEIS and the forthcoming 2020 Final SEIS. Your November 10th email incorrectly suggests that the Navy has fulfilled its responsibility to provide NPCA with the records it has requested under the Freedom of Information Act ("FOIA") and under NEPA's public participation provisions, and this comment will explain just how incorrect that assertion is. Moreover your letter references a two week "deadline" for NPCA to submit a supplemental comment, and this supplemental comment will explain why that is an unreasonable deadline and a deadline that NPCA thought was still open to discussion between the parties' counsel. NPCA expressly reserves the right to submit an additional supplemental comment regarding the substantive analysis and assertions in the Navy's 2019 DSEIS, once it has in fact received all of the records underling the Navy's 2019 DSEIS NEPA analysis that NPCA has properly and repeatedly requested but has still not received.</p> <p>Over the past several decades the Navy has engaged in a fractured NEPA process regarding its Navy jet electronic warfare training exercises. Those military jet aircraft operate out of its base on Whidbey Island in Puget Sound and fly over the Olympic Peninsula, including Olympic National Park while conducting those exercises. Unfortunately the Navy has never produced a programmatic NEPA analysis regarding these training exercise and has instead issued a series of much narrower NEPA analyses that examine only specific aspects of those exercises or recent changes to those exercises.</p> <p>NPCA's June 2016 FOIA Request</p>	Please see response to NPCA-35.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>As you know NPCA submitted a FOIA request to the Navy in June of 2016 (the “June 2016 FOIA”). That June 2016 FOIA sought records regarding and underlying several of the Navy’s most recent jet training NEPA documents including a 2014 Environmental Assessment (“2014 EA”) and a 2015 EIS. NPCA needed those records in the short term to address a then pending Navy permit application to the U.S. Forest Service that relied upon the 2014 EA and 2015 EIS. However from a longer term perspective, NPCA also needed these records to prepare to participate in the Navy’s next NEPA analysis, which was expected to begin in 2017. See NPCA’s October 4, 2017 Scoping comments at 6-7. As NPCA explained in its 2017 scoping comments on the forthcoming 2019 DSEIS it would be a direct violation of NEPA, 40 C.F.R. § 1506.6(f), and FOIA for the Navy to force NPCA to participate in a public commenting process regarding the 2019 DSEIS before the Navy had fully responded to NPCA’s 2016 FOIA. Id. The Navy’s initial response to NPCA’s 2016 FOIA was to produce a ridiculous 158 pages of responsive records. The Navy then required NPCA to go through two administrative appeal processes, both of which were “successful” in that they resulted in remands for new searches but neither remand resulted in the Navy producing a single additional page of responsive records.</p> <p>NPCA’s December 2018 FOIA Request</p> <p>In December of 2018, because NPCA believed the Navy’s release of its 2019 DSEIS was likely during the spring of 2019 and because NPCA had still received no additional records in response to its 2016 FOIA, NPCA submitted a second FOIA request to the Navy (the “2018 FOIA”). The 2018 FOIA clearly indicated it supplemented the 2016 FOIA and sought all records created or obtained by the Navy regarding its ongoing NEPA process since it received the 2016 FOIA. In February of 2019 the Navy produced only about 400 pages of records in response to the 2018 FOIA, which was clearly not all of the responsive records. NPCA therefore administratively appealed the Navy’s initial inadequate response to the 2018 FOIA. In addition to challenging the scope of the Navy’s search, that April 2019 appeal objected to the Navy’s improper redactions under FOIA exemption 6 and its withholding of comments by other agencies regarding its drafts of the 2019 DSEIS, in clear violation of 40 C.F.R. § 1505.6(f). In June of 2019 the Navy granted NPCA’s FOIA administrative appeal and remanded the 2018 FOIA so the Navy could conduct a supplemental search (the “2018 FOIA Supplemental Search”). Significantly, by this time the 2019 DSEIS was already released for public comment and only one day remained in the comment period. As such, NPCA was forced to submit its initial</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>comments of the 2019 DSEIS without the benefit of most of the responsive records sought by its 2018 FOIA.</p> <p>NPCA's 2019 FOIA Lawsuit</p> <p>Of course NPCA also was forced to submit its 2019 DSEIS comments without a complete response to its 2016 FOIA. When the Navy announced that its 2019 DSEIS was out for public comment in March of 2019, NPCA reluctantly decided that the only way it would possibly get a complete response to the 2016 FOIA would be to file a FOIA lawsuit against the Navy, which it did in early May of 2019. NPCA v. US Navy, 2:19-cv-645-TSZ (W.D. WA.) (the "FOIA lawsuit"). In July of 2019 the FOIA lawsuit was stayed so that the Navy could conduct the supplemental search regarding NPCA's 2016 FOIA that the Navy had initially promised to do in 2017.</p> <p>NPCA's Multiple Requests for the DSEIS Scientific and Technical References</p> <p>In addition to FOIA, the Navy has obligations under NEPA to provide information regarding its NEPA analysis. In April, while the Navy's 2019 DSEIS was out for public comment, NPCA requested that, as required by 40 C.F.R. § 1502.21, the Navy provide it and the public with all the references cited and incorporated into its 2019 DSEIS. NPCA first requested these references through its counsel at an April 29th open house in Astoria, Oregon. NPCA followed up on that in-person request with an April 30th email (the first email request, Exhibit 2), which indicated that the Navy was required to produce these references pursuant to both Section 1502.21 and NPCA's pending 2018 FOIA. After the Navy posted a few references online on or about May 15, 2019, NPCA sent the Navy an email on May 24, 2019 (the second email request, Exhibit 3) explaining that NPCA's request for references included all references cited in the 2019 DSEIS. NPCA then raised the missing references issue during a June 26, 2019 conference call with the Navy's counsel. In early July NPCA received a CD from the Navy containing more, but still not all, of the 2019 DSEIS references. NPCA then sent the Navy an email on July 9, 2019 (the third email request, Exhibit 4) explaining what references were still missing. NPCA received another CD from the Navy in mid-August with additional references, but the Navy's response was still incomplete and also referred NPCA to references that were behind pay walls. On August 14th NPCA sent another email to the Navy (the fourth email request, Exhibit 5) seeking a complete response regarding the requested DSEIS references and objecting to the Navy's attempt to require NPCA to pay for access to multiple references. When the Navy did not respond, NPCA sent the Navy another email request on</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>August 26, 2019 (the fifth email request, Exhibit 6) reiterating its requests in its fourth email request. The Navy's counsel responded in a September 23, 2019 email that attached a few additional references and promised that another CD with references would be forthcoming. Exhibit 7. NPCA received that CD on October 17, 2019, but once again the Navy had still not provided all of the DSEIS references NPCA had requested. NPCA sent the Navy an email on November 1, 2019 (the sixth email request, Exhibit 8) explaining what references were still missing. As of the date of this supplemental comment the Navy has not responded to NPCA's sixth email request. Thus, after six written requests and at least two verbal requests, NPCA still has not received all of its requested 2019 DSEIS references that the Navy is obligated to produce under both NEPA (Section 1502.21) and NPCA's 2018 FOIA.</p> <p>The Navy's failure, after sixth months of requests, to produce all of the 2019 DSEIS references is especially difficult to understand. NPCA is requesting technical and scientific references that the Navy itself listed in its 2019 DSEIS as technical and scientific sources that it used and relied upon when it drafted its DSEIS. Ordinarily, if the Navy in fact reviewed and relied upon those listed references, one would expect them to all have been in the Navy's possession, gathered together and saved in one or more folders, or at least readily accessible to the Navy, and therefore relatively easy to produce. The fact that the Navy is still struggling to produce these references raises obvious questions about the accuracy of the Navy's listed references in its DSEIS.</p> <p>The Noise Analysis Data</p> <p>In its 2019 DSEIS the Navy repeatedly referenced the results of noise modeling that it had conducted. NEPA requires that the data and other information that substantiates such modeling in an EIS be provided to the public, usually in an Appendix to the EIS. See 40 C.F.R. § 1502.18. However the appendices to the 2019 DSEIS did not contain this information and on May 31, 2019 NPCA requested that the Navy produce it. Exhibit 9. That request noted that in addition its production being required by Section 1502.18, this noise analysis data was also responsive to NPCA's 2018 FOIA. After several months of waiting, on September 23, 2019, Exhibit 7, the Navy's counsel informed NPCA that its May 31st email had been converted by the Navy into a new, separate FOIA request, DON-Navy-2019-011111. As of the date of this supplemental comment NPCA has not received any response to this 2019 Noise Analysis FOIA.</p> <p>The Navy's Supplemental FOIA Searches and Responses</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>As explained above, as of July 2019, the Navy had committed in writing to do supplemental searches regarding both NPCA's 2016 FOIA and 2018 FOIA requests. During the next several months NPCA received a series of partial, supplemental responses to those two FOIA requests. On October 4, 2019 NPCA received what the Navy called its final supplemental response to the 2018 FOIA. Exhibit 10. On October 22, 2019 NPCA received the Navy's final supplemental response to its 2016 FOIA. Exhibit 11. From NPCA's perspective, both of these supplemental responses are still incomplete, as NPCA communicated to the Navy's counsel during a conference call on November 5, 2019. Both supplemental responses continue to improperly invoke FOIA exemption 6. Redacting from the records the names of public officials and almost all Navy personnel, including the Navy personnel who prepared the actual public NEPA analysis, makes it very difficult to understand and evaluate these redacted records. The 2016 supplemental response did not inform NPCA of the volume of records the Navy was withholding under other exemptions and the Navy's supplemental search appears to have missed numerous responsive records including many public comments on the Navy's 2015 EIS. The Navy's 2018 supplemental response continues to improperly withhold comments from other agencies regarding drafts of the DSEIS and there also appear to be issues regarding the scope of the Navy's supplemental search regarding the 2018 FOIA as well.¹ Because NPCA informed the Navy's counsel that it was still not satisfied with the Navy's responses to its 2016 FOIA, the Navy answered NPCA's complaint in the 2016 FOIA litigation on November 8th and NPCA is preparing an administrative appeal of the Navy's supplemental response to NPCA's 2018 FOIA.</p> <p>The Navy's November 10, 2019 Email</p> <p>All of the above NEPA and FOIA process history between the Navy and NPCA underlies the Navy's November 10th email, which erroneously asserts that NPCA must, within 5 days, submit a supplemental comment on the 2019 DSEIS because the Navy has fulfilled its obligations to conduct a single "supplemental search." This assertion fails for multiple reasons. First, the November 10th email references the Navy's October 4th supplemental response, which was a supplemental response to NPCA's 2018 FOIA request. As noted above NPCA does not consider that October 4th Supplemental response to be complete. Second, the Navy's November 10th email says it is following up on a June 20th email, but does not include the text from that June 20th email. Exhibit 12. That June 20th Navy email specifically references the supplemental</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>search the Navy agreed to do regarding NPCA's 2016 FOIA and the FOIA litigation. Again, as noted above, NPCA has notified the Navy's counsel that it does not consider the Navy's supplemental response to its 2016 FOIA request to be complete and the parties are therefore preparing to litigate those FOIA issues in federal court.</p> <p>Third, the Navy's June 20th email, based on its subject line, is actually a direct response to NPCA's May 31st request for the data underlying the 2019 DSEIS noise analysis and in fact expressly says that it will accept a supplemental comment on the issue of noise impacts. In September the Navy converted NPCA's May 31st request into a separate FOIA request (the 2019 Noise analysis FOIA). The Navy has never responded to this separate 2019 Noise Analysis FOIA and none of the Navy's supplemental responses to NPCA's 2016 and 2018 FOIAs contain the requested noise analysis data.</p> <p>Fourth, the Navy's assertion in its November 10th email totally ignores its failure to produce all of the DSEIS references that NPCA has requested eight different times (two verbal requests and six email requests).</p> <p>The Navy, in its June 20th email, clearly indicated it would accept a supplemental comment from NPCA regarding the substance of its 2019 DSEIS analysis once the Navy had given NPCA the additional records and information it was seeking under FOIA and NEPA. However the Navy's assertion in its November 10th email that it has somehow fulfilled its obligations under NEPA and FOIA to provide NPCA with additional records and information to use when preparing such a supplemental comment has no basis in fact.</p> <p>The Timing of a NPCA's Supplemental Comment</p> <p>In its June 20th email, the Navy indicated it would require NPCA to submit its supplemental response within fourteen days of receiving the outstanding FOIA and NEPA records. Thereafter timing of any supplemental comment from NPCA was the subject of discussions between counsel for the Navy and NPCA, with counsel for NPCA explaining that fourteen days would not be enough time for NPCA to both review the Navy supplemental productions and prepare a supplemental comment. NPCA also requested that the time period would not start to run until both sides agreed that NPCA had what it was legally entitled to have under FOIA and NEPA.</p> <p>See June 28, 2019 email from NPCA's counsel to the Navy's counsel.² NPCA believed the parties' discussions regarding the timing of a supplemental comment from NPCA were still ongoing and was surprised when it received the Navy's November 10th email suddenly reviving the fourteen-day time</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>limit from the Navy's June 20th email and in fact demanding a supplemental comment be submitted within 5 days.</p> <p>NPCA objects to any arbitrary fourteen-day time limit that the Navy seeks to impose on NPCA's right to submit a supplemental comment on the substance of the Navy's analysis in its 2019 DSEIS after NPCA ultimately receives all of the information it is entitled to under both FOIA and NEPA. The Navy has given itself multiple years, in the case of the 2016 FOIA, and almost a year, in the case of the 2018 FOIA, to conduct supplemental searches, which are still incomplete. Even if those supplemental searches had been complete, requiring NPCA to both review the thousands of additional records produced by the Navy and draft a supplemental comment within fourteen days is completely unreasonable and inconsistent with the Navy's obligations to allow and facilitate informed public participation under NEPA. See 40 C.F.R. §§1500.1(b), 1500.2(d), 1506.6. A thirty day deadline would be much more reasonable.</p> <p>Conclusion</p> <p>NPCA therefore objects to the demand in the Navy's November 10, 2019 email that NPCA submit a substantive supplemental comment regarding the Navy's 2019 DSEIS. That demand is based on a mistaken (in multiple respects) factual premise that the Navy has supposedly met its obligations to provide NPCA with supplemental responses to NPCA's 2016 and 2018 FOIA. The Navy's demand also ignores the Navy's other obligations under NEPA to provide NPCA with additional information regarding its 2019 DSEIS. Rather than submitting a substantive supplemental comment based on clearly incomplete information, NPCA submits this supplemental comment setting forth the Navy's continuing violations of its legal obligations to NPCA under both FOIA and NEPA. NPCA reserves the right to submit a substantive supplemental comment regarding the Navy's 2019 DSEIS within 30 days of the Navy fulfilling all of its obligations under FOIA and NEPA to provide NPCA relevant information underlying the analysis in that 2019 DSEIS.</p> <p>1 NPCA attempted to get some of these agency comments by sending a FOIA directly to one of those agencies, the US Environmental Protection Agency. The EPA however referred that request to the Navy (the 2019 EPA Comment FOIA) and the Navy once again improperly refused to release these agency comments in violation of 40 C.F.R. § 1506.6(f). NPCA currently has an October 25, 2019 administrative appeal pending regarding the Navy's improper withholding of records regarding NPCA's 2019 EPA Comment FOIA.</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
<i>Natural Resources Defense Council</i>		
NRDC-01	<p>Fundamental to satisfying NEPA’s requirement of fair and objective review, agencies must ensure the “professional integrity, including scientific integrity,” of the discussions and analyses that appear in environmental impact statements. 40 C.F.R. § 1502.24. To this end, they must make every attempt to obtain and disclose data necessary to their analysis. The simple assertion that “no information exists” will not suffice; unless the costs of obtaining the information are exorbitant, NEPA requires that it be obtained. See 40 C.F.R. § 1502.22(a). Agencies are further required to identify their methodologies, indicate when necessary information is incomplete or unavailable, acknowledge scientific disagreement and data gaps, and evaluate indeterminate adverse impacts based upon approaches or methods “generally accepted in the scientific community.” 40 C.F.R. §§ 1502.22(2), (4), 1502.24.2 Such requirements become acutely important in cases where, as here, so much about an activity’s impacts depend on newly emerging science. Finally, NEPA does not “permit agencies to falsify data or to ignore available information that undermines their environmental impact conclusions.” <i>Hoosier Environmental Council v. U.S. Department of Transportation</i>, 2007 WL 4302642 *13 (S.D. Ind. Dec. 10, 2007). Thus, the Navy and NMFS’s review must be thorough; they may not “sweep[] negative evidence under the rug.” <i>National Audubon Society v. Department of the Navy</i>, 422 F.3d 174, 194 (4th Cir. 2005). Various stressors associated with the Navy’s activities will directly, indirectly, and cumulatively impact marine mammals and other marine species. These stressors include but are not limited to acoustic impacts; impacts from explosives and other non-acoustic energetic sources; vessel strikes and other physical disturbance; entanglement in cables, wires, and parachutes; ingestion of materials such non-explosive munitions and expended materials; and secondary effects such as transmission of diseases and parasites.</p> <p>The underwater noise produced by vessels and the vessels’ physical presence mask the acoustic cues that the whales depend on and disrupt these vital behaviors. Notably, researchers have reported that, on exposure to vessel noise, the whales increase their swimming speeds, engage in evasive swimming patterns, increase their time spent traveling, alter their dive lengths, and significantly reduce their foraging time. Reduction in foraging efficiency translates to lower intake of food energy, which in turn compromises fitness and survival, lowers birthrates, and increases mortality. An independent population viability analysis found that if it were</p>	<p>The Navy uses the best available science to analyze potential impacts of the Proposed Action (including from acoustic, explosive, energy, physical disturbance and strike, entanglement, ingestion, and secondary stressors) on marine mammals according to methods generally accepted in the scientific community and coordinated with NMFS as a cooperating agency on the Supplemental EIS/OEIS. The potential responses of marine mammals from vessel noise are assessed in Section 3.4.2.1.3 of the Supplemental EIS/OEIS. Vessel noise associated with proposed Navy activities is unlike persistent vessel noise from commercial vessels or whale watching activities. Noise from Navy vessels is unlikely to have significant effects on marine mammals, including the reduction in foraging time. The standard operating procedures and mitigation the Navy uses to help avoid vessel strike would further help avoid any significant behavioral reactions from marine mammals due to exposure to vessel noise.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	possible to eliminate acoustic disturbance while maintaining current levels of Chinook abundance, annual population growth would increase to 1.7 percent.	
NRDC-02	<p>The DSEIS contemplates activities within the range of the Southern Resident population, including the Salish Sea. These include bombing and missile exercises in the Navy's offshore operations area, including in Area W-237; sonar exercises in offshore area generally; and various activities in the Salish Sea, although Navy units would be required to obtain approval from a "designated" Command authority before using mid-frequency active sonar during training or pierside maintenance or testing. DSEIS at 2-28 to 2-38, K-12. Notably, according to the Navy's analysis, the Washington Inland Waters population of harbor porpoises and of the Hood Canal population of harbor seals will be subjected to some of the highest estimated take (DSEIS to E-2 to E-37), suggesting that some activities with the potential to harm the orcas are concentrated in the Salish Sea and the interior waters of Puget Sound. Given this overlap, and given the potential for grievous harm from Navy activities, the Washington State Southern Resident Orca Task Force specifically included the Navy in its recommendations, advising that the governor meet with the region's commanding officer "to address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state" and request the Navy's participation in the second year of the Task Force, to "identify actions to reduce the Navy's impacts to Southern Resident orcas."</p>	<p>Potential impacts to marine mammals from acoustic and explosive sources, which are part of the Proposed Action, are analyzed in Section 3.4.2.1 and Section 3.4.2.2, respectively. The Navy's acoustic and explosive effects analysis looks at multiple factors such as the southern resident killer whale's abundance across the Study Area in each season, the levels of sound that may cause certain effects, and the Navy's proposed time and space use of noise producing activities. A greater number of effects are estimated for harbor porpoises and harbor seals than other species, such as Southern Resident killer whales, due to their much higher abundances in the Study Area.</p> <p>The Navy worked cooperatively with NMFS during the ESA and MMPA consultation processes to enhance mitigation measures for Southern Resident Killer Whales to the maximum extent practical. Based on its operational analysis of potential mitigation measures for active sonar, explosives, and physical disturbance and strike stressors in NWT Inland Waters, the Navy determined it would be practical to implement additional measures in the Puget Sound and Strait of Juan de Fuca Mitigation Area to further avoid or reduce potential impacts on Southern Resident Killers whales. These new measures are detailed in Appendix K (Geographic Mitigation Assessment) of the Navy's Final Supplemental EIS/OEIS.</p> <p>The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force's working groups on prey and vessel traffic. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.</p>
NRDC-03	It is not clear how the Navy conducted its impact analysis on the Southern Resident population. The suggestion that its training activities would impact individual orcas only twice each year under its preferred alternative	Information about the quantitative analysis is described in detail in the 2018 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>(DSEIS at E-3) makes little sense, given that the Southern Residents travel together in pods, making it far more likely that every member of the pod would be affected; nor does it make sense that take estimates for Washington Inland Waters harbor porpoises and Hood Canal harbor seals would number in the hundreds of thousands, while Southern Residents account for a handful; nor does it make sense that the 2019 modeling would result in the same numbers of whales taken as in 2015, when the Navy's impact thresholds were substantially higher and the types and numbers of some activities were different. The Navy intends to conduct missile training and other explosives activities with an impact zone that is extremely difficult to monitor, yet, as discussed below, it assumes that its mitigation will preclude mortalities. And in the past, the number of mid-frequency active sonar events that have occurred within the whales' range is not trivial. These apparent defects in the Navy's modeling run counter to the "hard look" required by NEPA and are extremely concerning given the plight of this endangered and declining population. See 40 C.F.R. §§ 1500.1(b); Baltimore Gas & Electric, 462 U.S. at 97.</p>	<p>Testing, available at www.nwtteis.com. The Navy's acoustic and explosive effects analysis looks at multiple factors such as the southern resident killer whale abundance across the Study Area in each season, the levels of sound that may cause certain effects, and the Navy's proposed time and space use of noise producing activities. The Navy Acoustic Effects Model uses Monte Carlo methods to estimate the expected value of behavioral responses. This is accomplished by running multiple simulations in which factors are randomly selected for the selected modeling area, including, but not limited to, the travel path of the platform with a sound source and animal distribution based on a probability density function for the species. Many simulations are run for any given testing and training event to ensure that the mean impacts predicted by NAEMO represent the likely impacts given the potential for a species to be present within the ranges to effect. In instances where the potential for a species to be present at any point in time is very low, as in the case of Southern Resident killer whales, the mean value will be weighted by the large majority of instances in which no impacts would occur. A greater number of effects are estimated for harbor porpoises and harbor seals due to their much higher abundances in the study area.</p> <p>Given the low numbers of Southern Resident killer whales and the similarity of the Phase II and Phase II proposed actions, it is not surprising that the predicted behavioral harassments in the Inland Waters portion of the study area were the same despite revisions to the quantitative analysis. Since the Draft Supplemental EIS/OEIS, however, the Navy has incorporated new estimates of Southern Resident killer whale densities and distributions in the NWTT Offshore Area into the quantitative analysis of impacts. The revised density estimates are shown in the technical report <i>U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area</i> (amended September 20, 2019), available at www.nwtteis.com. As a result, the Navy has revised the number of behavioral takes of Southern Resident killer whales in this Final Supplemental EIS/OEIS.</p> <p>As described in the technical report, in practice, the Navy conservatively factors mitigation effectiveness (i.e., underestimated mitigation effectiveness) into its quantitative analysis process. To calculate a mitigation effectiveness score for each scenario, the Navy multiplied the Species Sightability Factor [g(0)] by a Visibility Factor [0.25, 0.5, 0.75, or 1], then by an Observation Area Factor [0, 0.5, or 1], and lastly by a Positive Control Factor [0, 0.5, or 1]. One example of why the Navy's method for calculating mitigation effectiveness is conservative is that the Navy assigns worst-case</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>scores (instead of typical-case scores) to each effectiveness factor. The Navy would assign an Observation Area Factor of 0, if for example, during an explosive missile exercise the intended detonation location could not be continuously visually observed. Multiplying 0 by the other mitigation factors would result in an overall mitigation effectiveness score of 0; therefore, the Navy would not take any credit for mitigation in its take estimate (i.e., would not reduce the number of model-estimated mortality takes based on mitigation).</p> <p>For NWTT, the Navy Acoustic Effects Model predicted zero mortalities of any marine mammal species due to explosives. Mitigation measures would reduce the risk of injury due to explosives, as described in Chapter 5 (Mitigation); however, no adjustments to the take estimates were made for mortality takes based on mitigation effectiveness because the model predicted zero mortalities.</p>
NRDC-04	<p>Here, disruption in gray whale behavior can act adversely with the inanition caused by lack of food, increasing the risk of stranding and lowering the risk of survival in compromised animals. Further, starving gray whales may travel into unexpected areas in search of food—a likely contributing cause of some of the ship-strikes observed in recently stranded animals. The Navy estimates that its activities will cause as many as 80 takes of gray whales each year, including two cases of temporary hearing loss caused by underwater explosives. <i>See passim</i> DSEIS at E-2 to E-37. In addition to improving the transparency of its analysis (see “Selection of Modeled Locations,” below), the Navy must carefully consider the biological context of behavioral disruption in that species and evaluate the potential for severe consequences in exposed whales.</p>	<p>Information about the quantitative analysis is described in detail in the 2018 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing. The Navy’s acoustic and explosive effects analysis looks at multiple factors such as gray whale abundance across the Study Area in each season, the levels of sound that may cause certain effects, and the Navy’s proposed time and space use of noise producing activities. As discussed in the Supplemental EIS/OEIS in Sections 3.4.2.1 and 3.4.2.2, a few instances of behavioral reaction or even minor to moderate TTS is not expected to have long-term consequences for individual gray whales.</p>
NRDC-05	<p>The Navy, following the criteria set forth in its 2017 technical report, has elected to base its estimates of mortality and non-auditory injury (such as lung damage) from explosives on a 50% averaging of risk rather than on the onset of risk. See DSEIS at 3.4-294 (Table 3.4-72). Both the 50% average and onset criteria account for variability in water depth and body mass; the difference between them appears to stem from natural variability in the data produced by the 45- year-old study on which the Navy’s criteria is founded, a study that exposed a range of terrestrial species to underwater explosives. Remarkably, the Navy uses the 50% average for its impact analysis while using onset for purposes of assessing the effectiveness of the Navy’s mitigation zones. DSEIS at 3.4-293 to 3.4-294.</p> <p>This approach is not consistent with the probability standards set forth in</p>	<p>The Navy used the range to 1 percent risk of mortality and injury (referred to as “onset” in the Draft Supplemental EIS/OEIS, and since clarified as 1 percent risk of onset) to inform the development of mitigation zones for explosives, and similar to other thresholds, used the mean of onset for impact assessment. In all cases, the mitigation zones for explosives extend beyond the range to 1 percent risk of non-auditory injury, even for a small animal (representative mass = 5 kg).</p> <p>It is unclear what the commenter intends by asserting that the differences in thresholds are due to “natural variability,” whereas available injury data suggest that injury susceptibility is correlated to dose, among other factors. The Navy points the commenter to the technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i></p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	the Marine Mammal Protection Act (“MMPA”). The MMPA incorporates a standard of “significant potential” into its definition of “injury” for military readiness activities; this standard plainly differs from the higher “likelihood” standard that applies to behavioral disruption. Compare 16 U.S.C. §§ 1362(18)(B)(i) and (B)(ii). And while the probability standard for mortality is not specifically defined in the Act, Congress expressly amended the MMPA in 1994 to incorporate a “potential” standard in the wake of the Ninth Circuit decision in <i>U.S. v. Hiyashi</i> , 22 F.3d 859 (9th Cir. 1993). If the DSEIS is intended to serve NMFS’ purposes in rulemaking under the Marine Mammal Protection Act, as well as to represent a more conservative estimate of harm, the Navy cannot base its mortality and injury estimates on the mean.	(U.S. Department of the Navy, 2017h), available at www.nwtteis.com , for derivation of the Navy’s injury and mortality thresholds for underwater explosives. Over-predicting impacts would occur with the use of 1 percent non-auditory injury risk criteria in the quantitative analysis. The Navy, in coordination with NMFS, has determined that the mean onset incidence of occurrence is an appropriate threshold to analyze the “significant potential” for this effect under 16 U.S.C. §§ 1362(18)(B)(i), similar to other criteria that are based on mean data (e.g., auditory impacts).
NRDC-06	The Navy, while appearing finally to accept the strong evidentiary basis for decompression sickness in some sonar-exposed whales (DSEIS at 3.4-87), nonetheless discounts the leading explanation about the mechanism of sonar-related pathologies—maladaptive alteration of dive patterns—as uncertain. DSEIS at 3.4-88 to 3.4-89 (concluding, “It is uncertain as to whether there is some more easily-triggered mechanism for [bubble and fat emboli] specific to beaked whales or whether the phenomenon occurs only following rapidly occurring stranding events”). But this explanation has now been supported by numerous studies, including post- stranding pathology, laboratory study of organ tissue, and theoretical work on dive physiology, as well as by expert reviews, and is clearly best available science. As the Navy notes, experiments on common bottlenose dolphin to test for nitrogen bubble formation after sudden repetitive dives have found no evidence of gas bubble formation. But beaked whales, which are adapted to perform long and deep dives, show saturation of nitrogen levels near the ocean surface, making them particularly vulnerable. Even if some uncertainty exists around the physiological mechanism for bubble formation, with several viable models set forth by researchers (at described at DSEIS at 3.4-88), the science still indicates that the effect is likely to be behaviorally mediated and occurs in beaked whales apart from strandings. The DSEIS concludes its discussion of gas-bubble formation by arguing, in a single dismissive sentence, that “the rarity of observations of bubble pathology” makes it “discountable” for purposes of the Navy’s impact analysis here. In fact, the rarity of those observations is easily attributable to many factors that limit the availability of beaked whales to analysis, including the offshore, deep-water occurrence of these species and the	The Navy considered the best available science on bubble pathology, summarized in Section 3.7.3.1.1.1 (Injury – Nitrogen Decompression), to develop the conclusions presented in this Final Supplemental EIS/OEIS. As thoroughly documented in the Supplemental EIS/OEIS in Section 3.4.2.1.1.1 (Injury), it is correct to state that there is uncertainty regarding the mechanism behind the bubble pathology exhibited in a small number of stranded beaked whales. Additionally, it appropriate to conclude that this effect would not be expected as a result of this proposed action. Only a small number of strandings have been associated with the use of U.S. Navy sonar; none of these have occurred in the Study Area. Information on the beaked whale strandings associated with Navy training and testing activities is provided in the Navy’s technical report titled <i>Marine Mammal Strandings Associated with U.S. Navy Sonar Activities</i> (2017), available at www.nwtteis.com . The Navy’s analysis, based on the best available science, indicates that beaked whales would not suffer this injury due this proposed action. Additionally, the Navy’s behavioral response criteria takes into account the greater sensitivity of these species to acoustic disturbance.

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	short window that exists for assaying tissue for the purpose, as the literature has made clear. The Navy's one-sentence dismissal of these impacts is arbitrary. For purposes of analysis, the Navy must assume that some number of beaked whales are subject to injury from gas-bubble formation, and will suffer gas-bubble formation, under certain conditions of sonar exposure.	
NRDC-07	The criteria that the Navy's SPAWAR command has produced to estimate temporary and permanent threshold shift in marine mammals, and that the Navy applies here, are erroneous and non-conservative. Wright (2015) has identified several statistical and numerical faults in the Navy's approach, such as pseudo-replication, use of means rather than onset, and inconsistent treatment of data, that tend to bias the proposed criteria towards an underestimation of effects. Similar and additional issues were raised by a dozen scientists during the public comment period on the draft criteria held by NMFS. At the root of the problem is the Navy's broad extrapolation from a small number of individual animals, mostly bottlenose dolphins, without taking account of what Racca et al. (2015b) have succinctly characterized as a "non- linear accumulation of uncertainty." The auditory impact criteria should be revised.	The permanent threshold shift/temporary threshold shift criteria and thresholds, as set by NMFS, include numerous conservative assumptions, such as (1) Navy assumes no recovery of hearing during time intervals between intermittent exposures. However, multiple studies from humans, terrestrial mammals, and marine mammals have demonstrated less temporary threshold shift from intermittent exposures compared to continuous exposures with the same total energy because hearing is known to experience some recovery in between noise exposures. Therefore, the Navy's approach is known to over-estimate the effects of intermittent noise sources such as tactical sonars. (2) Marine mammal temporary threshold shift data have shown that, for two exposures with equal energy, the longer duration exposure tends to produce a larger amount of temporary threshold shift. Since most marine mammal temporary threshold shift data have been obtained using exposure durations of tens of seconds up to an hour, much longer than the durations of many tactical sources, the use of the existing marine mammal temporary threshold shift data tends to over-estimate the effects of sonars with shorter duration signals. Since marine mammal hearing and noise-induced hearing loss data are limited, both in the number of species and in the number of individual's available, attempts to minimize pseudoreplication would further reduce these already limited data sets. Specifically, with marine mammal behavioral temporary threshold shift studies, behaviorally-derived data are only available for two mid-frequency cetacean species (bottlenose dolphin, beluga) and two phocids in water pinniped species (harbor seal and northern elephant seal), with OW pinnipeds and high-frequency cetaceans only having behaviorally-derived data from one species. Arguments from Wright (2015) regarding pseudo replication within the temporary threshold shift data are therefore largely irrelevant in a practical sense because of limited data. Multiple data points were not included for the same individual at a single frequency - if multiple data existed at one frequency, the lowest temporary threshold shift onset was always used. There is only a single frequency where temporary threshold shift onset data exist for two individuals of the same species: 3 kHz for dolphins. Their temporary threshold shift (unweighted) onset values were 193 and 194 dB re

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>1 $\mu\text{Pa}^2\text{s}$. Thus, Navy believes that the current approach makes the best use of the given data. Appropriate means of reducing pseudoreplication may be considered in the future, if more data become available. Many other comments from Wright (2015) and the comments from Racca et al. (2015b) appear to be erroneously based on the idea that the shapes of the auditory weighting functions and temporary threshold shift/permanent threshold shift exposure thresholds are directly related to the audiograms; i.e., that changes to the composite audiograms would directly influence the threshold shift/permanent threshold shift exposure functions [e.g., Wright (2015) describes weighting functions as “effectively the mirror image of an audiogram” (p. 2) and states “The underlying goal was to estimate how much a sound level needs to be above hearing threshold to induce temporary threshold shift.” (p. 3) — both statements are incorrect and suggest a fundamental misunderstanding of the criteria/threshold derivation.] This would require a constant (frequency-independent) relationship between hearing threshold and temporary threshold shift onset that is not reflected in the actual marine mammal temporary threshold shift data. Attempts to create a “cautionary” outcome by artificially lowering the composite audiogram thresholds would not necessarily result in lower temporary threshold shift/permanent threshold shift exposure levels, since the exposure functions are to a large extent based on fitting mathematical functions to the existing temporary threshold shift data.</p>
NRDC-08	<p>Further, in estimating the number of instances of injury and mortality, the DSEIS makes two post hoc adjustments, significantly reducing the totals based on presumed animal avoidance and mitigation effectiveness. These two reductions are arbitrary and non-conservative.</p> <p>By itself, the Navy’s avoidance adjustment effectively reduces the number of estimated auditory injuries by 95%, on the assumption that marine mammals initially exposed to three or four sonar transmissions at levels below those expected to cause permanent injury would avoid injurious exposures. While it is certainly true that some marine mammals will flee the sound, there are no data to inform how many would do so, let alone that 95% would move as expeditiously as the Navy presumes. Marine mammals may remain in important habitat, and the most vulnerable individuals may linger in an area, notwithstanding the risk of harm; marine mammals cannot necessarily predict where an exercise will travel; and Navy vessels engaged in certain activities may move more rapidly than a marine mammal that is attempting to evacuate.</p>	<p>The commenter provides no scientific basis for asserting that incorporating NMFS-approved animal avoidance into the quantitative analysis (referred to as “two post hoc adjustments”) is “arbitrary and non-conservative.” Consideration of these factors, along with propagation and exposure modeling in the Navy Acoustic Effects Model, provides the best estimate of potential impacts under this proposed action.</p> <p>Sound levels diminish quickly below levels that could cause PTS. Studies have shown that the vast majority of animals are likely to avoid sound levels that could cause injury to their ear and would initiate avoidance at even lower received levels [see Section 3.4.2.1.1.5 (Behavioral Reactions)]. Behavioral response literature, including the recent 3S and SOCAL BRS studies, indicate that multiple species from different cetacean suborders do in fact avoid approaching sound sources by a few hundred meters or more, which would reduce received sound levels for individual marine mammals to levels below those that could cause permanent threshold shift (PTS). Specifically, for the most powerful hull-mounted sonar source, the ranges to PTS for most marine</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Avoidance adjustments were first used in 2012, for an environmental impact report prepared under the California Environmental Quality Act; in that case, the authors, to compensate for their non-conservative assumptions about avoidance, presumed that every instance of permanent threshold shift would result in biological removal of the individual. As the Marine Mammal Commission has repeatedly advised, the Navy should not adjust for avoidance here.	<p>mammal groups are within a few tens of meters, and the ranges for the most sensitive group, the high-frequency cetaceans, average about 200 meters. PTS ranges for other sources are even shorter. Thus, an animal may avoid sound levels that could cause PTS while remaining in its current habitat.</p> <p>Assuming a typical marine mammalian swim speed, animals present beyond the range to onset PTS for the first three to four pings of an MF1 source could avoid onset PTS. In reality, animals may avoid at greater speeds, and ranges to onset PTS for many sources would be even shorter, than assumed for analyzing avoidance in this impact assessment. This means the potential for PTS may be lower than predicted by this quantitative analysis. A detailed analysis, including information on swim speeds, is provided in the 2018 technical report titled <i>Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing</i>. Nevertheless, some animals could be caught off-guard at the beginning of, or after a pause in a training or testing event. Therefore, the Navy acknowledges that some animals could receive PTS and has estimated these impacts in the analysis. Avoidance adjustments to the raw output from the NAEMO are necessary because, as described in the Supplemental EIS/OEIS in Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Sonars and Other Transducers) and Section 3.4.2.2.1 (Methods for Analyzing Impacts from Explosives), animals (i.e. computer representations of individual marine mammals) in the model are not programmed to avoid sound sources or move horizontally in any way.</p>
NRDC-09	<p>The Navy's adjustment of mortality numbers for "mitigation effectiveness," which incorporates the methodology set forth in a 2018 technical report (DSEIS at 3.4-297 to 3.4-298), is also arbitrary.</p> <p>The Navy's analysis starts with the species-specific $g(0)$ factors applied in professional marine mammal abundance surveys, then multiplies them by a simple factor to reflect the relative effectiveness of its lookouts in routine operating conditions. Yet the Navy's sighting effectiveness is likely to be much poorer than that of experienced biologists dedicated exclusively to marine mammal detection, operating under conditions that maximize sightings.</p> <p>In the first place, the sighting conditions that may obtain during Navy activities are substantially inferior to those used to generate $g(0)$ factors in abundance surveys. As one NOAA paper observed, abundance survey rates decline significantly as sea states rise above Beaufort 1. Yet most Navy activities would be allowed to occur in all sea conditions and hours of day</p>	<p>The commenter provides no scientific basis for asserting that incorporating NMFS-approved mitigation effectiveness is arbitrary. Information about the quantitative analysis process, including the consideration of mitigation effectiveness, is described in detail in the 2018 technical report titled <i>Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing</i>. The Navy quantitatively assessed the effectiveness of its mitigation measures on a per-scenario basis for four factors: (1) species sightability, (2) a Lookout's ability to observe the range to PTS (for sonar and other transducers) and range to mortality (for explosives), (3) the portion of time when mitigation could potentially be conducted during periods of reduced daytime visibility (to include inclement weather and high sea state) and the portion of time when mitigation could potentially be conducted at night, and (4) the ability for sound sources to be positively controlled (e.g., powered down). Line-transect surveys and Navy training and testing activities are conducted for</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	(see DSEIS at Ch. 5 (“Mitigation”), and Beaufort sea states in areas proximate to Navy activities within the Northwest Study Area averaged Beaufort 5 across the previous three years—a point at which detection power is a small fraction of $g(0)$ for most species. (See Table 1 below for averages at representative NOAA buoy stations.)	<p>fundamentally different purposes. Differences exist between the areas observed, number of observers, observation tools and techniques, and types of observer experience. The Navy assessed these differences and determined that using $g(0)$ values derived from line-transect surveys is the best available scientific basis (i.e., statistically-derived values) for its species sightability factors. The $g(0)$ values used by the Navy for their mitigation effectiveness adjustments take into account the differences in sightability with sea state, and utilize averaged $g(0)$ values for sea states of 1–4 and weighted as suggested by Barlow (2015). This helps to account for reduced sightability in varying conditions. Using $g(0)$ values is an appropriate and conservative approach that underestimates the protection afforded by the Navy’s mitigation measures for the reasons detailed in the technical report. For example, during line-transect surveys, there are typically two primary observers. During Navy training and testing, there are routinely between one to four Navy Lookouts designated to observe the mitigation zones. During explosive activities, if additional platforms are participating, personnel positioned in those assets (e.g., safety observers, evaluators) will support observing the mitigation zone. During activities involving vessel movement, the Navy positions watch personnel to monitor for any indication of danger to the ship and the personnel on board. As a standard collision avoidance procedure, watch personnel also monitor for marine mammals that have the potential to be in the direct path of the ship. This can result in additional personnel observing a mitigation zone (e.g., during hull-mounted active sonar activities). To conservatively assess mitigation effectiveness, the Navy only accounts for the minimum number of Lookouts required for each activity. Therefore, the mitigation effectiveness factors may underestimate the likelihood that some marine mammals and sea turtles may be detected during activities that are supported by additional personnel who may also be observing a mitigation zone.</p> <p>Line-transect surveys are typically used to estimate cetacean and turtle abundance, and as such, are designed to cover a survey area uniformly in a straight line or grid pattern. Each primary line-transect observer looks for marine species in the forward 90-degree quadrant on their side of the survey platform and scans the water from the vessel out to the limit of the available optics (i.e., the horizon). For mitigation, Navy Lookouts focus their observations directly on the mitigation zone, which is several degrees of magnitude smaller than that used to calculate species sightability. For example, during hull-mounted mid-frequency active sonar activities, the mitigation zone extends 1,000 yd. from the ship hull. During explosive</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		bombing activities, the mitigation zone is 2,500 yd. around the intended target, which is located directly beneath the firing platform. Some Navy training and testing activities are stationary or occur within a localized area. During these activities, Lookouts generally scan the same area of water during the activity, which offers a continuous opportunity to sight animals at that location, including animals that may have initially been underwater and not available to be seen. As previously described, the Navy's approach to estimating marine mammal impacts integrates a host of conservative assumptions to ensure that potential impacts are overestimated instead of underestimated.
NRDC-10	Second, the impact radius of many of the Navy's explosives extends far beyond the limited sighting distances used in vessel abundance surveys. The g(0) factor is predicated on sightings occurring directly on the trackline of the vessel, with detection rates dropping significantly as distance from the trackline increases. Yet the distances expected to cause permanent hearing loss in "high-frequency cetaceans" (i.e., porpoises) can run thousands of kilometers in all directions from both explosive sonobuoys and explosive torpedoes, and in both cases the mobile source can be kilometers away from Navy watchstanders when it detonates.	The commenter suggests that the Navy considered mitigation in its PTS estimates for explosive sources; however, this is incorrect. The Navy does not reduce PTS takes for explosives based on mitigation. The Navy conservatively assessed the likelihood that Lookouts would be able to visually observe the range to PTS for non-impulsive sources, and mortality for impulsive sources (e.g., explosives) for each training or testing scenario. As previously described, this is influenced by the size of the predicted impact ranges, location of the mitigation zone in proximity to the observation platform, type of observation platform (e.g., pier, small boat, large vessel, helicopter, fixed-wing aircraft), and number of Lookouts. The Navy also considered the objectives of each training and testing scenario to determine the opportunities for and capabilities of Lookouts to continuously visually observe the impact range, for example the range to mortality for explosives. If the range to mortality could not be observed during an activity, the Navy would not take any credit for mitigation in its take estimate (i.e., would not reduce the number of model-estimated mortality takes based on mitigation).
NRDC-11	Finally, Navy watchstanders have been shown to be significantly less effective than biologists, of the sort used in professional abundance surveys, in detecting marine mammals. We know from the Navy's own studies that watchstanders charged with implementing exclusion zones appear to fare much poorer in detecting marine mammals than do trained protected species observers, who are generally not allowed aboard ship. Given this—and given that)—Navy visual surveys can seldom approximate the sighting effectiveness of a large-vessel abundance survey. In any case, the public has no meaningful way to evaluate the Navy's adjustment further since the DEIS does not provide the scores used to generate the effectiveness factor, nor does it provide pre-adjustment take numbers.	The commenter incorrectly characterized the findings of the Watwood et al. 2016 report. As described in the report, the marine mammal observation study was conducted to further the Navy's understanding of several monitoring questions, including obtaining data to characterize the possible exposure of marine species to mid-frequency active sonar. As such, marine mammal observers were tasked with recording sightings within a 180-degree field in front of the ship out to the horizon, a significantly larger swath of water compared to the 1,000 yd. mitigation zone the Navy Lookouts were responsible for observing and reporting sightings around the vessel hull. The marine mammal observation team only observed two marine mammals when active sonar was on, and both animals were several thousand yards away

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		from the sonar source, and therefore outside of the mitigation zone and area in which Navy Lookouts were required report marine mammal sightings.
NRDC-12	<p>The Navy's post hoc adjustment for operational mitigation effectiveness is not a trivial or an abstract issue. It has the apparent effect of eliminating risk of mortality from explosives known to be of a power to kill marine mammals. Some experts have raised concerns that one Southern Resident orca mortality (L112) was caused by naval explosives or ordnance. We urge the Navy to provide more transparency about its modeling adjustment so that the public has the opportunity to comment on the Navy's analysis (40 C.F.R. §§ 1502.9(a), 1503.1(a), 5 U.S.C. § 706(2)(D)), and to provide unadjusted mortality estimates.</p> <p>Table 1. Mean, standard deviation (S.D.), minimum (min.), and maximum (max.) wave height (m), and mean and range on Beaufort Sea State (B.S.S.) values for data collected at four buoys positioned within the Northwest Study Area from 2016 through 2018. Data source: NOAA National Buoy Data Center (NBDC) (2019).</p>	<p>As described previously and in the 2018 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing, credit taken for mitigation effectiveness is extremely conservative, and NMFS has concurred with the analytical approach used. In some instances, no mitigation credit for certain species or scenarios was taken (i.e., the Navy did not adjust mortality take estimates based on mitigation). For example, the model estimated zero (0) mortality takes of Southern Resident killer whales. Therefore, no adjustments were made for mitigation because there were no takes estimated by the model.</p> <p>As stated in the Navy's 2019 Draft Supplemental EIS/OEIS Section 3.4.2.1 (Acoustic Stressors) and Section 3.4.2.2 (Explosive Stressors), the conservative consideration of mitigation effectiveness is integral to the Navy's overall analysis of impacts from sonar and explosive sources. As discussed in the technical report, the Navy's acoustic effects model does not consider procedural mitigations (i.e., power-down or shut-down of sonars, or pausing explosive activities when animals are detected in mitigation zones around a detonation location), which necessitates consideration of these factors in the Navy's overall acoustic analysis. The National Marine Fisheries Service investigated the stranding of Southern Resident killer whale L-112 (NOAA Technical Memorandum NMFS-NWFSC-133). No U.S. Navy training activities involving sonar or explosives were conducted between February 1 and 11, 2012, in the Northwest Training Range Complex (which includes Washington, Oregon, and northern California). Other anthropogenic activity, including other U.S. military, Royal Canadian Navy, fishing, or construction activities, were also ruled out as potential causes of the observed injuries.</p>
NRDC-13	<p>For example, two of the proposed behavioral response functions rely substantially on captive animal studies, even though it is generally accepted that captive animals, especially (but not limited to) those that have previously been trained, are likely to be less responsive to intrusive sound. More specifically, every data point that informs the pinniped function, and nearly two-thirds of the data points informing the odontocete function (30/49), are derived from a captive study. In the case of the odontocete function, the reliance on captive studies exacerbates that function's heavy dependence on the bottlenose dolphin, a species that is generally considered relatively insensitive, to represent a diverse set of</p>	<p>The commenter suggests that the Navy results are arbitrary; however, this is incorrect. The Navy uses the best available science in the analysis which has been reviewed by external scientists and approved by NMFS. The Navy has used all available data for the development of updated criteria and threshold, and limiting the data to the small number of field studies would not provide enough data with which to develop the new risk functions. In addition, the Navy accounts for the fact that captive animals may be less sensitive, and the scale at which a moderate to severe response was considered to have occurred is different for captive animals than for wild animals, as the Navy understands those responses will be different. Please see the 2018 technical</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	taxa with divergent sensitivity and reactivity to mid- frequency anthropogenic noise. If, for example, the number of wild killer whale data points (n=8) and captive bottlenose dolphin data points (n=30)—a discrepancy that owes itself to the greater accessibility of captive animals—were exchanged, such that killer whales represented the larger and bottlenose dolphins the lesser amount of data, the resulting response function would differ substantially. That result is entirely arbitrary.	report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing (U.S. Department of the Navy, 2017) for details on how the Navy accounted for the differences in captive and wild animals in the development of the BRFs.
NRDC-14	Additionally, the risk functions do not incorporate (nor does the Navy apparently consider) a number of relevant studies on wild marine mammals, such as a passive acoustic study on blue whale vocalizations and a tagging study on behavioral responses to dipping sonar, even though received levels from these studies are either available or can be estimated. Some were included in the only published quantitative synthesis of behavioral response data, Gomez et al. (2016); others, like the dipping sonar study, appeared after that synthesis was published, and after the Navy produced its behavioral take functions two years ago. Exclusion of those studies fails to meet regulatory requirements that base evaluation of impacts on research methods generally accepted in the scientific community. See 40 C.F.R. § 1502.22(b)(4).	The new risk functions were developed in 2016, before several recent papers were published or the data were available. As new science is published, the Navy continues to evaluate the information. It is unreasonable to revise and update the criteria and risk functions every time a new paper is published. These new and future papers provide additional valuable information, and the Navy has already begun to consult them for updates to the criteria in the future. Although not incorporated into the behavioral response functions, relevant new studies are not excluded from the analysis in this Final Supplemental EIS/OEIS. Thus far, no new information has been published or otherwise conveyed that would fundamentally change the assessment of impacts or conclusions of this Final EIS/OEIS. To be included in the behavioral response function, data sets needed to relate known or estimable received levels to observations of individual or group behavior. Melcon et al. (2012) does not relate observations of individual/group behavior to known or estimable received levels [at that individual/group]. In Melcon et al. (2012), received levels at the HARP buoy averaged over many hours are related to probabilities of D-calls, but the received level at the blue whale individuals/group are unknown.
NRDC-15	It is not clear from the DSEIS or from the Navy's associated technical report on acoustic "criteria and thresholds" exactly how each of the studies the Navy employed were applied in the analysis, or how the functions were fitted to the data, but the available evidence on behavioral response raises concerns that—notwithstanding the DSEIS' claims to the contrary—the functions are not conservative for some species. For this reason and others, we ask the Navy to make additional technical information available, including expert elicitation and peer review (if any), so that the public can fully comment pursuant to NEPA.	As stated in Supplemental EIS/OEIS Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Sonar and Other Transducers), the derivation of the BRFs is provided in the 2017 technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III). The appendices to this report detail the specific data points used to generate the BRFs. Data points come from published data that is readily available and cited within the technical report.
NRDC-16	As noted above, dipping sonar, like hull-mounted sonar, appears on the basis of preliminary data to be a significant predictor of deep-dive rates in beaked whales on the Navy's SOAR range, with the dive rate falling	The Navy relied upon the best science that was available to develop the BRFs in consultation with NMFS. The Navy's current beaked whale BRF acknowledges and incorporates the increased sensitivity observed in beaked

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>significantly (e.g., to 35% of that individual's control rate) during sonar exposure, and likewise appears associated with habitat abandonment. Importantly, these effects were observed at substantially greater distances (e.g., 30 or more km) from dipping sonar than would otherwise be expected given the systems' source levels and the beaked whale response thresholds developed from research on hull-mounted sonar. Researchers have hypothesized that the inherently unpredictable nature of dipping sonar—the inability of whales to track its progress in the water—make it a disproportionately powerful stressor. Yet all the data sources used to produce the Navy's behavioral response functions concern hull-mounted sonar, an R/V-deployed sonar playback, or an in-pool source. The Navy's generic behavioral response function for beaked whales thus does not incorporate their heightened response to these sources, although such a response would be presumed to shift the function "leftward." Nor do the response functions for other species account for this difference, although unpredictability is known to exacerbate stress response in a diversity of mammalian species and should conservatively be presumed, in this case, to lead to a heightened response in marine mammal species other than beaked whales.</p>	<p>whales during both behavioral response studies and during actual Navy training events. This article (Associating patterns in movement and diving behavior with sonar use during military training exercises: A case study using satellite tag data from Cuvier's beaked whales at the Southern California Anti-submarine Warfare Range, supra.) was not available at the time the behavioral response functions were developed. The new information and data presented in the new article was recently thoroughly reviewed the Navy and will be quantitatively incorporated into the Navy's future BRFs as appropriate. However, the Navy's current beaked whale BRF covers the responses observed in the new article since the beaked whale risk function is more sensitive than the other risk functions at lower received levels. Thus far, no new information has been published or otherwise conveyed that would significantly change the assessment change the assessment of impacts or conclusions of this Final EIS/OEIS.</p>
NRDC-17	<p>As with injury and mortality, the Navy applies cut-offs in estimating the number of behavioral impacts on marine mammals. It is evident that these cut-offs significantly affect the Navy's estimates. The DSEIS postulates that the cutoffs would zero-out take estimates at a point where, using the Navy's response functions, 25% of all odontocetes other than beaked whales and harbor porpoises, 13% of all mysticetes, and 18% of all pinnipeds and mustelids (i.e., sea otters) would be considered to have a potentially significant behavioral response. DSEIS at 3.4-150 (Table 3.4-13).</p> <p>Applying this post hoc adjustment makes no sense theoretically, as the Marine Mammal Commission pointedly observes in its comments, since distance is already incorporated in the Navy's new behavioral response functions as a contextual factor. In other words, distance is already accounted for in the data and analyses from the which the behavioral response functions were derived. More than this, the Navy's chosen cut-offs, which for each hearing class were grounded in little to no information, are plainly inconsistent with the available data, including but not limited to blue whale feeding response, blue whale vocalization response, controlled exposures of beaked whales, and opportunistic data from at least one mass stranding, of melon-headed whales, associated with sonar use. Indeed, a</p>	<p>Cut-off distances are only applied as a component of the behavioral response criteria, not injury or mortality criteria. The consideration of proximity (cut-off distances) was part of the criteria developed in consultation with NMFS and was applied within the Navy's acoustic effects model. Cut-off distances were used to better reflect the take potential for military readiness activities as defined in the MMPA. As stated in Draft Supplemental EIS/OEIS Section 3.7.3.1.2.1, the derivation of the behavioral response functions and associated cut-off distances is provided in the 2017 technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III). Briefly, much of the data used to derive the behavioral response functions was from nearby, scaled sources, thereby potentially confounding results since it is difficult to tell whether the focal marine mammal is reacting to the sound level or the proximity of the source and/or vessel amongst other potentially confounding contextual factors that are unlike actual Navy events for which the behavioral response functions (BRFs) were derived. To account for these non-applicable contextual factors, all available data on marine mammal reactions to actual Navy activities and sound sources (or other large-scale activities such as seismic surveys when information on proximity to sonar sources is not available for a given species group, i.e. harbor porpoises) were reviewed to find the farthest distance to which significant behavioral</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>recent controlled exposure study of Northern bottlenose whales designed to investigate this very issue concluded that received level, and not distance, drove responses to sonar in this beaked whale species even at distances somewhat beyond the cutoffs used by the Navy here. The Navy appears to respond to this criticism by doubling its cutoffs where higher-intensity sonar or multi-platform sonar activities are concerned, but these adjustments do not cure the inconsistencies with the data we have cited above.</p> <p>As the Marine Mammal Commission notes, "Use of cut-off distances could be perceived as an attempt to reduce the numbers of takes." We urge the Navy to abandon this arbitrary, consequential, and highly concerning element in its new analysis.</p>	<p>reactions were observed. These distances were rounded up to the nearest 5 or 10 km interval, and for moderate to large scale activities using multiple or louder sonar sources, these distances were greatly increased --- doubled in most cases. The Navy's BRFs applied within these distances is currently the best known method for providing the public and regulators with a more realistic (but still conservative where some uncertainties exist) estimate of impact and potential take under military readiness for the proposed actions within this Final Supplemental EIS/OEIS.</p> <p>The commenter claims the cut-offs are inconsistent with available data. This claim is inaccurate, and the data cited to support this claim were considered in the development of the analysis in this Draft Supplemental EIS/OEIS. To be included in the behavioral response function, data sets needed to relate known or estimable received levels to observations of individual or group behavior. Thus, the data from Goldbogen et al. (2013) was directly used in the development of the behavioral criteria. Although Wensveen et al. (2019) was not published when the behavioral criteria were developed, the cutoff distances encompass the most distant detected responses in that study. In Melcon et al. (2012), received levels at the HARP buoy averaged over many hours are related to probabilities of D-calls, but the received level at the blue whale individuals/group and corresponding distances to the source are unknown. The link between sonar use and the melon-headed whale stranding at Hanalei Bay is speculative and not strongly supported by available evidence; see the technical report titled Marine Mammal Strandings Associated with U.S. Navy Sonar Activities (available at www.nwtteis.com).</p>
NRDC-18	<p>For purposes of take estimation, the DSEIS assumes that marine mammals do not respond behaviorally to single explosive detonations, beyond a brief alerting response that would not constitute a significant alteration in behavior. This assumption appears to derive from final rules issued under the Marine Mammal Protection Act for ship-shock trials in the late 1990s and 2000s, and is entirely without empirical support.</p> <p>The Navy's preferred alternative provides for detonations with net explosive weights up to 650 lbs. There is no reason for the Navy to assume, as the Marine Mammal Commission observes, that a marine mammal "would exhibit a significant behavioral response to two 5-lb. charges detonated within a few minutes of each other but would not exhibit a similar response for a single detonation of 50 lbs., let alone detonations of more than 500 lbs." In response to comments made on other Draft Environmental Impact Statements, concerned with other ranges, the</p>	<p>Marine mammals may be exposed to isolated impulses in their natural environment (e.g., lightning). There is no evidence to support that animals have significant behavioral responses (rising to the level of 'harassment' under the MMPA definition for military readiness activities) to temporally and spatially isolated explosions. Still, the analysis conservatively assumes that any modeled instance of temporally or spatially separated detonations occurring in a single 24-hour period would result in harassment under the MMPA for military readiness activities. Further, the criteria do not preclude the consideration of animals being behaviorally disturbed during single explosions if they are exposed above the TTS threshold, which is only 5 dB higher than the behavioral harassment threshold. The range to effect for TTS would be correlated to the size of the explosive.</p> <p>The Navy has been monitoring detonations since the 1990s and has not observed significant behavioral reactions. To clarify, this monitoring has</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>agency justified its position by claiming it had not observed significant behavioral responses to single detonations in the course of its observations since the 1990s. Yet the Navy's monitoring effort around underwater explosives is often limited and is focused, where it occurs, on preventing injuries and mortalities within the blast radius, not on detecting marine mammal behavioral responses.</p> <p>The literature on responses to explosions does not distinguish between single and multiple detonations. It is arbitrary for the Navy, in estimating takes and assessing impacts, to assume that only multiple rounds of in-water detonations can cause behavioral takes.</p>	<p>occurred under the monitoring plans developed specifically for shock trials, the detonations with the largest net explosive weight conducted by the Navy (no shock trials are proposed in this Study Area).</p>
NRDC-19	<p>The delineation of Biologically Important Areas by NOAA, the updates made by the Navy to its predictive habitat models, and evidence of additional important habitat areas within the Northwest Study Area, provide the opportunity for the agencies to improve upon their current approach to the development of alternatives by improving resolution of their analysis of operations.</p> <p>Recognizing that important habitat areas imply the non-random distribution and density of marine mammals in space and time, both the spatial location and the timing of training and testing events in relation to those areas is a significant determining factor in the assessment of acoustic impacts. Levels of acoustic impact are likely to be under- or over-estimated depending on whether the location of the modeled event is further from the important habitat area, or closer to it, than the actual event. Thus, there is a need for the Navy to compile and provide more information regarding the number, nature, and timing of testing and training events that take place within, or in close proximity to, important habitat areas, and to refine its scale of analysis of operations to match the scale of the habitat areas that are considered to be important.</p> <p>While the DSEIS, in assessing environmental impacts on marine mammals, breaks down estimated impacts by population, little detail is provided about assumptions concerning modeled locations and times of year, making it impossible for the public to assess the reasonableness of the Navy's impact analysis in capturing the distribution of the activities proposed in the document. See, e.g., DSEIS at 2-28 TO 2-38 (e.g., defining numerous activities as simply occurring "[o]ffshore"). Furthermore, without knowing more about the modeled sites, it is impossible to assess the reasonableness of the Navy's "take" numbers in representing the amount of take that the Navy will propose for authorization under the Marine Mammal Protection Act.</p>	<p>The EIS/OEIS is structured to provide flexibility in training and testing locations, timing, and number. Many factors influence actual training and testing locations that cannot be predicted in advance (e.g., weather), so the analysis must allow for flexibility. The analysis must consider multiple Navy training and testing activities over large areas of the ocean for a 7-year period; therefore, analyzing activities in multiple locations over multiple seasons produces the best estimate of impacts/take to inform the EIS/OEIS and regulators. The scale at which spatially explicit density models are structured is determined by the data collection method and the environmental variables that are used to build the model. A number of variables that are meaningful to marine mammal species, such as sea surface temperature, do not vary or affect species on a fine scale. Expecting fine scale resolution from the Navy's density database may force artificial granularity on species for which it is not biologically meaningful at the population level. Therefore, given the variables that determine when and where the Navy trains and tests and the resolution of the density data, the analysis of potential impacts cannot be scaled to specific habitat areas, and is used to provide the EIS/OEIS and the regulator with the information necessary to determine potential impacts/take for a population of animals. Specific modeled locations are not disclosed in public documents because of national security concerns, and information regarding the exact location of sonar usage is classified. Furthermore, the Navy requires large areas of sea space because it trains in a manner to avoid observation by potential adversaries. Modern sensing technologies make training on a large scale without observation more difficult. A foreign military's continual observation of U.S. Navy training in predictable (e.g., compiled and publicly disclosed) geographic areas and timeframes would enable foreign nations to gather intelligence and</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>This is important in ensuring that the Navy’s activities do not exceed annual levels of authorized take—and that sufficient measures are taken to protect particularly vulnerable marine mammal populations, such as the critically endangered Southern Resident orca and the struggling California gray whale.</p> <p>We recommend that the Navy provide further information on modeled locations, and determine the worst-case take estimate if activities take place in the highest-density areas that are authorized and not excluded from use through geographic mitigation.</p>	<p>subsequently develop techniques, tactics, and procedures to potentially and effectively counter U.S. naval operations.</p> <p>Still, the Draft Supplemental EIS/OEIS provides a significant level of information about the locations of specific activities in Chapter 2 (Description of Proposed Action and Alternatives) and Appendix A (Activity Descriptions). Chapter 2 also describes Standard Operating Procedures that may influence activity location. Lastly, Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment) describe Mitigation Areas that would be implemented under the proposed action.</p> <p>In addition to the above considerations, conservative assumptions in the quantitative assessment process, as described in the technical report titled <i>Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing</i> (U.S. Department of the Navy, 2018c); conservative application of marine mammal behavioral response data in the development of behavioral response criteria, as described in the technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i> (U.S. Department of the Navy, 2017h); and implementation of the adaptive management process under Letter of Authorization under the Marine Mammal Protection Act for the proposed action ensure that the level of authorized take would not be exceeded. Both technical reports are available at www.nwtteis.com.</p>
NRDC-20	<p>As a threshold matter, it is unclear where in the DSEIS this analysis of the environmental effects of Growler training in the offshore area appears. For example, while the Navy points to its cumulative effects discussion for this analysis, that chapter is limited to the observation that “[t]hese proposed operations, when considered with the Proposed Action, could add to the cumulative impacts on air quality, birds, noise, socioeconomic resources, cultural resources, and American Indian and Alaska Native Traditional resources.” DSEIS at 4-4 (Table 4.3-1). Nor does Appendix J, which summarizes the modeled noise impacts to human health, recreational, and aesthetic values, discuss the impacts of Growler operations within the training range.</p>	<p>The analysis of the Growler training in the Offshore area appears in the various resource sections. For example, impacts to fishes or marine mammals from aircraft overflights can be found in those sections (3.9.3.1.4, Impacts from Aircraft Noise [Fishes], or 3.4.2.1.4, Impacts from Aircraft Noise [Marine Mammals]). Because aircraft pose a potential strike hazard to birds, the analysis of that potential is found in Section 3.6.2.4.1 (Impacts from Aircraft and Aerial Target Strikes).</p>
NRDC-21	<p>Second, as the Navy admits, its analysis of the impacts from Growler overflights has been parceled out into multiple actions and multiple EISs. DSEIS at 1-10. The Navy attempts to justify these segmented analyses based on its belief that each of the Growler expansion and training activities—as well as the training purportedly considered in the DSEIS</p>	<p>The Navy prepares Environmental Impact Statements (EIS) and Environmental Assessments (EA) in order to comply with the National Environmental Policy Act (NEPA). These NEPA documents are intended to ensure decision makers consider the potential environmental effects of a proposed action and its alternatives, provide an opportunity for public involvement, and promote</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>itself—are disconnected from one another but “cumulatively” addressed in each of these documents. DSEIS at 1-10, 4-1, 4-4. Federal agencies, however, cannot segment or manipulate the scope of their actions in order to evade the full environmental impact analysis that NEPA demands. 40 C.F.R. § 1508.27(b)(7) (“Significance cannot be avoided by ... breaking [an action] down into small component parts.”). Rather, when determining the scope of its environmental review under NEPA, an agency must consider “connected, cumulative, and similar actions” together to prevent an agency from “dividing a project into multiple ‘actions,’ each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.” 40 C.F.R. § 1508.25; see, e.g., <i>Earth Island Inst. v. U.S. Forest Serv.</i>, 351 F.3d 1291, 1305 (9th Cir. 2003). The Navy’s attempt to subdivide its analysis of these impacts violates these requirements and impermissibly risks masking significant effects to terrestrial and marine wildlife because the sum of these parts does not make a whole. Neither the Growler EIS, nor the electronic warfare EA, nor the NWTT EIS adequately and completely analyzes the impacts of Growler overflights and training on marine and terrestrial wildlife.</p>	<p>transparency by informing the public of these potential environmental effects. Each NEPA document addresses a specific proposed action, separated from other actions by its purpose and need, independent utility, timing, and geographic location. Some NEPA documents are stand-alone documents; others tier off or expand the analyses of other NEPA documents. NEPA documents that analyze the potential impacts of training and testing activities, including this Supplemental EIS/OEIS, support the purpose and need of the Navy to both successfully train naval forces and test naval capabilities for eventual employment in military operations. NEPA documents for aircraft homebasing actions focus on aircraft operations in and around the airfield and their facility needs. NEPA documents for installations focus on infrastructure enhancements for host and tenant command missions. Importantly, every environmental document considers the cumulative impacts to the environment from other relevant past, present, and reasonably foreseeable future actions (federal, state, local, and private) in addition to the proposed action.</p>
NRDC-22	<p>Third, the Navy’s limited discussion in the DSEIS, and in the other NEPA documents, of the impacts of Growler training and overflights in the NWTT area fails to satisfy NEPA’s “hard look” requirements. It is clear that the presence of Growlers and other aircraft throughout this region can disrupt wildlife, including marine mammals. Multiple studies and literature reviews have documented effects of aircraft on the behavior of cetaceans. These effects range from diving in response to the presence of aircraft to defensive behaviors and directional change.</p> <p>It is also clear from the literature that noise from aircraft transfers to the water column at biologically meaningful volumes. Indeed, as the Navy notes in the DSEIS, but does not bring forward for analysis, modeling specific to Growlers demonstrates that sound levels from overflights can range from 152 dB re 1 µPa at 2 meters below the water surface for a subsonic flight at 1,000 ft., to 128 dB re 1 µPa at 2 meters below the water surface for subsonic flight at 10,000 ft. DSEIS at 3-19 (Table 3.0-4). These levels plainly exceed, for example, the 120 dB re 1 µPa threshold that coincided in one study with the onset of behavioral responses, in orcas, to vessel noise. And sonic booms from Growlers can also produce noise at levels far above those causing behavioral changes.</p> <p>Growlers will be using the Olympic MOAs and Warning Areas 237A and B,</p>	<p>The studies cited in this Supplemental EIS/OEIS support the Navy’s conclusions regarding aircraft noise impacts to species present in the Study Area. The Navy used the best available data, science, and information accepted by the relevant and appropriate regulatory and scientific communities in its analysis in accordance with National Environmental Policy Act (NEPA), the Administrative Procedure Act (5 United States Code sections 551–596), and Executive Order 12114. Specifically, best available science used to inform the assessment of impacts to marine mammals from aircraft noise is provided in Section 3.4.2.1.1.5 (Behavioral Reactions – Behavioral Reactions to Aircraft Noise) in Chapter 3.4 (Marine Mammals). Section 3.0.3.1.3 (Aircraft Noise) characterizes aircraft noise stressors in the Study Area, while Appendix J (Airspace Noise Analysis for the Olympic Military Operations Area) characterizes aircraft noise in the Olympic MOA and W-237. Appendix D (acoustic and Explosive Concepts) explains the conditions under which airborne sound may enter the water.</p> <p>The modeled values cited in Table 3.0-4 are for an F/A-18, not a EA-18G. Information regarding flight activity specific to the Olympic MOA and W-237 that would impact the sound level transmitted underwater (i.e., flight altitude) is provided in Appendix J of this Draft Supplemental EIS/OEIS. The</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>and transiting to and from these areas to Whidbey Island NAS tens to hundreds of thousands of times during the period evaluated in the DSEIS. This offshore area and those in the Salish Sea represent a significant part of Southern Resident orca habitat—much of it designated as critical habitat—but the Navy does not discuss effects to this habitat or to cetaceans or other marine mammals anywhere in the DSEIS, or any of the other NEPA analyses prepared for this overflight activity.</p> <p>For the above reasons, the Navy must provide further information on the noise impacts from aircraft. 40 C.F.R. § 1502.22. Further, we recommend that the Navy consult with NMFS to determine the effects of this significant aggregate of overflights on marine mammals, including, but not limited to, critically endangered Southern Resident Killer Whales.</p>	<p>majority of fixed-wing aircraft flights in the Study Area would occur at altitudes greater than 6,000 ft. MSL. All aircraft fixed-wing aircraft flights would occur at altitudes greater than 6,000 ft. MSL in the Olympic MOA, including the portion of the MOA over the Offshore Area within 3 NM of shore. The sound from aircraft overflight noise is short duration and widely dispersed; therefore, there is a low probability for potential overlap with an animal near the surface. Sound from aircraft overflight noise lacks the amplitude and duration to cause hearing loss. Behavioral responses would be short-duration and are unlikely to cause a significant impact. The annual number of EA-18G sorties to and from the Olympic MOA and W-237 under Alternative 1 is given in the Draft Supplemental EIS/OEIS as 2,524 sorties and would not equate to hundreds of thousands of sorties over a 7-year period as suggested in the comment. In addition, going supersonic 30 NM or closer to shore and over land is not allowed in the Pacific Northwest during military readiness activities, and it is unlikely that supersonic flight training will occur. If a training need should occur for supersonic flight it will comply with Navy regulations CNAF M-3710.7.</p> <p>Brief, transient broadband noise at low received levels in the water due to aircraft flights under this proposed action would not disrupt natural behavioral patterns including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering to a point where such behavioral patterns are abandoned or significantly altered. Aircraft noise in Southern Resident killer whale critical habitat is discussed in Section 3.4.2.1.4 (Impacts from Aircraft Noise). The Navy has consulted with NMFS in accordance with Section 7 of the Endangered Species Act. In addition, the Navy has conducted conferencing with NMFS on proposed Southern Resident killer whale critical habitat in accordance with Section 7 of the Endangered Species Act.</p>
NRDC-23	<p>In order to satisfy NEPA, an EIS must include a “full and fair discussion of significant environmental impacts.” 40 C.F.R. § 1502.1. It is not enough, for purposes of this discussion, to consider the proposed action in isolation, divorced from other public and private activities that impinge on the same resource; rather, it is incumbent on the Navy to assess cumulative impacts as well, including the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future significant actions.” Id. § 1508.7. A meaningful cumulative impact analysis must identify (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past,</p>	<p>Please see response below regarding aggregate impacts to marine mammals.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	present, proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate. Grand Canyon Trust v. FAA, 290 F.3d 339, 345 (D.C. Cir. 2002) (quotation and citation omitted).	
NRDC-24	<p>As with past analyses, the present DSEIS tabulates exposures and takes of marine mammal species but has not adequately assessed the aggregate impacts. On the contrary, it assumes, without explanation, that the accumulated annual mortalities, injuries, energetic costs, temporary losses of hearing, chronic stress, and other impacts would not affect vital rates in individuals or populations, even though the Navy’s activities would affect the same populations over time.</p> <p>This assumption seems predicated, for many species, on the unsupported notion that transient activity will not accumulate into population-level harm. The DSEIS makes this assertion even for species such as harbor porpoises (see DSEIS at 3.4-232 to 3.4-237), for which it estimates auditory injury, temporary hearing loss, and behavioral disruption at extraordinarily high numbers relative to the size of individual populations. See <i>Motor Veh. Mfrs. Ass’n v. State Farm Ins.</i>, 463 U.S. 29, 43 (1983) (holding an agency arbitrary and capricious where, inter alia, it “offered an explanation for its decision that runs counter to the evidence before [it]”).</p> <p>Ultimately, the DSEIS states, “The best assessment of long-term consequences from Navy training and testing activities will be to monitor the populations over time within the Study Area” (DSEIS at 3.4-133). But while we strongly concur with the Navy that long-term monitoring is critical, that monitoring cannot substitute for an adequate assessment of the aggregate effects of those activities. Nor can the Navy’s summary dismissal of impacts substitute for the more robust population consequences analyses performed by other parties for an increasing number of other actions, such as for harbor porpoises exposed to pile-driving in the North Sea. 40 C.F.R. § 1502.22(b)(4) (requiring use of “theoretical approaches or research methods generally accepted in the scientific community”).</p>	<p>No mortalities or non-auditory injuries are predicted under the Proposed Action for any marine mammal species including harbor porpoises. The vast majority of estimated impacts to marine mammals are instances of behavioral response, followed by instances of temporary threshold shift, both considered Level B under the MMPA. A small proportion of a few species such as harbor porpoises are estimated to receive instances of PTS. It is unclear if or how a PTS would affect the fitness of an individual, although this uncertainty is considered when analyzing long-term consequences for individuals and populations and applying this to the overall aggregate impacts.</p> <p>Aggregate impacts are assessed in Supplemental EIS/OEIS Section 3.4.3 (Summary of Impacts [Combined Impacts of All Stressors] on Marine Mammals). In the NWTT Study Area, unit-level military readiness activities occur over a small spatial scale with few participants, typically over a short duration (a few hours or less), while larger-scale training and testing events occur in locations outside of the Study Area. Predicting synergistic impacts of multiple stressors currently relies on speculation, but substantial efforts are underway to better understand possible aggregate effects through data collection. These efforts are not limited solely to long-term monitoring, but also include theoretical approaches and research methods generally accepted in the scientific community such as the Population Consequences of Disturbance model (see Section 3.4.2.1.1.7, Long-Term Consequences). Until there are sufficient data to inform such models, the best assessment of long-term consequences from Navy training and testing activities will be to monitor the populations over time on Navy ranges. The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area or at any Navy Range Complex. In addition, the Navy’s research and monitoring programs, described in Section 3.0.1.1.1 (Marine Species Monitoring and Research Programs) in Chapter 3.0 (Introduction), are focused on filling data gaps and obtaining the most up-to-date science to inform impact assessment.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Information about prior and current research being conducted on marine mammals on Navy ranges is in Chapter 3.4 (Marine Mammals) and can be found at www.navymarinespeciesmonitoring.us . To date, the findings from the research and monitoring and regulatory conclusions from recent analyses by NMFS have been that the majority of impacts from military readiness activities are not expected to be deleterious with regard to fitness of any individuals, or cause long-term consequences to populations of marine mammals.
NRDC-25	<p>Nor does the Navy's treatment of cumulative impacts, adding the impacts of other reasonably foreseeable activities to its own projected training and testing, result in an adequate analysis. The DSEIS begins by listing numerous other military, commercial, and industrial activities in the region (DSEIS at 4-3 to 4-40), including Navy activities, such as Growler operations, that were purportedly covered in other NEPA documents; pier extensions and replacements; commercial fishing; and substantial maritime traffic. Unfortunately, in assessing the additive and synergistic impacts of these activities, the Navy provides only abstract rationalization.</p> <p>In the case of marine mammals, for example, the Navy relies on its findings from the 2015 EIS, to conclude that "the incremental contribution of the Proposed Action would be negligible" and to rule out any further analysis of marine mammals. DSEIS at 4-43. Yet this misstates the actual conclusion of the Navy's previous analysis. The 2015 EIS recognized that "the current aggregate impacts of past and present actions and reasonably foreseeable future actions are expected to result in recoverable impacts to most marine mammal species, and significant impacts on some in the Study Area"; that, "[t]herefore, cumulative impacts on marine mammals would be significant" even without consideration of the additional impacts caused by the proposed training and testing activities; but that, compared to other actions, the Navy's "relative contribution would be low." The fact that an activity's "relative contribution would be low" does not mean that it is "negligible," as the Navy concludes here, and not in need of further analysis. See <i>Klamath-Siskiyou Wildlands Ctr. v. BLM</i>, 387 F.3d 989, 994 (9th Cir. 2004) (stating that "[a] proper consideration of the cumulative impacts of a project requires some quantified or detailed information"). On the contrary, NEPA requires review of the cumulative impacts resulting from "individually minor but collectively significant actions taking place over a period of time" (40 C.F.R. 1508.7). That requirement is all the more important where, as the Navy previously acknowledged, cumulative</p>	<p>The Navy, in cooperation with NMFS, has taken a hard look at the cumulative effects of the incremental impact of its proposed actions when added to other past present and future actions, against the appropriate resources and regulatory baselines. The Navy used the best available science and a comprehensive review of past, present, and reasonably foreseeable actions to develop its Cumulative Impacts analysis. As required under NEPA, the level and scope of the analysis is commensurate with the potential impacts of the action as reflected in the resource-specific EIS, discussions in Chapter 3 (Affected Environment and Environmental consequences). The EIS/OEIS considered its activities alongside other actions in the region when those impacts are cumulatively significant. Past and present actions are also included in the analytical process as part of the affected environment baseline conditions presented in Chapter 3. The Navy has done so in accordance with the Council on Environmental Quality 1997 guidance. Per the guidance, a qualitative approach and best professional judgment are appropriate where precise measurements are not available. Where precise measurements and/or methodologies were available they were used. Guidance from the Council on Environmental Quality states it "is not practical to analyze cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful." All of the potential effects on marine mammals from Navy training and testing were analyzed in Section 3.4 (Marine Mammals). Based on the best available science, it was determined that population-level impacts would not occur. The commenter otherwise has provided no evidence that demonstrates stock or population-level consequences resulting from Navy training and testing activities have occurred, activities that have occurred in these areas at similar levels of intensity, for decades.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>impacts from past, present, and reasonably foreseeable future actions are already “significant” for some species. Furthermore, as noted above, the Navy’s conclusion that its “relative contribution would be low” does not follow from the facts presented for some of the region’s marine mammal populations, such as harbor porpoises.</p> <p>At present, the Navy’s analysis of cumulative impacts is arbitrary and does not meet NEPA’s requirement to assess the overall impact of the accumulation of individual impacts.</p>	
NRDC-26	<p>There is no question that the Navy’s alternatives analysis is improved by the addition of a true “no-action” alternative. The Hawai’i District Court, in reviewing the Navy’s most recent EIS for Hawai’i and Southern California training and testing (“HSTT”) activities, concluded that that document failed to include such an alternative, which the NEPA regulations mandate to “provide a baseline against which the action alternatives are evaluated.” Conservation Council, 97 F. Supp. 3d at 1236 (citing Friends of Southeast’s Future v. Morrison, 153 F.3d 1059, 1065 (9th Cir. 1998)). The present DSEIS, in including the alternative—though immediately rejecting it as unreasonable (see DSEIS at 2-24)—purports to cure this clear deficiency. Describing the “no action” option cannot by itself, however, provide the choice among the full range of reasonable alternatives required by law. In an effort to provide that range, the Navy has developed a preferred alternative (“Alternative 1”) based on a “representative year of training” and “an annual level of testing that reflects the fluctuations in testing programs.” DSEIS at 2-25. The maximum level of training and testing is captured in the Navy’s only other action alternative (“Alternative 2”). Id. According to the DSEIS, the effect is to “reduce[] the amount of hull-mounted mid-frequency active sonar estimated to be necessary to meet training requirements” (id.), which would be a welcome change. It does not appear, however, that the Navy’s preferred alternative will actually reduce the amount of sonar activity that takes place in the NWTT Study Area, as opposed to reflecting a pre-defined status quo. Indeed, the description provided in the DSEIS suggests that Alternative 1 better captures the “fluctuations” in activity that the Navy expects to occur. Id. at 2-25. Thus, for example, Alternative 1 anticipates that a particular anti-submarine warfare exercise will be run 75 times in the first year and 100 times in the second, and so forth, rather than the less realistic 100 times per year contemplated by Alternative 2. Id. at 2-29. The Navy’s preferred alternative provides a more accurate estimate of sonar and explosives activity, which is a significant improvement for analysis; yet its Alternative</p>	<p>The Navy’s alternatives were developed in order to satisfy the Navy’s purpose and need related to fulfilling its Title 10 requirements. The Navy has explored and evaluated all reasonable alternatives. Details regarding the development of reasonable alternatives are provided in Section 2.4 (Action Alternatives Development) and Section 2.4.2 (Alternatives Carried Forward). Consistent with 40 C.F.R. 1502.14, the Navy has included a robust suite of mitigation measures, which will be implemented in both action alternatives (i.e., whichever alternative is selected). These mitigation measures, as well as standard operating procedures that the Navy routinely employs, are discussed in detail and specifically inform the decision maker and the public how the Navy can avoid or minimize adverse impacts. NEPA identifies the application of mitigation measures, such as those suggested by the comment, to the alternatives “when not already included in the proposed action or alternative” (40 C.F.R. 1502.14).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	2 is not a true alternative, in that it does not “avoid or minimize adverse impacts or enhance the quality of the human environment” 40 C.F.R. § 1502.1 (stating purpose of an environmental impact statement). We urge the Navy to develop a fuller range of reasonable alternatives.	
NRDC-27	<p>The latest science, including the Navy’s own analysis, indicates an urgent need to extend mitigation to dipping sonar, which is deployed via cable from manned and unmanned aircraft.</p> <p>Dipping sonar, like hull-mounted sonar, appears on the basis of available data to be a significant predictor of deep-dive rates in beaked whales. Evidence indicates that beaked whales dive deeper and stay at depth during exposure to mid-frequency active sonar (possibly to escape from the sound, as the lowest sound pressure levels occur at depth), behavior that also extends the inter-deep-dive-interval (“IDDI,” a proxy for foraging disruption).80 IDDI’s were found to significantly lengthen upon exposure to MFAS, with the longest, lasting 541 and 641 minutes, recorded during helicopter-deployed mid-frequency active sonar at distances of ~17 and ~11 kilometers, respectively. These effects have been documented at substantially greater distances (~30 km) than would otherwise be expected given the systems’ source levels and the response thresholds developed from research on hull-mounted sonar. Deep-dive duration increases as distance to the helicopter decreases.</p> <p>Helicopters deploy mid-frequency active sonar from a hover in bouts generally lasting under 20 minutes, moving rapidly between sequential deployments in an unpredictable pattern, and thus whales may react more strongly to these sudden, close-range exposures even though their duration of use and source level (217 dB) are generally well below those of hull-mounted mid- frequency active sonar (235 dB). Dipping sonar is also deployed at depth, which may be another reason why it is relatively more impactful. This finding is consistent with the wider stress literature, for which predictability is a significant factor in determining stress-response from acoustic and other stimuli (Wright et al. 2007). It should thus be presumed conservatively to apply to marine mammal species other than beaked whales.</p> <p>The DSEIS projects a substantial increase in activities involving dipping sonar, from 14 annual events during the current cycle (2015-20) to 53 to 75 annual events under the Navy’s preferred alternative and 80 annual events under Alternative 2. DSEIS at 3-13 (bin MF4). The Navy must consider restricting or limiting use of dipping sonar during the present NEPA process.</p>	<p>The Navy did include mitigation for active sonar, including dipping sonar, in the Draft Supplemental EIS/OEIS. Within 12 NM from shore in the Marine Species Coastal Mitigation Area, the Navy will not conduct Anti-Submarine Warfare Tracking Exercise – Helicopter, Maritime Patrol Aircraft, Ship, or Submarine training activities. These activities involve the use of MF4 and MF5.</p> <p>The Navy relied upon the best science that was available to develop the behavioral response functions in consultation with NMFS. The Navy’s current beaked whale BRF acknowledges and incorporates the increased sensitivity observed in beaked whales during both behavioral response studies and during actual Navy training events. The article cited in the comment (Falcone, 2017) was not available at the time the behavioral response functions were developed. The Navy will incorporate these findings into the Navy’s future behavioral response functions as appropriate. However, the Navy’s current beaked whale BRF covers the responses observed in the new article since the beaked whale risk function is more sensitive than the other risk functions at lower received levels. Although not incorporated into the behavioral response functions, relevant new studies are not excluded from the analysis in this Final Supplemental EIS/OEIS. Thus far, no new information has been published or otherwise conveyed that would fundamentally change the assessment of impacts or conclusions of this Draft Supplemental EIS/OEIS.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
NRDC-28	The Navy does not incorporate stand-off distances of any size within its management requirements for its proposed Mitigation Areas, providing only that activities not take place “within” the defined areas. See DSEIS at K-11 to K-13. Thus, activities that are otherwise restricted or limited within an Area could occur directly along the boundary and ensnare the Area at levels that can cause injury and increase the risk or severity of behavioral disruption. Stand-off distances are a reasonable mitigation measure that is routinely required by NMFS in authorizing take under the Marine Mammal Protection Act. 40 C.F.R. §§ 1502.14(f), 1503.3(d). The Navy must consider establishing stand-off distances around its Mitigation Areas to the greatest extent practicable, allowing for variability in size given the location of the Area, the type of operation at issue, and the species of concern.	The mitigation areas identified in Appendix K (Geographic Mitigation Assessment) represents the maximum mitigation within mitigation areas and the maximum size of mitigation areas that are practical to implement under the Proposed Action. Implementing additional mitigation (e.g., stand-off distances that would extend the size of the mitigation areas) beyond what is described in the appendix would be impractical due to implications for safety, sustainability, and the Navy’s ability to continue meeting its mission requirements. For example, as described in Section K.3.2.2.2 (Operational Assessment), creating stand-off distances from the 12 NM, 20 NM, and 50 NM limits within the Marine Species Coastal Mitigation Area would result in activities being conducted farther offshore. Moving activities farther offshore would be impractical due to decreased event realism, increased resource allocations and operational costs (due to extending distance offshore and proximity to Navy support facilities, which would increase fuel consumption, maintenance, and time on station), increased safety risks (associated with conducting training and testing at extended distances offshore and farther away from critical medical and search and rescue resources), and accelerated fatigue-life of aircraft and ships (leading to increased safety risk and higher maintenance costs). Increased resource allocations and operational costs would serve as a limiting factor for Navy surface units whose available underway times are constrained by available manpower and fuel expenses. This would also reduce training or testing opportunities during a platform’s limited available timeframes because increased time spent transiting to more distant training areas or test sites results in decreased time available for training or testing.
NRDC-29	As with the consent order entered by the court in Conservation Council for Hawai’i v. NMFS, 97 F.Supp.3d 1210 (D. Haw. 2015), the present DSEIS would allow the Navy to derogate from the measures associated with its mitigation areas, where necessary for national security, if certain conditions are met. Specifically, authorization must be granted, the Navy must provide NMFS with advance notice of the derogation and data on the activities conducted after the completion of events, and the Navy must provide information on those activities in its annual reports. See DSEIS at K-11 to K-12 (Table K-2). Unlike the consent order, however, the DSEIS does not clearly restrict derogation authority to highest-level officers. Under the consent order, authority could be invoked only by certain named officers representing the highest command authority, namely the Commander or Acting Commander of the Pacific Fleet, for training activities, and the Commander or Acting Commander of the various	As discussed in Appendix K (Geographic Mitigation Assessment) of the Navy’s 2018 Final HSTT EIS/OEIS, the Navy amended the level of permission authority for the HSTT Proposed Action so that the four-star Commander of the U.S. Pacific Fleet could delegate authority to another high-level Command authority for approval. Mitigation language in the NWTT Final Supplemental EIS/OEIS for obtaining permission from the “appropriate designated Command authority,” providing NMFS with advance notification, and including relevant information about the event in annual activity reports to NMFS prior to commencement of applicable activities is consistent with mitigation language included in the 2018 Final HSTT EIS/OEIS. The Navy expanded its suite of mitigation areas in NWTT Inland Waters and will implement additional mitigation beyond requiring Command approval and NMFS notification and annual reporting for certain activities, as detailed in

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	research branches for testing activities, and then only when the Navy “deems it necessary for national defense.” Stipulated Settlement Agreement and Order, Conservation Council, supra (Sept. 14, 2015). Similarly, at least some of the geographic areas adopted by the Navy in prior NEPA processes, such as the Humpback Whale Cautionary Area established in previous Hawaii- Southern California Training and Testing EISs, allowed for derogation only upon approval of the Pacific Fleet Commander. This requirement made it more likely that derogation decisions would be taken with the greatest seriousness and consideration. By contrast, the DSEIS is unclear in its designation, generally allowing units to obtain permission from “the appropriate delegated Command authority.” DSEIS at K-11 to K-12 (emphasis added). The Navy should clarify that authorization may be given only by the highest-level Command authorities, consistent with the consent order in Conservation Council.	Appendix K (Geographic Mitigation Assessment) of this Final Supplemental EIS/OEIS.
NRDC-30	That protection, however, though improved on the current NMFS authorization, would not be comprehensive, particularly for the Southern Resident orca population. Best available scientific information indicates that this population of orcas uses waters of the Pacific Ocean between Cape Flattery, Washington, and Point Reyes, California, extending approximately 47 miles offshore, between December and June. Id. In light of the observed impacts of noise disturbance, including active sonar, on Southern Resident orcas (see Section II.A.1), we recommend the Navy consider prohibiting or at least significantly limiting the use of mid-frequency active sonar from all sources, including dipping sonar, within the Marine Species Coastal Mitigation Area, at least between December and June; and, similarly, to further limit other activities that have the potential to result in species take. If prohibiting or limiting mid-frequency active sonar (and/or other activities) is not possible across the entire Mitigation Area, we recommend that the Navy at least carefully consider a prohibition in the waters within the Mitigation Area extending between Cape Flattery, Washington, and Tillamook Head, Oregon, including the waters offshore of the Columbia River mouth, to protect an area of highest relative habitat use for Southern Residents, as indicated by presently available satellite telemetry data.	The Navy does not generally schedule training and testing near Cape Flattery due to the high volume of commercial vessel traffic in that portion of the Study Area. The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from active sonar on marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on marine mammals in important foraging and migration areas. For the Final Supplemental EIS/OEIS, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters near Cape Flattery as the commenter recommended. The Navy will conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation Area. Additional geographic mitigation for active sonar beyond what is detailed in Section K.3 (Mitigation Areas to be Implemented), such as prohibiting all active sonar within 50 NM from shore, would be impractical to

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		implement for the reasons described in Appendix K (Geographic Mitigation Assessment) and Section 5.5.1 (Active Sonar).
NRDC-31	<p>In addition to the proposed restrictions, the Navy must consider prohibiting or restricting air- deployed mid-frequency active sonar (i.e., dipping sonar) within the Olympic Coast National Marine Sanctuary Mitigation Area, as well as other activities involving sources of mid-frequency active sonar, including unit-level training and maintenance and system checks while vessels are in transit.</p> <p>In particular, the deployment of all forms of mid-frequency active sonar should be restricted within the vicinity of the Quinault Canyon. Both visual and passive acoustic surveys have demonstrated the importance of the canyon for a diversity of marine mammal species.</p> <p>Remarkably, the extremely rare and endangered North Pacific right whale has been acoustically detected within the canyon, as have humpback whales, sperm whales, offshore, transient, and resident killer whales, Pacific white-sided dolphins, and Risso's dolphins, and a variety of beaked whale species. Dall's porpoise, Cuvier's beaked whale, northern right whale dolphin, and northern fur and elephant seals have also been sighting in the vicinity of the Quinault Canyon (Oleson et al. supra; Oleson & Hildebrand, NPS-OC-12-001CR, pp. 56, 2012), and Southern Resident orcas have been satellite tracked in this area (NOAA Fisheries, 2015).</p> <p>We recognize that the Quinault Canyon lies within the Quinault Range Site and that the practicability of implementing comprehensive mitigation may be limited; however, we recommend the Navy fully explore opportunities for applying additional mitigation measures to protect the Quinault Canyon to the full extent practicable. First and foremost, such measures should include further restrictions on activities. For those activities that the Navy concludes, after probing analysis, cannot be reduced or shifted, the Navy (1) should undertake year-round monitoring of the Canyon to ascertain the seasonality of species presence and habitat use and adaptively plan to reduce operations during periods of greater biological importance; and (2), as a last resort, should employ enhanced monitoring techniques, including the use of passive acoustics, to avoid protected species.</p>	<p>The Navy did include mitigation for active sonar, including dipping sonar, in the Draft Supplemental EIS/OEIS. Within 12 NM from shore in the Marine Species Coastal Mitigation Area, the Navy will not conduct Anti-Submarine Warfare Tracking Exercise – Helicopter, Maritime Patrol Aircraft, Ship, or Submarine training activities. These activities involve the use of MF4 and MF5. For the Final Supplemental EIS/OEIS, the Navy developed new mitigation to conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation Area. Previously in the Draft Supplemental EIS/OEIS, the Navy was proposing to conduct a maximum of 33 hours of MF1 annually within only the Olympic Coast National Marine Sanctuary (excluding the portion of the mitigation area that overlapped the Quinault Range Site). The expanded mitigation will offer additional protections for marine mammals that inhabit the Sanctuary or sea space around Quinault Canyon. Additional geographic mitigation for active sonar beyond what is detailed in Section K.3 (Mitigation Areas to be Implemented), such as prohibiting additional types of active sonar or further limiting active sonar hours in the NWTT Offshore Area (such as prohibiting use of active sonar near Quinault Canyon), would be impractical to implement for the reasons described in Appendix K (Geographic Mitigation Assessment) and Section 5.5.1 (Active Sonar).</p>
NRDC-32	<p>The Navy should expand the proposed mitigation measures to more comprehensively protect humpback whales at Stonewall and Heceta Banks between May and November. The Navy should prohibit air-deployed mid-frequency active sonar (i.e., dipping sonar) within the Stonewall and Heceta Bank Humpback Whale Mitigation Area, as well as other activities</p>	<p>For the Final Supplemental EIS/OEIS, the Navy developed new mitigation to conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	involving sources of mid-frequency active sonar, including unit-level training and maintenance and system checks while vessels are in transit. The expanded mitigation measures would benefit a variety of species, including noise-sensitive harbor porpoise, that are likely to be found in relatively higher densities within the Mitigation Area. The Navy should also include mitigation measures that limit vessel speeds to reduce the likelihood of vessel strike.	Sanctuary Mitigation Area. The expanded mitigation will offer additional protections for humpback whales in the portion of the Marine Species Coastal Mitigation Area that overlaps Stonewall and Heceta Banks. Additional geographic mitigation for active sonar beyond what is detailed in Section K.3 (Mitigation Areas to be Implemented), such further expanding mitigation requirements at Stonewall and Heceta Banks, would be impractical to implement for the reasons described in Appendix K (Geographic Mitigation Assessment) and Section 5.5.1 (Active Sonar).
NRDC-33	As with the Stonewall and Heceta Bank Humpback Whale Mitigation Area, the Navy should expand the proposed mitigation measures to more comprehensively protect humpback whales at Point St. George Humpback Whale Mitigation Area, here between July and November. The Navy should prohibit air-deployed mid-frequency active sonar (i.e., dipping sonar), as well as other activities involving sources of mid-frequency active sonar, including unit-level training and maintenance and system checks while vessels are in transit. The Navy should also include mitigation measures that limit vessel speeds to reduce the likelihood of vessel strike.	For the Final Supplemental EIS/OEIS, the Navy developed new mitigation to conduct a maximum combined total of 33 hours of surface ship hull-mounted MF1 mid-frequency active sonar during testing annually within 20 NM from shore in the Marine Species Coastal Mitigation Area, the Juan de Fuca Eddy Marine Species Mitigation Area, and the Olympic Coast National Marine Sanctuary Mitigation Area. The expanded mitigation will offer additional protections for humpback whales in the portion of the Marine Species Coastal Mitigation Area that overlaps the Point St. George Humpback Whale Mitigation Area. Additional geographic mitigation for active sonar beyond what is detailed in Section K.3 (Mitigation Areas to be Implemented), such further expanding mitigation requirements in the Point St. George Humpback Whale Mitigation Area, would be impractical to implement for the reasons described in Appendix K (Geographic Mitigation Assessment) and Section 5.5.1 (Active Sonar).
NRDC-34	As noted elsewhere in these comments, the Salish Sea, including the inland waters of Puget Sound, constitutes critical habitat for the Southern Resident orca and is a focus of extensive conservation effort, on both sides of the border, to sustain and recover the population. The high numbers of takes estimated, in the DSEIS, for both the Washington Inland Waters harbor porpoise and the Hood Canal harbor seal indicates that considerable activity would take place in the whales' critical habitat. This appears true notwithstanding the requirement that units obtain approval from the "designated Command authority" before undertaking certain activities in the area, which differs notably from the derogation procedures proposed for other Navy Mitigation Areas in not incorporating a "national security" standard. See id. at K-12. Navy impacts are intolerable to the public We urge the Navy to engage in a more rigorous analysis of alternatives and mitigation options in this area, with the aim of eliminating potential impacts on Southern Residents. The Navy should consider (1) completely	As described in Section K.3.3. (Mitigation Areas for Marine Species in NWT Inland Waters), the Navy developed enhanced mitigation measures in NWT Inland Waters for Southern Resident killer whales, gray whales, and other marine species for the Final Supplemental EIS/OEIS. The Navy's new Puget Sound and Strait of Juan de Fuca Mitigation Area requirements will result in training and testing activities being conducted in NWT Inland Waters only when necessitated by mission-essential training or testing program requirements. Furthermore, the Navy will implement additional geographic mitigation for activities that are conducted in the mitigation area as applicable, such as seasonal awareness messages, communication with sighting information networks, limitations on the type and location of active sonar and explosive activities, and prohibition of live fire activities. For example, the Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	prohibiting activity during periods of higher residency or occurrence of the population, viz, roughly May through October for the Salish Sea and roughly October through mid-February for the inland waters of Puget Sound; (2) using existing methods, and working with Navy engineers, to isolate noise from its activities, particularly for activities such as pierside testing and maintenance that are concentrated in particular location; and (3) setting a transparent, rigorous protocol for ensuring that Southern Residents will not be exposed to noise that can cause behavioral disruption, before an activity proceeds, including by using the region's existing real-time hydrophone networks and by establishing additional hydrophone sites in key areas as needed. Finally, the Navy (4) must consider measures to mitigate the impacts of its Growler overflights on Southern Residents and other marine species—an issue that the DSEIS does not squarely address (see above at sec. II.E).	Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales. The Navy's mitigation as described in the Final Supplemental EIS/OEIS represents the maximum level of mitigation practical to implement under the Proposed Action, and any further mitigation in NWTT Inland Waters, such as mitigation for aircraft overflights, would be impractical due to implications for safety, sustainability, and mission requirements for the reasons described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).
NRDC-35	As noted above, gray whales are undergoing a major die-off of uncertain duration, with large percentages showing signs of “skinniness” and some stranded whales exhibiting emaciation; in animals suffering from such stress, the addition of another stressor could have severe consequences. The Navy should expand its proposed mitigation measures to more comprehensively protect gray whales at Northern Puget Sound Gray Whale Mitigation Area between March and May. It should not conduct any testing and training activities within the Mitigation Area from March through May. In addition, the Navy should include mitigation measures that limit vessel speeds to reduce the likelihood of vessel strike.	As described previously and in Section K.3.3. (Mitigation Areas for Marine Species in NWTT Inland Waters), the Navy developed enhanced mitigation measures in NWTT Inland Waters for Southern Resident killer whales, gray whales, and other marine species for the Final Supplemental EIS/OEIS. The Navy's new Puget Sound and Strait of Juan de Fuca Mitigation Area requirements will result in training and testing activities being conducted in NWTT Inland Waters only when necessitated by mission-essential training or testing program requirements. Furthermore, the Navy will implement additional geographic mitigation for activities that are conducted in the mitigation area as applicable, such as seasonal awareness messages for gray whales, limitations on the type and location of active sonar and explosive activities, and prohibition of live fire activities. The Navy's mitigation as described in the Final Supplemental EIS/OEIS represents the maximum level of mitigation practical to implement under the Proposed Action, and any further mitigation in NWTT Inland Waters would be impractical due to implications for safety, sustainability, and mission requirements for the reasons described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).
NRDC-36	Located approximately 60 km west of Grays Harbor, Washington, Grays Canyon represents seasonal feeding habitat for high densities of humpback whales. In addition, sightings of Dall's porpoise, fin whale, and the first sighting of a blue whale in the region in several decades have been made in the vicinity of the Grays Canyon. Guide and Willapa Canyon, located to the west of Willapa Bay, Washington, have been shown to represent	The Navy assessed the practicality of implementing the commenter's additional mitigation recommendations. As described in Section K.3.2.2.2 (Operational Assessment), training with active sonar in varying ocean floor topographies, such as near canyons, is essential to national security; therefore, additional restrictions on the use of active sonar near Quinalt, Grays Canyon, Guide, Willapa, Astoria, or Eel Canyons, would be impractical

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>biologically important foraging habitat for female northern fur seals. Astoria Canyon, Oregon, is located directly west of the Columbia River mouth, coincident with the Columbia River plume. Astoria Canyon has a rich prey field that supports an important groundfish fishery and falls within the recently recorded expansion in the range of jumbo squid in the California Current, a primary prey species for endangered sperm whales. This highly productive environment provides biologically important feeding habitat for marine mammals, including humpback whales, and has led to the site being designated as an Important Bird Area. In addition, there is evidence from satellite telemetry that Southern Resident killer whales use the topography of the Astoria Canyon during navigation along the Oregon/Washington coastline. Humpback whale, Risso's dolphin, and harbor porpoise have been sighted within the Eel River Canyon, northern California.</p> <p>The five canyon systems fall within the 50 nm and, in some cases, the 20 nm boundaries of the Marine Species Coastal Mitigation Area and are thus afforded protection from most explosive and several non-explosive training and testing activities, as discussed above. We recommend that, additionally, the Navy conduct no training or testing activities with mid-frequency sonar within the vicinity of the canyons at any time of year to provide protection for deep-diving and/or noise-sensitive species, including endangered sperm whales and harbor porpoise.</p>	<p>to implement because such mitigation would preclude ready access to areas with the necessary environmental and oceanographic conditions that replicate military mission and combat conditions. Preventing access to critical training waterspace would have a significant impact on the ability for units to meet their individual training and certification requirements (impacting the ability to deploy with the required level of readiness necessary to accomplish their missions), to certify forces to deploy to meet national security tasking (limiting the flexibility of Combatant Commanders and warfighters to project power, engage in multi-national operations, and conduct the full range of naval warfighting capability in support of national security interests).</p>
NRDC-37	<p>(1) Avoidance of underwater detonations at night and in other low-visibility conditions</p> <p>At night and during periods of low visibility, the Navy's ability to detect marine mammals within its safety zone declines significantly. Additionally, some endangered species engage in rest or shallow diving during the night, increasing their vulnerability to ship collision and to injury from explosives and ordnance. Many individual Navy exercises, tests, and maintenance activities last eight hours or fewer, making avoidance of nighttime activity practicable, at least in some cases. Yet, with the exception of mine neutralization exercises involving Navy divers (DSEIS at 5-45, 67), the Navy does not require, nor does it consider, avoidance of underwater detonations at night and/or during other low-visibility conditions. See DSEIS at Ch. 5 ("Mitigation").</p>	<p>Activities using explosives typically occur during daytime. For the Final Supplemental EIS/OEIS, the Navy developed new mitigation to prohibit conducting explosive Mine Countermeasure Neutralization Testing at night or in Beaufort Sea state number 3 conditions or better. As described in Section 5.6.2 (Explosives) of the Supplemental EIS/OEIS, the locations and timing of explosive training and testing activities vary based on range scheduling, mission requirements, testing program requirements, and standard operating procedures for safety and mission success. Further mitigation to prohibit activities at night or in low-visibility conditions would be impractical to implement for the reasons described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).</p>
NRDC-38	<p>Based on these studies, mitigating active sonar impacts could be achieved by employing down- sweeps with harmonics or by reducing the level of side bands (or harmonics).108 In addition, results indicate that low-frequency (1-2 kHz) active naval sonar systems without harmonics can</p>	<p>The Navy explicitly designs its active sonar signals to provide optimum performance at detecting underwater objects (e.g., submarines) in a variety of acoustic environments. The Navy assessed the potential for implementing active sonar signal modification as mitigation. At this time, the science on the</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>therefore operate at higher source levels than mid-frequency (6-7 kHz) active sonar systems without harmonics with similar startle effects on porpoises. To our knowledge, the Navy is not presently investigating signal modification as a potential mitigation measure. Given the tangible management implications of this research, however, and the potentially broad benefits to multiple species through modification at the signal source, we recommend that more research of this nature should be carried out in order to understand the extent to which these results can be generalized across species. In parallel, the feasibility of implementing signal modifications (such as those recommended above) into Navy operations should be explored.</p> <p>Other signal characteristics may also be of interest. For example, short rise times (i.e., rise times less than or equal to 15 ms) are correlated across mammalian species with startle response, raising concerns about sensitization. In a 2011 study, researchers demonstrated that sounds with short rise times elicited an acoustic startle response in captive grey seals, followed by “rapid and pronounced” sensitization, taking hold after about 3 playbacks, whereas sounds with longer rise times failed to induce a startle response and did not sensitize the animals. The startled seals then displayed sustained spatial avoidance, rapid flight responses, and “clear signs of fear conditioning,” and, once sensitized, even avoided food that was proximate to the sound source. According to the authors, sounds with short rise times thus have “the potential to cause severe effects on long-term behavior, individual fitness and longevity of individuals in wild animal populations.” In a follow-on study, high-frequency echosounders with short rise times were found to produce a strong behavioral response in the same species, leading the researchers to conclude that it could produce startle responses, and therefore potentially sensitization, as well.</p> <p>Here, too, we recommend further research and exploration of the feasibility of signal modification.</p> <p>The DSEIS appears both to defer conducting research on how modifying sonar signals (particularly upsweeps and downsweeps) might affect sonar performance until future studies confirm that it could be an effective mitigation measure; and conducting those studies itself. DSEIS at 5-58. This is not acceptable under NEPA. Obtaining information on the viability of this measure is especially important in this region, where, given the</p>	<p>differences in potential impacts of up or down sweeps of the sonar signal (e.g., different behavioral reactions) is extremely limited and requires further development. For example, Kastelein et al. (2012) researched the behavioral responses of a single captive harbor porpoise to varying sonar signals. Although this very limited data set suggests up or down sweeps of the sonar signal may result in different reactions by harbor porpoises in certain circumstances, this science requires further development (e.g., to determine potential reactions by other individual harbor porpoises and other marine mammal species). If future studies indicate that modifying active sonar signals (i.e., up or down sweeps) could be an effective mitigation approach, then the Navy will investigate if and how the mitigation would affect the sonar's performance. As described in Chapter 5 (Mitigation), mitigation must meet the appropriate balance between being effective and practical to implement.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	extraordinarily large number of takes estimated for harbor porpoises—the very subject of the Kastelein et al. signal modification study—the information is essential to a reasoned choice among alternatives. See 40 C.F.R. § 1502.22(a). While the Navy notes that “active sonar signals are designed explicitly to provide optimum performance at detecting underwater objects,” it never explains why making the modifications implicated by the marine mammal behavioral studies discussed above would be impracticable. Indeed, some of those modifications, such as converting up-sweeps to down- sweeps, would not alter the system’s spectral output in any way. The Navy must obtain information on the viability and effectiveness of this measure. 40 C.F.R. § 1502.22.	
NRDC-39	The Navy should employ thermal detection in optimal conditions, or, at minimum, require the establishment of a pilot program for thermal detection, with annual review under the adaptive management system established in MMPA rulemaking. The Navy states once again, as it has in several previous NEPA reviews, that it “plans to continue researching thermal detection systems to determine their effectiveness and compatibility with Navy applications.” DSEIS at 5-63. A pilot program would be consistent with that interest, while allowing for trial use as a monitoring measure.	Analysis of the potential for thermal detection systems as a mitigation tool was presented in Section 5.5.4 (Thermal Detection Systems and Unmanned Aerial Vehicles) of the Draft Supplemental EIS/OEIS. The Office of Naval Research Marine Mammals and Biology program funded a project (2013-2018) to test the thermal limits of infrared-based automatic whale detection technology. The Navy has also been investigating the use of thermal detection systems with automated marine mammal detection algorithms for future mitigation during training and testing, including on autonomous platforms. For example, the Defense Advanced Research Projects Agency funded six initial studies to test and evaluate infrared-based thermal detection technologies and algorithms to automatically detect marine mammals on an unmanned surface vehicle. Based on the outcome of these initial studies, the Navy is planning additional follow-on efforts and testing. The Navy plans to continue researching thermal detection systems to determine their effectiveness and compatibility with Navy applications. If the technology matures to the state where thermal detection is determined to be an effective mitigation tool during training and testing, the Navy will assess the practicality of using the technology during training and testing events and retrofitting its observation platforms with thermal detection devices. The Navy will provide information to NMFS about the status and findings of Navy-funded thermal detection studies and any associated practicality assessments at the annual adaptive management meetings. Information about the Navy’s adaptive management program is included in Section 5.1.2.2.1.1 (Adaptive Management).
NRDC-40	The speed at which Navy vessels operate during testing and training exercises, and during general transit between exercises, has direct implications for the probability of mortality from a ship strike as well as for the size of the ship’s acoustic footprint. Based on studies of right whales,	As described in Section 5.5.7 (Reporting Requirements) of the Supplemental EIS/OEIS, the Navy developed its reporting requirements in conjunction with NMFS to be consistent with mission requirements and balance the usefulness of the information to be collected with the practicality of collecting it. The

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>which NMFS has generally accepted as a proxy for other baleen whale populations, a vessel speed of 15 knots is estimated to result in an 80% probability of mortality if a ship strike were to occur; this probability approaches 100% at a speed of 20 knots or higher. Slowing ships below 10 knots can reduce collision rates by 90% and decrease the probability of serious injuries or death. The acoustic footprint of vessels also widens dramatically with speed, such that speed is one of the leading covariate influences on noise output from vessels.</p> <p>Ship strikes are a leading cause of large whale mortality off the U.S. west coast. While elsewhere the Navy has indicated a need to operate at higher speeds under certain circumstances, such as when an aircraft carrier must maintain a minimum wind speed relative to ground in order to launch and receive aircraft, there are other conditions when maintaining a 10-knot vessel speed is surely practicable. The Navy should include restrictions to limit vessel speed within some of the mitigation areas cited above, particularly those intended to protect endangered large whales, as it has in certain portions of the Atlantic Fleet Training and Testing (AFTT) Study Area.</p> <p>Additionally, given that the speed of Navy ships during all aspects of their operations potentially impacts marine mammals, we recommend that the Navy collect and report data on ship speed as part of the EIS process. This will allow for objective evaluation of ship-strike risk, of harassment resulting from vessel activity, and of the potential benefit of additional speed-focused mitigation measures.</p>	<p>Navy's training and testing activity reports and incident reports are designed to verify implementation of mitigation; comply with current permits, authorizations, and consultation requirements; and improve future environmental analyses. Additional reporting would be ineffective as mitigation because it would not result in modifications to training or testing activities or further avoidance or reductions of potential impacts. For example, additional reporting of vessel speed data would not result in modifications to vessel speeds (e.g., speed restrictions) or reduce the already low potential for vessel strikes of marine mammals. As described in Section 5.3.4.1 (Vessel Movement), Navy vessels are required to operate in accordance with applicable navigation rules. Applicable rules include the Inland Navigation Rules (33 Code of Federal Regulations 83) and International Regulations for Preventing Collisions at Sea (72 COLREGS), which were formalized in the Convention on the International Regulations for Preventing Collisions at Sea, 1972. These rules require that vessels proceed at a safe speed so proper and effective action can be taken to avoid collision and so vessels can be stopped within a distance appropriate to the prevailing circumstances and conditions. In addition to complying with navigation requirements, Navy ships transit at speeds that are optimal for fuel conservation, to maintain ship schedules, and to meet mission requirements. Vessel captains use the totality of the circumstances to ensure the vessel is traveling at appropriate speeds in accordance with navigation rules. Depending on the circumstances, this may involve adjusting speeds during periods of reduced visibility or in certain locations. Navy vessel operators need to train to proficiently operate vessels as they would during military missions and combat operations, including being able to react to changing tactical situations and evaluate system capabilities. For example, during training activities involving flight operations from an aircraft carrier, the vessel must maintain a certain wind speed over the deck to launch or recover aircraft. Depending on wind conditions, the aircraft carrier itself must travel at a certain speed to generate the wind required to launch or recover aircraft. Implementing vessel speed restrictions would increase safety risks for Navy personnel and equipment and the public during the training event and would reduce skill proficiency in a way that would increase safety risks during military missions and combat operations. Furthermore, vessel speed restrictions would not allow the Navy to continue meeting its training requirements due to diminished realism of training exercises. The Navy needs to test the full range of its vessel and system capabilities to ensure safety and functionality in conditions analogous to military missions</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>and combat operations. For example, during non-explosive torpedo testing activities, the Navy must operate its vessels using speeds typical of military missions and combat operations to accurately test the functionality of its acoustic countermeasures and torpedo systems during firing. Vessel speed restrictions would not allow the Navy to continue meeting its testing program requirements due to diminished realism of testing events. Researchers, program managers, and weapons system acquisition programs would be unable to conduct accurate acoustic research to meet research objectives and effectively test vessels and vessel-deployed systems and platforms before full-scale production or delivery to the fleet. Such testing is required to ensure functionality and accuracy in military mission and combat conditions per required acquisition milestones or on an as-needed basis to meet operational requirements.</p> <p>Furthermore, the Navy does not currently maintain a record management system to collect, archive, analyze, and report marine species observation or vessel speed data for every training and testing activity and all vessel movements. For example, the speed of Navy vessels can fluctuate an unlimited number of times during training and testing events. Developing and implementing a record management system of this magnitude would be unduly cost prohibitive and place a significant administrative burden on vessel operators and activity participants. Burdening operational Commanders, vessel operators, and event participations with requirements to complete additional administrative reporting would distract them from preparing a ready force and focusing on mission-essential tasks. Additional reporting requirements would draw event participants' attention away from the complex tactical tasks they are primarily obligated to perform, such as driving a warship or engaging in a gunnery event, which would adversely impact Navy personnel safety, public safety, and the effectiveness of training or testing.</p>
NRDC-41	In addition to a rigorous assessment of the biological impacts discussed above, NEPA (and multiple treaties, laws, and polices) require an assessment of the cultural impacts of the Navy's activities. See, e.g., § 40 C.F.R 1508.8. The vast coastal area affected by the Navy's proposed action holds great cultural and spiritual significance for U.S. Tribes and Canadian First Nations. In addition to emphasizing the Navy's obligation to conduct government-to-government consultation with each of the tribes in this region, we support and incorporate by reference the comments from the	<p>The Navy has conducted an assessment of cultural impacts of the Navy's activities, as captured in Section 3.10 (Cultural Resources) and Section 3.11 (American Indian and Alaska Native Traditional Resources).</p> <p>As stated in Section 3.11.1.1 of the Draft Supplemental EIS/OEIS, the Navy has invited 56 recognized tribes potentially impacted by the proposed activities to government-to-government consultation. The Navy is currently involved in government-to-government consultation with several tribes.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	InterTribal Sinkyone Wilderness Council and others seeking a full analysis of these cultural effects across the affected area in any final EIS.	
Noise Pollution Clearinghouse		
NPCH-01	My review of the DSEIS, however, is limited because the Navy has not provided the underlying data and information supporting the noise related claims in the DSEIS. In particular, in order to completely evaluate the claims in the DSEIS, I and others would need the modeling used by the Navy and the information and data used to support the modeling assumptions. I prepared a list of the required data and information needed to assess the completeness and accuracy of the DSEIS noise assessment, and NPCA's representatives requested that information from the Navy on May 31, 2019. To date, I have not received this data and information. Consequently, it is impossible for anyone with only the currently publicly available data and information to fully evaluate the DSEIS noise assessment. Nevertheless, I have identified a number of deficiencies which I describe in these comments.	Please see response to NPCA-35.
NPCH-02	<p>1. Incomplete Analysis</p> <p>The noise analysis is incomplete, particularly with respect to noise impacts on Olympic National Park and Daniel J. Evans Wilderness Area.</p> <p>1.1 Lack of Analysis of Noise Impact on Olympic National Park and Wilderness Areas</p> <p>Olympic National Park is not mentioned in Volume 1 of the DSEIS by name. In fact, there are only three references to the national park in two paragraphs of the 970 page document. There were only two references to the nearby wilderness areas.</p> <p>Olympic National Park is mentioned in conjunction with something approaching a noise analysis on only seven of the 814 pages of Volume 2 (3.12.29, 3.12.30, 3.12.32, 3.12.33, 3.12.34, 4.50, and 4.51). Many of the references were repetitive and redundant. None were comprehensive nor cumulative. Most strikingly, Appendix J, Airspace Noise Analysis for the Olympic Military Operations Areas, does not specifically mention Olympic National Park in conjunction with an actual noise analysis, other than one study conducted by the National Park Service in 2010, and not related to the proposed alternatives.</p> <p>Similarly, the Daniel J. Evans Wilderness Area is below the MOA and transit routes, the Buckhorn Wilderness is under the transit routes, and the Colonel Bob Wilderness is under the MOA. Also there are three additional nearby wilderness areas, the Brothers Wilderness, the Mount Skokomish Wilderness, and the Wonder Mountain Wilderness. Yet, the Daniel J. Evans</p>	The Navy revised the Final Supplemental EIS/OEIS to include additional analysis of potential noise impacts outside the Olympic MOA, including the Olympic National Park. This additional information in Appendix J includes additional analysis of aircraft transits to and from the Olympic MOA. The analysis includes the areas beneath the Olympic MOA as well as all areas on the Olympic Peninsula.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Wilderness Area is mentioned only once in Volumes 1 and 2. There is no noise analysis of the impacts of Navy aircraft on the wilderness areas. The DSEIS cannot claim to have taken a hard look at the noise impacts on Olympic National Park and Daniel J. Evans Wilderness Area when it rarely discusses the Park, does not discuss the Daniel J. Evans Wilderness Area or other wilderness areas, or discusses noise impact in limited and general ways. This is critical because the MOAs are over 27 percent of the Olympic National Park. (DSEIS, Volume 2, 3.12- 30). Moreover, Navy aircraft noise does not travel only straight down from the aircraft, but covers a wide area for which the Navy has not analyzed.	
NPCH-03	<p>1.2. Lack of Map of Noise Impacts</p> <p>The noise modeling used in the assessment of the noise impacts is called "MOA and Route NoiseMap Model (MRNMap)." (DSEIS, Appendix J, J-5-6, emphasis added) Ironically, there is no map of the noise impact of aircraft on Olympic National Park or wilderness areas from the MRNMap modeling. In fact there are no noise maps at all in the DSEIS or its appendices. NoiseMap is more than just the name of the model the Navy used to assess the noise impacts, noise maps are one of the primary tools acousticians use to evaluate noise impacts. Noise maps allow experts and the public to visualize, through color coded contour lines, the noise levels at various locations. They provide the noise footprint of the proposed action. Since people can't hear the noise at each location while reading the DSEIS, noise maps are an invaluable evaluation tool, providing both the noise level and the location of resources of concern. They are even part of the DOD guidance in the Range Air Installations Compatible Use Zones (RAICUZ) Program that the DSEIS claims to be following, which is found in the Appendix J.</p> <p>The lack of noise maps serves to obscure the noise impacts of aircraft on Olympic National Park. The limited tabular data in the DSEIS provides neither a comprehensive (few locations within the Park are considered) nor a cumulative (see Point 3 below for a description of how the cumulative impact of multiple aircraft and cumulative impact of transit and MOA operations were not considered) analysis of the impacts.</p>	Noise contour maps are not applicable to the noise modeling conducted in the Olympic MOA. Any noise contour map produced based on the results of modeling would simply be a reflection of the terrain elevation and would not be useful. The noise analysis using MR_NMap was modified to account for the varying terrain elevation levels underneath the Olympic MOA. Thus, the estimated noise levels are directly related to the terrain levels as reported in Tables J-11 and J-16. The reader can look at the terrain map and match with the associated estimated noise exposure levels.
NPCH-04	<p>This DEIS does not provide noise maps, probably for one of two likely reasons, neither of which excuse the Navy from taking a hard look at the noise impacts.</p> <p>1) MRNMap is poorly suited to evaluate noise impacts in complex mountainous terrain such as found in Olympic National Park. The Navy seeks to excuse this with the demonstrably false claim that "[t]he current</p>	MR_NMap is the approved model for airspace noise analysis by both DoD and FAA. Note that AEDT (INM has been retired) does not handle military airspace operations. The model approach and assumptions within MR_NMap are not demonstrations of "absurdity." The critique provided by the commenter indicates a limited understanding of airspace operations: Navy MOA training operations vary from sortie to sortie; there are no predictable flight paths

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>version of MRNMap, which uses the best available science to calculate noise within SUA, does not have the capability to model complex terrain." (DSEIS Appendix J, J-18) What is false about this statement is the claim that NRNMap uses the best available science. The best available science can assess noise levels in complex terrain. The FAA's INM noise model does this and has done it for years. Our 21st Century acoustical science is much more capable than the Navy claims. The Navy's model, however, does not include the best available science.</p> <p>2) The Navy chose not to present a noise map because it chose not to use actual flight paths in developing its model of noise levels and impacts. Instead, the Navy chose to smear hypothetical noise sources evenly over the MOAs (except for very near the boundaries). Had the Navy presented a noise map generated from MOA and Range Noise Map software, it would strain credibility, since the noise would be essentially the same everywhere, the noise contours would be essentially the shape of the airspace modeled. The map would merely show the absurdity of the assumptions used to model the noise. The map would not actually show anything useful in analyzing the impacts on various areas within Olympic National Park, but would show that DSEIS did not do a very good job of assessing actual noise impacts.</p> <p>The two most important factors in noise modeling are the noise of the source and the distance of the source from noise receivers. The distance depends critically on the location of the source. The Navy's assessment ignored this fundamental aspect of noise evaluation. Instead of taking a hard look at where the noise sources are located, the Navy smeared them everywhere. This has the effect of averaging the noise and hiding the areas of greatest impact, the exact areas a legitimate DSEIS would identify and analyze.</p>	<p>within the MOA. MR_NMap does, in fact, include the source noise as well as its lateral and vertical distributions while operating in the airspace. These parameters are directly stated in Appendix J.</p>
NPCH-05	<p>1.3. No assessment of Audibility or the Noise Footprint of Military Jets One map the DSEIS should have presented and did not is that of the noise footprint of the military jets on the National Park. Figure 1 below provides an example of such a map. The footprint is determined using actual empirical evidence from observers using the Growler Tracker software. 2 The Growler Tracker is a survey that visitors and residents of the Olympic Peninsula can use to share information with NPCA about where and when they hear Growler jets. Survey users share data including date, time, and precise location of an instance when they heard a Growler jet overhead, as well as how it affected their listening experience. The green circles are the locations of actual noise observations of Navy</p>	<p>Current noise models for the audibility of aircraft are used for single events or a series of events that follow a precise flight track. Neither is true for airspace operations, which undergo varied flight tracks and profiles for training purposes.</p> <p>The noise modeling conducted for this analysis follows the standard noise modeling tools for assessing noise exposures from current and proposed airspace training operations. These procedures utilize noise level metrics to provide a comparison between the baseline (or no action) and proposed scenarios. This process allows a comparison of the changes in the cumulative noise exposure between (or among) the scenarios. These calculations are</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Jets. The purple circles are the location of the monitoring locations in the 2010 National Park Service report. The footprint (shaded area) was drawn by using the horizontal distance of the furthest Growler observation from the transit flight path and constructing a footprint from the flight paths and MOA borders based on that distance.</p> <p>As the number of observations in the Growler Tracker database is limited, Figure 1 probably understates the actual noise footprint of the Navy Jets. For example, OLYM003, which is the Hurricane Ridge monitoring location in the National Park Service report, experienced jet noise 8.3% of the time and therefore should be included in the footprint. Nevertheless, the estimated footprint encompasses the majority of Olympic National Park and Daniel J. Evans Wilderness Area.</p>	<p>based on the operation of the aircraft and estimated over an area of exposure.</p> <p>Audibility, on the other hand, is a complex process that involves a source, a receiver, a background sound spectrum, and localized atmospheric conditions. Although noise models can predict audibility for an individual flight trajectory, no current audibility noise model exists for aircraft operations within an airspace. These operations are dispersed over the entire airspace volume and vary widely from operation to operation. A new section has been added to Appendix J describing audibility of the EA-18G. In this new section, a table indicates the lateral distance of audibility for the EA-18G is typically 12 NM or greater.</p>
NPCH-06	<p>1.4. No Nighttime Analysis</p> <p>The Navy claims 6% of the flights occur during the nighttime, yet conducted no nighttime noise analysis. Given the number of campsites within the park, sleep interference should have been considered in the DSEIS. The southern transit route is almost directly over the Three Prune, Lake Beauty, Low Divide, Chicago Camp, Camp Wilder, Hayes River, Upper Cameron, Lower Cameron, Falls Camp, Camp Ellis Moose Lake, Grand Lake, Three Forks, and Greywolf Camp campsites. There are also several campsites under the northern transit route or nearby the northern and southern transit routes.</p> <p>There are dozens of campsites under the MOAs, including South Beach, Kaloloch Ranger Station, Mosquito Creek, Jefferson Cove, To leak Point, Strawberry Point, Scott Creek, Third Beach, Second Beach, Hole-in-the-Wall, Chilean Memorial, Cedar Creek, Norwegian Memorial, Yellow Banks, South Sand Point, Sand Point, Ericksons Bay, Wedding Rocks, Ozette, Queets, Spruce Bottom, Hoh Rain Forest, Bogachiel, Flapjack, Bob Creek, Three Lakes, Three Prune, and Elip Creek. There are dozens more that are close to the MOAs. And there are a number of campsites not within Olympic National Park, such as Cottonwood, Hoh Oxbow, Minnie Peterson, South Fork, Willoughby Creek, Slide Camp, Camp Tony, Cliff Camp, Two Mile, Dungeness Forks and Bogachiel State Park campsites.</p> <p>Tent walls do not attenuate jet noise like homes do, so a more rigorous sleep interference assessment is required than in residential areas, yet no assessment of sleep interference was conducted.</p>	<p>The cumulative exposure does include the effect of acoustic nighttime operations, as specified by the DNL metric. Sleep interference estimates for airspace operations are not accurate due to the varying nature of the flight operations as well as the occupation levels of the campsites.</p>
NPCH-07	<p>1.5. No Analysis on Park and Wilderness Area Wildlife</p> <p>The DSEIS did not undertake an assessment of the noise impacts on wildlife within Olympic National Park, the Daniel J. Evans Wilderness Area, the</p>	<p>The Draft Supplemental EIS/OEIS did contain a thorough analysis of impacts to wildlife, wherever they may occur in or near the Study Area. Please see Chapter 3 (Affected Environment and Environmental Consequences).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Buckhorn Wilderness Area, and the Colonel Bob Wilderness Area. Given the unique natural soundscape, the unique ecosystem, and the presence of endangered species, this absence is striking.	
NPCH-08	<p>2. Fatally Flawed Transit Analysis</p> <p>The Navy aircraft accesses the MOAs by crossing Olympic National Park. The noise analysis of aircraft flying between the Whidbey Island and the MOAs is fatally flawed with respect to its impact on Olympic National Park. The transit noise analysis deserved its own section and appendix, but received neither. Instead, it received a disjointed and incomplete analysis.</p> <p>2.1 Disjointed Analysis</p> <p>The noise analysis of the transit flights is scattered over three unrelated subsections of the DSEIS: Space and Airspace Deconfliction, Navigation and Safety, and Impacts on Airborne Acoustics Under Alternative 1 for Training Activities. The analysis is incomplete, both individually and together, with no recognition that one transit path is almost entirely over Olympic National Park, no assessment of cumulative impacts with the MOA noise, no cumulative impact from multiple aircraft, and no assessment of the acoustic footprint of the transit path.</p> <p>The DSEIS states that, "The transit of aircraft to and from these areas is discussed in the body of this Supplemental in Section 2.3.3.2 (Sea Space and Airspace Deconfliction), Section 3.0.3.1.3.1 (Navigation and Safety), and Section 3.12.3.2.1.1 (Impacts on Airborne Acoustics Under Alternative 1 for Training Activities)." (DSEIS, Appendix J, J-1) The following is a critique of each section.</p> <p>2.1.1 No Analysis of Noise Impacts on Olympic National Park in Section 2.3.3.2 (Sea Space and Airspace Deconfliction)</p> <p>Section 2.3.3.2 has no noise analysis of the transit flight path on Olympic National Park, no decibel levels of the flights, and no acoustic footprint of the flights. Only normal and typical altitudes for a couple locations are presented. As the quote above suggests, the "transit of aircraft to and from these areas is discussed," but that is all. No noise analysis is discussed.</p>	<p>The Navy revised the Final Supplemental EIS/OEIS to include additional analysis of aircraft transits to and from the Olympic MOA. The analysis includes the areas beneath the Olympic MOA as well as all areas on the Olympic Peninsula. For more information about the analysis of transits, please see Section J.6.2 (Transit to/from the Olympic MOA) in Appendix J of the Final Supplemental EIS/OEIS.</p>
NPCH-09	<p>2.1.2 Very Limited Analysis of Noise Impacts on Olympic National Park in Section 3.0.3.1.3.1 (Navigation and Safety).</p> <p>The title of this section, Navigation and Safety, raises the question, why place the transit flight path noise impact assessment in Navigation and Safety, and not give it its own section or appendix? Whatever the Navy's reasoning, the effect is to hide the lack of a hard look at the transit flight noise impacts.</p> <p>The noise analysis in Navigation and Safety is a mere two paragraphs long.</p>	<p>The additional transit analysis provided in Appendix J of the Final Supplemental EIS/OEIS includes the information requested in the comment.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>We learn that maximum noise levels are between 57 and 69 dBA when aircraft are at a certain altitude. We do not know where these noise levels occur and if they are truly maximum levels, since aircraft at lower altitudes would be louder. In fact, the Section 3.12.3.2.1.1 discussed below contradicts these values.</p> <p>We are provided a map of the flight transition route (Figure 3.0-1), but critically, it does not show Olympic National Park. It does not show what is being impacted.</p> <p>Figure 2 provides the map that the Navy should have and failed to provide in the DSEIS that shows that the southern transit route from JQM 360040 to YETII is almost entirely directly over Olympic National Park and Daniel J. Evans Wilderness Area.</p> <p>Figure 3 shows a cross section of the southern transit route. One can see that nearly the entire route is over Olympic National Park, and that the distance between the ground and the transit aircraft is significantly reduced due to the elevation of the land.</p>	
NPCH-10	<p>Finally, the Navy's evaluation of the impact of the 69 to 57 dBA is vastly insufficient. The Navy states: "Although the flyover event noise levels during transit would be higher than average background noise levels in the national park and wilderness areas, they are not substantially above the range of noise levels that can occur under natural conditions. For example, leaves or tall grass rustling in a moderate wind can generate sustained noise levels of 55 dBA. Strong winds can generate relatively sustained noise levels above 65 dBA, with peak noise levels being even higher (Cowan, 1994)." (Volume 2, 3-22)</p> <p>There are literally dozens of more sophisticated ways to analyze the impact of the noise on Olympic National Park and Daniel J. Evans and other Wilderness Areas. One would be to state what the actual background levels were. Ironically, the only actual noise measurements in the DSEIS noise assessment were not even made for the DSEIS but done by the Park Service in 2010. Those measurements show that half the time, soundscape levels were below 34.1 dBA at the HOH River Trail, below 36.6 dBA at Third Beach Trail, below 23.1 dBA at Hurricane Ridge, below 32.3 at Lake Crescent-Pyramid Mt. Trail, and below 31.4 dBA at Lake Ozette. At Hurricane Ridge, soundscape levels were below 15.4 dBA 10% of the time. There was no need to site a noise measurement taken in an unknown location in unknown winds when there are actual noise measurement taken in the Park.</p> <p>Figure 4 below shows the impact of a 57 and 69 dBA noise on a 15 and 35</p>	<p>The information requested in the comment regarding ambient noise measurements was included in the Draft Supplemental EIS/OEIS, in Section J.7 (Acoustic Monitoring Report) of Appendix J.</p> <p>Use of the standard noise thermometer is not skewing the explanation of the difference between noise level versus perceived loudness. The EIS report states directly that a 10 dB increase will be associated with a doubling of loudness judgment. The representation of the standard noise thermometer has been used by a multitude of reports and acoustic primers from a wide range of organizations. Human hearing response follows a logarithmic scaling more than a linear scale.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>dBa soundscape. Most noise thermometers portray the loudness of noises on a linear scale, where the visual difference between 40 and 50 decibels is the same as the difference between 50 and 60 decibels. Using such a scale, it would be reasonable to presume that a 10 dBA increase from 50 dBA to 60 dBA is a 20% increase in the loudness. There are two problems with this presumption. One, the decibel scale is a logarithmic scale, not a linear scale. Two, our hearing is a biological system that does not respond linearly to noise. Human's hear a 10 dBA increase as a doubling of the loudness. The scale on the noise thermometer in Figure 4 matches our response to loudness. As shown on the loudness thermometer, a 10 dBA increase from 50 dBA to 60 dBA is actually a doubling of the loudness or a 100% increase, not a 20% increase as a linear scale would suggest.</p> <p>From Figure 4 it is clear that relative to the natural soundscape, the jet noise is very intrusive. In fact, the 57 dBA jet noise is approximately four times louder than the 35 dBA soundscape, and 18 times louder than the 15 dBA soundscape. The 69 dBA jet noise is approximately 11 times louder than the 35 dBA soundscape, and 42 times louder than the 15 dBA soundscape. The Navy does not acknowledge the intrusiveness of the jet overflights on the Olympic National Park soundscape and visitors in the DSEIS.</p>	
NPCH-11	<p>Another more sophisticated way to analyze the noise would have been to provide a noise map of the background and overflight noise levels so that the reader of the DSEIS could see where the events occur. This was not done.</p> <p>Yet another more sophisticated analysis would involve actually measuring the noise level of overflights rather than estimating them. This was not done.</p> <p>Instead of doing a sophisticated analysis of transit noise, the DSEIS resorted to basically saying, "sometimes when the wind is blowing hard, the background level can be 65 dBA." This point ignores all the times when the wind is not blowing hard. It equates jet noise with natural sounds in Olympic National Park. And it ignores all the more appropriate ways to analyze noise impacts.</p>	<p>DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD's position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
NPCH-12	<p>2.1.3 Limited and Contradictory Noise Analysis in Section 3.12.3.2.1.1. Impacts on Airborne Acoustics Under Alternative 1 for Training Activities This section is part of Section 3.12 Socioeconomic Resources. It primarily evaluates noise in terms of economics. As such, it is a limited assessment. The implied argument the Navy presents, which is not persuasive, is that because tourism to Olympic National Park and the area has increased, there must not be a noise impact. It should be noted that it does not follow from the fact that people still visit Olympic National Park that the noise impacts are minimal.</p> <p>Beyond this rather empty economic noise analysis, the noise analysis in Section 3.12.3.2.1.1 is notable primarily for how it contradicts the noise analysis in Section 3.0.3.1.3.1 described above. For example, instead of the 69 dBA noise level described in Section 3.0.3.1.3.1, Section 3.12.3.2.1.1 says: "The highest elevations along the flight transit routes between NAS Whidbey Island and the Olympic MOAs range from approximately 4,500 to 8,000 ft. MSL. An EA-18G flying at an altitude of 10,000 ft. MSL directly over an 8,000 ft. peak could produce maximum noise levels of up to 97 dBA at ground level (i.e., at a distance of 2,000 ft.)" Remember, the nearly 30 dBA increase from 69 to 97 dBA is an eight times increase in loudness using the 10 dBA is a doubling of loudness rule.</p> <p>Finally, the DSEIS blatantly misuses the 2010 National Park Service noise measurements at Hurricane Ridge. The DSEIS states: "At the Hurricane Ridge site, which is the closest site to the YETII reporting point, the daytime median ambient noise level was 24.4 dBA. After removing noise from all aircraft overflights, the median ambient noise level was reduced to 23.4 dBA, and noise from only natural sounds was measured at 23.1 dBA." While the statement is factually correct, the implied use of these data are wrong. The DSEIS seems to be using this sentence to imply that the aircraft</p>	<p>NPS uses L50 to monitor the health of its natural soundscapes. Thus, the effect of aircraft noise on this metric is a proper assessment comparison for national parks. For the aircraft noise to increase the L50, it must be above the natural L50 by definition. This change in the L50 metric does not inform the actual aircraft noise levels experienced at specific locations. Instead, the small 1 dBA rise in the L50 metric provides an indication of the overall short duration in which the aircraft noise is above L50.</p> <p>The statement that jet noise is incompatible with natural soundscapes is a personal judgment outside of the scope of the noise analysis.</p> <p>The commenter uses the level of 97 dB frequently, as though it would be experienced frequently by Park visitors. It is important to understand that this is a maximum noise level that is possible only when a Growler is flying at its highest power setting, at the lowest permissible altitude, over the highest terrain in the MOA; a very rare occurrence (Table J-13 of the Draft Supplemental EIS/OEIS).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>add only 1 dBA to noise levels. Either the Navy does not understand the L50 metric used in the measurements or it is purposely trying to give the misleading impression that the Jets are 1 dBA greater than the natural soundscape. The L50 metric provides the decibel level exceeded 50% of the time. As such, half the time periods are quieter and half are louder than the L50 value. In Olympic National Park, the L50 metric provides a description of the soundscape, not the jet noise. The jet noise is 97 dBA.</p> <p>Like the case of the economic non-argument above, the Navy is careful not to explicitly say incorrect facts in the DSEIS, but is more than willing to imply incorrect conclusions, while not actually supplying any real analysis. The real value of the Hurricane Ridge data is comparing the 97 dBA jet noise to the soundscape on Hurricane Ridge and other ridges and summits. Figure 5 does just that. The conclusion from Figure 5 is that the jet noise is incompatible with the natural soundscape.</p>	
NPCH-13	<p>2.2 Incomplete Transit Route Analysis</p> <p>Perhaps the most important fact about the transit routes is that they are over Olympic National Park and Daniel J. Evans and Buckhorn Wilderness Areas. The DSEIS appears to obscure this fact, particularly in its presentation of the transit routes in Figure 2.3-1: Aircraft Transit to and from Olympic Military Operations Areas on page 2-18 of the DSEIS. As Figures 2 and 3 above show, the transit routes are over the park and wilderness areas. The DSEIS has not determined the impact on specific park resources under the transit routes.</p> <p>2.3 Summary of Transit Analysis</p> <p>The transit analysis is fatally flawed and incomplete. The DSEIS contains very little analysis of the transit noise impacts on Olympic National Park. What analysis it does contain is misleading and contradictory.</p>	Please see response to NPCH-08.
NPCH-14	<p>3. Lack of Cumulative Impacts</p> <p>The DSEIS has not looked at the cumulative impacts of noise from the transit routes and the MOAs. Moreover, it's Lmax analysis considers only one aircraft.</p> <p>3.1. No Cumulative Impacts of Transit Noise and MOA Noise</p> <p>The MOA noise analysis is found in Appendix J. The transit noise analysis is scattered between three sections, Section 2.3.3.2 (Sea Space and Airspace Deconfliction), Section 3.0.3.1.3.1 (Navigation and Safety), and Section 3.12.3.2.1.1 (Impacts on Airborne Acoustics Under Alternative 1 for Training Activities). The DSEIS has segmented the assessment in such a way that the cumulative noise impacts of both the MOA and transit routes cannot be assessed.</p>	Please see response to NPCH-08. The cumulative analysis of noise from all aircraft (MOA and transit) can be found in Chapter 4 (Cumulative Impacts).

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
NPCH-15	<p>3.2 No Noise Analysis of Cumulative Impacts of Multiple Aircraft Heard at One Time</p> <p>The Navy's Lmax analysis, due to the primitive nature of the NoiseMap software, does not consider the cumulative impacts of more than one aircraft. For its Lmax analysis, the Navy relied on Table J-17, which is merely the maximum EA-18G noise levels at various distances. This method of assessment is rather primitive, because there are only a few altitude heights and associated noise levels in the Table and because the table presents the results for only one aircraft. The cumulative impact of more aircraft was not considered.</p>	<p>The MR_NMap noise model is not "primitive." It is the noise model that is most appropriate for airspace noise analysis, and approved by the FAA for this type of analysis.</p> <p>Lmax values for aircraft operations are provided in Tables J-13 through J-17 (the commenter appears to be overlooking Tables J-13 through J-16). Table J-17 provides a simple illustration of Lmax levels for the EA-18G at various altitudes. The maximum additive effect of two aircraft would be 3 dB, and this occurrence would be rare given the improbable circumstance where two aircraft are at the identical slant distance to a single receiver at the same instance in time.</p>
NPCH-16	<p>4. Lack of Actual Noise Measurements</p> <p>Perhaps the most striking omission of the entire DSEIS noise analysis is the lack of noise measurements of jet aircraft, particularly as they affect Olympic National Park. This is a fatal flaw in the DSEIS. Noise measurements are critical to determining the existing baseline (soundscape) as well as to confirm and modify noise modeling assumptions.</p> <p>Instead of conducting actual noise measurements, the DSEIS relied on outdated modeling technology that cannot accommodate complex terrain (MOA and Range Noise Map's deficiencies are described in Section 1.2 above), and used modeling methods that do not take into account actual flight paths (the smearing technique used in the DSEIS is described in Section 1.2 above).</p> <p>Noise modeling is valuable to understanding noise impacts because noise measurements cannot be made at all possible locations, but noise modeling alone should not be used to assess noise impacts when actual noise measurements can be made. Ideally, with a model that can address complex terrain and multiple metrics, noise measurement should be used to calibrate and confirm the modeling.</p> <p>Noise measurements are even more important in the case of this DSEIS because the modeling results are of very limited value due to the limitation of the model with respect to complex terrain and the limitation of the modeling method, the smearing technique.</p> <p>The only noise measurements that were presented were performed by the National Park Service in 2010 and were seriously misrepresented in the DSEIS (see Section 8 below).</p> <p>Actual noise measurements are critical to any hard look at noise impacts. The DSEIS failed to undertake actual noise measurements, relying instead</p>	<p>The noise model used, MR_NMap uses state of the art science and is the appropriate method to evaluate aircraft noise in special use airspace such as the Olympic MOA. This model is approved by the FAA for these types of analyses. Regarding the use of a model, please see the response to NPCH-11.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	on outdated modeling technology and suspect modeling methods. As the DSEIS states: "Noise is one of the most prominent environmental issues associated with military training activities" (DSEIS, Appendix J, J-3), yet the Navy didn't even bother to measure the noise. The DSEIS cannot be considered a hard look at what it acknowledges as of one of the most prominent environmental issues associated with the Navy's activities.	
NPCH-17	<p>5. DSEIS Noise Metrics Poorly Suited to Assess the Impact on the Soundscape of Olympic National Park and Wilderness Areas.</p> <p>A noise metric is a measure for quantitatively assessing noise. There are dozens of noise metrics available, such as dBA, dBC, octave band analysis, DNL, Lmax, LSO, L90, L10, L1, audibility, time audible, time above, Each noise metric has its advantages and disadvantages. Each noise metric provides some information on the noise. But no noise metric completely describes a noise. Acousticians rely on many noise metrics to quantify a noise, and in order to take a hard look at the impacts of noise the DSEIS should have done the same.</p> <p>The DSEIS mentions at least 8 noise metrics, including dBA, Lmax, DNL, Ldnr, audibility, time above, percent time audible, and LSO median level. Together, these metrics could give a fairly complete measure of the noise. However, an octave band frequency analysis similar to that found in the National Park Service report is also critical to understanding the intrusion of jet noise on Olympic National Park Soundscapes. The low frequency component of the jet noise travels further than the high frequency noise, and that noise is poorly captured using A-weighted decibel levels. Instead of using these nine measures of noise in the DSEIS analysis, however, the Navy relied primarily on DNL and Lmax, and did not provide a complete assessment.</p> <p>Moreover, the DNL metric is typically presented as a daily or yearly average noise level. As such it provides a measure of noise averaged over a day or year. As an average, it includes some assessment of the loudness of events and some assessment of the duration of events. But as an average, it has two fatal shortcomings. One, the DNL noise level is not a measure of any particular noise event-no one has ever heard a yearly average jet with a 10 decibel nighttime penalty. Two, averages hide the impacts of particular noise events. Just as a punch from Michael Tyson averaged over a day would be a love pat, jet noise averaged over a day can be made to appear quiet. But a Michael Tyson punch is not a love pat and a jet overflight is not quiet. To measure Michael Tyson's punch or a jet overflight in a meaningful way, instantaneous measures are required.</p>	<p>The engines used for the noise model were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The GE F414-400 enhanced engine is currently only in a research phase for the Navy, and is not installed in any aircraft, nor are there plans to purchase or install it. If this engine were to be introduced to the fleet of F/A-18E/F and EA-18G aircraft, the Navy would measure the noise emissions from this new engine.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	The Lmax metric provides an instantaneous measure, and to the extent the DSEIS used the Lmax metric, this is a vast improvement over the DNL metric. However, the Lmax metric lacks a measure of frequency and duration.	
NPCH-18	<p>The metric best suited to measure the impact of noise on a National Park and Wilderness Areas is the time audible metric. This metric was used in the 2010 National Park Service noise study reported in the DSEIS, but not in the new data the Navy presented in the DSEIS. The critical question about jet noise in Olympic National Park and Daniel J. Evans and other Wilderness Areas is not what the A-weighted sound pressure level would be if averaged over a year, when a 10 decibel penalty is added for night time noise, but whether the noise impairs the natural sound soundscape? Unfortunately, the DSEIS did not investigate noise using an audibility metric, and cannot assess the question of whether the jet noise impairs the natural soundscape.</p> <p>Moreover, the Navy's rationale for not using the time audible metric was arbitrary, or possibly doesn't exist at all. The DSEIS seems to be rejecting the audibility metric because the Navy didn't establish a threshold of impact for that metric. "However, no uniform criteria nor threshold on percent time audible has been established to determine a potential noise impact within these SUA." (DSEIS, Appendix J, J-5). Ironically, the Navy established a threshold for neither the DNL or Lmax metric, yet used both of them in its analysis. The Navy, therefore, arbitrarily rejected the most appropriate metric for measuring impact on the National Park.</p> <p>With respect to the DNL metric, the Navy's representations of its fitness are very questionable. First, while never establishing a criteria or threshold, the Navy seems to imply that 65 DNL is that threshold. It is Important to examine the Navy's rationale. In Appendix J, the Navy states: "In this analysis, noise from aircraft training activities within the Olympic MOA was assessed using noise metrics recommended by the Department of Defense (DoD), the Federal Interagency Committee on Aviation Noise (FICAN),² ANSI, and the FAA. Aircraft flight noise was assessed using the A-weighted Ldn and the Ldnr. Table J-2 provides the noise level limits associated with land use planning (DoD, 2011; Navy, 2008). In general, most land uses are considered compatible within Noise Zone 1. For Noise Zone 2, some land uses are incompatible with the noise. Within Noise Zone 3, most land uses are incompatible. In addition, the analysis provides Lmax levels from the EA-18G (Table J-13) to aid in the assessment of noise intrusions into the natural soundscape areas underneath and adjacent to the SUA."</p>	<p>Regarding the suggestion to use a time audible metric, please see the response to the Section 1.3 comment above, describing the unsuitability of that metric for airspace noise analysis.</p> <p>Supplemental Lmax values are provided to demonstrate the frequency of occurrences and changes between the scenarios. The choice of noise metrics is not arbitrary but is instead based on recommendations from FICON, FICAN, DoD, and FAA.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>There are a number of problems with this rationale, starting with the first sentence. In particular, the ANSI 512.9 Part 5 Standard specifically says, "This Standard does not address the effects of short-term exposure of people to intrusive sounds in locations such as parks and wilderness areas." The Navy's own citation does not recommend using DNL for parks and wilderness areas. Second, the Navy cites two local land use and planning programs (RUICUZ and AICUZ) as the source of Table J-2, but they do not apply to this DSEIS. Moreover, even if these land use planning programs did apply, local land use and planning does not include National Parks and Wilderness Areas. Third, the Navy merely states that most land uses are compatible with 65 DNL but does not specifically state which land uses in its study are not compatible with 65 DNL, and what criteria should apply to them. Fourth, the Navy selectively chose what it wanted from the RUICUZ and AICUZ documents, but didn't follow the noise mapping guidance contained within the documents. These problems show the arbitrary nature of the Navy's selection of metrics and thresholds or criteria. The Navy's choice of metrics is arbitrary, and it does not adopt a criteria or threshold for any metric it uses or cites. It merely implies that 65 DNL is compatible with most situations based on two documents which contain requirements for noise mapping the Navy did not follow, and based on one document that specifically says that parks and wilderness areas are not addressed by it.</p>	
NPCH-19	<p>6. Lack of Alternatives</p> <p>The DSEIS does not provide the required range of alternatives to the proposed action. Moreover, the DSEIS has not assessed alternatives that would minimize the adverse effects of jet aircraft on Olympic National Park.</p> <p>There were two very obvious alternatives not considered in the DSEIS. The first would be to not use Olympic National Park the Wilderness Areas as a transit route to and from the MOAs. The second is to not use Olympic National Park and Daniel J. Evans and other Wilderness Areas as training areas. The DSEIS didn't even consider reducing or minimizing either of the above.</p>	<p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
NPCH-20	<p>7. Misrepresented the NPS Report</p> <p>The DSEIS presentation of the 2010 National Park Service report is misleading and deceptive. This is true of every paragraph in Section J. 7 Acoustic Monitoring Report of Appendix J.</p> <p>For example, in the first paragraph the DSEIS states: "Two other sites were monitored [in the National Park Service report], but they lie well outside</p>	<p>The Navy revised the Final Supplemental EIS/OEIS to include additional analysis of aircraft transits to and from the Olympic MOA. The analysis includes the areas beneath the Olympic MOA as well as all areas on the Olympic Peninsula. For more information about the analysis of transits, please see Section J.6.2 (Transit to/from the Olympic MOA) in Appendix J of</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>the boundary of the MOAs. While they could be indicative of noise levels received during transit to the MOAs, the results at these two site were very similar to results seen in the other three sites, and so add no new information."</p> <p>There are a number of problems with this statement. First, it is notable that the transit analysis did not utilize the other two sites. See Figure 2 for the location of sites OLYM003 and OLYM004 to the transit routes. This is a critical oversight in a noise analysis devoid of actual noise measurements. The Navy appears to desperately not want to know what the existing noise conditions are under its transit routes.</p>	<p>the Final Supplemental EIS/OEIS. Also, Section J.7 was revised to include all five locations analyzed in the 2010 National Park Service study.</p>
NPCH-21	<p>Second, contrary to the Navy's claim, the results from the Hurricane Ridge monitoring location (one of the excluded sites) would have added significant new information concerning the audibility of jet aircraft and the nature of the high elevation soundscape within Olympic National Park. If the Navy had used the two additional monitoring locations in the National Park Service report it would have found that the jets are audible a significant amount of the time, even though the Hurricane Ridge monitoring location was approximately 16 miles from the transit flight path. Moreover, the Hurricane Ridge data show that significant portions of the National Park soundscape are much quieter than the Navy admits. The three locations the Navy chose are not representative of the high elevation Park soundscape. The elevations of the three sites the Navy considered were 658 feet, 254 feet, and 69 feet. The Hurricane Ridge site was 5,156 feet and much more representative of the soundscapes of the higher elevations within Olympic National Park. Notably, the high elevation natural soundscape is substantially quieter than the lower locations, with 10 percent of the daytime levels below 15.4 dBA. This has very significant implications for the intrusiveness of jet aircraft on the higher elevations, where the quieter soundscape means the audibility and intrusion is much greater.</p> <p>Third, as seen in Figure 2, there are only two National Park Service monitoring locations within the MOA areas, and those are along the coast. The monitoring locations are the purple dots. OLYMOO1 is not in the MOA. Fourth, even though the Navy claims the Hurricane Ridge data does not add any new information, the Navy actually stated in Section 3.12.3.2.1.1 of the DSEIS that it is the "closest site to the YETI" and reported noise levels from the location (in a very misleading way described in Section 2.1.3 of these comments).</p>	<p>The Hurricane Ridge and Lake Crescent locations and data were added to the Appendix J discussion of the National Park Service monitoring study.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
NPCH-22	The second paragraph of Section J.7 was only one sentence long, but even that sentence was misleading. "The natural daytime ambient acoustic baseline was found to be 34.1 dBA for Hoh River Trail, 35.6 dBA for Third Beach Trail, and 31.4 dBA for Lake Ozette." The numerical values are correct but they lack a metric. The metric is the median or LSO value. This means that half the time the soundscape was quieter than the cited values. In fact, 10 percent of the time, the daytime soundscape was quieter than 32.9 dBA, 26.7 dBA, and 21.7 dBA for the three locations. The exclusion of the metric is important because from it we learn that the natural soundscape is quiet and that there are many times when the natural soundscape is very quiet. This is critical baseline information as the Navy considers the impact of aircraft that can be more than 80 dBA louder than the ambient conditions.	Appendix J in the Final Supplemental EIS/OEIS has been revised to include the LA50 metric for clarity.
NPCH-23	The third paragraph of Section J.7 repeats and is related to how the Navy misrepresents, in the main body of the DSEIS, the instantaneous and time above metric used in the National Park Service report. On page 3.12-29 the DSEIS gives the impression that Park Service feels the most important instantaneous noise level is 60 dBA, and implicitly assumes the only noise impact worth protecting against in a National Park is the ability of people to hold a conversation at a distance of 3 feet. "The [National Park Service] study reported the percentage of time that measured noise levels exceeded four noise thresholds indicative of disturbance at each of the measurement locations for the winter season. The fourth and highest level, 60 dBA, provided a basis for estimating impacts on normal voice communications at 3 ft., which is the most relevant threshold for hikers and visitors to the park. (DSEIS, Volume 2, 3.12-29, emphasis added) The Navy's second sentence above clearly states that 60 dBA is the most relevant threshold for hikers and visitors, and also gives the impression that this is the National Park Service's opinion. Neither of these are true. The Park Service document does not say the 60 dBA level is the most relevant threshold. If the Navy thinks 60 dBA is the most relevant threshold, they have provided no evidence for it.	The Final Supplemental EIS/OEIS has been revised to eliminate the statement that the 60 dBA threshold is most relevant for hikers and visitors to the park.
NPCH-24	The fourth paragraph of Section J. 7 is most notable for what it leaves out. It is clear from the National Park Service report that jet aircraft have the greatest impact on the natural soundscape of Olympic National Park, and that this is most true as one moves away from the edge of the park and roads. The very places Navy jet noise penetrates. Nowhere in the Navy's analysis do we find that acknowledgement.	Nowhere in the National Park Service report is a conclusion that jet aircraft have the greatest impact on the natural soundscape of the Olympic National Park. It would be inappropriate for the Navy to make that unsupported claim.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>The final paragraph of Section J.7 discusses the continued relevance of the National Park report, but misses the most relevant aspect of the report, The National Park Service report is exceptionally valuable to the DSEIS, primarily as a template for how the Navy should have conducted its analysis on the noise impacts to Olympic National Park.</p> <p>In summary, the Navy's representations of the National Park Service report are often not supported by the report, and more often than not, serve to obscure and obfuscate important data, such as that jet aircraft are the greatest threat to the natural soundscape.</p> <p>The Navy's "hard look" at the noise impacts on the Olympic National Park is comparable to a park visitor looking at park scenery and wildlife through blurry and unfocused binoculars backwards. When the DSEIS should be getting a close-up view of noise and impact, too often the DSEIS provides a fuzzy far off look. The noise analysis is incomplete, the transit analysis is flawed, cumulative impacts were not considered, actual noise measurements were not taken, the unique nature of the Park soundscape was not considered, and alternatives to minimize the impact were not considered. All too often the DSEIS presented limited or misleading data and analysis that cannot be considered a true hard look.</p>	
Nossaman LLP		
Nossaman-01	<p>These comments are submitted on behalf of Hood Canal Sand and Gravel, LLC and concern the Northwest Training and Testing Supplemental EIS/OEIS:</p> <p><u>Dabob Bay Range Complex</u></p> <p>The boundaries of the Dabob Bay Range Complex are incorrectly depicted in Figures ES-1, 1.1-1, 2.2-1, and 2.2-3. The U.S. Army Corps of Engineers ("Corps"), which has jurisdiction over navigational access to U.S. waters, has designated a restricted area for the Navy's use in Dabob Bay (noise and vessel transit restrictions) and Hood Canal (vessel transit restrictions). See 33 C.F.R. §334.1190. The restricted area designated by the Corps for Navy testing and training operations does not extend as far within Hood Canal as depicted in these figures. The Navy does not have legal authority to unilaterally expand the boundaries of the restricted area, or to increase restrictions on civilian vessel traffic in U.S. waters beyond those adopted by the Corps or the U.S. Coast Guard. The boundaries of the Dabob Bay Range Complex should be revised in the Supplemental EIS to match the area that has been authorized for Navy use by Corps and U.S. Coast Guard regulations.</p> <p>The Corps' regulations also impose time limits and other requirements on</p>	<p>As described in the 2015 NWTT Final EIS/OEIS, the Dabob Bay Range Complex Site includes Dabob Bay and Hood Canal from 1 mile south of the Hood Canal Bridge to the Hamma Hamma River, a total area of approximately 45.7 square nautical miles. The Navy has conducted underwater testing at the DBRC Site since 1956. The areas depicted in the figures cited in the comment are the Study Area boundaries and are not intended to reflect any nearby restricted areas. The Study Area includes areas where activities may be conducted (some of which may occur outside of restricted areas) and where the potential impacts of these activities could reach. Therefore, no changes to the figures are required.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Navy testing operations in Hood Canal. 33 C.F.R. §334.1190(a)(2)(i) – (iv). Those time restrictions and other requirements should be reflected in the Supplemental EIS and the Navy’s training and testing plans.	
Nossaman-02	<p><u>Cumulative Impact Analysis</u></p> <p>The cumulative impact analysis presented in the Navy’s Draft EIS for its Northwest training and testing operations recognized the pending development of a commercial pier Thorndyke Resources (Pit-to-Pier) Project. DEIS Vol. 2, Sec. 4.3.6 (page 4-18). Hood Canal Sand and Gravel, LLC, which is developing that project, submitted comments clarifying and correcting several factual statements in the Draft EIS regarding the gravel mine and pier project. In the Final EIS, in response to those comments, the Navy incorrectly stated that the State of Washington had denied the Joint Aquatic Resource Permit Application (“JARPA”) for the project. FEIS Appx. I, page I-111.</p> <p>State and local land use and permitting applications for the gravel mine and pier project, including a JARPA for the project, were submitted to Jefferson County on March 29, 2003. Jefferson County determined the applications were complete a month later, vesting the project under Washington’s land use laws as of that date. An updated application packet was submitted for the project in 2014 but that did not alter the project’s vesting date. As of the date of this comment letter, no final action has been taken on the applications for this project and those applications remain pending. Accordingly, construction and operation of the pier on Hood Canal, which will be used exclusively for gravel loading operations, should be identified in the cumulative impact analysis in the Supplemental EIS, under non-military actions, as a reasonably foreseeable future action. Inclusion of Hood Canal Sand and Gravel’s project in the Supplemental EIS should have no adverse effect on the Navy’s planned training and testing operations. The Navy previously concluded that the project produced neither cumulative adverse environmental impacts nor any incompatibilities with Navy plans and actions. See Keyport Range Complex Extension NEPA Final EIS (May 2010) and US Navy NBK Bangor EHW-2 NEPA Final EIS (March 2012). In addition, the Navy’s encroachment plan for its Hood Canal facilities states that the Navy should “[c]oordinate with Thorndyke Resource, Jefferson County, Department of Homeland Security, Department of Transportation, and the Army Corps of Engineers, [...] to ensure mutually safe operations.” – Naval Base Kitsap Encroachment Action Plan (April 2010).</p>	Thank you for providing this information. The Hood Canal Sand and Gravel project has been added in Chapter 4 (Cumulative Impacts) of the Final Supplemental EIS/OEIS.
<i>Ocean Protection Coalition</i>		

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
OPC-01	<p>Northern California has one of the most nutrient rich productive coastlines on the planet thanks to upwelling and it's a major migration route for gray whales and humpbacks. Blue whales and Killer whales also travel past our coast. While the plan is to do test 12 miles off shore, sound travels. Even 300 miles from the source, sonar can be up to 140 decibels, which is 100 times more intense than the level known to alter whale behavior.</p> <p>The proposed trainings by the Navy will harm dozens of protected species of marine mammals -- Southern Resident killer whales, blue whales, humpback whales, dolphins, and porpoises -- through the use of high-intensity mid-frequency sonar. The use of sonar has been directly connected to many instances of beached whales that have died from barotrauma after military sonar exercises.</p> <p>The negative effects of noise pollution extends beyond marine mammals. And offshore waters are NOT dead zones. Several species of dolphins off our coast are primarily oceanic. And there are a huge number of oceanic fish.</p> <p>Ocean mammals depend on hearing for navigation, feeding and reproduction. Scientists have linked military sonar and live-fire activities to mass whale beaching, exploded eardrums and even death.</p> <p>How will the Navy guarantee marine animals will not be harmed when sound travels and there are no sound barriers in the ocean to stop it?</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal or fish populations in the Study Area or at any Navy Range Complex. In addition, the Navy's research and monitoring programs, described in Section 3.0.1.1.1 (Marine Species Monitoring and Research Programs) in Chapter 3.0 (Introduction), are focused on filling data gaps and obtaining the most up-to-date science to inform impact assessment. The Navy, in collaboration with National Marine Fisheries Service, continuously assesses emerging best available science under the adaptive management process.</p> <p>The quantitative analysis does not predict any marine mammal mortalities or non-auditory injuries resulting from the proposed activities. A small number of permanent threshold shifts, a permanent reduction in hearing sensitivity at the affected frequency range, to individuals of several species are predicted [see Appendix E (Estimated Marine Mammal and Sea Turtle Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities)]. These limited impacts to individuals are unlikely to have any long-term consequences for the species or stocks. According to the best available science summarized in Final Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine species are unlikely to result from Navy training and testing activities in the Study Area. The Navy has worked cooperatively with NMFS to develop a suite of mitigation to avoid or reduce potential impacts to protected species, such as the Southern Resident killer whale, to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS as discussed in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).</p>
OPC-02	<p>The permit for "incidental take" - the number of marine animals the Navy is allowed to kill - is unfounded because there is literally no way to know exactly how many marine animals are killed because most will never be recorded due to sinking or counted because the delayed termination response will happen once the navy leaves the area. The "allowed take" numbers are not scientifically backed up because there are no definitive numbers and there have not been accurate population counts.</p> <p>How will the Navy make accurate counts for take and stay within the allowed incidental take numbers?</p>	<p>The vast majority of estimated "take" is from behavioral reactions. Information about the quantitative analysis is described in detail in the 2018 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing. The Navy's acoustic and explosive effects analysis looks at multiple factors such as marine mammal abundance across the study area in each season, the levels of sound that may cause certain effects, and the Navy's proposed time and space use of noise producing activities. As discussed in the Draft Supplemental EIS/OEIS in Sections 3.4.2.1 and 3.4.2.2, a few instances of take per year are not enough to cause long-term consequences for</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>individuals. Stranding of marine mammals due to proposed activities is very unlikely.</p> <p>As described in Section 5.1.2 (Compliance Initiatives), the Navy's monitoring programs, research programs, and reporting initiatives have been ongoing for more than a decade and will continue as a compliance requirement for the MMPA or ESA, or both. The Navy and NMFS use the information contained within monitoring, research, activity, and incident reports when evaluating the effectiveness and practicality of mitigation and determining if adaptive adjustments to mitigation may be appropriate. These reports also facilitate better understandings of the biological resources that inhabit the Study Area and the potential impacts of the Proposed Action on those resources. The Navy's adaptive management review process and reporting requirements serve as the basis for evaluating performance and compliance. The process involves technical review meetings and ongoing discussions between the Navy, NMFS, the Marine Mammal Commission, and other experts in the scientific community.</p>
OPC-03	<p>Visual detection can miss anywhere from 25-95% of the marine mammals in an area. When sonar is used, it has been scientifically documented that marine mammals surface quickly to get out of the underwater sound that can damage their ear drums. In 2009, a 72 foot female lactating Blue Whale was struck off our coast and killed with a spotter on board a research vessel.</p> <p>How will the Navy guarantee there will not be any strikes?</p>	<p>Please see Section 3.4.2.4.1 (Impacts from Vessels and In-Water Devices) of the Supplemental EIS/OEIS for the analysis of marine mammal vessel strike. While the Navy believes it is unlikely that any vessel strikes of marine mammals would occur, the Navy is seeking authorization from NMFS for a take to account for the possibility of an accidental strike. As presented in Chapter 5 of the Draft Supplemental EIS/OEIS, the Navy also includes mitigation measures designed to avoid or reduce impacts to marine mammals.</p>
OPC-04	<p>The Navy's own documents reveal that it plans to use 20,000 tons of heavy metals, plastics and other highly toxic compounds over the next two decades in the oceans where it conducts its war games.</p> <p>According to the Navy's Northwest Training and Testing environmental impact statement (EIS), in the thousands of warfare "testing and training events" it conducts each year, 200,000 "stressors" from the use of missiles, torpedoes, guns and other explosive firings in US waters happen biennially. These "stressors," along with drones, vessels, aircraft, shells, batteries, electronic components and anti-corrosion compounds that coat external metal surfaces are the vehicles by which the Navy will be introducing heavy metals and highly toxic compounds into the environment.</p> <p>How will the Navy guarantee that they are not releasing toxins into the oceans? How will the Navy guarantee it will not cause stressor that severely injure and kill marine life?</p>	<p>Please see Section 3.1 (Sediments and Water Quality) of the Supplemental EIS/OEIS for the analysis of impacts to sediments and water quality from the Navy's proposed activities. See the various resource sections elsewhere in Chapter 3 for an analysis of potential impacts to those species (3.4 Marine Mammals, 3.5 Sea Turtles, 3.6 Birds, 3.7 Marine Vegetation, 3.8 Marine Invertebrates, and 3.9 Fishes).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
OPC-05	<p>The U.S. Navy has proposed training and testing that would allow the Navy to harm marine mammals approximately 15 million times over five years. Testing and training activities that would affect marine mammals include the use of explosives, electromagnetic devices, physical strikes from missiles, underwater detonations and ships, entanglement and ingestion of toxic chemicals and munitions.</p> <p>These activities often result in the disruption of basic behaviors of marine mammals including activities necessary for survival such as migration, surfacing, navigating, hearing, nursing, breeding and feeding. Many of the species that would be affected are listed as threatened or endangered, making the Navy's proposed project a direct violation of the Endangered Species Act.</p> <p>How will the Navy guarantee they will NOT disrupt life sustaining behaviors marine mammals depend on for survival?</p>	<p>The commenter significantly over-estimates the impact to marine mammals predicted under this proposed action. Additionally, instances of harm, as defined by the regulations implementing the Endangered Species Act, are a small portion of the total predicted impacts. The Navy does not expect any marine mammal mortalities resulting from the proposed activities. The number of impacts to marine mammals predicted under this proposed action are provided in Appendix E (Estimated Marine Mammal and Sea Turtle Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities). The Navy has consulted with the National Marine Fisheries Service for this proposed action under Section 7 of the Endangered Species Act.</p> <p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal or fish populations in the Study Area or at any Navy Range Complex. According to the best available science summarized in Final Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), there are currently no direct correlations between an observed behavioral response and a loss of an individual. In addition, based on the analysis in Chapter 3.4 (Marine Mammals), long-term consequences for marine species are unlikely to result from Navy training and testing activities in the Study Area. The Navy has worked cooperatively with NMFS to develop a suite of mitigation to avoid or reduce potential impacts to protected species, such as the Southern Resident killer whale, to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS, as discussed in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).</p>
Olympic Forest Coalition		
OFC-01	<p>Thank you for the opportunity to comment on the NWTT Draft Supplemental EIS/OEIS. The Olympic Forest Coalition incorporates submitted comments (OFCO/WCAA Comment on Draft EIS Navy Draft EIS – EA-18G Growlers at Naval Air Station Whidbey Island, February 2017;;, OFCO/WCAA Comment, Scoping, NWTT Supplemental EIS/OIES, October 2017, among other comments on related activities). The Coalition joins the West Coast Action Alliance, the Olympic Park Associates, and the National Parks Conservation Association in their comments on this draft Supplemental EIS/OEIS.</p> <p>Our comments include the following areas of concern: a) unjustified</p>	<p>The Navy has a number of unrelated actions taking place in the Pacific Northwest, and the Navy has prepared separate NEPA documents for each. The Navy prepares separate NEPA documents covering different proposed activities because each document is focused on a specific proposed action, is separated from other actions by its purpose and need, has independent utility, has different timing, and involves differing geographic locations. Specifically, this Supplemental, which is designed to address the Navy's statutory responsibility to maintain ready forces, analyzes the potential impacts of training and testing activities from the year 2020 forward. The 2019 Draft Supplemental EIS/OEIS contains a thorough analysis of potential</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>reliance on the flawed NWTT FEIS (2015); b) the 2019 study on impacts of military flights on the Olympic Peninsula soundscape was not included; c) inadequate analysis of impacts on threatened and endangered species (Marbled Murrelets and Northern Spotted Owl); d) inadequate cumulative impacts analysis; e) Inadequate consideration of reasonable alternatives; and f) inadequate mitigation measures.</p> <p>Unjustified Reliance on the Flawed NWTT FEIS (2015).</p> <p>The Draft SEIS/OEIS incorporates in part the NWTT FEIS published in 2015, unless the literature review undertaken for this Supplemental EIS/OEIS on scientific studies published since 2015 identified new findings. The NWTT FEIS was flawed due to incomplete and inadequate information, segmentation of functionally related Navy action into several “actions” limited in scope, inadequate analysis of all impacts (including noise, prey resources, air, water and soil contamination, and climate change), and lack of cumulative impacts analysis of all functionally related Navy actions. The NWTT FEIS incorporated the US Fish and Wildlife Service Biological Opinion that was completed on inadequate and incomplete information provided by the Navy to the Service. The biological determination made in the BiOp are flawed. WCAA/OFCO commented on this problem and the Draft Supplemental EIS/OEIS does not address the critique. The Navy should undertake a full and adequate Revised EIS that fully addresses all inadequacies before consideration of expanded training activities is completed.</p>	<p>environmental impacts from the Navy's proposed activities using the best available science. Therefore, a revised EIS/OEIS is not required.</p>
OFC-02	<p>2019 Impacts of Military Flights on Olympic Peninsula Soundscape Findings Not Incorporated in Analysis</p> <p>The Draft SEIS/OIS does not incorporate a very recent, significant and relevant piece of scientific research directly on point: “Impacts of Military Flights on Olympic Peninsula Soundscapes” (Kuehne, 2019). The research has been presented in regional symposia in beginning stages, and should have been included in the analysis. The two-year study of the impacts on the soundscape by the Navy Boeing EA-18G (“Growler”) aircraft is particularly relevant, and one of a kind. The study was conducted by Lauren Kuehne, MSc Research Scientist at the University of Washington’s College of the Environment, School of Aquatic and Fishery Sciences. Ms. Kuehne carried out one of the only scientific studies of the soundscape on the Olympic Peninsula. Ms. Kuehne “sought to answer two questions: 1) What are the current noise levels and contributions of different aircraft on the Olympic Peninsula soundscape? and 2) How might these levels change with proposed increases in military training and</p>	<p>The Draft Supplemental EIS/OEIS was released to the public before the Kuehne report was made available. The Navy has considered this report in the Final Supplemental EIS/OEIS (see Section 3.12 and Appendix J).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

Commenter	Comment	Navy Response
	<p>operations?” The study captured sound data from three areas – within the Olympic National Park and adjacent to the Military Operations Area for the Navy training activities that fly out of Naval Air Station Whidbey Island (NASWI). The three study locations on the west side of the Olympic Peninsula were: “Third Beach (elevation 64 m), River Trail (199 m), and Hoh Watershed (28 m)”. The study recorded and distinguished commercial aircraft, military aircraft, and helicopters. The study including capturing data from the Navy Boeing EA-18G “Growler” aircraft in 2017 and 2018, before the proposed increase of 36 added aircraft (2019). With the decision to increase the Navy fleet from 82 to 118 jets (Record of Decision for Growler Environmental Impact Statement - 2019), monitoring the increase in noise and related impacts becomes more imperative. Read Ms. Kuehne’s report [link to PDF]. Results of Ms. Kuehne’s study (excerpts):</p> <ul style="list-style-type: none"> • “The data were compared with the Whidbey Island airfield public notice of flights, 83% of which are the Growler aircraft. • Of the 4,644 flight events identified. • Of these, 85% were classified as military, 8% commercial, 6% propeller, and <1% were helicopters. • On the busiest days, we recorded an average of up to 70-85 flight events per location. • The maximum number of flight events recorded on a single day at locations were 73 (Hoh Watershed), 104 (River Trail), and 81 (Third Beach). • The duration of time in each day and hour that military aircraft were audible was highly correlated across the three locations, indicating flight activities impacted a large geographic area at any given time. • Military aircraft are a dominant contributor to the soundscape of the Olympic Peninsula, representing 85% of the total time aircraft are audible. • Percent time audible was substantial during daytime hours, particularly at the coastal sites, which averaged 12% audible during daytime hours across all 40 recording days. However, to achieve this average level meant that on some individual days the percent time audible during these hours was far greater (e.g., 49-52% of the time). Individual locations can experience in the range of up to 80-100 events in a single day.” • Data showed that areas outside of the MOA are clearly impacted, with the Hoh River location averaging 9-12% audible during daytime hours (with a maximum of 52% recorded on one sampling day- hour). • The River Trail location, positioned 1.8 km outside the MOA, receives consistent noise from military aircraft indicates that the noise footprint extends well beyond the MOA. 	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>• An important outcome of this study was demonstrating feasibility in identifying different types of aircraft from audio recordings, that were processed using widely available software. [Kuehne] then used these data to calculate metrics relevant for people and wildlife, which do not experience and respond to noise and disturbance as calculated by long-term averages (i.e., the 24 hr day-night average sound level that is the standard applied by the Federal Aviation Administration).</p> <p>These findings are particularly relevant in wilderness areas, the Olympic National Park, and rural communities. As the Olympic Peninsula shoulders the burden for the entire country of training pilots on the new aircraft, Ms. Kuehne's study definitively demonstrates that ground monitoring of noise is feasible and can produce reliable data that on impacts, which can and should be used to drive mitigation strategies for endangered species like the Northern Spotted Owl and Marbled Murrelet, and rural resident's health. The Draft SEIS/OEIS provided a modeling study of sound impacts (Appendix J), but no actual data. The model employed day nit [sic] averages, critiqued in WCAA/OFCO previous comments, and unaddressed in the modeling. The Navy must consider this important new science in a revised EIS and incorporate a full spectrum of mitigation strategies for wildlife, human health and economic losses due to the detrimental impacts on the soundscape of the Olympic Peninsula. The Navy must also implement an independent monitoring program modeled on Ms. Kuehne's study and report to the public in the operational area on findings annually.</p>	
OFC-03	<p>Inadequate Analysis of Impacts on Threatened and Endangered Species</p> <p>The Draft EIS/OEIS does not provide new nor adequate information on impacts to threatened and endangered species such as the Marbled Murrelet and the Northern Spotted Owl, species that will be impacted by the training and testing exercises of the aircraft. The Draft SEIS/OEIS also proposes to use new technologies, such as the "high energy laser" equipment, without adequate information about the potential environmental impacts on threatened and endangered species. OFCO incorporates the concerns about threatened and endangered species in previous comments, as the concerns are not adequately addressed in the Draft.</p> <p>Marbled Murrelets, threatened throughout the MOA, will be impacted both on land and in the marine waters area. The populations are in decline in Washington State, as compared to the stable populations in Oregon and California. The expanded and increasing military operations in both the habitats of the Marbled Murrelet – terrestrial and marine – is of grave</p>	<p>The Draft Supplemental EIS/OEIS included a thorough analysis of endangered species, and the Navy consulted with both the National Marine Fisheries Service and the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act. The Navy's use of high-energy lasers and other new technologies, while new to the NWTT Study Area, have been tested on other Navy ranges and evaluated in previous environmental documents. Their use in the NWTT Study Area has been thoroughly analyzed in this NWTT Supplemental EIS/OEIS for impacts specific to their use in this environment. In each case, as described throughout Chapter 3, impacts are expected to be minimal to undetectable.</p> <p>The analysis of potential impacts to northern spotted owls was conducted in the 2015 NWTT Final EIS/OEIS, and was also included in the consultations with the U.S. Fish and Wildlife Service, resulting in the 2016 Biological Opinion in which the Service stated, "the proposed aircraft overflights are likely to affect spotted owls through intermittent exposures to aircraft noise</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>concern. The increased military operations will impact Murrelet nesting habitat, diving and foraging, marine habitat, and prey fish. The expanded MOA encompasses the marine and terrestrial areas designated as critical habitat for the Marbled Murrelet. While the SEIS made note of new scientific information about sound and climate impacts, no mitigation measures were proposed to address impacts to Murrelets. The Draft SEIS/OEIS reports that a sound study of impacts on Murrelets is in progress, but does not give the scope, methodology, timeline of the study. The Draft indicates no mitigation strategies are proposed for the impacts to Marbled Murrelets. The Navy should not expand the MOA without including mitigation measures to address this threatened species.</p> <p>Northern Spotted Owls, also threatened throughout the MOA, will be impacted by expanded and increased terrestrial training activities. While the SEIS made note of new scientific information about sound and climate impacts, no mitigation measures were proposed to address impacts to Northern Spotted Owls. The SEIS indicates no mitigation strategies are proposed for the impacts to owls. The Navy should not expand the MOA without including mitigation measures to address this threatened species.</p>	<p>throughout the year, including during the nesting season. However, because Navy aircraft will maintain minimum flight altitudes well above the distances at which any significant behavioral responses by affected spotted owls are likely to occur, the effects to spotted owls by these aircraft overflights are considered insignificant." The Navy is not proposing to expand the Olympic MOA or decrease flight altitudes, so the conclusion of insignificant effect to spotted owls remains correct. Therefore, no mitigation measures for the spotted owl are required.</p>
OFC-04	<p>Inadequate Cumulative Impacts Analysis</p> <p>The SEIS/OEIS includes a discussion of cumulative impacts that is overly narrow in scope, and does not incorporate all the functionally related activities and impacts, and clouds the analysis by relying on cumulative impacts "tiered" in other documents. The SEIS/OES excludes impacts outside of the narrowly defined project scope (Sec. 4.2), stating:</p> <p><i>"NEPA documents that analyze a specific type of aircraft operation at a military airfield (in this case, the Growler) are focused in and around that airfield and its facility needs. While the Navy has analyzed, and is currently analyzing, various other projects in the area, those projects are not preconditions for Growler operations at the NASWI complex. Growler operations at the NASWI complex are not a precondition for larger military readiness activities on range complexes in the Pacific Northwest. Even in the absence of these Growler operations, military training in the Pacific Northwest would continue independently from this Proposed Action..."</i></p> <p>The aircraft will fly beyond the air fields where the craft are stationed to conduct the training, including the MOAs and transit areas to the MOAs, therefore, cumulative impacts of flights in the MOAs and outside of the MOAs, and the area immediately surrounding the airfields must be considered. In particular the Navy must to assess the impacts over the northern tier of Olympics, including the National Park (Lake Crescent,</p>	<p>The Navy revised the Cumulative Impacts analysis to include additional activities that have occurred or will occur in the vicinity of the Study Area. The Navy then considered the cumulative impacts of its activities in addition to all of the activities listed in Table 4.3-1.</p> <p>The Navy has expanded the noise analysis to include the transit of aircraft to and from the Olympic MOA, and that is also included in Cumulative Impacts. No scoping comments were received by the Navy from WCAA/OFCO about these issues.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Hurricane Ridge areas), the coastal communities such as Port Townsend, Port Angeles, Sequim, Forks and others, as flight activities transit between Whidbey Island air base and their official military airspace over the west side of the Olympics.</p> <p>The impacts from the increased flights to air quality, soils and water from chemical loading due to the training flights are not considered adequately in the SEIS/OEIS, nor is the impacts of carbon. WCAA/OFCO pointed out these inadequacies in our comments on the Draft and scoping for this Supplemental EIS/OEIS. The Supplemental EIS/OEIS has not addressed these shortcomings.</p> <p>The cumulative impacts of functionally related Navy activities must be fully disclosed and not obfuscated by narrow scope and tiering off other documents, equally narrow in scope. The Navy must undertake a revised EIS that adequately and fully analyzes the cumulative impacts, or take the no action alternative.</p>	
OFC-05	<p>Reasonable Alternatives Not Considered</p> <p>The Draft SEIS/OEIS does not adequately consider reasonable alternatives, such as moving the training to areas more suitable to the mission and that protect the environmental resources. The Navy relied on its own personnel for the analysis of alternatives (Section 2). The Navy eliminated any consideration of other areas with the statement that no other area could provide the training needed for the Pacific Northwest region. This is circular reasoning. The Navy must train pilots for warfare, not only in the Pacific Northwest region. The analysis for dismissing other reasonable alternatives was not adequately shared in the Draft SEIS/OEIS.</p> <p>The Navy dismissed setting geographic restrictions to protect specific species as creating a “patchwork” of training times and areas that would prevent the Navy from fulfilling its training requirements. This analysis also lacks validity and clearly dismisses mitigation for threatened and endangered species. If a species breeding season and forage areas create too great a burden for the Navy to manage in a scheduled training activity, it leaves open to grave concern how the Navy may handle any real-time complexity.</p> <p>The Navy dismisses the “no action” alternative out of hand. The Navy must fully consider specific alternatives that would reduce impacts on marine, terrestrial and aquatic species and rural residents and economies in a revised EIS/OEIS and present the alternatives for public comment before a final decision is made.</p>	<p>The Navy fully considered the specific alternatives raised in the comment. The reasons alternative locations did not meet the purpose and need for the Proposed Action were presented in the 2015 NWTT Final EIS/OEIS. Those reasons remain valid.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
OFC-06	<p>Inadequate Mitigation Measures</p> <p>The Draft Supplemental EIS/OEIS included a description of mitigation measures that will be taken by the Navy, indicating that the mitigation measures are updated from the NWTT FEIS (2015). Section 5 covers the mitigation measures. The Navy reports that it is conducting a study on Marbled Murrelets to refine its assessment of impacts and mitigation measures, but does not incorporate any preliminary findings nor information about the study. The Draft Supplemental EIS/OEIS is premature and does not have adequate recommendations to mitigate impacts.</p> <p>The Navy reports that it uses a “Protective Measures Assessment Protocol” software tool in planning phases to provide instructions during operations, which includes mitigation measures. The Protocol was not adequately described nor presented in the Draft SEIS/OEIS and should be made available for independent review to determine if it adequately provides mitigation measures for all natural resources and residents in the MOAs and affected areas.</p> <p>The Navy indicates that it carries out monitoring and reporting, as well as research on its activities. These reports were not incorporated nor made publicly available for review, with the exception of the Marine Species Monitoring Program. The Navy monitoring, research and reporting regime on terrestrial and aquatic species should be made public for affected communities in the MOAs, for independent review, and to expand and assist academic research in relevant fields.</p> <p>The Navy indicates that it established in 2010 and 2011, an “Integrated Comprehensive Monitoring Program” and a “Scientific Advisory Group”, which adopted planning level assessments, goals and strategies, but provided little in terms of concrete data on impacts, recommendations for mitigation. The Navy indicates it does and will report on Training and Testing activities, but the reports seem limited to wildlife “strikes” and incidents, and not environmental impacts. The reports are not made public.</p> <p>The Navy reports that it adopted, and will expand, on mitigation measures in two areas: procedural and geographic based “mitigation zones”.</p> <p>Procedural mitigation is planned, but not specific in the Draft. Procedural mitigation includes “look outs” pre and during activities. The Navy will supplement look outs with “passive acoustic devices” that may detect marine mammals, but does not indicate the steps to mitigate the impacts if detected of other species. The Draft Supplemental EIS/OEIS focus’ on marine mammals and turtles, and states it “may” include seabirds. The</p>	<p>The Navy consulted with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) on those ESA-listed species that could be affected by the Navy’s proposed activities. The consultations concluded after the release of the Draft Supplemental EIS/OEIS. Any mitigation measures or reporting requirements determined to be necessary by either USFWS or NMFS are included in this Final Supplemental EIS/OEIS in Chapter 5 (Mitigation).</p> <p>The Integrated Comprehensive Monitoring Program and the Scientific Advisor Group are outgrowths of Navy consultations with the National Marine Fisheries Service. As stated in the NWTT Draft Supplemental EIS/OEIS in Section 3.0.1.1.1, “Additional information on the program is available on the U.S. Navy Marine Species Monitoring Program website (https://www.navymarinespeciesmonitoring.us/), which serves as a public online portal for information on the background, history, and progress of the program and also provides access to reports, documentation, data, and updates on current monitoring projects and initiatives.”</p> <p>The Final Supplemental EIS/OEIS has been revised to clarify that areas such as national parks are to be avoided by U.S. Naval aircraft when flying at altitudes less than 3,000 ft. above ground level except when in compliance with approved special use airspace, such as a military operations area.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	section focus' in any specificity on sea turtles as an example, without stating how this is relevant to the MOAs and adjacent areas and specific studies that will be undertaken by the Navy. The mitigation steps to take focus on marine resources, and little information is provided for mitigating the impacts of the aircraft on terrestrial resources, even in the technical section on mitigation zones (Appendix K), focus' on marine resources in the water, and not the aircraft impacts. The mitigation measures given as examples seem to contradict with the actual activities presented. For example, the Navy states it provides guidance to pilots to not fly over national parks and monuments, and other sensitive habitat areas. The activities in the MOAs include flights over precisely these areas. The Navy must clarify the contradictory mitigation measures presented in the Draft. The Draft SEIS/OEIS states that final mitigation measures will be provided in the Final EIS/OEIS. The Navy must outline with more specificity its recommendations and plans for the threatened and endangered species, terrestrial, aquatic and marine, impacted in the MOAs and adjacent areas in a Revised EIS/OEIS before making a final EIS/OEIS determination, in order to give adequate information to the public to comment.	
OFC-07	For these reasons, the Olympic Forest Coalition requests that the Navy conduct a full, adequate and complete Revised EIS/OEIS, present the document to the public for comment, prior to making a final determination on a preferred alternative. In the alternative, the Navy must adopt the "no action" alternative and not increase the training and testing activities in the MOAs and adjacent areas.	As explained in the responses above, the Draft Supplemental EIS/OEIS was in compliance with NEPA requirements. Minor revisions were made to the Final Supplemental EIS/OEIS to provide clarification where necessary.
<i>Olympic Park Associates</i>		
OPA-01	OPA supports the No Action Alternative as the only alternative acceptable to the Olympic Peninsula's environment. We also ask for a minimum 14-day extension to the comment period bringing it to 90-days because of the number of people it effects, the large area it encompasses, and the length of the SEIS - 2 vol., 1,800 pages. A study "Impact of military flights on Olympic Peninsula soundscapes Initial Summary of Findings, June 4, 2019, Lauren Kuehne, MSc, Research Scientist, University of Washington's College of the Environment School of Aquatic and Fishery Sciences" needs to be completed. Follow-up studies need to be done to provide better answers regarding the impact of military flights on the people and wildlife of the Peninsula. In addition, we ask that all comments on this SEIS be made assessable to the public through the Navy Comment website for at least 60 days following the record of decision (ROD) on this EIS.	The original 60-day comment period was extended by 15 days for a 75-day comment period. Notices announcing the extension of the public review and comment period were published in the Federal Register April 18, 2019 (84 FR 16250), and April 26, 2019 (84 FR 17826). The Navy received and reviewed the Kuehne paper. All public comments and Navy responses have been included in this Final Supplemental EIS/OEIS. The public comments have been provided in their original format on the NWTT project website at https://www.nwtteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/Public-Comments . The commenting feature on the project website, while not a NEPA requirement, was added by the Navy to further facilitate commenting by the

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>OPA opposes Alternatives 1 and 2 because of the damage they will do to Olympic National Park, Olympic Coast National Marine Sanctuary, The Washington Islands National Wildlife Refuges, Washington Islands Wilderness, Colonel Bob Wilderness Area, and the people and wildlife of the Peninsula.</p> <p>While trying to submit SUBSTANTIVE OPA comments on-line, OPA received the following message from the website (Please enter no more than 5000 characters). The site will also not accept reference maps. Our comments also make references to comments made available from Olympic National Park and the study by Lauren Kuehne. They are included in submission envelope. OPA will submit OPA substantive comments by mail. This is inefficient for both the Navy and OPA.</p>	<p>public. The Navy placed certain limitations on comments (5,000 characters of text and 1 MB limit for file attachments), to allow the Navy to continue supporting this feature in a cost-effective manner. Over 1,800 comments were received on this project through website commenting and attachments, with very few affected by this limit. The Navy will review this file size limitation for future projects.</p>
OPA-02	<p>There are two types of training involved in this SEIS. One, electronic warfare training using Growler G-18 fighter jets using the western side of the Olympic Peninsula to train. Two, or more, sea training exercises and testing using the ocean site of the Olympic Coast National Marine Sanctuary.</p> <p>Electronic emitter training has been done in Idaho and Nevada for several decades indicating that alternative sites are available. While Idaho's Mountain Home Air Force Base and surrounding area, as one example, was designed for military training, the Olympic Peninsula was not. This training activity should stay in a less environmentally sensitive area.</p> <p>Sea training exercises and testing using the ocean is also a century old Navy training need for an ocean environment. Because this training is not intended to obliterate sea animals, it could be done in an area already used and despoiled for these types of operations.</p>	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		The Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Final Supplemental EIS/OEIS. For this reason training complexes in Nevada are not reasonable. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. Additionally, the Olympic MOA is desirable for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure, environmental conditions that maximize the training realism and testing effectiveness, and other factors stated in 2.5.1.1.
OPA-03	OPA supports the No Action Alternative as the only alternative acceptable to the Olympic Peninsula's environment. We also ask for a minimum 14-day extension to the comment period bringing it to 90-days because of the number of people it effects, the large area it encompasses, and the length of the SEIS - 2 vol., 1,800 pages.	The original 60-day comment period was extended by 15 days for a 75-day comment period. Notices announcing the extension of the public review and comment period were published in the Federal Register April 18, 2019 (84 FR 16250), and April 26, 2019 (84 FR 17826).
OPA-04	A study "Impact of military flights on Olympic Peninsula soundscapes Initial Summary of Findings, June 4, 2019, Lauren Kuehne, MSc, Research Scientist, University of Washington's College of the Environment School of Aquatic and Fishery Sciences" needs to be completed. Follow-up studies need to be done to provide better answers regarding the impact of military flights on the people and wildlife of the Peninsula.	The Navy received and reviewed the Kuehne paper. The Navy has considered this report in the Final Supplemental EIS/OEIS.
OPA-05	In addition, we ask that all comments on this SEIS be made assessable to the public through the Navy Comment website for at least 60 days following the record of decision (ROD) on this EIS.	All public comments and Navy responses have been included in this Final Supplemental EIS/OEIS. The public comments have been provided in their original format on the NWTT project website at https://www.nwtteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/Public-Comments .
OPA-06	While trying to submit SUBSTANTIVE OPA comments on-line, OPA received the following message from the website (Please enter no more than 5000 characters). The site will also not accept reference maps. Our comments also make references to comments made available from Olympic National Park and the study by Lauren Kuehne. They are included in submission envelope. OPA will submit OPA substantive comments by mail. This is inefficient for both the Navy and OPA. The request for SUBSTANTIVE statements and the restrictions placed on online input give the appearance of going through the NEPA motions but not really being interested in the results. The on-line input portal does not allow maps referenced in these comments. "You can only submit one file. If you upload multiple files, only the latest uploaded file will be accepted. Allowable File Types: Text, PDF, Microsoft	The commenting feature on the project website, while not a NEPA requirement, was added by the Navy to further facilitate commenting by the public. The Navy placed certain limitations on comments (5,000 characters of text and 1 MB limit for file attachments), to allow the Navy to continue supporting this feature in a cost-effective manner. Over 1,800 comments were received on this project through website commenting and attachments, with very few affected by this limit. The Navy will review this file size limitation for future projects.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Word. Maximum file size is 1MB." On-line input is greeted with (Please enter no more than 5000 characters).	
OPA-07	<p>OPA disagrees that the area selected to meet this goal, the Olympic Military Operations Area (Olympic MOA) is an absolute necessity for the Navy.</p> <p>Electronic emitter training has been done in Idaho and Nevada for several decades indicating that alternative sites are available. While Idaho's Mountain Home Air Force Base and surrounding area, as one example, was designed for military training, the Olympic Peninsula was not. This training activity should stay in a less environmentally sensitive area.</p> <p>Sea training exercises and testing using the ocean is also a century old Navy training need for an ocean environment. Because this training is not intended to obliterate sea animals, it could be done in an area already used and despoiled for these types of operations.</p> <p>The SEIS says, "Cessation of military at-sea training and testing activities in the NWTT Study Area would mean that the Navy would not meet its statutory requirements and would be unable to properly defend itself and the United States from enemy forces, unable to successfully detect enemy submarines, and unable to safely and effectively use its weapons systems or defensive countermeasures. Navy personnel would essentially not obtain the unique skills or be prepared to safely and effectively use sensors, weapons, and technologies in realistic scenarios required to accomplish the overall mission. Consequently, the No Action Alternative is inherently unreasonable because it does not meet the purpose and need." [EIS p. ES-4]</p> <p>OPA argues that this statement is untrue and self-serving. These training activities have been done in other places and could continue to do so. The Navy has picked a location most convenient to their current bases and is refusing to look seriously at the harm these operations would do to the people and environment selected.</p> <p>While the "Olympic MOA" may meet typical Navy location requirements, OPA argues that the Navy needs to think less typically. With satellite observation being able to locate a cell phone and this capability is available to nations capable of harming the United States, Russia, China, for example, OPA finds the statement to be 20th century thinking. Especially concerning, "The Navy also requires large areas of sea space because it trains in a manner to avoid observation by potential adversaries. Modern sensing technologies make training on a large scale without observation more difficult. A foreign military's continual observation of U.S. Navy</p>	Please see response to OPA-02.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>training in predictable geographic areas and timeframes would enable foreign nations to gather intelligence and subsequently develop techniques, tactics, and procedures to potentially and effectively counter U.S. naval operations." [EIS p. 5-14] In this EIS the Navy has stated where they will train during daylight hours, Monday through Friday that are not holidays. There is nothing in the EIS that proves this is the only place where these operations can be performed.</p> <p>OPA wonders if the Navy is forgetting the lessons of Pearl Harbor by concentrating so many Naval facilities within the range of one atom bomb explosion. Namely, the growler arsenal at Whidbey, submarines at Keyport, with carriers & other naval vessels at Everett & Bremerton.</p> <p>The map on EIS, ES-3 shows the Olympic Military Operations Area. In includes "Approximately 24 percent of the Olympic National Park and 27 percent of the Olympic National Forest lies beneath the Olympic MOAs. All of the Colonel Bob Wilderness Area and Pacific Beach State Park underlie the Olympic MOAs as do several other points of interest and recreation areas located on the peninsula... The Olympic Coast National Marine Sanctuary, located offshore of the Olympic Peninsula." [EIS p. 3.12-19]</p> <p>Also, within the Olympic MOA is The Washington Islands Wilderness and the Washington Islands National Wildlife Refuges which are not mentioned in the SEIS. Three Refuges within the Washington Islands National Wildlife Refuges are included. They are (with the SEIS comments) Flattery Rocks National Wildlife Refuge, Quillayute Needles National Wildlife Refuge, and Copalis National Wildlife Refuge Table 6.1-2: [EIS p. 6-11-12].</p> <p>Since 1907, these critical areas of the Olympic Peninsula have been set aside to protect the Peninsula's wildlife and biodiversity. Beginning with Theodore Roosevelt and a series of congressional acts, this protection has resulted in the creation of wildlife refuges, a national park for the enjoyment of its citizens, elk, other unique wildlife, wilderness areas to protect natural resources from human damage, and a national marine sanctuary. The area, the Navy wishes to convert into an electronic warfare training area (Olympic MOA), has been designated as an environmentally sensitive area for 112 years.</p> <p>Also included in the "Olympic MOA" are Washington State Department of Natural Resources land; Hoh, Makah, Quileute, and Quinault Reservations; thousands of acres of private land, including the towns of Forks & Amanda Park, the people, birds, wildlife who live on the Peninsula & visitors to the peninsula; the birds migrating on the Pacific Flyway. The people and wildlife of the Peninsula should not have to live in a military training range.</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
OPA-08	<p>Moving operations to the Olympic MOA, requires jets to fly from NAS Whidbey Island to the west side of the Olympic Peninsula. Upon reaching the west side the jets will begin a search for three electronic emitters randomly located at 15 different sites within the Olympic National Forest. This will require a search pattern of flights north and south over the western part of the Peninsula. It will be nearly impossible to not fly over the western appendages of Olympic National Park to accomplish this activity. (See PDN Map end of document)</p> <p>It will bring hours of Growler noise to the whole western side of the Peninsula. Despite the many paragraphs in the SEIS explaining that this noise should be of no concern, under the current Naval operations, people in Forks are recording flyovers of 94 dBA. Flights are heard as late as 9:30 pm - after sundown most of the year. Based on where the emitter sites are located, Forks would not be directly located under search flight paths. Despite that, they are hearing 94 dBA's and their shelves are rattling. According to the SEIS, Growlers transits will be routed Over Olympic National Park, Lake Crescent, Sequim and Port Townsend as they transit back and forth between their Whidbey Island base and the Olympic electronic training areas (EIS map on p. 2-19). OPA calculates this to be 19-20 times (5,000 divided by 260), transit passes over the northern Peninsula per day. The map also shows arrows of flight over the Olympic mountains to return to base from the Quinault area. This does not account for the number of north to south flights needed to search for the electronic emitters.</p> <p>This also does not account for flights coming over land from training activities in the Olympic Coast National Marine Sanctuary. [p. 24 Table 2. Proposed Training Activities., USFWS Biological Opinion on US Navy proposed NW Training and Testing Program, July 21, 2016]</p>	<p>The location of the emitters has no bearing on where within the Olympic MOA the aircraft will fly during electronic warfare training flights. However, the Olympic MOA does extend west of the coast off the Olympic Peninsula, so the areas described in the comment would continue to be exposed to noise levels similar to those experienced over the past several decades.</p> <p>The analysis in the Supplemental EIS/OEIS, including the Airspace Noise Analysis in Appendix J, considered all of the proposed flights, at the altitudes, locations, and time of day when they could occur. The analysis accounted for all flights conducted in the Olympic MOA and in W-237, that area of the ocean that includes part of the Olympic Coast National Marine Sanctuary.</p>
OPA-09	<p>One activity listed in [p. 9 Table 2. USFWS Biological Opinion on US Navy proposed NW Training and Testing Program, July 21, 2016] (Air Combat Maneuver, (ACM), Offshore Area, (W-237, Olympic MOAs), 550 events) According to a Boeing website, when searching for emitters, the Growler jets operate in groups of three to enable triangulation on the electronic target [Boeing Growler website, April 2019]. This fact adds to the level of noise and/or the length of time the noise is present.</p> <p>Not mentioned, in a cultural analysis, are the effects on the towns of the Peninsula that will listen to the Growler roar Monday through Friday, during "daylight hours". As seen in the following SEIS paragraphs, the Navy dismisses noise as a meaningful stressor on the people living under the</p>	<p>The number of aircraft involved during any training activity are based on the requirements for that activity. Some activities could include as many as four aircraft, as described in the table in Section A.1.1.1 (Air Combat Maneuver). The total number of aircraft was considered during the analysis of noise impacts.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>aircraft overflights and visitors to the Peninsula. In the SEIS there appears to be a use of averages that smooth flyover noise levels. The examples following are a jumble of statistics that have little to do with the reality of this activity currently.</p> <p>While some visitors to a natural setting like the Olympic National Park may be disturbed by an aircraft overflight, others may not even register the event." [EIS p. 3.12-28,29] The last sentence maybe true if the visitor is deaf but Forks residents have also reported vibrations of floor boards and objects on shelves during these flyovers.</p>	
OPA-10	<p>The SEIS continues, "Visitors to the national park, national forests, and wilderness areas on weekends or at night will rarely hear an EA-18G aircraft, because EA-18G training flights typically occur Monday through Friday and during daylight hours." [EIS p. 3.12-31] This statement assumes that visitors to the Peninsula only come on the weekends. Park statistics show that 76% of 2014 backcountry permits issued were for people to be in the park Monday through Friday. In April, Forks residents reported hearing flights as late as 9:30 pm. The assumption seems to be that people living on the Peninsula don't matter AND that the Navy has been following its own declarations in this EIS. Current practice declares it does not. Flights occur past sundown.</p> <p>In total there will be 118 Growler jets at Naval Air Station Whidbey. This is the complete U.S. arsenal of Growler jets.</p> <p>The sound profile of the Growler is very different than other jets. It is not only loud but includes a low frequency vibration that travels farther and vibrates objects in its path. The people of the Peninsula, the people of Coupeville, and the San Juan people hear and feel this daily.</p> <p>The Navy admits to noise levels within the Olympic airspace will range from 80 dB to 100 dB. "Continued exposure to noise above 85 dBA (adjusted decibels) over time will cause hearing loss. The volume (dBA) and the length of exposure to the sound will tell you how harmful the noise is. In general, the louder the noise, the less time required before hearing loss will occur." [Center for Hearing and Communication, website]</p>	<p>The analysis and conclusions in the Supplemental EIS/OEIS account for weekday visitors. The sentence quoted in the comment was describing the potential impact for weekend and nighttime visitors to the park. The rest of the analysis includes the other visitors, as found in the next section in the Draft Supplemental EIS/OEIS where those visitors "may experience aircraft overflight noise on multiple occasions during weekdays while they are staying the park."</p>
OPA-11	<p>It is telling that one reference in this SEIS is: Miller, J. D. (1974). Effects of noise on people. The Journal of the Acoustical Society of America, 56(3), 729–764. [EIS p. 3.9-110] OPA finds it incredible that there are not more recent studies referenced in this SEIS on this subject.</p> <p>According to Noise Pollution: A Modern Plague, Lisa Goines, RN and Louis Hagler, MD, March, 2007 [http://www.nonoise.org/library/smj/smj.htm] noise causes: "Hearing Impairment, Interference with Spoken</p>	<p>The studies cited in the Supplemental EIS/OEIS are relevant given the type, level, and frequency of sound generated during aircraft flights in the Olympic MOA. Other research, such as those provided in the comment are relevant to chronic and much higher levels of noise than would result from the flight activities proposed in the Supplemental EIS/OEIS.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Communication, Sleep Disturbances, Cardiovascular Disturbances, Disturbances in Mental Health, Impaired Task Performance, Negative Social Behavior and Annoyance Reactions can come from exposure to noise. "Noise represents an important public health problem that can lead to hearing loss, sleep disruption, cardiovascular disease, social handicaps, reduced productivity, impaired teaching and learning, absenteeism, increased drug use, and accidents. It can impair the ability to enjoy one's property and leisure time and increases the frequency of antisocial behavior. Noise adversely affects general health and well-being in the same way as does chronic stress. It adversely affects future generations by degrading residential, social, and learning environments with corresponding economic losses. Local control of noise has not been successful in most places."</p> <p>Regarding cardiovascular disease, OPA finds the following very interesting, "every increase in arterial hypertension can lead to more infarctions (heart attacks) and strokes."</p> <p>[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2696954/]</p> <p>The Navy Purchasing Department issued the following warning regarding the health of its own personnel, "According to PMA265 representatives (Navy Purchasing Department), the F/A-18E/F aircraft emits, and the EA-18G will emit, a maximum of 150 dBs, which is well above the noise level considered hazardous to hearing (greater than 84 dBs). According to PMA265, they made no initial attempts to mitigate the flight-line/deck jet noise hazard through design selection. This is contrary to the system safety design order of precedence specified in the MIL-STD-882D "PMA265 representatives stated that they did not pursue minimizing noise generated by the F/ A-18E/F engines through design because warfare sponsors (Commander, Naval Air Forces representatives) did not identify noise requirements as KPPs within the Operational Requirements Document (ORD). "PMA265 did not attempt to mitigate the jet noise hazard in the initial design and development of the aircraft, did not follow required guidance relating to risk levels and risk acceptance authority levels, and did not track the flight-line/deck jet noise hazard and its residual mishap risk. These conditions may contribute to a hazardous environment of high noise exposure associated with jet aircraft that, according to the Naval Safety Center, increases the likelihood of permanent hearing loss to sailors and Marines. PMA265 representatives stated that many flight-deck personnel exceed total daily exposure limits in approximately one launch while</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	wearing hearing protection that provides 30 dBs attenuation" [https://citizensofthereserve.wordpress.com/2013/05/05/very-disturbing-noise-facts-from-the-navy/]	
OPA-12	Regardless of formulas, etc. given in the SEIS, the noise, based on experience, will only get worse from the increased number of jets and will be consistently louder than many of the examples given in the SEIS. Growler jets are the jets equipped for electronic warfare training. [Boeing website] The electronic warfare training will be done with them. Other Navy jets flights will be in addition to the electronic warfare training. The Navy has consistently denied that noise is a problem to the people subjected to it. Their standard response is "it's the sound of freedom." The Navy has refused to work productively with the National Park Service, citizens of Coupeville, EPA asking for noise monitoring, and the Washington State Department of Health regarding noise issues. There are reasons when airports expand, that houses are purchased and destroyed or receive noise insulation services paid by the governments involved. The Navy's standard phrase "the sound of freedom" will not keep people from suffering bad health affects when continually exposed to it. The human body cannot tolerate Blue Angel noise for extended periods of time. OPA wonders what the reaction would be if this training were to occur over Seattle or other more populated Puget Sound regions. And, it is affecting many residents of Seattle and other Western Washington cities because the Peninsula provides vacation homes and recreational activities for them. Witness the ferry backups starting every Thursday afternoon, even in winter. City people leave for the Peninsula to enjoy nature's sounds not the Blue Angels. This access to nature has made Puget Sound cities great places to live and work. This training operation will change one of the quietest places in America, Olympic National Park's Hoh Rain Forest, to only when the Navy doesn't fly, and it will fly a lot. OPA found this bibliography on the Internet. Most later than 1974. OPA suggests that the Navy consider studying them: [list of dozens of references]	The studies cited in the Supplemental EIS/OEIS are relevant given the type, level, and frequency of sound generated during aircraft flights in the Olympic MOA. Other research, such as those provided in the comment, which the Navy considered, are relevant to chronic and much higher levels of noise than would result from the flight activities proposed in the Supplemental EIS/OEIS.
OPA-13	Economic: Because of the noise, the economic effects on Peninsula could be devastating. In 2017, people visiting Olympic National Park, alone, spent \$279 million in communities near the park. That spending supported 3,556 jobs in the local area and had a cumulative benefit to the local economy of \$385 million. That does not include visitors to the Peninsula to recreate in	The potential economic impact to the region was included in Section 3.12 (Socioeconomic Resources). The impacts of the training and testing activities on tourism are discussed in Section 3.12.2.3 (Tourism). Along with this, the potential impacts to socioeconomic resources from Growler activities was analyzed in Section 3.12.3.2 (Airborne Acoustics). The results of that analysis include in part, "Considering that trends in economic indicators have

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>the surrounding Olympic National Forest or to fish, hunt, camp, or hike elsewhere on the Peninsula. And it doesn't include other outdoor activities like visiting lavender and music festivals. The harm to the Peninsula's economy and way of life will be far greater than the \$5 million in fuel savings to the Navy. [p.64, Navy Currents, fall 2015]</p> <p>However, the SEIS states, "Training and testing activities within the Study Area would result in an increase in energy demand over current activities. The energy demand would arise from fuel (e.g., gasoline, diesel) consumption, mainly from aircraft and vessels participating in training and testing. Details of fuel consumption by training and testing activities on an annual basis are set forth in the air quality emissions calculation spreadsheets available on the project website. Aircraft fuel consumption is estimated to decrease by approximately 28 percent and 26 percent per year under Alternative 1 and Alternative 2, respectively, when compared to current rates of aircraft fuel consumption for training and testing activities. Vessel fuel consumption is estimated to increase by 140 percent under Alternative 1 and by 163 percent per year under Alternative 2, when compared to current rates of vessel fuel consumption during training and testing activities. Fuel consumption would result in a net total increase of 7 percent and 13 percent for Alternative 1 and 2, respectively. The alternatives could result in a net cumulative reduction in the global energy (fuel) supply. The significant increase in vessel testing fuel consumption for Alternatives 1 and 2 is due to additional testing operations compared to the baseline, including operations that were previously not analyzed; and updated fuel flow rates for vessels, which are significantly higher for certain vessels, including guided-missile destroyer. [EIS p. 6-13 to 6-14]</p> <p>The jobs brought to the Peninsula by this EIS is, will be, far fewer than the potential jobs lost if the noise resulting from this EIS reduces tourism to the Peninsula.</p>	<p>historically increased and are projected to continue to increase, disturbances from airborne acoustics on the Olympic Peninsula are expected to have a negligible impact on socioeconomic resources in the Study Area." Thus, no negative effects to tourism activities in the Study Area are expected from proposed training and testing activities. Therefore, loss of revenue or employment associated with tourism is not expected to occur.</p>
OPA-14	<p>Environmental:</p> <p>Olympic National Park:</p> <p>Olympic National Park is the 8th most visited park in the national park system. There were 3.4 million visitors to the Park in 2017, exceeding visitation to Mt. Rainier National Park. The ONP is also an International Biosphere Reserve and a World Heritage Site. Olympic National Park's uniqueness has been formally recognized since 1907 when Theodore Roosevelt made it a national monument. The reasons listed below.</p> <p>Olympic National Park has several distinctly different ecosystems, including glacier-capped mountains, old-growth temperate rain forests, and over 70</p>	<p>To ensure compliance with the National Marine Sanctuary Program regulations and the interagency consultation requirements of National Marine Sanctuaries Act section 304(d), the Navy considered all proposed modifications to training and testing activities to determine whether they have the potential to destroy, cause the loss of, or injure sanctuary resources, or result in adverse impacts on sanctuary resources or qualities. Accordingly, the Navy and NMFS submitted a joint Sanctuary Resource Statement to the Office of National Marine Sanctuaries.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>miles of wild coastline 94% of the park is designated as the Daniel J. Evans Wilderness. "Wilderness is " ... an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." The Wilderness Act created our National Wilderness Preservation System and provides the means for Congress to designate "wilderness areas," our nation's highest form of land protection. Today millions of Americans enjoy wilderness for hiking, camping, backpacking, fishing, mountaineering, solitude, and more.</p> <p>"Olympic National Park and its surroundings are home to a wide variety of wildlife. Just offshore, whales, dolphins, sea lions, seals, and sea otters feed in the Pacific Ocean. Invertebrates of countless shapes, sizes, colors and textures inhabit the tide pools.</p> <p>"On land, some species, like raccoons, beaver and mink, live mostly in the lowlands. But others, like deer, elk, cougars and bears, range from valleys to mountain meadows. Park waters are home to Some of the healthiest runs of Pacific salmon outside of Alaska. Over 300 species of birds live in the area at least part of the year, from tiny penguin-like rhinoceros auklets offshore to golden eagles soaring over the peaks."</p> <p>"The park is a rare refuge for species dependent on old growth forests, including some species protected under the Endangered Species Act. Olympic provides one of the last remaining large tracts of Intact primeval forest in the lower 48 states. These moist forests provide essential habitat for northern spotted owls, marbled murrelets and a variety of amphibians. "The wildlife community of the isolated Olympic Peninsula is also unique. This community is noteworthy not only for its endemic animals (found only here), but also for species missing from the Olympics, yet found elsewhere in western mountains. Pika, ptarmigan, ground squirrels, lynx, red foxes, coyotes, wolverine, grizzly bears, bighorn sheep and historically, mountain goats, did not occur on the Olympic Peninsula. Meanwhile, endemic species like the Olympic marmot, Olympic snow mole and Olympic torrent salamander are found here and nowhere else in the world!" [Olympic National Park website, April 20, 2019]</p> <p>Olympic Coast National Marine Sanctuary:</p> <p>The Navy wishes to couple the electronic warfare training activity with training and testing activities which include new activities at sea, as well as activities that are currently ongoing and have historically occurred in the Study Area." [EIS Abstract] (See map 1) The historical training was much more benign than what is being asked in this EIS. It will include "asking for extension of a NOAA permit for "incidental takes of marine mammals...and</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>incidental takes of threatened and endangered marine species." [EIS p. ES-04]</p> <p>"For more than 40 years, our national marine sanctuaries have worked to protect special places in America's ocean and Great Lakes waters, from the site of a single Civil War shipwreck to a vast expanse of ocean surrounding remote coral reefs and tiny atolls. Backed by one of the nation's strongest pieces of ocean conservation legislation, the National Marine Sanctuaries Act, the sanctuaries seek to preserve the extraordinary scenic beauty, biodiversity, historical connections and economic productivity of our most precious underwater treasures. By acting as responsible stewards of these special places, we strengthen our nation now and for future generations." [https://sanctuaries.noaa.gov/about/]</p> <p>"he National Marine Sanctuaries Act (NMSA) was enacted in 1972 in order to protect significant marine habitats and special ocean areas like Florida Keys and Monterey Bay. Under the NMSA, the Secretary of Commerce is authorized to designate and manage certain areas of the marine and Great Lakes environment that he or she considers to be nationally significant and that merit federal management.</p> <p>While some people who hear the word "sanctuary" think that these areas are fully protected from all extractive uses, the reality is quite different. Under the National Marine Sanctuaries Act, sanctuaries are managed for multiple uses provided the uses are deemed compatible with resource protection by the Secretary of Commerce. The National Marine Sanctuaries Act does not prohibit any type of use, but leaves it up to the Secretary to determine through a public process which activities will be allowed and what regulations will apply to various uses. Under this process a secretary may exempt extractive uses from regulation, such as bottom trawl fishing. 11 [https://marine-conservation.org/what-we-do/programareas/mpas/national-marine-sanctuaries/legislative-history-national-marine-sanctuaries-act/]</p> <p>"Olympic Coast National Marine Sanctuary represents one of North America's most productive marine ecosystems and spectacular undeveloped coastlines." [https://olympiccoast.noaa.gov/living/]</p> <p>"The Olympic Coast is an example of the temperate Northeast Pacific ocean ecosystem. The ocean environment is influenced by global patterns of ocean currents and climate that interact with the unique geology of the Olympic Mountains, continental shelf and deep sea floor. The sanctuary is large enough to observe both variety and stability in the ocean processes - important qualities for studying short- and longterm changes." [Olympic</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Coast National Marine Sanctuary website, April 20, 2019]</p> <p>"Marine life, ranging from minute ocean drifters called plankton, to humpback whales, thrive here. Twenty-nine species of marine mammals and scores of seabirds species spend parts of their lives here; gray whales visit as of the longest mammal migration on earth and albatross gather food here to return to nestling on mid-Pacific islands and atolls. Sea otters munch on macro-invertebrates such as urchins, which in turn graze on majestic kelp forests. Fishes occupy myriad niches from the deepest ocean canyons to the shallowest tide pools.</p> <p>"The sanctuary includes habitats as varied as broad sandy beaches, tide pools, rocky reefs, the open ocean surface and deep sea canyons. These habitats provide for shelter, feeding, nesting and other basic needs to sustain diverse and abundant marine wildlife populations.</p> <p>Because of its closeness to a wilderness park, the Sanctuary has a unique position to be a scientific test tube for understanding the natural interaction of sea and land. Preserved untrammled it provides a library and laboratory of scientific information valuable to this and future generations. Activities requiring permits for "incidental takes of marine mammals...and incidental takes of threatened and endangered marine species." [EIS p. ES-4] would seem to nullify this ability.</p>	
OPA-15	<p>OLYMPIC PARK ASSOCIATES ALSO SUPPORTS:</p> <p>Study: Impact of military flights on Olympic Peninsula soundscapes Initial Summary of Findings June 4, 2019 Lauren Kuehne, MSc Research Scientist University of Washington's College of the Environment School of Aquatic and Fishery Sciences 1122 NE Boat Street Seattle, WA 98105. {Attached separately)</p> <p>Following are excerpts from the study:</p> <p>Under Results</p> <p>This says, it appears, that the EIS 5,000 flights per year refer to take offs from Whidbey not the number of times the jets would be heard doing their training flights. Any calculations based on 5,000 flights would severely under estimate the noise impact on the people and wildlife of the western part of the Olympic Peninsula. Based on "25-50 flights" and an average up to 70-85 flight events (above) the impact would be conservatively 5,525 to 18,785 flights over areas of the MOA in a year.</p>	<p>The analysis in the Supplemental EIS/OEIS, including the Airspace Noise Analysis in Appendix J, considered all of the proposed flights, at the altitudes, locations, and time of day when they could occur.</p>
OPA-16	<p>In June 2015, Congressman Kilmer asked the Navy to cooperate with the National Park Service & Federal Interagency Committee on Aviation Noise (FICAN) to investigate the impact of noise on the Park. No agreement was reached as to how this would be done.</p>	<p>DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>On February 24, 2017 the Washington State Department of Health submitted a letter asking the Navy to do further study on the effects of noise on the residents of Coupeville, WA. [https://www.doh.wa.gov/CommunityandEnvironment/Noise]</p> <p>As reported in the Seattle Times, March 25, 2017, "EPA faults study on expanding Growler jets at Whidbey, seeks on-the-ground noise monitoring." To our knowledge no studies or monitoring has been done. The Navy has repeatedly shown its disregard for the environment under their management. In Washington State alone, they allowed workers to be exposed to toxins for 7 years in the Bremerton Navy Yard. Despite warnings, workers became sick because of their irresponsible lack of oversight of Yard working conditions. [KINGS, November 2017]</p> <p>It is alleged by the Washington State Attorney General that the Navy, "committed multiple violations of the Clean Water Act by its decision to release toxic substances into the Sinclair Inlet, which flows into the Puget Sound, and failed to obtain the proper permits when cleaning a decommissioned aircraft carrier, the USS Independence." [AG Ferguson]</p> <p>The Navy broke off discussions "with state and local groups about easing the impacts of expanding EA-18G Growler jet training over a central Whidbey Island historic district. "A Navy statement Friday cited a 'fundamental difference of opinion' on what should be done to reduce the noise and other adverse effects of the training flights.</p> <p>"The breakdown of talks is the latest sign of a bitter divide between the Navy and many residents of the rural central part of the island who fiercely oppose plans to quadruple, in the years ahead, the number of Growler flights over the Ebey's Landing National Historic Reserve." [Seattle Times Dec 3, 2018]</p> <p>In this SEIS, "ES.7.3 Monitoring As described in the 2015 NWTT Final EIS/OEIS, the Navy remains committed to demonstrating environmental stewardship while executing its National Security Mission and complying with the suite of federal environmental laws and regulations, and providing required and relevant reports to appropriate regulatory agencies."</p> <p>Given its actions to date, this statement rings hollow to OPA. To many OPA members who live in the northwestern part of Washington State, the Navy is becoming a very noisy and disruptive neighbor. To OPA's non-Peninsula residents, the Navy appears to have a lack of understanding of the Peninsula environment and its value to the nation.</p> <p>Unfortunately, OPA finds many statements within the SEIS of March 29, 2019 are made without sufficient facts to prove their accuracy.</p>	<p>these types of analyses¹. The following text² states DoD's position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>CONCLUSION: OPA supports the constitutionally guaranteed right of domestic tranquility. OPA argues this SEIS will increase the noise heard on the Olympic Peninsula to levels that are harmful to human physical and mental health. This SEIS will also despoil a marine sanctuary with activities that can be done in an area not designated for wildlife protection.</p> <p>While OPA understands and supports the Navy's desire to be good warriors and to protect the U.S. citizens from foreign harm. OPA also argues that our environment also requires protection from harm. For over 112 years, presidents and congress have been trying to save examples of nature's work on the Olympic Peninsula. These areas belong to all. They are a National park, National wilderness areas, National marine sanctuary. They were created for all Americans. National parks, wildlife refuges, wilderness areas, and marine sanctuaries were created to preserve unique natural areas. OPA argues extra effort should be used to protect these places for future generations.</p> <p>We need to preserve the experience people expect in a national park – to hear the sounds of nature and for nature to hear itself.</p> <p>As important, our medicines come from nature. Materials for our food and shelter come from nature. OPA argues we are a part of nature and our ability to live in the natural world is also necessary for the human species survival. In wilderness, in natural areas, we learn from nature, so we can do this. To destroy these places destroys biodiversity. To ignore this reality, will bring our people to a condition no military operation can prevent. This SEIS disregards the people and wildlife of the Olympic Peninsula. It disrespects the national effort to protect these national treasures.</p> <p>To the Navy, it appears, it is about location. To have the training out of a base they manage. To allow them to cluster their operations. Despite citizen objection, the Navy is hoping that this will be a politically safe decision. That the protesting citizen's political representatives lack the power to stop its plans.</p> <p>To OPA it is about the environment. A healthy environment for people and wildlife living, working and visiting the Peninsula and the Salish Sea. Providing a healthy environment for the Olympic Elk; birds, local and migratory; and the sea mammals and other ocean critters.</p> <p>Olympic Park Associates doesn't want the 7 years under this SEIS to be an experiment on what Growler jet noise will do to humans and wildlife or what electronic noise, explosions, high-energy lasers, and chemicals will do</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	to marine life. The SEIS is a convenience for the Navy, a sacrificial loss for the people of the Peninsula and the country.	
Orca Conservancy		
Orca-01	<p>Whether intentional or unintentional, anthropogenic noise in the marine environment is an important component of ocean noise. The Marine Mammal Protection Act (MMPA) calls for the "least practicable adverse impact" on marine mammals and their habitats. To limit harm, the NMFS requires the USN to shut down or delay sonar transmission if there are nearby marine mammals. It also forbids the Navy to produce pulses of 180dB or more within about 14 miles of any coastline, or within 0.6 miles of several "offshore biologically important areas.</p> <p>Previous training and testing exercises in the Southern Residents' habitat, when the whales were nearby, disrupted their normal behavior and caused the whales to flee, indicating they are sensitive to sonar activity. For a population that is on the verge of extinction, any additional adverse effects will have a long-term consequence.</p>	<p>Information about the quantitative analysis is described in detail in the 2018 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing. The Navy's acoustic and explosive effects analysis looks at multiple factors such as marine mammal abundance across the study area in each season, the levels of sound that may cause certain effects, and the Navy's proposed time and space use of noise producing activities. As discussed in the Draft Supplemental EIS/OEIS in Sections 3.4.2.1 and 3.4.2.2, a few instances of take per year are not enough to cause long-term consequences for individuals.</p> <p>The commenter's description of the Navy's mitigation for active sonar is not accurate. The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from active sonar on marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on marine mammals in important foraging and migration areas. Additional information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).</p>
Orca-02	<p>Orca Conservancy has previously proposed establishment of the Marine Protected Areas (MPA), where habitat enhancement and protection could be emphasized to increase prey available to whales. Our list is not intended to be comprehensive, but is a start based on information available to us. The USN would be better served in electing to be part of solution; until we start showing considerable growth in the SRKW population and the entire ecosystem trying to support them. This list is based on, first and foremost, SRKW distribution; 2) important areas for salmon rearing; 3) spawning areas for forage fish; 4) areas with high primary productivity due to unusually high levels of tidal mixing. Many of these areas already have</p>	<p>As described in Appendix K (Geographic Mitigation Assessment), the Navy completed an extensive assessment to develop mitigation areas for the NWTT Study Area. The Navy considered Southern Resident Killer Whale habitat in its assessment, including the habitats mentioned by the commenter. The Navy will implement additional mitigation within the Puget Sound and Strait of Juan de Fuca Mitigation Area, which encompasses the entire NWTT Inland Waters portion of the Study Area, to avoid or reduce potential impacts on marine mammals, birds, and fish. Other efforts mentioned by the commenter, such as establishing protected areas to</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>some level of protection as Aquatic Reserves, Marine Stewardship Areas, or are already known as MPA's</p> <p>The west side of San Juan Island</p> <p>The west side of San Juan Island is the most heavily used portion of the SRKW range. Closing it to recreational fishing would offer two advantages. First, it would significantly reduce vessel traffic in Haro Strait. Second, it would maintain prey density through Haro Strait, rather than the reduced prey density after runs are heavily fished by sports fisherman. Shifting fishing effort to the waters north of San Juan Island should have minimal impact on the sport fishing industry, while significantly benefitting whales</p> <p>1) Hein Bank</p> <p>This is an area where prey appear to be concentrated, so it is an important feeding area for SRKWs. It should have the same protections as the waters off San Juan Island</p> <p>2) Cherry Point</p> <p>Cherry Point is an important spawning area for herring, which are a key forage fish central to the Salish Sea food web</p> <p>3) Protection Island</p> <p>This is an area of high productivity that is an important area for herring immediately prior to spawning</p> <p>4) Maury Island</p> <p>The waters off Maury Island have been identified as the most important area for juvenile salmon in the Central Puget Sound region</p> <p>5) Nisqually</p> <p>The recent restoration of the Nisqually estuary makes it an important area with the potential to increase salmon survival and production</p> <p>7) Elwha</p> <p>The recent restoration of the Elwha River makes its estuary an important area with the potential to increase salmon survival and production</p> <p>8) Camano Island</p> <p>Most of the island's nearshore is important spawning habitat for forage fish</p> <p>9) Other</p> <p>Other restoration efforts, such as the mouth of the Snohomish River and beach nourishment on the Snohomish County coast, may justify the elevation of such areas to MPA status in the future, to maximize the biological productivity of these areas</p> <p>These areas could be sites where habitat is closed to damaging activities. Shipping could be routed away from these areas to minimize the risk of damage from oil and coal.</p>	<p>prohibit recreational fishing activities, beach nourishment, and rerouting shipping lanes, are outside the scope of this Supplemental EIS.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Orca-03	<p>Rather than using a fixed received level threshold for whether a take is likely to occur from exposure to mid-frequency sonar, the USN has proposed a method for incorporating individual variation. Risk is predicted as a function of three parameters: 1) a basement value below which takes are unlikely to occur; 2) the level at which 50% of individuals would be taken; and 3) a sharpness parameter intended to reflect the range of individual variation. Parameters employed are based on the best available science, the implications of uncertainty in the values, and biases and limitations in the model. Data were incorrectly interpreted when calculating parameter values, resulting in a model that underestimates takes.</p> <p>Errors included failure to recognize the difference between the mathematical basement plugged into the model, and the biological basement value, where the likelihood of observed and predicted takes becomes non-negligible; using the level where the probability of take was near 100% for the level where the probability of take was 50%; and extrapolating values derived from laboratory experiments that were conducted on trained animals to wild animals without regard for the implications of training; and ignoring other available data, resulting in a further underestimation of takes.</p>	<p>The commenter is referring to the Phase II behavioral criteria. Since Phase II, the Navy incorporated emergent best available science into new behavioral response functions for Phase III that are described in the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III) (U.S. Department of the Navy, 2017a), available at www.nwtteis.com. The Phase III behavioral criteria were determined appropriate and adopted by NMFS.</p>
Orca-04	<p>The model also has limitations. For example, it does not consider social factors, and this is likely to result in the model underestimating takes. This analysis has important management implications.</p> <p>First, not only do takes occur at far greater distances than predicted by the USN's risk model, the fact that larger areas are exposed to a given received level with increasing distance from the source further multiplies the number of takes. This implies takes of specific individuals will be of greater duration and be repeated more often, resulting in unexpectedly large cumulative effects. Second, corrections need to be made for bias, and corrections will need to be larger for species for which there are no data than for species for which there are poor data. Third, the greater range at which takes would occur requires more careful consideration of habitat specific risks and fundamentally different approaches to mitigation.</p>	<p>The Navy Acoustic Effects Model considers social factors (e.g., group sizes) typical of the species modeled. The Navy Acoustic Effects Model also uses accepted propagation models and incorporates extensive databases of physical environmental data to accurately predict acoustic propagation as described in the technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing (U.S. Department of the Navy, 2018c), available at www.nwtteis.com. (This includes modeling for potential impacts at distances far from a sound source. The energy from multiple exposures during an event (e.g., multiple sonar pings) are accumulated to assess auditory impacts. Takes of individuals are accurately accounted for in the quantitative analysis as described in this Final Supplemental EIS/OEIS and the above supporting technical report.</p> <p>The Navy compiled data from multiple sources and developed a protocol to select the best available density estimates based on species, area, and time (i.e., season), including those for species with poor data. This process is described in Section 3.0.1.2.1 (Marine Species Density Database) and the technical report titled U.S. Navy Marine Species Density Database Phase III for</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>the Northwest Training and Testing Study Area (U.S. Department of the Navy, 2019), available at www.nwtteis.com.</p> <p>The Navy has worked cooperatively with NMFS to develop a suite of mitigation to avoid or reduce potential impacts to protected species, such as the Southern Resident killer whale, to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS, as discussed in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).</p>
Orca-05	<p>The USN distinguishes two types of takes: Level A, in which there is immediate injury or death; and Level B, in which there is no immediate injury, but cumulative exposure may lead to harm at the population level. However, in certain contexts, Level B harassment may lead to Level A takes through indirect mechanisms.</p> <p>The population effects of Level A takes on populations are relatively easy to assess, as individuals that are killed are obviously removed from the population, and those that are injured are more likely to die whenever the population is next exposed to stress.</p> <p>Calculating the population effects of Level B takes is a topic of contemporary research. For example, Bain (2002a) explored using energetic consequences of behavior change in conjunction with population dynamics models to estimate population effects of Level B takes. Stress concurrent with Level B harassment would have additional population consequences. Stress may occur in the absence of behavioral change, or the absence of change in significant behavioral patterns such as foraging or nursing, or exclusion from optimal habitat. Lusseau et al. (2006) concluded disturbance caused a decline in and posed a significant threat to the survival of the bottlenose dolphin population in Doubtful Sound, New Zealand. Therefore, the different magnitudes of takes will have different population consequences. Thus, it will be challenging to synthesize results of multiple studies, as different measured endpoints may belong on different curves relating them to noise, and different endpoint will have different population consequences. Furthermore, the population consequences can depend on the health of the population. Most notably the latter, as we know the SRKW population health is suffering due to the lack of their number one food source, Chinook salmon.</p> <p>Temporary Threshold Shifts in captive marine mammals are commonly used as an index of physical harm. Limiting experimental noise exposure to levels that cause temporary effects alleviates ethical concerns about</p>	<p>The commenter incorrectly defines terms under the Marine Mammal Protection Act. For military readiness activities, the correct definition of Level A harassment is “any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild.” Level A harassment is not mortality. For military readiness activities, the correct definition of Level B harassment is “any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering to a point where such behavioral patterns are abandoned or significantly altered.” According to the best available science summarized in Final Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), there are currently no direct correlations between an observed behavioral response and a loss of an individual. No mortalities from acoustic or explosive sources are predicted due to the Proposed Action.</p> <p>Significant research is ongoing into the population consequences of disturbance, as summarized in Section 3.4.2.1.1.7 (Long-term Consequences) in Chapter 3.4 (Marine Mammals). Still, it is not possible to utilize individual short-term behavioral responses to estimate long-term or population-level effects in available models based on available data. Also, the sound characteristics that correlate with specific stress responses in marine mammals are poorly understood, as are the ultimate consequences due to these changes, as described in Section 3.4.2.1.1.3 (Physiological Stress). Therefore, the best assessment of long-term consequences from Navy training and testing activities is monitoring populations over time within the Study Area. As the commenter mentions, substantial efforts are underway to better understand possible compounding impacts through data collection. The Navy has developed and implemented comprehensive monitoring plans since 2009 for protected marine mammals occurring on Navy ranges with the</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>deliberately causing permanent injury. However, repeated exposure to noise that causes temporary threshold shifts can lead to permanent hearing loss. In fact, chronic exposure to levels of noise too low to cause temporary threshold shifts can cause permanent hearing loss. Changes in behavior resulting from noise exposure could result in indirect injury in the wild. Therefore, damage to hearing from noise exposure is an example of unconditional injury from noise. OSHA (2007) requires limiting human exposure to noise at 115dB above threshold (equivalent to 145 dB re 1uPa for killer whales - pain threshold for killer whales begins at 135 dB re 1uPa) to 15 minutes.</p>	<p>goal of assessing the impacts of training and testing activities on marine species and the effectiveness of the Navy's mitigation measures. The Navy supports a wide range of research that continually improves the understanding of marine species presence on Navy ranges and the impacts of stressors on these species. More information on these efforts can be found at https://navymarinespeciesmonitoring.us/. To date, the findings from the research and monitoring and regulatory conclusions from recent analyses by NMFS have been that the majority of impacts from military readiness activities are not expected to be deleterious with regard to the fitness of any individuals or long-term consequences to populations of marine mammals.</p> <p>The commenter cites two studies that considered the impacts of marine mammal watching vessels on their target species. These studies were considered in the Navy's examination of best available science in Chapter 3.4 (Marine Mammals). Unlike marine mammal watching vessels, however, the Navy does not intentionally approach marine mammals and implements procedural mitigation to avoid vessel interactions with marine mammals. Additionally, as described in Section 3.0.3.1.2 (Vessel Noise), Navy traffic is a very small portion of overall vessel traffic in the Inland Waters portion of the Study Area.</p> <p>The commenter incorrectly states that temporary threshold shift is used as an indicator of harm. This is not supported by Reference 14 [Au et al (2003)], which documented recovery of TTS in a bottlenose dolphin. Any instances of TTS are considered Level B harassment and are expected to be of low magnitude and of short duration. Additionally, the commenter cites Szymanski et al. (1999) in regards to applying OSHA general industry noise standards to marine mammals. The Navy's Phase III criteria for assessing threshold shift incorporate the best available science on marine mammal sound exposures, incorporating other mammal data as appropriate. The killer whale audiogram data in Szymanski et al. (1999) is incorporated into the Phase III criteria. See the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III) (U.S. Department of the Navy, 2017a), available at www.nwtteis.com, for detailed information on how the criteria and thresholds were derived. The marine mammal criteria and thresholds developed for that technical report were relied on by National Marine Fisheries Service in establishing guidance for assessing the effects of sound on marine mammal hearing (National Marine Fisheries Service, 2016I) and were re-affirmed in the 2018 revision (National Marine Fisheries Service, 2018e). In addition, these auditory impact criteria were recently published by</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>Southall et al. (2019a). Lastly, Section 3.4.2.1.1.5 (Hearing Loss) synthesizes the best available science on threshold shift in marine mammals.</p> <p>The Navy is aware of the Southern Resident killer whales' plight in the Pacific Northwest and plans applicable activities with consideration given to their possible presence. The Navy's current and planned sonar and explosives activities occur largely in areas not frequented by Southern Resident killer whales. As described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment), the Navy worked cooperatively with NMFS to develop a suite of mitigation to avoid or reduce potential impacts on Southern Resident killer whales and their prey species to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS in areas important to Southern Resident killer whales and salmonids for feeding, breeding, and migration.</p>
Orca-06	<p>A variety of mechanisms for Level B harassment to potentially lead to Level A takes have been identified. When speaking exclusively on killer whales, separation of individuals from social units is a consequence of noise exposure that may lead to mortality. In 2003, in Haro Strait, some killer whales responded to mid-frequency sonar by seeking shelter behind a reef. Others chose to flee, resulting in splitting of a pod that historically spent all of its time together as a single unit. While no deaths resulted from this particular incident, other killer whales have been observed separated from their social units resulting in death prior to reunion or requiring human intervention to restore the individual to its social unit.</p> <p>Temporary threshold shifts may conditionally lead to harm. Impaired hearing ability increases vulnerability to ship strike. In 2003, blunt force trauma was identified as a cause of death in the investigation of harbor porpoise mortalities following exposure to mid-frequency sonar in Washington State. A minke whale was nearly struck by a research vessel in the area where one had been observed fleeing mid-frequency sonar exposure.</p> <p>Same holds true, if not more, for killer whales.</p> <p>Therefore, temporary threshold shifts may conditionally lead to harm. Impaired hearing ability increases vulnerability to ship strike. In 2003, a harbor porpoise was found with ear damage following exposure to mid-frequency sonar in Washington State, although post-mortem changes could not be ruled out as a cause. A minke whale was nearly struck by a research vessel in the area where one had been observed fleeing mid-frequency sonar exposure. On February 11, 2012, the body of L112, a</p>	<p>There are no known instances of a behavioral response due to noise exposure resulting in mortality or injury of killer whales. Although the quantitative analysis predicts TTS in killer whales, a small number of which would be to Southern Residents, any instances of TTS are expected to be of low magnitude and of short duration. The combined impacts of all stressors on marine mammals are discussed in Section 3.4.3 (Summary of Impacts) in Chapter 3.4 (Marine Mammals). Predicting cumulative impacts of multiple stressors currently relies on speculation based on the best available science (e.g., "hearing loss as a result of noise exposure may increase the risk of vessel strike"); however, substantial efforts are underway to better understand possible compounding impacts through data collection. The Navy supports a wide range of research that continually improves the understanding of marine species presence on Navy ranges and the impacts of stressors on these species. More information on these efforts can be found at https://navymarinespeciesmonitoring.us/. To date, the findings from the research and monitoring and regulatory conclusions from recent analyses by NMFS have been that the majority of impacts from military readiness activities are not expected to be deleterious with regard to fitness of any individuals, or long-term consequences to populations of marine mammals.</p> <p>To avoid physical disturbance and strike from vessel movements, the Navy maneuvers to maintain a 500 yd. mitigation zone distance from whales. Navy studies from other range complexes demonstrated that median speeds near coasts are low, varying from 5-12 knots. There have been no vessel strikes involving minke whales, Southern Resident killer whales, or any other marine</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>young female SRKW was found on Long Beach, Washington. Based on findings from the gross examination and the absence of conclusive histopathology or ancillary test results, blunt force trauma was the primary consideration for the acute death of the animal. Weather and sea surface data for coastal Oregon and Washington, and drift patterns for the Columbia River plume suggested that L112 had likely been carried for some days in the Columbia River eddies or drifted from the south before being cast on Long Beach. Sonar and small underwater explosive activities were confirmed by the Royal Canadian Navy on February 4, 5, and 6, 2012 in Canadian waters off Vancouver Island and in the Strait of Juan de Fuca but no marine mammals were ‘observed’ during the activities. On Tuesday, December 20, 2016, the body of J34, a young male SRKW, was discovered floating in the Strait of Georgia just north of Vancouver, British Columbia and appeared to have suffered “blunt force trauma”.</p>	<p>mammal by Navy vessels conducting training and testing activities in the Study Area.</p> <p>In May 2003, killer whales in Haro Strait, Washington, exhibited what were believed by some observers to be aberrant behaviors, during which time the USS Shoup was in the vicinity and engaged in mid-frequency active sonar operations. Sound fields modeled for the USS Shoup transmissions (Fromm, 2009; National Marine Fisheries Service, 2005; U.S. Department of the Navy, 2004) estimated a mean received SPL of approximately 169 dB re 1 μPa at the location of the killer whales at the closest point of approach between the animals and the vessel (estimated SPLs ranged from 150 to 180 dB re 1 μPa). Per the Phase III behavioral response function for odontocetes, the estimated received level during this exposure would likely have resulted in a behavioral response. However, attributing the observed behaviors to any one cause is problematic given there were six nearby whale watch vessels surrounding the pod, and subsequent research has demonstrated that “Southern Residents modify their behavior by increasing surface activity (breaches, tail slaps, and pectoral fin slaps) and swimming in more erratic paths when vessels are close” (National Oceanic and Atmospheric Administration Fisheries, 2014).</p> <p>A discussion of harbor porpoise strandings in May 2003 is available in the technical report titled <i>Marine Mammal Strandings Associated with U.S. Navy Sonar Activities</i> (available at www.nwtteis.com). The higher number of harbor porpoise strandings in 2003 were likely indicative of a start to a multi-year trend in increased strandings related to an increase in local harbor porpoise population sizes, and since little post-mortem evidence for acoustic trauma exists, it is likely the porpoises stranded around the time of USS SHOUP tactical sonar operations were unrelated to acute acoustic trauma from sonar exposure.</p> <p>The National Marine Fisheries Service investigated the stranding of Southern Resident killer whale L-112 (NOAA Technical Memorandum NMFS-NWFSC-133). No U.S. Navy training activities involving sonar or explosives were conducted between 1 and 11 February 2012 in the Northwest Training Range Complex (which includes Washington, Oregon, and northern California). Other anthropogenic activity, including other U.S. military, Royal Canadian Navy, fishing, or construction activities, were also ruled out as potential causes of the observed injuries.</p>
Orca-07	<p>These species are familiar with boats in the aforementioned areas, and normally avoid them by a wide margin if need be, when they can actually</p>	<p>The commenter is referring to the Phase I and II behavioral criteria. Since Phase II, the Navy incorporated emergent best available science into new</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>hear them coming.</p> <p>Out of the three datasets used (captive cetacean, killer whales, right whales), the second largest dataset is killer whales exposed to mid-frequency sonar from the USS Shoup in Haro Strait, Washington, in May, 2003. The level quoted in the HRC SDEIS (Dept. Navy 008b) is an estimate of the received levels experienced when mid-frequency sonar was transmitted from about 3 km away. This level caused major behavioral changes in 100% of exposed whales (Risk=1 for Level B takes of a magnitude that in other contexts or species could lead indirectly to physical harm), but was not believed to have caused Level A takes (the whales did not strand, and received levels were estimated to be too low to have caused threshold shifts, MNFS OPD 2005) in any individuals (Risk = 0). However, much more data are available from the May 2003 USS Shoup incident. Behavioral changes were first observed at 47 km (where the received level was estimated to be 121 dB). The behavioral response was tail slapping by about 25% of the individuals observed, which is consistent with observed responses to vessel noise at a similar level. At a distance greater than 22km, the direction of travel changed away from a feeding area, and hence forage behavior was disrupted. At this distance, the received level may have increased to the neighborhood of 135dB re 1uPa with about 6 dB of reduced spreading loss and 6 dB reduced absorption. This would be comparable to a vessel traveling at a low speed approaching to within 10 m, which is very difficult to accomplish without causing whales to turn away. 100% of killer whales responded by abandoning their feeding ground and moving away from the noise source at the received level. While vessels cause diversion from straight-line paths, they have not been observed to displace killer whales from feeding areas (vessels have been observed to displace killer whales from resting areas, but this is likely mediated by presence rather than noise, as the effect is observed in the presence of silent vessels, Trites et al 1995). Thus, it is not surprising that a qualitatively different behavioral response was exhibited. The peak exposure level was estimated to be 175 dB re 1uPa (HRC SDEIS, although NMFS noted that estimated levels tended to overestimate measured levels by 1-10 dB [NMFS OPR 2005], so the peak exposure level may have been only 165dB). In addition to changing travel patterns, the pod split, with approximately 50% of the pod continuing to shelter in an acoustic shadow zone, and the other 50% fleeing at high speed. Such behavior has not been observed in the presence of vessels alone. It should be emphasized that the 100% of killer whales exhibited a disruption of a significant life process,</p>	<p>behavioral response functions for Phase III that are described in the technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i> (U.S. Department of the Navy, 2017a), available at www.nwtteis.com. The Phase III behavioral criteria were determined appropriate and adopted by NMFS.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	foraging, at a level that may have been less than 135dB re 1uPa, in contrast to the value used in the SDEIS, 163.3 dB re 1uPa for a 50% response.	
Orca-08	<p>Additional datasets are available for killer whale response to noise. E.g., in Bain and Dahlheim's (1994) study of captive killer whales exposed to band-limited white noise in a band similar to that of mid-frequency sonar at a received level of 135 dB re 1uPa, abnormal behavior was observed in 50% of the individuals. This is far lower than the level observed in bottlenose dolphins. In addition, Bain (1995) observed that 100% of wild killer whales appeared to avoid noise produced by banging on pipes (fundamental at 300Hz with higher harmonics) to 135 dB re 1uPa contour. This indicates the difference between wild and captive killer whales (non-zero risk in captive marine mammals might correspond to 100% risk in wild individual of the same species), as well as implying that risk of 100% may occur by 135 dB re 1uPa for this genus in the wild. However, while this may be the case, more emphasis needs to be placed on the captive-wild difference, as there are species differences, like Dall's porpoises, harbor seals, and California sea lions being relatively noise tolerant, and harbor porpoises, killer whales, and Steller sea lions relatively noise intolerant.</p> <p>Further, killer whales responded to vessel traffic at around 105-110 dB with conspicuous behavioral changes such as increased rates of threat displays and evasive swimming patterns. Subtle behavioral changes, such as inhibition of foraging behavior, were observed at lower levels. While inhibition of foraging is a Level B take, in a food limited population, inhibition of foraging is likely to result in increased mortality and/or reduced recruitment.</p>	<p>Since Phase II, the Navy has incorporated emergent best available science into new behavioral response functions for Phase III that are described in the technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i> (U.S. Department of the Navy, 2017a) available at www.nwtteis.com, including data on exposures to wild killer whales. As shown in the technical report, the Navy considered how captive and wild animals may respond differently to acoustic stressors when analyzing response severity.</p> <p>The Navy acknowledges in the Final Supplemental EIS/OEIS that the proposed training and testing activities have the potential to affect marine species, and provides a separate analysis and determinations of impacts for each species in the training and testing area. The Navy's acoustic effects model predicts impacts from acoustic stressors (e.g., sonar) on marine mammals, and the Final Supplemental EIS/OEIS considers impacts from vessel noise as well (please refer to Section 3.4.2.1.3, Impacts from Vessel Noise). While stressors from Navy activities would contribute to other natural and anthropogenic stressors encountered regularly by marine species in the affected environment (e.g., commercial vessel traffic, natural fluctuations in prey availability), their impact would be minimal in comparison. For example, Navy vessel traffic is much lower than commercial and recreational vessel traffic within the Inland Waters portion of the Study Area.</p>
Orca-09	<p>Finally, the USN's characterization of the killer whale dataset is incorrect. They indicate the effects observed in the presence of mid-frequency sonar in Haro Strait were confounded by the presence of vessels. However, the effects of vessels on killer whales have been extensively studied, both prior to and subsequent to exposure. Behavioral responses attributed to mid-frequency sonar are qualitatively different than those observed to vessels alone. While the observations were based on a small sample, they were not inconsistent. The sonar signal was blocked from reaching the whales with full intensity by shallow banks or land masses during three segments of the observation period. The "inconsistencies" can be attributed to differences in behavior depending on whether there was a direct sound path from the Shoup to the whales. It should be noted there was extensive study of this population prior to exposure, as well as extensive post-exposure monitoring.</p>	<p>In May 2003, killer whales in Haro Strait, Washington, exhibited what were believed by some observers to be aberrant behaviors, during which time the USS Shoup was in the vicinity and engaged in mid-frequency active sonar operations. Sound fields modeled for the USS Shoup transmissions (Fromm, 2009; National Marine Fisheries Service, 2005; U.S. Department of the Navy, 2004) estimated a mean received SPL of approximately 169 dB re 1 µPa at the location of the killer whales at the closest point of approach between the animals and the vessel (estimated SPLs ranged from 150 to 180 dB re 1 µPa). Per the Phase III behavioral response function for odontocetes, the estimated received level during this exposure would likely have resulted in a behavioral response. However, attributing the observed behaviors to any one cause is problematic given there were six nearby whale watch vessels surrounding the pod, and subsequent research has demonstrated that "Southern Residents modify their behavior by increasing surface activity (breaches, tail slaps, and</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>The USN incorrectly concludes that additional datasets are unavailable. In addition to the three data sets the USN relies upon; captive cetaceans, killer whales, and right whales -- the data set illustrating the use of acoustic harassment and acoustic deterrent devices on harbor porpoises illustrate exclusion from foraging habitat. Data are also available showing exclusion of killer whales from foraging habitat, although additional analysis would be required to assess received levels involved. The devices which excluded both killer whales and harbor porpoises had a source level of 195 dB re 1μPa, a fundamental frequency of 10 kHz, and were pulsed repeatedly for a period of about 2.5 seconds, followed by a period of silence of similar duration, before being repeated. Devices used only with harbor porpoises had a source level of 120-145 dB re 1μPa, fundamental frequency of 10 kHz, a duration on the order of 300 msec, and were repeated every few seconds. Harbor porpoises, which the USN treats as having a B+K value of 120 dB re 1μPa (with A large enough to yield a step function) in the AFAST DEIS29, 45 dB lower than the average value used in the HRC SDEIS, may be representative of how the majority of cetacean species, which are shy around vessels and hence poorly known, would respond to mid-frequency sonar. Even if harbor porpoises were given equal weight with the three species used to calculate B+K, including them in the average would put the average value at 154dB re 1μPa instead of 165 dB re 1μPa.</p>	<p>pectoral fin slaps) and swimming in more erratic paths when vessels are close" (National Oceanic and Atmospheric Administration Fisheries, 2014).</p> <p>In regards to datasets used to develop behavioral criteria, the commenter is referring to the Phase I and II behavioral criteria. Since Phase II, the Navy incorporated emergent best available science into new behavioral response functions for Phase III that are described in the technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i> (U.S. Department of the Navy, 2017a), available at www.nwtteis.com.</p>
Orca-10	<p>An important property of the model is that the biologically observed basement value is different than the mathematical basement value. The USN proposes using 120 dB re 1μPa as the basement value. They indicate the selection of this value is because it was commonly found in noise exposure studies. I.e., many species are highly likely to avoid received levels greater than 120 dB.</p> <p>For example, many looked at changes in migration routes resulting from noise exposure, and found that 50% of migrating whales changed course to remain outside the 120 dB re 1μPa contour. These results might be interpreted in several ways. They could be seen as minor changes in behavior resulting in a slight increase in energy expenditure. Under this interpretation, they would not qualify as changes in a significant behavior, and are irrelevant to setting the basement value. They could be interpreted as interfering with migration, even though the whales did not stop and turn around, and hence 120 dB would make an appropriate B+K value rather than B value.</p> <p>Bowhead whales are one of the species on which the 120 dB threshold is based, because individuals near industrial noise were observed to remain</p>	<p>The commenter is referring to the Phase I and II behavioral criteria. Since Phase II, the Navy incorporated emergent best available science into new behavioral response functions for Phase III that are described in the technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i> (U.S. Department of the Navy, 2017a), available at www.nwtteis.com. The Phase III behavioral criteria were determined appropriate and adopted by NMFS.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	just outside this contour. However, aerial surveys, which could observe individuals from far from the source, observed concentrations of individuals where the sound was barely audible. This suggests the 120 dB threshold only actually applied to a small fraction of the population, in contrast to data obtained by observers located at the noise source. Additionally, the change in course could have been accompanied by a stress response, in which case the received level at which the course change was initiated rather than the highest level received (120 dB re 1μPa) could be taken as the biological basement value.	
Orca-11	All that being said, the proposed action regarding impacts on Southern Resident killer whales (SRKW) continues to be inadequate. As of May 27, 2019, there are 76 remaining SRKWs, therefore, if even one member of the population is affected will result in population level impacts that could escalate the spiral towards indefinite extinction (PBR = 0.76). The EIS/OEIS continues to promote a range of responses on killer whales towards sonar to include; ignoring, alerting, altering movement, and avoidance is without basis. The USN is not adapting to direct, indirect or cumulative impacts to the SRKW and therefore, the USN must do better.	Based on the best available science, long-term consequences for marine mammal species or stocks, including Southern Resident killer whales, would not be expected from Navy training and testing activities under the Proposed Action. As described in Chapter 3.4 (Marine Mammals), a single or even a few TTS or behavioral reactions by an individual killer whales per year are unlikely to have any long-term consequences for that individual. Direct, indirect, and cumulative impacts to marine mammals are analyzed in Chapter 3.4 (Marine Mammals) and Chapter 4 (Cumulative Impacts). The Navy has consulted with the National Marine Fisheries Service as required by Section 7 of the Endangered Species Act.
Orca-12	We feel strongly that the USN needs to incorporate better techniques to improve their detection rates of marine mammals, extend their exclusion zones around detected marine mammals, and utilize exclusion zones based on specific areas and times in their mitigation strategies. For example, in 2005 the European Parliament called for its member states to impose a moratorium on military sonars. The World Conservation Union, an organization of 70 nations and 400 nongovernmental groups, has passed a resolution to limit the use of loud noises until the effects are better understood. (The U.S. abstained in that vote). And the Scientific Committee of the International Whaling Commission found "compelling evidence" that entire populations of marine mammals are threatened by underwater noise.	Training and testing with active sonar is essential to national security. The Navy uses active sonar during military readiness activities only when it is essential to training missions or testing program requirements since active sonar has the potential to alert opposing forces to the operating platform's presence. Passive sonar and other available sensors are used in concert with active sonar to the maximum extent practicable. The Navy will implement procedural mitigation to avoid or reduce potential impacts from active sonar on marine mammals wherever and whenever activities occur in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from active sonar on marine mammals in important habitat areas. For example, the Navy will restrict certain activities or types of sonar year-round within 12 NM from shore in the Marine Species Coastal Mitigation Area, seasonally within the Point St. George Humpback Whale Mitigation Area and Stonewall and Heceta Bank Humpback Whale Mitigation Area, and year-round in the Puget Sound and Strait of Juan de Fuca Mitigation Area to help the Navy avoid potential impacts from active sonar on marine mammals in important foraging and migration areas. Additional information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Orca-13	<p>The Supplement's additional analysis of Maritime Security Operations includes 286 annual activities all conducted within inland waters and in the critical habitat of the Southern Resident population. As previously stated, any additional anthropogenic noise in the Southern Residents' range, from vessel noise or sonar activities, will have a negative impact on this population. As Judge Martinez concluded in his review of the impact of noise on SRKWs from a proposed gravel mine expansion, it is non-sensical to design a policy around identifying initial factors that do not accumulate to put a population in jeopardy, allowing those; identifying the factor that brings the cumulative effect to the jeopardy level and prohibiting that single factor, and then allowing additional threats once the population is already in jeopardy.</p> <p>The annual census of the entire Southern Resident population allows an accurate count to be maintained and close observation of births and losses. At the end of 2018, the Southern Resident killer whale population numbered only 73 individuals, 14 fewer than is listed in the initial DEIS and 16 fewer than the most recent peak of 89 individuals in 2011. The USNs proposed increases in sonar and vessel activity within the range of this critically endangered population will cause additional stress and negative impacts on this struggling community. We urge the USN to reconsider the impacts of its proposed activities being imposed on SRKWs and to examine alternatives, and additional mitigation measures to ensure the protection and recovery of this population.</p> <p>Therefore, if marine mammals are sighted or detected within acoustic range, then exercises should be shut down, if in progress, and postponed or moved elsewhere if the exercises have not yet started. For example, an appropriate threshold for such a decision is whenever noise levels from naval operations as well as other sources at the location of SRKWs are expected to be greater than 130 dB re 1µPa; again, the pain threshold of killer whales. Notably, after the USS Shoup incident (https://vimeo.com/35584781) in 2005, the USN had put into effect a policy designed to further protect marine mammals in Puget Sound, according to Rear Admiral (ret) Leendert "Len" Hering, commander of Navy Region Northwest. Since his retirement, however, it appears that the USN has become lax on this policy. Additionally, with today's technologies, it behooves us to ask why the USN has not set up permanent hydrophones where they intend to train. The hydrophones not only could announce and track the movement of whales, but the information would be quite useful to scientific research.</p>	<p>No harm to Southern Resident Killer Whales is anticipated from proposed training and testing activities. Potential impacts to marine mammals from acoustic and explosive sources, which are part of the proposed action, are analyzed in Section 3.4.2.1 and Section 3.4.2.2, respectively. The Navy's acoustic and explosive effects analysis looks at multiple factors such as the southern resident killer whales abundance across the study area in each season, the levels of sound that may cause certain effects, and the Navy's proposed time and space use of noise producing activities.</p> <p>As described in Section 5.2.1.1 (Lookouts), the Navy's passive acoustic devices (e.g., remote acoustic sensors, expendable sonobuoys, passive acoustic sensors on submarines) can complement visual observations for marine mammals when passive acoustic assets are already participating in an activity. The passive acoustic devices can detect vocalizing marine mammals within the frequency bands already being monitored by Navy personnel. Marine mammal detections from passive acoustic devices can alert Lookouts to possible marine mammal presence in the vicinity. Lookouts can use the information from passive acoustic detections to assist their visual observations of the mitigation zone. Based on the number and type of passive acoustic devices that are typically used, passive acoustic detections do not provide range or bearing to a detected animal in order to determine its location or confirm its presence in a mitigation zone. Therefore, it is not practical for the Navy to implement mitigation in response to passive acoustic detections alone (i.e., without a visual sighting of an animal within the mitigation zone). As described in Section 5.5.3 (Active and Passive Acoustic Monitoring Devices), although the Navy is continuing to improve its capabilities to use range instrumentation to aid in the passive acoustic detection of marine mammals, at this time it would not be effective or practical for the Navy to monitor instrumented ranges for real-time mitigation or to construct additional instrumented ranges as a tool to aid in the implementation of mitigation.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Orca-14	<p>When permitting construction work by Washington State Ferries, NMFS allowed zero Level A and B takes for endangered marine mammals, and we urge the same standard to be applied in the training range. Further, upon review of data on responses of SRKWs to vessel traffic, Washington State enacted legislation intended to limit exposure to 95 dBRMS re 1μPa for continuous noise from nearby vessels, and 105 dB for sources beyond 0.5 nautical miles. We urge NMFS to use a threshold in this range for Level B take rather than the current 120 dB threshold applied to marine mammals for which inadequate data are available to set a species-specific threshold. Likewise, NMFS has recognized harbor porpoises are vulnerable to take at received levels well below 120 dB.</p> <p>These lower thresholds will extend far beyond the range at which marine mammals can be sighted from vessels responsible for explosives and mid-frequency active sonar. This will require the use of remote sensing technology such as drones (with infrared sensing capability for use at night) and sonabuys. The use of permanent hydrophone arrays wired to shore would allow more thorough tracking of marine mammal movement throughout the training range.</p> <p>In addition, exercises should be moved further offshore than currently planned to compensate for the greater ranges at which Level B takes could be expected under the criteria recommended here than for the 120 dB contour.</p>	<p>The continuous noise threshold of 120 dB, which has been used by NMFS to assess impacts due to continuous industrial noise, was not applied in the Navy's analysis of impacts. Rather, the Navy, in consultation with NMFS, used the best available science on marine mammal behavioral responses during acoustic exposures to develop behavioral response criteria. For more information about the Phase III criteria, please refer to the technical report titled <i>Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)</i> (June 2017), available at www.nwtteis.com. The Navy has consulted with NMFS under Section 7 of the Endangered Species Act and will continue to coordinate with NMFS on criteria and thresholds for assessing impacts to marine mammals.</p> <p>The Navy developed several new mitigation measures for the Final Supplemental EIS/OEIS to further avoid potential impacts on Southern Resident killer whales. For example, the Navy will initiate communicate with available sighting detection networks prior to the conduct of applicable activities in NWTT Inland Waters. The Navy developed a new mitigation area in the NWTT Offshore Area known as the Juan de Fuca Eddy Marine Species Mitigation Area, where annual mid-frequency active sonar hours will be limited and explosives will be prohibited. It would not be practical to implement additional distance-from-shore restrictions or additional passive acoustic monitoring for the reasons provided in Appendix K (Geographic Mitigation Assessment) and Chapter 5 (Mitigation).</p> <p>Analysis of the potential for thermal detection systems as a mitigation tool was presented in Section 5.5.4 (Thermal Detection Systems and Unmanned Aerial Vehicles) of the Draft Supplemental EIS/OEIS. The Office of Naval Research Marine Mammals and Biology program funded a project (2013-2018) to test the thermal limits of infrared-based automatic whale detection technology. The Navy has also been investigating the use of thermal detection systems with automated marine mammal detection algorithms for future mitigation during training and testing, including on autonomous platforms. For example, the Defense Advanced Research Projects Agency funded six initial studies to test and evaluate infrared-based thermal detection technologies and algorithms to automatically detect marine mammals on an unmanned surface vehicle. Based on the outcome of these initial studies, the Navy is planning additional follow-on efforts and testing. The Navy plans to continue researching thermal detection systems to determine their effectiveness and compatibility with Navy applications. If the technology matures to the state where thermal detection is determined to be an</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		effective mitigation tool during training and testing, the Navy will assess the practicality of using the technology during training and testing events and retrofitting its observation platforms with thermal detection devices. The Navy will provide information to NMFS about the status and findings of Navy-funded thermal detection studies and any associated practicality assessments at the annual adaptive management meetings. Information about the Navy's adaptive management program is included in Section 5.1.2.2.1.1 (Adaptive Management).
Orca-15	<p>Lastly, Orca Conservancy would like to remind the government that in past requests for use of sonar to take protected species resulted in legal cases directly on point. Specifically, the ninth circuit looked at the 2012 rule making process and requests for take of protected species. The panel found that where the courts have held that "Although the National Marine Fisheries Service made a negligible impact finding under 16 U.S.C.S. § 1371(a)(5)(A)(i)(I) in authorizing a rule, this finding did not excuse the agency's failure to comply with the independent requirement of § 1371(a)(5)(A)(i)(II)(aa) to analyze whether proposed mitigation measures would reduce the effects of low frequency active sonar on marine mammals to the least practicable adverse impact; [2]-Absent evidence that protecting offshore biologically important areas would impede military readiness training, the agency erred when it changed the selection criteria to exclude many areas based on lack of data, which did not result in the least practicable adverse impact on marine mammal species, stock, and habitat; [3]-Planning to consider future rule changes to accommodate new information did not satisfy mitigation requirements." The court also held that in the Navy's 2012 proposed rulemaking that is extremely similar to the current request, the court found held that the 2012 Final Rule did not establish means of "effecting the least practicable adverse impact on" marine mammal species, stock and habitat, as was specifically required by the MMPA. The panel further held that the Fisheries Service impermissibly conflated the "least practicable adverse impact" standard with the "negligible impact" finding; and concluded that to authorize incidental take, the Fisheries Service must achieve the "least practicable adverse impact" standard in addition to finding a negligible impact. The statute's text makes clear that to authorize incidental take, NMFS must achieve the "least practicable adverse impact" standard in addition to finding a negligible impact. NMFS also did not give adequate protection to areas of the world's oceans flagged by its own experts as biologically important,</p>	<p>The Navy worked cooperatively with NMFS during the MMPA consultation process and determined that the suite of mitigation developed for the Final Supplemental EIS/OEIS will effect the least practicable adverse impact on marine mammal species or stocks and their habitat.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>based on the present lack of data sufficient to meet NMFS's designation criteria, even though NMFS's own experts acknowledged that "[f]or much of the world's oceans, data on cetacean distribution or density do not exist." (NRDC, Inc. v. Pritzker (9th Cir. 2016) 828 F.3d 1125, 1128.)</p> <p>The lack of sensitivity to the SRKW's dwindling population and its need for a protected home in accordance with its endangered species status in 2005 remains a critical concern. In a perfect world, training should be excluded from their critical habitat. Additionally, proximity to Naval bases for the convenience of sailors and their families, or interesting underwater topography taken as a rationale for continuing exercises does not warrant even one "take" of this species.</p> <p>We adamantly believe that these creatures, because they are threatened with extinction, must be given the utmost priority -- and that training and testing within their entire range should be prohibited, if we are truly working together to save them.</p>	
<i>Pacific Whale Watch Association</i>		
PWWA-01	<p>The Pacific Whale Watch Association (PWWA) is a US/Canadian transboundary organization whose professional members responsibly take an estimated half million visitors annually to view wildlife throughout the region, including the southern resident killer whales (SRKW).</p> <p>Over the past several decades, with the help and dedication of impassioned, scientifically educated naturalists and professional captains, the PWWA has been supporting conservation efforts throughout the region. Our hope is to bring world-wide awareness of the plight of the SRKW population and the loss of wild salmon and healthy salmon habitat throughout the region, encouraging people to do everything we can to help recover this culturally significant community of beloved beings.</p> <p>Working closely with government agencies on both sides of the border the PWWA hopes to maintain a strong coalition with all our region's stakeholders to help our struggling SRKW pods recover and thrive during these challenging times.</p> <p>Therefore, while the PWWA recognizes the value of naval readiness to protect our respective countries, it is distressing to us that the United States Navy seeks to utilize SRKW designated critical habitat for naval exercises "which are known to present a risk to marine mammals... (including) permanent or temporary hearing threshold shifts, auditory masking, physiological stress, behavioral responses, injury, or even result in the death of an animal."</p> <p>With all the conservation efforts, world-wide attention, and public</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>concerns focused on SRKW pods at this time, we cannot support the Navy's desire to drop ordinance, test harmful—possibly fatal—sonar, and severely disrupt these populations to simply test our naval readiness.</p> <p>While we make every effort to support improved guidelines to protect these whales (keep safe distances, avoid critical habitat, reduce speed in the proximity of whales, and vessel sounds by reducing speed and turning off sounders when in the vicinity of whales) it seems a giant step backwards to—in essence—“wage war” on our SRKW along the outer coasts of Washington, Oregon, California, and Alaska.</p> <p>We also disagree with the Navy's conclusion that “the numbers of marine mammals potentially impacted by explosives are small as compared to each species' respective abundance, (and) long-term consequences for the species or stocks would not be expected.” Quite the opposite, the SRKW are precariously verging on extinction and every single animal is critical to their survival.</p> <p>We also find it disturbing that there is mounting evidence of SRKWs that have washed ashore in recent years with injuries, some massively bruised and bloody internally with no broken bones, “consistent with explosive blast or extreme pressure trauma caused by sonar at close range,” according to Ken Balcomb of the Center for Whale Research.</p> <p>Therefore, we encourage NMFS and the Navy to choose the “No Action Alternative,” discontinuing training and testing in SRKW designated critical habitat, lessening the potential for impacts on marine mammals that may result from training and testing activities.</p>	
<i>Quiet Skies Over San Juan County</i>		
Quiet Skies-01	<p>1. What are the mitigation proposals for curbing the noise over the Olympic Peninsula? Real noise data - not just computer generated data needs to be gathered. The EIS for the addition of 36 more Growlers at Ault Field did not use real data. An Outdated system which the Navy defines as “probably not legally defensible” was used. Here in San Juan County we know that the decibels projected by NoiseMap are not accurate. The same 36 Growlers are now flying over the Olympic Peninsula and it appears that the same faulty outdated computer software is being used to predict Growler impacts on the Peninsula.</p> <p>2. It has come to my attention that the Navy will be upgrading the Growlers Twin F414 Engines that have 17,000 pounds of thrust with new engines that will have 26,000 pounds of thrust. This means MORE GROWLER NOISE not less. WHEN DO WE GET TO COMMENT ON THE EIS THAT ADDRESSES THE NOISE IMPACTS OF THE NEW ENGINES WITH 26.000 POUNDS OF</p>	<p>The noise model used, MR_Nmap uses state of the art science and is the appropriate method to evaluate aircraft noise in special use airspace such as the Olympic MOA. This model is approved by the FAA for these types of analyses.</p> <p>The engines used for the noise model were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The GE F414-400 enhanced engine is currently only in a research phase for the Navy, and is not installed in any aircraft, nor are there plans to purchase or install it. If this engine were to be introduced to the fleet of F/A-18E/F and EA-18G aircraft, the Navy would measure the noise emissions from this new engine.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>THRUST?</p> <p>3. Convenience for Navy Personnel rather than what is good for residents and the environment of the Olympic Peninsula and the NW Washington region seems to be the priority. We have many members of the Navy in our family and have always respected the Navy community - but now it appears that the Navy is the BULLY IN THE ROOM and does not care at all for the tax payers whose homes are now being degraded and the veterans who have chosen the quiet of the Olympic Peninsula to help them recover from their tours of duty from the various wars they have served in. I have spoken with many PTSD veteran residents of the Peninsula who are struggling to understand why the Navy is not choosing to mitigate the noise or base the War Training Operations in more suitable locations. - which DO exist.</p>	
Quiet Skies-02	<p>4. As our resident Orca population struggles to survive, the Navy continues to use sonar where they live and hunt. These "takings" are excessive and should be stopped immediately.</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Redwood Forest Foundation, Inc.		
RFFI-01	<p>On behalf of the Redwood Forest Foundation, Inc. (RFFI), I am writing to urge the U.S. Navy to address the concerns expressed by the InterTribal Sinkyone Wilderness Council relating to the Northwest Training and Testing Study Area Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement. We support the Sinkyone Council in their requests for stronger protections for the ocean and for indigenous ways of life. Before moving forward, the U.S. Pacific Fleet should fully address these concerns through a collaborative process with the Sinkyone Council and its member Tribes.</p> <p>As a 501(c)(3) nonprofit that owns and manages timberland near the Northern California coastline, RFFI is deeply acquainted with the cultural and spiritual importance of this coastline to the Tribal Nations of Humboldt and Mendocino Counties. The land has been utilized and managed as a cultural, spiritual, and ecological resource for thousands of years. In its May 3 letter to the U.S. Navy, the Sinkyone Council stated that, "The Navy's</p>	<p>The Navy has addressed the concerns expressed by the InterTribal Sinkyone Wilderness Council in their comments to the Navy. The Navy continues Government-to-Government consultation with the InterTribal Sinkyone Wilderness Council.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>future training and testing activities must be conducted in a way that provides greater respect and protection for cultural and spiritual values and resources, and marine species of significance to the Tribes.” RFFI is wholehearted in its support for the Sinkyone Council on this matter. Indigenous peoples’ needs and concerns have been minimized or ignored for generations – we urge the U.S. Navy to break with this tradition and respect the InterTribal Sinkyone Wilderness Council’s clearly articulated requests to protect the cultures, customs, and lifestyles of its member Tribes.</p>	
<i>Save the Olympic Peninsula</i>		
STOP-01	<p>For years now, Save the Olympic Peninsula (STOP) and its members have been commenting on various environmental documents generated by the United States Navy and/or the United States Forest Service relating to the Pacific Northwest Electronic Warfare Range and Navy training and testing in the waters adjacent to the Olympic Peninsula. For just as many years, the Navy and the Forest Service have been ignoring those comments, and the comments of thousands of other people and organizations, and have been proceeding to severely damage the environment and peace and tranquility of the Olympic Peninsula and surrounding waters and islands. In large part, STOP’s prior comments have been directed at the noise impacts of the jets using the Pacific Northwest Electronic Warfare Range (EWR). No such impacts were ever considered until October 1, 2015, when a noise analysis was finally slipped into the Northwest Training and Testing Final Environmental Impact Statement / Overseas Environmental Impact Statement (NWTT FEIS/OEIS) as its Appendix J. That noise analysis had not been included in the draft environmental impact statement and the public had not been afforded an opportunity to comment on it. That noise analysis was so extremely flawed it appeared to purposefully understate the impacts of the Navy jets.</p> <p>There is now a new noise analysis. It is included the Northwest Training and Testing Draft Supplemental EIS/OEIS (Draft Supplement), again as an Appendix J. The new noise analysis is also so extremely flawed as too appear to purposefully understate the impacts of the Navy jets. But if anything in the new noise analysis in the Draft Supplement is correct, it is the part that proves how extremely flawed the former noise analysis was in the NWTT FEIS/OEIS.</p> <p>The new noise analysis shows 2224 EA-18G aircraft per year to have been entering and exiting the Olympic MOA’s from 2015 through 2017, of which 1194 are said to have been practicing to suppress enemy air defenses and</p>	<p>Since the 2015 NWTT Final EIS/OEIS, the Navy has developed better tools to track historical training activities. Past training is one of the factors that goes into determining future levels of activities, so with more accurate data on past training, the Navy was able to better predict future levels of activity. The values in this Supplemental EIS/OEIS are the best available information for both historical and predicted future activity.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>318 are said to have been training for electronic warfare close air support. See Table J-3, Page J-8, Draft Supplement, Exhibit J. However, the former noise analysis said there would only be 1558 EA-18Gs per year entering and exiting the Olympic MOA's in these same years, of which 572 were to practice suppressing enemy air defenses and 245 were to train for electronic warfare close air support. See Table 3-7, Page 14, NWTT FEIS/OEIS, Exhibit J.</p> <p>The Navy's own figures thus show that the NWTT FEIS/OEIS understated the number of flights that would occur in the MOAs by at least 666 flights annually compared to what the Draft Supplement says did occur. Discrepancies like this cast grave doubts on the reliability of the whole process through which the Navy is studying the impacts of its operations. And so do the flaws discussed below that exist in the new noise analysis. But first, one point that both noise analyses have made correctly is:</p> <p>"Noise is one of the most prominent environmental issues associated with military training activities."</p> <p>See Section 2, Noise Metrics, Page 4, of the original Exhibit J; and see J.4, Noise Metrics, Page J-3, of the new Exhibit J.</p> <p>Despite this acknowledgement, the Draft Supplement EIS/OEIS, and its Exhibit J, continue to give short shrift to the noise impacts of the Navy's training and testing activities in the following ways:</p> <p>1. The number of projected flights is again understated in the new noise analysis. The new Exhibit J contains the following wording that the old Exhibit J essentially contained.</p> <p>"The numbers reflected in the following tables are based on the number of aircraft sorties, while the numbers in the 2015 NWTT Final EIS/OEIS are the number of activity events; therefore, a comparison between the two sets of data is not easily made. One aircraft sortie could result in the completion of multiple training events, as a sortie is simply a single operational flight by one aircraft. Similarly, in some cases, one event could include multiple aircraft sorties."</p> <p>See Draft Supplement, Exhibit J, Section J.5, Page J-7.</p> <p>It does not matter whether a comparison is easily made. But it very much does matter that an accurate comparison be made.</p>	
STOP-02	<p>The words quoted above are apparently intended to explain away the fact that Table 2.5.1 of the Draft Supplement calls for 574 air combat maneuver events and 3,938 aircraft electronic warfare training events in the Olympic MOAs annually, whereas the new noise analysis, Exhibit J, Table J-7, only calls for 2540 aircraft missions (presumably "sorties") in the Olympic MOAs</p>	<p>The Navy continues to improve its ability to forecast actual training activities for purposes of accurate noise modeling. The numbers shown in this Supplemental EIS/OEIS are based on the most current, best available information. It is important to note, that a doubling of the number of proposed sorties would result in only a minor increase in the resultant DNL</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>annually.</p> <p>Table 2.5.1, contains a footnote 2 saying the 574 air combat maneuver events "typically involve two aircraft; however, based upon the training requirement, events may involve multiple aircraft." In this context, "multiple" apparently means more than two aircraft.</p> <p>Table 2.5.1, also contains a footnote 4 saying that for the 3,938 aircraft electronic warfare training events, "on average, two events occur per sortie."</p> <p>Applying these two footnotes to the events called for by Table 2.5.1, that table specifies there will be a minimum of 3117 (i.e., 1148 + 1969) aircraft sorties annually in the Olympic MOAs.</p> <p>Comparing this figure with the 2540 aircraft sorties that the new Noise Analysis assumes, it is evident that the projected flights is again understated, this time by at least 577 aircraft sorties.</p> <p>But the projected flights could be understated far more because there is a huge disparity between the events per sortie figures claimed in footnotes 2 and 4 referred to above, and the events per sortie figures used in the Biological Opinion 01EWF00-2015-F-0251 dated July 21, 2016 (Biological Opinion) under which the Navy received clearance under the Endangered Species Act to operate in the Electronic Warfare Range.</p> <p>Table 2 of the Biological Opinion, on Page 24, states there are typically 2 to 4 aircraft per air combat maneuver event, but no maximum number of aircraft per event is stated. Table 2 of the Biological Opinion, on Page 26, states there are typically 1 to 4 aircraft per electronic warfare operations event, but no maximum number of aircraft per event is stated. Using these figures, together with the number of training events called for by Table 2.5.1 of the Draft Supplement, there could be between 5,086 and 28,048 aircraft sorties in the MOAs annually. The new noise analysis would then understate the projected flights by a factor of between 2 and 11, or as many as 2,542 to 25,508 sorties.</p> <p>Considering that the old noise analysis understated the projected flights compared with the flights that subsequently occurred, and considering the large disparities discussed in this Section 1, it is essential that the Draft Supplement and its noise analysis get the ratios of aircraft per event correct. How these ratios are derived should be clearly demonstrated in a dedicated section containing supporting documentation. They simply should not be addressed in footnote statements.</p>	<p>estimated for the area beneath the Olympic MOA (approximately a 3 dB increase).</p>
STOP-03	<p>2. The impacts of aircraft activity at all points between Naval Air Station Whidbey Island (NASWI), where the training flights originate and return,</p>	<p>The Navy revised the Final Supplemental EIS/OEIS to include additional analysis of aircraft transits to and from the Olympic MOA. The analysis</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>and the Olympic MOAs, are again not adequately considered. Six paragraphs in Section 3.0.3.1.3.1 - Navigation and Safety (including one paragraph repeated from Section 2.3.3.2 - Sea Space and Airspace Deconfliction) contain only the following information from which noise impacts could be calculated:</p> <p>a. Aircraft normally fly southwest from a navigation point named MCCUL (20 NM west-southwest of NAS Whidbey Island) over the Strait of Juan de Fuca normally at or above 15,000 feet MSL to a fixed navigation point (65 NM west-southwest of NAS Whidbey Island) at the boundary of the Olympic MOAs.</p>	<p>includes the areas beneath the Olympic MOA as well as all areas on the Olympic Peninsula. For more information, please see Section J.6.2 (Transit to/from the Olympic MOA).</p>
STOP-04	<p>b. Aircraft normally exit the Olympic MOAs per instrument Flight Rules clearance given by the Seattle Air Route Traffic Control Center to the navigation point named YETII (30 NM southwest of NAS Whidbey Island). Aircraft normally cross YETII at or above 12,000 feet MSL and then enter the arrival pattern to return to NAS Whidbey Island.</p> <p>The only figures certain from the information given in the Draft Supplement, and that is qualified by the word "normally," is that MCCUL is crossed at 15,000 feet and YETII is crossed at 12,000 feet. The actual elevations of flights coming out of the MOAs depend on instructions giving by Seattle Air Route Traffic Control and are not specified. The actual elevations of the returning aircraft east of YETII depend on the arrival pattern, which pattern must necessarily decrease from 12,000 feet to ground level at Ault Field.</p> <p>The Draft Supplement assumes certain noise levels for certain spots in the MOAs and in Olympic National Park based on a flyover event at 14,000 - 15,000 feet MSL. Those noise levels, however, are totally speculative because the actual flight elevations are not specified in the Draft Supplement.</p> <p>The Draft Supplement does not address any of the noise impacts between Whidbey Island and MCCUL for westbound aircraft, or between YETII and Whidbey Island NAS for eastbound aircraft. These areas are subject to the lowest elevation flights, and include such special places as the Dungeness Wildlife Refuge, Protection Island, the City of Port Townsend, and depending on the takeoff and landing patterns, large portions of the San Juan Islands and the Salish Sea. The Draft Supplement is grossly deficient in not having considered the noise impacts on these areas.</p> <p>Compounding the seriousness of these deficiencies is the reference in Section 3.0.3.1.3.1 of the Draft Supplement to "flight transit routes between NAS Whidbey Island and the Olympic MOAs." In the context,</p>	<p>All aircraft normally fly the planned flight path, and the flight path into the Olympic MOA is typically used by the EA-18G as planned. However, the transition airspace to and from the Olympic MOA is highly congested with commercial and general aviation traffic in addition to the EA-18G. FAA controls the airspace to and from the Olympic MOA, and during a normal weekday a mass of aircraft are departing or arriving from multiple airports on the Olympic Peninsula and surrounding Puget Sound. Military aircraft make up only about 7 percent of that traffic. The FAA has a planned traffic scheme and the EA-18Gs are safely blended into that traffic scheme. At times, due to the dynamic nature of the traffic scheme, aircraft are given air traffic control instructions that take them off their planned flight routes. These instructions must be followed unless the pilot deems the instruction unsafe. There are a number of reasons for air traffic control to issue instructions that take an aircraft off its planned flight route; e.g., safety, orderly flow of traffic, or a more expeditious route of flight. Any or all of the reasons could apply in a given situation. The noise modeling used the best available information regarding route of flight and altitudes.</p> <p>Because future flight altitudes of aircraft maneuvering in the Olympic MOA cannot be known, the Navy conducted modeling based on estimated percent of time at various altitudes as shown in Table J-3. These altitude estimates were determined from interviews conducted with Navy personnel responsible for EA-18G aircrew training and is the best available information.</p> <p>Flight transit routes do not mean the same as "military training routes." Please note that EA-18G aircraft normally cross YETII at or above 10,000 ft. MSL.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	"flight transit routes" could mean the same as "military training routes," or "MTRs", as discussed in the NAS Whidbey Island Complex Growler FEIS, Section 3.1.2.1.4. Depending on their classification, MTRs can have floors between 200 and 500 feet AGL. Whether it is the Navy's intent to eventually establish these "flight transit routes" as approved "military transit routes," and what floors the Navy would seek on those routes, needs to be clearly addressed.	
STOP-05	<p>3. Aircraft events are again assumed to be uniformly distributed throughout the SUAs, including W237A, W237B, Olympic MOA A, and Olympic MOA B. See Exhibit J, Section J.5, Page J-7. This cannot possibly be accurate when, for one reason, the mobile emitter sites that the aircraft will be detecting and targeting are within the Olympic MOAs. This artificially distorts and dilutes the actual impacts of the aircraft within the Olympic MOAs, and within Marbled Murrelet and Spotted Owl Critical Habitat that exists there.</p> <p>Realistically, flight tracks such as those used to study sound effects at the OLF in the NAS Whidbey Island Complex Growler FEIS at Figure 3.1-6, should be established for each of the mobile transmitter sites and the noise impacts in the MOAs determined from them. Instead of asserting, as Draft Supplement does, that this is not possible "because the actual locations of any given event are unpredictable," the actual locations of the given events should be predicted as well as possible.</p>	<p>The location of the emitters has no bearing on where within the Olympic MOA the aircraft will fly during electronic warfare training flights.</p> <p>Aircraft conducting electronic warfare training flights would not fly predictable flight tracks within the Olympic MOA, which is the reason that the best method for predicting noise impacts in special use airspace is the model used by the Navy in its noise analysis. As stated in Appendix J, "In this analysis, noise from aircraft training activities within the Olympic MOA was assessed using noise metrics recommended by the Department of Defense (DoD), the Federal Interagency Committee on Aviation Noise (FICAN), ANSI [American National Standards Institute], and the FAA [Federal Aviation Administration]."</p>
STOP-06	<p>4. The number of aircraft training within a three nautical mile distance from the outside edge of the SUAs towards the interior of the SUAs, on the north, east and south sides of the MOAs, is again difficult to understand. The old noise analysis suggests that no aircraft will train in these offsets. The new noise analysis suggests maybe some aircraft will train (perhaps inadvertently) in these offsets at least some of the time. In both analyses, however, it is impossible to be sure how many aircraft will train in these offsets and for how much of the time. This uncertainty should be addressed by showing throughout the SUA the time that aircraft will be training in any portion of the SUA in any one year. This could be accomplished by a map color coded for different amounts of training time.</p> <p><i>A color coded map showing the time that aircraft will be using various locations within the SUA in any one year would also better help to address the inaccuracies discussed in Section 3. It is very unlikely that the far southwest corner of W-237A will see anywhere near as much traffic as the areas above the three main concentrations of emitter sites in the MOAs.</i></p>	<p>The Navy improved upon the analysis conducted in the 2015 Final EIS/OEIS, by allowing some aircraft to occur in the buffer area or offset. While the aircrew typically establish this buffer to prevent spilling out of the airspace, due to the dynamic nature of realistic flight training, some aircraft may enter the offset but would correct their course prior to exiting the airspace. The analysis in this Supplemental EIS/OEIS considered that possibility by including some level of activity to occur in the offset. Based on the best information available, it isn't a discrete amount of flight activity in the offset area, but rather is a diminishing distribution from the offset to the SUA boundary.</p> <p>The Navy considered the recommendation of a color-coded map to show where training in the MOA would occur. However, the Navy cannot predict where in the MOA aircraft will fly during their training maneuvers, making such a map impossible to create.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<i>Different colors could be used to code for the different amounts of traffic at these locations, as well as other locations.</i>	
STOP-07	5. There are 40 more Growlers than the 118 covered in the Draft Supplement and previous environmental document. This was confirmed in an email from Mike Welding, T CIV NAS Whidbey Is, N01P, email address michael.welding@navy.mil, to Michael Monson, email address michaelmonson@outlook.com, on February 13, 2017. In that email Mr. Welding attempted to justify the failure to address these aircraft in any environmental document by calling them "preservation aircraft" and claiming they would just be "parked" at NAS Whidbey Island and other locations, and that they will only be used to "replace aircraft at the end of their service life." He also asserts that the number of aircraft is not significant, and that only the number of total operations is significant. STOP believes the number of aircraft is significant because of the likelihood of a "preservation aircraft" being used as a replacement for another Growler that is temporarily down for repairs. Having 118 Growlers as addressed in environmental documents always available for training will lead to many more flights than would happen if there were only 118 Growlers in existence. Furthermore, it is difficult to believe that perfectly operational "preservation aircraft" would be left on the sidelines for years until the other aircraft have reached the end of their service lives. If those "preservation aircraft" could be used to reduce the number of pilots in need of training, it is a very safe bet that they will be used. The result will be more than 118 Growlers being used at any one time, and more flights occurring. These additional aircraft, and how and when they will be used, should have been addressed in the Draft Supplement.	Regardless of the number of aircraft physically located at NAS Whidbey Island, the number of aircraft expected to fly to and train in the Olympic MOA remains based on the amount of training to be accomplished. Therefore, the data used to generate the noise model results is accurate and based on the best available information.
STOP-08	6. The new noise analysis uses very little real, accurate, and measured noise levels from aircraft utilizing the training areas. Noise predictions are based almost entirely on unreliable, computer generated approximations from dated information. As suggested in a letter dated March 8, 2017, from R. David Allnutt, Director, Office of Environmental Review and Assessment, United States Environmental Protection Agency, Region 10, to Ms. Lisa Padgett, EA-18G Growler Project Manager, of the Naval Facilities Engineering Command Atlantic, the Navy should have established and used data from a monitoring program to verify the actual noise impacts from its Whidbey Island operations.	The noise model used, MR_Nmap uses state of the art science and is the appropriate method to evaluate aircraft noise in special use airspace such as the Olympic MOA. This model is approved by the FAA for these types of analyses.
STOP-09	7. It is hoped that the United States Navy will seriously consider these comments, and work to eliminate the very adverse impacts of its operations on, over, above, and below the Olympic Peninsula and its	The homebasing decision discussed in this comment goes beyond the scope of the NWTT Supplemental EIS/OEIS.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>adjoining waters. The best way to accomplish this is to move its Growler operations and/or training activities to one or more of the several different facilities such as those considered, but rejected, in the NAS Whidbey Island Complex Growler FEIS, Volume 1, at Section 2.5, or back to Mountain Home AFB, Idaho. Training at these locations would have much fewer adverse impacts on the surrounding areas than continuing to use NAS Whidbey Island.</p> <p>Using other facilities would have two very important advantages that the Navy has not seemed to consider. First, training in several locations, with varying conditions, would seem to better equip pilots with the experience and skills they would need to fight battles at various locations around the world, than does training at just one site. Second, with the OLF and the MOAs very close to Ault Field, the practice pilots receive does not replicate the fatigue factor the pilots will experience in actual combat.</p> <p>The reasons offered by the Navy in NAS Whidbey Island Complex Growler FEIS, Volume 1, Section 2.5, as to why a single-site for Growler operations at NAS Whidbey Island is necessary, and why training activities cannot occur anywhere but from NAS Whidbey Island, are contradicted by the email referred to in Section 5 above, from Mike Welding to Michael Monson. Therein Mr. Welding says:</p> <p>"The 117 or 118 operational Growler aircraft discussed in the DEIS will be assigned to carrier squadrons, expeditionary squadrons and the training squadron home based at NAS Whidbey Island.</p> <p>Other carrier-based aircraft will be assigned overseas in Japan, while some test aircraft will be assigned to NAS Patuxent River, in Maryland and the Naval Air Weapons Station at China Lake, CA. There will also be some training aircraft assigned to NAS Fallon, NV, as part of the Weapons School located there."</p> <p>The reasons offered by the Navy in said Section 2.5 as to why a single-site for Growler operations at NAS Whidbey Island is necessary, and why training activities cannot occur anywhere but from NAS Whidbey Island, are so emphatically negative as to offer scant hope for Growlers ever being effective in real military operations at distant locations around the globe. We know that is not the case. The arguments the Navy makes against the alternatives suggests the lack of any open mind. That is to the detriment of both the Navy and the public.</p> <p>Save the Olympic Peninsula (STOP) is a non-profit, public benefit corporation registered in Washington State since June 16, 2015. The undersigned Ronald N. Richards is the Chair of STOP, and he has been</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>designated as its EWR Lead.</p> <p>STOP's purposes include ensuring "the best use of the land, the lakes, and the rivers on, and the skies above, the earth below, and the waters adjoining, the Olympic Peninsula of the State of Washington, in order to retain the unique character of the area, protect its environmental qualities, and provide for its enjoyment by generations to come." Through these comments we hope to educate our governmental officials as to why the EWR is not consistent with those purposes.</p> <p>All the members of STOP's Board of Directors live, work, recreate, hike, fish, or travel in areas of Olympic National Park, Olympic National Forest, and Clallam, Jefferson, Grays Harbor, Island, and San Juan Counties that will be adversely affected by the proposed Pacific Northwest Electronic Warfare Range.</p>	
Seattle Aquarium		
Aquarium-01	<p>1. The Washington State Orca Task Force did explicitly recognize Navy impacts on southern resident orcas to be an issue.</p> <p>The EIS inaccurately claims that "Navy actions were not the sources for any of the identified threats" in the report by the Southern Resident Orca Task Force (Office of the Washington Governor, 2018) (page 3.4-46). In fact, concerns about the Navy's use of sonar equipment impacting the southern residents were raised in the very first Orca Task Force meeting (5/1/2018 meeting minutes). Recommendation 25 was "Coordinate with the Navy in 2019 to discuss reduction of noise and disturbance affecting Southern Resident orcas from military exercises and Navy aircraft." It also stated: "The governor should meet with the U.S. Navy's Commanding Officer for the region that includes Washington state to address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state. The governor should request the Navy participate on the Vessels working group in Year Two and identify actions to reduce the Navy's impacts to Southern Resident orcas" (emphases added) (Office of the Washington Governor, 2018).</p>	<p>The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force's working groups on prey and vessel traffic, to develop solutions to issues pointed out in recommendation #25. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.</p>
Aquarium-02	<p>2. Given the perilously small size of the endangered southern resident orca population today, harm to a single individual orca can easily mean a population-level effect.</p> <p>Each individual orca in the current population matters if the population is to avoid extinction. There has been a net loss of southern resident orcas since 2011. In 2016, NMFS declared that southern resident orcas are one of the marine species most at risk of extinction nationwide.</p> <p>The Draft EIS states that "the use of sonar and other transducers during</p>	<p>Since the Draft Supplemental EIS/OEIS, the Navy has incorporated new estimates of Southern Resident killer whale densities and distributions in the NWT Offshore Area into the quantitative analysis of impacts. The revised density estimates are shown in the technical report U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area (amended September 20, 2019), available at www.nwtteis.com. As a result, the Navy has revised the number of behavioral takes of Southern Resident killer whales in Appendix E (Estimated Marine Mammal and Sea Turtle</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>training activities as described under Alternative 1 will result in the unintentional taking of killer whales incidental to those activities” (page 3.4-190). Table 3.4-40 estimates two behavioral impacts to southern resident orcas per year from sonar and other transducers. The Draft EIS also says that “while odontocete behavioral responses to Navy sonar will vary across species, populations, and individuals, they are not likely to lead to long-term consequences or population-level effects” (p. 3.4-115). We are concerned that there is in fact a serious risk of population-level effects. In a small population with strong family ties, the loss of one orca also directly affects the others’ chance of survival. When a female resident orca dies, it increases the mortality risk of her male offspring under age 30 by 3.1 times, and the mortality risk of her male offspring over age 30 by 8.3 times (Foster et al. 2012).</p> <p>Furthermore, the EIS Fact Sheet Booklet states that 99.84% of all estimated takes of marine mammals would be Level B harassment, disrupting natural behavior patterns such as feeding, surfacing, nursing, breeding, sheltering or migration to those point where those patterns are abandoned or significantly alter. These—and especially feeding, breeding, and nursing—are all critical activities for the southern resident orcas now, given that they have produced only one surviving calf in the last three years, at least two orcas are visibly emaciated and the others are also not getting enough to eat.</p>	<p>Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities) of the Final Supplemental EIS/OEIS.</p> <p>The Navy does not anticipate any individual Southern Resident killer whale mortalities (“loss”) or PTS during training or testing activities. As described in Chapter 3.4 (Marine Mammals), a single or even a few minor TTS to an individual marine mammal per year are unlikely to have any long-term consequences for that individual. Based on the best available science, long-term consequences for marine mammal species or stocks, including Southern Resident killer whales, would not be expected from Navy training and testing activities under the Proposed Action. As described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment), the Navy worked cooperatively with NMFS to develop a suite of mitigation to avoid or reduce potential impacts on Southern Resident killer whales to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS in areas important to Southern Resident killer whales for feeding, breeding, and migration.</p>
Aquarium-03	<p>3. The designation for southern resident orca critical habitat is likely to change later this year, and the proposed activities must take that into account.</p> <p>The National Marine Fisheries Service (NMFS) has committed to proposing a rule with an expanded designation of critical habitat off Washington, Oregon and California by early October 2019. Changes in the Navy’s mitigation measures are likely to be necessary so that the proposed action does not “result in destruction or adverse modification of critical habitat.” The Navy should wait to make final decisions about training and testing in the potential new critical habitat areas, including off the Washington coast, until the new designation has been made later this year.</p>	<p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p>
Aquarium-04	<p>4. Recent variations in southern resident orca presence in the Salish Sea are complex and should not be used as justification for exercising less caution in the inland waters.</p> <p>The EIS states that “foraging during the spring in Salish Sea by southern resident killer whales has declined in recent years as they shift their range and forage for Chinook salmon or other prey species elsewhere in response</p>	<p>The inclusion of references from Shields et al., 2018 was not included to imply that impacts in the Inland Waters would be reduced or otherwise avoided because of the species changing presence of Southern Resident killer whales within their summer-core habitat areas, but rather to present best available science on the species current status, including prey availability. This is a</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>to reduced prey availability in that historically used inland waters foraging area” (p. 3.4-26).</p> <p>The southern resident orcas are still sighted in the Salish Sea frequently. In fact, Olson et al. 2018 noted that K and L pods have been increasing the duration of their stay in the inland waters by staying in the Salish Sea through the fall and into the early winter.</p> <p>Even spending time elsewhere, southern resident orcas are not getting enough food and are showing signs of malnutrition. The inland waters foraging area is still critically important if they are going to survive and thrive.</p> <p>The EIS implies that changes in the southern residents’ presence in the Salish Sea mean that protections there are less important than they used to be. In fact, it should be reason for an extra layer of caution. Reducing noise and disturbance in the heavily-trafficked inland waters could enable the southern residents to forage there more effectively and therefore spend more time there as they have historically.</p>	<p>critical component of the environmental baseline the Navy then uses to estimate potential impacts resulting from the Navy’s activities.</p> <p>As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The commenter incorrectly asserts that the Navy suggests that protective measures in the Salish Sea are less important; however, the Navy has not suggested that and does not consider that to be true. The mitigation measures developed for both NWTT Inland Waters and the NWTT Offshore Area for the Proposed Action represent an increase over the mitigation developed for the 2015 NWTT Final EIS/OEIS.</p>
Aquarium-05	<p>5. The EIS should include two additional studies related to impacts on southern resident orcas.</p> <p>Emmons, C.K., M.B. Hanson, and M.O. Lammers. 2019. Monitoring the occurrence of Southern Resident killer whales, other marine mammals, and anthropogenic sound in the Pacific Northwest. Prepared for: U.S. Navy, U.S. Pacific Fleet, Pearl Harbor, HI. Prepared by: National Oceanic and Atmospheric Administration, Northwest Fisheries Science Center under MIPR N00070-17-MP-4C419. 25 February 2019. 23p.</p> <p>This report states that there were 148 mid-frequency active sonar events detected between 2011 and 2017, with the peak overlapping with occurrence of the three killer whale communities (including southern residents). This is concerning because, as the EIS states, exposure to mid-frequency sonar has been directly linked to separation of a killer whale calf from its group (page 3.4-102); the separation and loss of a single calf would be a serious blow to the small population, given that there are so few calves and the southern residents have had limited reproductive success in recent years. Exposure to mid-frequency sonar has also been directly linked to mass strandings of cetaceans (page 3.4-127). In addition, the EIS states that newer high-duty or continuous active sonars have more potential to mask vocalizations, particularly for mid-frequency cetaceans like killer whales, and “longer-term consequences could include potential decrease in recruitment” (p. 3.4-102). The southern resident orcas cannot afford any further decrease in their already very low recruitment rates.</p>	<p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>The report could be read to indicate that the Cape Flattery Offshore region is a high use area for the Navy. The Navy would like to clarify that it does not frequently conduct training or testing activities in the location of the Cape Flattery Offshore hydrophone since that area is highly utilized by commercial vessel traffic, making it an undesirable location for the Navy to conduct activities, especially sonar training or testing.</p> <p>Emmons et al. 2019 reported a number of detections at Cape Flattery Offshore, but this was not normalized for effort, which was also highest at the Cape Flattery Offshore hydrophone location. This would have the effect of overstating detections in that area. Also, Emmons et al. 2019 reported on detections of MFA sonar, but did not distinguish between various sources (U.S. versus Canadian navies, among other users). Historically, the annual usage of MF1 sonar by the U.S. Navy in this area over the last 10 years has been minimal.</p> <p>As described in Appendix K (Geographic Mitigation Assessment), the Navy developed new mitigation for the Final Supplemental EIS/OEIS to further</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas. For example, the Navy developed a new mitigation area known as the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery as recommended by the commenter. The Navy's mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will further help avoid potential impacts from vessel movements and training and testing activities on this species.
Aquarium-06	Wieland, M., A. Jones, and S. C. P. Renn. 2010. Changing durations of Southern Resident killer whale 23 (<i>Orcinus orca</i>) discrete calls between two periods spanning 28 years. <i>Mar. Mam. Sci.</i> 26(1):195–201. This study found that the Southern Residents make a behavioral adjustment as a result of vessel noise, as measured through an increase in mean durations of discrete calls. "Because they are adjusting their vocal behavior, we must consider the very real possibility that engine noise is hindering their ability to communicate, and may well impact their efficiency at using acoustics to forage and navigate, as well" (Wieland et al. 2010). These findings should be incorporated into 3.4.2.1.1.4 on masking (page 3.4.103, which talks about other species but not killer whales) and into the odontocete discussion on page 3.4-120.	Wieland et al., 2010 was incorporated in Section 3.4.1.7.4 of the Final Supplemental EIS/OEIS as recommended by the commenter.
Aquarium-07	6. Whale report alert systems should be used for real-time sightings and advance warnings, complementing the limited visual range of lookouts. There are new real-time whale presence alert systems that the Navy should use to expand and speed up their awareness of likely imminent presence of southern resident orcas beyond what the lookouts can do visually. The Whale Report Alert System (WRAS), for example, from the B.C. Cetacean Sightings Network, alerts mariners to the presence of whales so that they may take mitigation measures to reduce the risk of disturbance and collision. Discussions are underway to potentially expand this system to Washington waters. Orca Network also has a Whale Sighting Network with Washington information online.	The Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales, as described in Section K.3.3 (Mitigation Areas for Marine Species in NWTT Inland Waters). The Navy will also continue to assess the practicality of other available monitoring techniques as technologies advance.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Aquarium-08	<p>7. Additional information is needed on the anticipated timing of the proposed activities.</p> <p>The EIS should detail the times of year during which the proposed activities will take place. The southern resident orcas and other animals like rockfish have seasonal movements and behaviors. Any overlap in their seasonal movements and the Navy's testing and training activities will increase impacts on these species. Information about timing should be made public in the EIS and the Navy should seek to adjust the timing of their activities to minimize such overlap.</p>	<p>As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).</p> <p>The duration of the Supplemental EIS/OEIS is for the foreseeable future, while the Marine Mammal Protection Act permits would be in place for seven years.</p>
Aquarium-09	<p>8. Other agencies and operators are taking new, meaningful steps to reduce noise and disturbance affecting southern resident orcas. The Navy must also increase its protections to help ensure that there is a net positive outcome for the orcas.</p> <p>In 2019, Washington state has taken big steps to reduce impacts on southern resident orcas from a range of vessel types and in-water disturbances, recognizing that noise and disturbance have significant adverse consequences for this endangered population. In May 2019, Governor Inslee signed into law a bill that increases the distance that vessels must stay away from the Southern Residents and enacts a 7-knot speed limit within a half nautical mile of these orcas. An additional law requires tug escorts for additional oil tankers to reduce the risk of an oil spill. Washington State Ferries is also doing a baseline noise inventory and developing solutions to address noise and frequencies of concern. Meanwhile, in 2019, voluntary ship slowdowns will continue and expand for the third year through the Vancouver Fraser Port Authority-led Enhancing Cetacean Habitat and Observation (ECHO) Program – a Canadian program that directly benefits southern resident orcas in the inland waters. The Navy should increase its own mitigation efforts so that there is still a significant net benefit to the southern residents in terms of reduced noise and disturbance when all these other entities are increasing their protective measures.</p> <p>Everything we can do now to protect the southern resident orcas is critical. The biggest and most immediately actionable opportunities in the near</p>	<p>The Navy worked cooperatively with NMFS during the MMPA consultation process and determined that the suite of mitigation developed for the Final Supplemental EIS/OEIS will effect the least practicable adverse impact on marine mammal species or stocks and their habitat. The Navy will implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in important habitat areas. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging and migration areas. Additionally, the Navy developed the Puget Sound and Strait of Juan de Fuca Mitigation Area to enhance protections of Southern Resident Killer Whales throughout NWTT Inland Waters. Information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	term are in reducing noise and disturbance of all kinds—so that orcas can find the few salmon that are available—and in reducing the risk of direct injury or death.	
<i>Seventh Generation Fund for Indigenous Peoples, Inc.</i>		
SGF-01	<p>On behalf of Seventh Generation Fund for Indigenous Peoples, an Indigenous non-profit located in Humboldt County we are writing this letter in solidarity with the ten Tribes that are a part of the Inter-Tribal Sinkiyone Wilderness Council regarding cultural, spiritual, and environmental impacts to the local tribes of Humboldt County and Mendocino County. On May 3, 2019, the ten Tribes submitted a letter in response to the Draft Supplemental EIS/OEIS (SEIS) for the Navy Northwest Training and Testing (NWTT) activities. Seventh Generation Fund attended the May 2nd Open House in Eureka, California. At this event Navy personal admitted that they did not seek nor receive Free, Prior, and Informed Consent from coastal Tribes as required by article 19 of the United Nations Declaration on the Rights of Indigenous Peoples.</p> <p>The Tribal Nations located along the coast maintain significant cultural and spiritual ties to the ocean, marine life, and the coastline. The Navy must incorporate the coastal tribes' Traditional Ecological Knowledge (TEK) which has allowed them to manage the marine environment since time immemorial. The coastal Tribes have a deep understanding of the environment which has been passed down for generations and must be included in any consideration of Navy testing and must inform whether testing is appropriate. The majority of the Tribal Nations of Mendocino and Humboldt County have stated their opposition to Navy testing and have made recommendations that must be integrated and followed.</p>	<p>The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy will consider additional tribal and traditional knowledge provided, maintaining respect for cultural sensitivity and confidentiality.</p> <p>As stated in the Supplemental EIS/OEIS, the term “traditional resources” is used to encompass protected tribal resources.</p>
SGF-02	<p>The Navy has an obligation to ensure the mitigation measures taken are sufficient to achieve the "Least practicably adverse impact" on the marine life and environment according to Natural Resources Defense Council v. Pitzker, 823 F.3d 1125, 1133 (9th Cir. 2016). According to Pyramid Lake Paiute Tribe v. Department of the Navy, 898 F. 2d 1410 (9th Cir. 1990) the Navy is obligated to act in the best interest of the Tribes which also includes requirements to reduce impacts to the lowest possible level. We urge you to uphold your obligation to ensure that the environment is not impacted by your testing and neither is the cultural and spiritual wellbeing of Tribal Nations on the Pacific Coast.</p>	<p>The Navy worked cooperatively with NMFS during the MMPA consultation process and determined that the suite of mitigation developed for the Final Supplemental EIS/OEIS will effect the least practicable adverse impact on marine mammal species or stocks and their habitat.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Skagit Audubon Society		
Skagit-01	<p><u>On-site monitoring of aircraft overflights, rather than modeling, is needed to truly evaluate impacts on people and wildlife in Olympic National Park.</u> We join many individuals and organizations in expressing concern for the impact that present and future military overflights of Olympic National Park and adjacent Olympic National Forest have on wildlife and on park visitors. These impacts will increase as more EA-18G Growlers based at Whidbey Naval Air Station fly over Puget Sound and the Olympic Peninsula to train in what the Supplemental EIS/OEIS calls the “Military Operations Area “ (MOA). Much of the MOA is what Audubon members and other civilians know and love as “Olympic National Park.” In the EIS/OEIS, the evaluation of impacts from sound is based on modeling rather than on actual monitoring of how aircraft noise affects wildlife and the experience of park visitors. This amounts to substituting speculation and unsupportable extrapolation for science. Potential serious impacts to Olympic National Park, a World Heritage site and International Biosphere Reserve famed for its natural quiet, should be based on science, not speculation.</p>	<p>DoD’s position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD’s position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015. ² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Skagit-02	<p><u>The aircraft sound information in the Supplemental EIS/OEIS unrealistically minimizes the jet noise levels and frequency of overflights park visitors are already experiencing.</u> Living in western Skagit County we have direct experience with the noise generated by the EA-18G Growler under various weather conditions and altitudes. While the Supplemental EIS/OEIS claims that overflights of the Olympic Peninsula will typically be at least 2,000 feet above ground level, the document admits that these flights could be as low as 1,500 feet. To then suggest that Growler noise at that elevation will be roughly equivalent</p>	<p>This paragraph contains a misunderstanding concerning how noise metrics are being applied: jet noise is not being compared to a whisper; instead, the metric under comparison is the cumulative noise exposure levels. The metrics cited in the comment (38 dB DNL and 39 dB DNL) are cumulative day-night average sound levels, which cannot be compared to a single noise event, such as a whisper.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>to a human whisper strongly contradicts our experience here in Skagit County. The Navy clearly needs to do monitoring, not just modeling, to realistically evaluate the noise impacts of the present, and soon to be expanded, overflights of the Olympic Peninsula.</p> <p>We note this statement on page 9 of the EIS/OEIS Fact Sheet Booklet (https://www.nwtteis.com/portals/nwtteis/files/public_information/dseis/NWTT_SEIS_OEIS-Fact_Sheet_Booklet.pdf) (my words in italics):</p> <p>“The noise modeling results show that the area underneath the Olympic MOAs (Military Operations Area, where electronic warfare training for Growler crews takes place.) would experience a cumulative noise exposure of less than 37 decibels (dB) DNL (day night average sound level) for current and proposed activities. The ocean area beneath W-237 (directly west of the Olympic Peninsula) would experience cumulative noise levels below 35 dB DNL. For comparison, 35 dB DNL would be considered the natural ambient noise level of a wilderness area, and 39 dB DNL the level of a rural residential area.”</p> <p>Figure 2 on page 9 states that 30 decibels is the volume of a whisper. This narrative ignores the fact that natural noises and aircraft noises have distinctly different effects on people and wildlife in a national park. The former is expected; the latter is discordant and disruptive. Implying that the noise of Growlers is little more than a whisper does not at all match the experience of those of us who frequently hear and see these aircraft overhead in western Skagit County. The standard described or implied is certainly not suitable for Olympic National Park, which famously is, or until recently was, one of the quietest places in the U.S.</p> <p>It should also be noted that cumulative, average noise levels do not reflect the lasting harm that can be done to species by single incidents. The one particularly loud overflight that flushes a murrelet chick off the nest does irreversible damage not reflected in a picture of average noise levels over time. Modeling does not capture this reality.</p>	
Skagit-03	<p><u>National Parks are, by law, to be preserved in their natural condition. The law does not exempt the Navy.</u></p> <p>The law which Congress passed in 1916 establishing the National Park Service states that the agency’s purpose is to, “conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” (https://home.nps.gov/pipe/learn/management/nps-organic-act-of-1916.htm) Growler overflights whose noise degrades the natural</p>	<p>The Navy aircraft that train in the Olympic MOA do so in compliance with all applicable laws. Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II. The Olympic MOA was established in 1977</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	conditions of Olympic National Park are not exempt from this act. It is highly inappropriate, and arguably illegal, to establish a “Military Operations Area” in whole or part over a national park. There are surely other places that the Navy could carry out its important training and equipment testing. These activities do not need to happen over or near a national park.	
Skagit-04	<p>The Navy’s training and testing activities are incompatible with the <u>protection of the Olympic Coast National Marine Sanctuary</u>. The Olympic Coast National Marine Sanctuary extends 25 to 50 miles seaward of the coastal area of Olympic National Park. As shown on the map at https://www.nwtteis.com/About-the-Study-Area#/images/3, the Navy’s Northwest Training and Testing Study Area appears to overlap this Congressionally established Sanctuary in its entirety. As vividly described in the Supplemental EIS/OEIS, a wide variety of weapons are tested here involving the use of various ships and aircraft, live ammunition, and explosives; yet we are urged to see the likely impact to marine mammals, birds, and other living things as very minimal. Taken as a whole, this speculative conclusion defies common sense, the more so given that the activities take place in an area designated a sanctuary.</p> <p>In numerous places in the Supplemental EIS/OEIS we read that the reason for choosing the Olympic Peninsula and its offshore waters, as well as various locations in the Salish Sea/Puget Sound, for naval testing and training is that it is convenient and will save transit money. There are many Navy bases in Puget Sound, and it’s convenient to train in the nearest part of the Pacific Ocean and over the mountainous and shoreline terrain of the peninsula. No argument is made for why the Navy’s convenience preempts the protection of a premier National Park and a Marine Sanctuary, both established by Congress for preservation in perpetuity for the benefit of the American public. Navy testing and training can be done away from national parks and other protected areas.</p>	Information on the importance of training and testing locations in NWTT Inland Waters and the NWTT Offshore Area is provided in Chapter 2 (Description of Proposed Action and Alternatives). To ensure compliance with the National Marine Sanctuary Program regulations and the interagency consultation requirements of National Marine Sanctuaries Act section 304(d), the Navy considered all proposed modifications to training and testing activities to determine whether they have the potential to destroy, cause the loss of, or injure sanctuary resources, or result in adverse impacts on sanctuary resources or qualities. Accordingly, the Navy and NMFS submitted a joint Sanctuary Resource Statement to the Office of National Marine Sanctuaries. The Navy will implement mitigation within the Olympic Coast National Marine Sanctuary, such as not conducting explosive activities and limiting certain types of active sonar, as described in Chapter 5 (Mitigation), and Appendix K (Geographic Mitigation Assessment). Additional information on Marine Protected Areas is presented in Section 6.1.2 (Marine Protected Areas).
Skagit-05	<p>The Supplemental EIS/OEIS fails to include a reasonable range of <u>alternatives</u>. The scale and complexity of the activities which the EIS/OEIS examines are massive, yet only 3 alternatives are examined: a continuation of the present testing and training with some additions (e.g. more Growler flights), a continuation with a greater increase in activity, and the required no action alternative, which would mean a cessation of training and testing in the study area. There is no alternative that considers avoiding overflights of Olympic National Park, for example, and restricting water-based</p>	The Navy complied with NEPA requirements in the development and consideration of alternatives. The Alternatives carried forward meet the Navy's purpose and need (see Section 1.4, Purpose of and Need for Proposed Military Readiness Training and Testing Activities) to ensure that it can fulfill its obligation under Title 10. The elimination or reduction of aircraft flights in the Olympic MOA would not allow the Navy to fulfill its obligation under Title 10. See Section 2.4 (Action Alternative Development) for more detailed information on the development of alternatives.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	activities to areas outside the Olympic Coast National Marine Sanctuary. That these changes would be inconvenient or more expensive for the Navy is not sufficient reason for not including such an alternative. Environmental Impact Statements are to examine a range of reasonable alternatives, which in this case would certainly include more than the three presented. At the very least, the Navy should design a solid, scientifically-based plan for eliminating or severely limiting negative impacts of aircraft overflights to Olympic National Park visitors and wildlife.	
Skagit-06	<u>The Supplemental EIS/OEIS fails to address all potential areas of negative impact in Olympic National Park.</u> To fly from Whidbey Naval Air Station to the Military Operations Area (MOA), Growlers pass over other parts of Olympic National Park, yet potential impacts in those areas, including such heavily visited year-round sites as Hurricane Ridge, are not examined. The EIS/OEIS only looks at impacts in the part of the park below the MOA. The study of sound which the National Park Service did in the park in 2010 (Olympic National Park Acoustic Monitoring Winter 2010 Natural Resource Report NPS/NRSS/NSNSD/NRR—2016/1310) found that Hurricane Ridge, beaches on the outer coast, the Hoh Rain Forest, and all other areas measured had very low levels of aircraft noise. Navy operations are already changing that condition and will increasingly do so unless there is mitigation to avoid degradation of the national park.	The Navy has expanded the noise analysis to include the transit of aircraft to and from the Olympic MOA.
Skagit-07	<u>The proposed mitigation related to Marbled Murrelets at sea is unrealistic and inadequate.</u> The Supplemental EIS/OEIS notes that the Marbled Murrelet is listed as a threatened species under the federal Endangered Species Act. (We would add that because of its precipitous population decline in Washington State, this species is listed under state law as endangered, which is not mentioned in the EIS/OEIS.) The EIS/OEIS states that murrelets in the marine environment where they forage could be affected by such Navy activities as testing and training with live ordnance. There is a vivid list of the harm which underwater explosions can do to the physiology of a Marbled Murrelet (p.3.6-56): “Marbled murrelets would be exposed to explosives during mine countermeasure and neutralization testing proposed in the Offshore Area, and existing mine warfare areas in Inland Waters (i.e., Crescent Harbor and Hood Canal Explosive Ordnance Disposal Training Ranges). ... In Inland Waters, marbled murrelets have an increased likelihood of exposure. Marbled murrelets exposed to underwater explosions may be subject to lethal or non-lethal injuries. Non-lethal	The Navy consulted with USFWS under section 7 of the Endangered Species Act to address potential impacts to marbled murrelets with implementation of the preferred alternative. Discussions about the level of benefit of the Navy's mitigation measures are presented throughout Section 5.3 (Procedural Mitigation to be Implemented) and Appendix K (Geographic Mitigation Assessment). The Navy will implement procedural mitigation to avoid or reduce potential impacts from acoustic, explosive, and physical disturbance and strike stressors on marine bird species wherever applicable activities occur. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals, sea turtles, birds, and fish in important habitat areas. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marbled murrelets in important foraging areas.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>injuries may include scarred or ruptured eardrums, or gastrointestinal tract lesions. ..."</p> <p>The related mitigation plan calls for having a single on-board observer watching for marbled murrelets and, when spotting one, calling a stop to the training or testing activity (e.g. at 5.3.2.2 Weapons Firing Noise" on p. 5-24). As birders experienced with observing murrelets off Skagit County shorelines from land, we know how difficult it is to spot this Robin-sized, cryptically-colored, low-profile bird when it is on water anything other than very calm. To do so while using binoculars on a boat that is rocking or underway is especially difficult. From our own experience, we are skeptical that a single observer under typical conditions can effectively and consistently spot Marbled Murrelets on the water. Some more realistic form of mitigation needs to be devised; better yet, this type of potentially highly disruptive weapons training and testing should not take place anywhere near murrelet foraging or resting areas.</p>	
Skagit-08	<p><u>Speculation about habituation is no substitute for careful study and consideration of cumulative effects on listed species.</u></p> <p>On page 3.6-41 the argument is made that Marbled Murrelets are habituated already to aircraft and ship noise and therefore more of that will have no effect:</p> <p>"Habituation has likely already occurred in many murrelets because helicopters have been used in Navy training exercises within Puget Sound for decades. Marbled murrelet nesting habitats surrounding Puget Sound and foraging habitats within Puget Sound underlie extensive commercial air traffic routes (see Section 3.12, Socioeconomic Resources), which also likely contributes to habituation to noise by murrelets."</p> <p>There is no consideration of the cumulative effects of yet more noise on Marbled Murrelets, Spotted Owls, or other species, especially from the impressively loud EA-18G Growlers.</p> <p>This kind of speculation is unwarranted in an EIS where determinations should be made based on science, not speculation. As mentioned before, the Marbled Murrelet is in rapid decline in Washington. The noise they experience now may be one of the reasons. To speculate that one more stressor in the bird's environment is just another inconsequential thing for the bird to get used to makes a mockery of the EIS process and the Endangered Species Act.</p>	<p>Habituation was but one of several factors considered, along with a number of scientific studies, that supported the conclusions stated in the Supplemental EIS/OEIS.</p>
Skagit-09	<p><u>There is insufficient information to evaluate whether Navy aircraft overflights will negatively affect Marbled Murrelet nesting success and fledgling survival in and near Olympic National Park.</u></p>	<p>The studies cited in the Supplemental EIS/OEIS support the Navy's conclusions regarding aircraft noise disturbance to marbled murrelets.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Table 3.6-1 on page 3.6-2 acknowledges that Marbled Murrelet and Spotted Owl designated critical habitat exists in both the coastal part of the training and testing area and under the Military Operating Area. Two maps in the EIS/OEIS dramatically show the extensive overlap of the MOA and critical habitat for the murrelet (page 3.6-18 Figure 3.6-1: Critical Habitat for the Marbled Murrelet) and the Spotted Owl (page 3.6-19 Figure 3.6-2: Critical Habitat for the Northern Spotted Owl).</p> <p>The Supplemental EIS/OEIS depicts Navy jet flight paths over the Olympic Peninsula as being so high above ground level that the noise the planes generate will be at most a minor disturbance to birds such as the Marbled Murrelet. It should be noted that the flight path of murrelets from the marine waters where they forage to their nest sites is not always low and along river courses but can involve flying high enough to clear passes at 5,000 or more feet elevation. Murrelets are known to do this in transiting from the Strait of Juan de Fuca to the Hoh River Valley in Olympic National Park, for example. Pertinent to this point is the footnote in section 3.6: “Note: MOA = Military Operating Area. The Olympic MOAs overlay both land and sea (extending to 3 nautical miles off the Washington coast) and include areas above 6,000 ft. Mean Sea Level but below 1,200 ft. above ground level at the higher terrain elevations of the mountains.”)</p> <p>Thus, the proximity of aircraft and the impact of noise from jets such as the Growler are potentially much more severe than described in the EIS/OEIS. The temporary disturbance from aircraft noise which the EIS/OEIS acknowledges could, in the case of the Marbled Murrelet, readily result in nesting failure. The murrelet’s single chick leads a precarious existence in its moss bed atop a high, old growth branch. A chick once startled from the nest and fallen to the forest floor is unable to recover. The same is true during the fledgling’s first flight, when it must succeed in reaching marine waters as much as 50 miles distant or die on the ground. The rapidly declining state of this species in Washington calls for great caution in adding to the stress it is already under.</p>	
Skagit-10	<p><u>There is insufficient information to state that Navy aircraft overflights will not jeopardize Spotted Owls in and near Olympic National Park.</u></p> <p>There has apparently been no effort in preparing the Supplemental EIS/OEIS to study how Spotted Owls nesting and foraging in or near Olympic National Park are affected by Growler and other Navy overflights and could be affected by the planned increase in these flights. The EIS/OEIS extrapolates from a study of the Mexican Spotted Owl in relationship to helicopter noise, a subspecies in a very different habitat with significantly</p>	<p>The analysis of potential impacts to northern spotted owls was conducted in the 2015 NWTT Final EIS/OEIS, and was also included in the consultations with the U.S. Fish and Wildlife Service, resulting in the 2016 Biological Opinion in which the Service stated, “the proposed aircraft overflights are likely to affect spotted owls through intermittent exposures to aircraft noise throughout the year, including during the nesting season. However, because Navy aircraft will maintain minimum flight altitudes well above the distances at which any significant behavioral responses by affected spotted owls are</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	different foraging techniques. There is no specific study of the impacts on Spotted Owl foraging and nesting in Northwest old growth forests when the unusually loud EA-18G Growler repeatedly passes overhead. Like the Marbled Murrelet, the Spotted Owl is in serious decline in Washington. Adding stressors in its environment should not be done without carefully targeted studies rather than simply extrapolating from the very limited and not particularly applicable available science.	likely to occur, the effects to spotted owls by these aircraft overflights are considered insignificant.” The Navy is not proposing to decrease flight altitudes, so the conclusion of insignificant effect to spotted owls remains correct.
Skagit-11	<u>The Supplemental EIS/OEIS gives little or no attention to wildlife species listed under state but not federal law as endangered.</u> Although the Tufted Puffin is not listed under the federal Endangered Species Act, under Washington State law this seabird is listed as endangered. The EIS/OEIS mentions the species in one place only (Table 3.6-2: Representative Birds of the Northwest Training and Testing Study Area) and gives no attention to how Navy testing and training off the Olympic Coast will affect this iconic bird on its island nesting grounds or where it forages on the open water. It should also be mentioned that while the EIS/OEIS addresses possible impacts to the Northern Sea Otter and correctly states that this species is not federally listed as threatened or endangered, the EIS/OEIS omits that the sea otter is listed as a federal species of concern and is designated under state law as endangered. (3.4.1.37.3 Distribution, p. 3.4-8) For a list of species marked for special protection under Washington State law go to https://wdfw.wa.gov/species-habitats/at-risk/listed .	The Supplemental EIS/OEIS includes an analysis of potential impacts to marine birds found in the NWT Study Area. The Navy has consulted with USFWS on Federally protected species, including diving birds such as the marbled murrelet.
Sound Defense Alliance		
SDA-01	1) Noise analysis (Appendix J) uses airport noise analysis metrics (DNL averaging) instead of impulse noise metrics for overflights on National Forest and National Parks property. Visitors and residents are reporting being alarmed by the loud, intermittent jet noise and averaging the noise does not properly assess the impact.	Impulsive noise metrics are not appropriate for subsonic flight operations. Impulsive metrics are used for sonic booms and explosions, which are not part of this scenario. Cumulative noise exposure was denoted by DNL and is the recommend metric by the U.S. Government (FICAN, FICON, DoD and FAA).
SDA-02	2) Noise models of the EA-18G are reported to be based on a single engine sound measurement made over 10 years ago. The draft SEIS does not describe the source of the model, which engines were used for measurements nor what the range of variability is when two engines with independent controllers are used. Twin engines create harmonics that increase the low frequency noise signature and this phenomenon impacts biological organisms and should be assessed.	EA-18G noise data are from detailed noise measurements of the F/A-18E Super Hornet collected from a series of dedicated measurements in 1997 to 2001. The flyover data was collected from controlled overflights with both engines operating. The engines in these measurements were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The data are not based on a single engine sound measurement. Twin supersonic jets do not generate low frequency harmonics.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
SDA-03	3) The Navy recently announced contracts to upgrade EA-18G jets with new, more powerful engines starting in 2019. The draft EIS does not account for the additional noise and potentially different noise signature of the new engines with an advertised increase in thrust of 20%. Throughout the analysis, the word “conservative” is used to imply that the impact will not be as great as stated. To be consistent, new noise models, based on actual measurements of EA-18G aircraft equipped with the more powerful engines should be used.	The engines used for the noise model were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The GE F414-400 enhanced engine is currently only in a research phase for the Navy, and is not installed in any aircraft, nor are there plans to purchase or install it. If this engine were to be introduced to the fleet of F/A-18E/F and EA-18G aircraft, the Navy would measure the noise emissions from this new engine.
SDA-04	4) The draft EIS confuses sorties and jets such that the reader cannot determine how many jets are involved in training activities. A recently issued FEIS concerning the addition of 36 EA-18G jets to NAS-WI brought the number of aircraft based at NAS-WI to 118 out of the 160 EA-18G fleet. The DEIS should clearly identify how many jets and flight crews are to be trained in the NWTT exercises.	The issue that is relevant for determining noise impacts of aircraft training in the Olympic MOA is the number of aircraft sorties flown in the Olympic MOA, regardless of the number of aircraft or aircrew based at NAS Whidbey Island. For noise modeling purposes, the proposed number of aircraft per year flown in the Olympic MOA is shown in Tables J-7 through J-10 in Appendix J.
SDA-05	5) The NWTT supplemental EIS and the NAS-WI FEIS to add 36 additional EA-18G aircraft are clearly linked and have been separated in violation of NEPA provisions. The entire region is impacted by transit flights to/from training areas, Electronic Warfare training using mobile and fixed transmitters and EA-18G jamming training. No analysis was produced on the impacts of communities not directly adjacent to the Special Use Airspace and the coastal training areas.	The Draft Supplemental EIS/OEIS included analysis of aircraft transit to and from the Olympic MOA. The Final Supplemental EIS/OEIS has been revised to include the results of aircraft noise modeling during those transits.
SDA-06	6) The Draft EIS states, without any evidence, that there will be no socioeconomic impacts in implementing either alternative. An example of economic impact: EA-18G flights over the Olympic National Park has resulting in the ONP not being eligible for a “Quiet Parks” designation from Quiet Parks International. This is an immediate economic impact since tourists seeking a quiet park experience will no longer consider ONP. Tourism is a large part of the region’s economy and disruption of that industry will have potentially very large impacts. The DEIS should forecast the potential lost tourism revenue and the ripple impacts on the communities on the Olympic peninsula.	Based on aircraft training in the Olympic MOA for decades, sometimes with higher levels of activities, and increasing park visitors, the conclusions in the Supplemental EIS/OEIS are valid.
SDA-07	7) Other alternative not considered. The Draft EIS did not compare other training locations – far out to sea, for example where no land mammals and no communities exist to be impacted. NEPA requires actual alternatives, not just variations of a theme: More training or less training. The Navy is required to consider other alternatives so that comparative impacts are apparent.	The Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Final Supplemental EIS/OEIS. For this reason training farther from NAS Whidbey Island, either farther at sea or at other land training areas was considered but eliminated from further consideration. Additionally, the Olympic MOA is desirable for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure,

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>environmental conditions that maximize the training realism and testing effectiveness, and other factors stated in 2.5.1.1.</p> <p>The Navy complied with NEPA requirements in the development and consideration of alternatives. The Alternatives carried forward meet the Navy's purpose and need (see Section 1.4, Purpose of and Need for Proposed Military Readiness Training and Testing Activities) to ensure that it can fulfill its obligation under Title 10. See Section 2.4 (Action Alternative Development) for more detailed information on the development of alternatives.</p>
<i>Surfrider Foundation - Mendocino County Chapter</i>		
Surfrider-01	We are extremely concerned about the health of our ecosystem and our local economy if the Navy is allowed to expand at-sea sonar and explosive training and testing. Although the Northwest Training and Testing Study Area begins in Southeastern Alaska and ends at the northern Mendocino County border, our local Mendocino County coastline will still be adversely affected because it is scientifically proven that sonar travels 300 miles under water.	Information describing ongoing and proposed training and testing activities, locations, and level of occurrence within the Northwest Training and Testing Study Area are provided in Chapter 2 of the Supplemental EIS/OEIS (Description of Proposed Action and Alternatives). Sound from these activities encounters acoustic transmission losses due to absorption from seawater, and interactions with the sea surface and seafloor. As a result, sound intensity will decrease with increasing distance as it propagates from a source. Sound transmitted from a source (e.g. sonar) is expected to attenuate appreciably at a distance of 300 miles from the source. Additional information regarding sound propagation can be found in Appendix D (Acoustic and Explosive Concepts) of the Final Supplemental EIS/OEIS.
Surfrider-02	It is well established that the high-intensity pulses produced by underwater military airguns can cause a range of impacts on marine mammals, fish, and other marine life, including broad habitat displacement, disruption of vital behaviors essential to foraging and breeding, loss of biological diversity, and, in some circumstances, injuries and mortalities. Until their hearing recovers, these animals will have a reduced ability to detect relevant sounds such as predators, prey, or social vocalizations.	No airguns are proposed in this project.
Surfrider-03	Changes in marine life feeding and migration patterns could drastically alter our local fishing economy. Also at risk would be the large revenue we receive from our local whale-watching tourism; people from around the globe flock to the Mendocino coast to watch the magnificent display of humpbacks, gray whales, and orcas breaching and spy-hopping on their way to and from breeding grounds farther south.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Surfrider-04	Of particular concern is the recent loss of over 70 gray whales off the West Coast because of malnutrition and vessel strikes. NOAA recently declared this die-off "a wildlife emergency." We cannot subject these marine	The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	mammals to more risk. At the very least, we request that the Navy halt their timeline for their Draft Supplemental EIS until a thorough investigation into the gray whale die-off is completed. Surfrider Foundation – Mendocino County Chapter believes that such impacts to our nation’s marine resources are not an acceptable price to pay for an increase in military training and testing.	Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.
<i>Vashon Maury Island Audubon Society</i>		
Vashon-01	The Vashon Maury Island Audubon Society supports the "No Action" Alternative in this EIS. The Olympic Coast and Olympic Peninsula are truly a sanctuary. Ever since 1907, the Federal Government has protected the mammals, birds, and other natural resources of this unique ecosystem. These protections include Olympic National Park (both the interior portions of the park as well as the coastal wilderness beaches), the Olympic Coast National Marine Sanctuary, Olympic National Forest and various designated wilderness areas. In all these areas, wildlife thrive undisturbed. The expansion of Naval Training in this area directly competes with the original purpose of preserving this remarkable ecosystem. Wildlife ... seabirds, whales and other marine mammals, and the creatures of the forest ... need the natural quiet of their landscape to reproduce and to thrive. This is not the place for Navy Growler jets. The Navy should resume its past practice of conducting this training in the interiors of Idaho and Nevada. There is no need to have substantial impacts on one of the most pristine ecosystem reserves in our country.	Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II. While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year. When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context: 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. Additionally, the Olympic MOA is desirable for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure,

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		environmental conditions that maximize the training realism and testing effectiveness, and other factors stated in 2.5.1.1.
<i>Washington Environmental Council and Washington Conservation Voters</i>		
WEC/WCV-01	<p>The draft EIS, as presented, clearly identifies that the Navy's training and testing activities will harm endangered Southern Resident orcas. The Navy must shift these activities away from locations and dates that endangered species are present.</p> <p>In an already noisy underwater world, orcas need quieter waters order to effectively communicate with one another, to forage for food, to nurse their young, to breed, and to migrate. More active sonar disturbance and mine explosions will harm orcas.</p>	<p>Based on the best available science, long-term consequences for marine mammal species or stocks, including Southern Resident killer whales, would not be expected from Navy training and testing activities under the Proposed Action. As described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment), the Navy worked cooperatively with NMFS to develop a suite of mitigation to avoid or reduce potential impacts on Southern Resident killer whales to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS in areas important to Southern Resident killer whales for feeding, breeding, and migration.</p>
WEC/WCV-02	<p>A March 2019 report by NOAA by Emmons, Hanson, and Lemmers (see citation below) records calls from both Southern Resident and Northern Resident Killer Whales at the same locations and months as explosive noises from Navy activities. That means the Navy is already altering the soundscape in ways that are harmful to these endangered species. Any harm to orcas constitutes an illegal "take" under the Endangered Species Act.</p> <p>There are documented cases in this region of U.S. and Canadian naval activities, including active sonar training and explosive testing, causing direct harm, death, or displacement to the Southern Resident orcas.</p> <ul style="list-style-type: none"> - In 2003, an active sonar training exercise conducted by the U.S. Navy in the eastern Strait of Juan de Fuca and Haro Strait caused the J Pod to stop foraging and exhibit abnormal behaviors and movement, change direction multiple times, and group together in shallow water where they are at increased risk of stranding. - A juvenile Southern Resident female was stranded in 2012 with evidence of trauma consistent with an explosion or high-pressure impact, a week after the Canadian Navy had been conducting sonar exercises in the region. - In 2017, explosives detonated by the Canadian Navy near L Pod caused the whales to group together suddenly and flee the area. <p>* Citation: Emmons, C.K., M.B. Hanson, and M.O. Lammers. 2019. Monitoring the occurrence of Southern Resident killer whales, other marine mammals, and anthropogenic sound in the Pacific Northwest. Prepared for: U.S. Navy, U.S. Pacific Fleet, Pearl Harbor, HI. Prepared by: National Oceanic and Atmospheric Administration, Northwest Fisheries</p>	<p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>Emmons et al. 2019 reported a number of detections at Cape Flattery Offshore, but this was not normalized for effort, which was also highest at the Cape Flattery Offshore hydrophone location. This would have the effect of overstating detections in that area. Also, Emmons et al. 2019 reported on detections of MFA sonar, but did not distinguish between various sources (U.S. versus Canadian navies, among other users). Historically, the annual usage of MF1 sonar by the U.S. Navy in this area over the last 10 years has been minimal. The Navy does not generally schedule training and testing near Cape Flattery due to the high volume of commercial vessel traffic in that portion of the Study Area.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003. Also, please see the new procedural mitigation measures described in Chapter 5 (Mitigation) and the</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Science Center under MIPR N00070-17-MP-4C419. 25 February 2019. 23p. Signed, 2,042 members of Washington Environmental Council and Washington Conservation Voters	new mitigation areas described in Appendix K (Geographic Mitigation Assessment) of this Supplemental EIS/OEIS.
WEC/WCV-03	Also, the designation for Southern Resident orca critical habitat is likely to change later this year. The Navy should not make final decisions about training and testing in the potential new critical habitat areas off the coasts of Washington, Oregon and California until this designation has been made.	The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DOD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.
WEC/WCV-04	<p>While other agencies and operators are taking new, meaningful steps to reduce noise and disturbance affecting Southern Resident orcas, the Navy must also increase its protections, or it will become responsible for a larger share of the cumulative impact and potentially negate some of the benefits of the other actions being taken.</p> <p>In a time when we should be taking action to address and decrease threats facing the population, including reducing noise and disturbance, the Navy's proposed activities increase the risks from ocean noise, vessel strike and disturbance, potential direct harm and injury to Southern Resident orcas, and displacement from preferred habitat.</p> <p>The Navy must consider the current crisis facing the endangered Southern Resident orcas and make new adjustments in its testing and training activities. Despite being listed under the Endangered Species Act for nearly 14 years, this unique population is not recovering and is continuing to decline. Given their highly endangered status and continuing decline, the Navy should be considering how to reduce impacts and increase protections for Southern Resident orcas.</p>	<p>The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas, as described in Appendix K (Geographic Mitigation Assessment). For the Final Supplemental EIS/OEIS, the Navy developed several new mitigation measures specific to Southern Resident killer whales. For example, in the NWTT Offshore Area, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery. The Navy's mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will further help avoid potential impacts from vessel movements and training and testing activities on this species.</p> <p>As described in Section K.3.3. (Mitigation Areas for Marine Species in NWTT Inland Waters), the Navy also developed enhanced mitigation measures in NWTT Inland Waters for Southern Resident killer whales, gray whales, and other marine species for the Final Supplemental EIS/OEIS. The Navy's new Puget Sound and Strait of Juan de Fuca Mitigation Area requirements will</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		result in training and testing activities being conducted in NWTT Inland Waters only when necessitated by mission-essential training or testing program requirements. Furthermore, the Navy will implement additional geographic mitigation for activities that are conducted in the mitigation area as applicable, such as seasonal awareness messages, communication with sighting information networks, limitations on the type and location of active sonar and explosive activities, and prohibition of live fire activities. The Navy's mitigation as described in the Final Supplemental EIS/OEIS represents the maximum level of mitigation practical to implement under the Proposed Action, and any further mitigation in NWTT Inland Waters would be impractical due to implications for safety, sustainability, and mission requirements for the reasons described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment).
West Coast Action Alliance		
WCAA-01	For years the West Coast Action Alliance has provided extensive comments to the Navy on its proposed actions, including a 47-page letter that spelled out in detail the factual and ethical deficiencies of its previous plans and public processes to expand the Growler fleet and electronic warfare testing and training, in area waters and over our communities and public lands. Those comments remain standing, and those concerns, still unaddressed, are hereby brought forward onto the public record. Like many concerned citizens, we have spent hundreds of hours reading, analyzing and discussing Navy NEPA documents, have followed instructions to back up specific concerns with specific explanations, references, and facts, have attended public meetings, and have in turn, like every other commenter with serious, substantive concerns, been completely ignored. Despite the trappings of yet another NEPA process in a long confusing line of EISs, Supplements, and EAs, each concluding no significant impacts, the message the Navy continues to transmit to the public who are not in its immediate circle of supporters, is the same message we were given verbally and in person in 2014: at a meeting in Pacific Beach, the Navy's NWTT range manager said, "We're here to listen to your objections, but we don't have to do anything about them." Despite NEPA's intent, and with substantive and informed concerns being provided by the thousands over the years, and despite abundant evidence of harm to communities and wildlands, no concessions or changes in the Navy's plans to reduce impacts have been made evident. No significant impacts have ever been found in any Navy NEPA products dating back more than a decade. This defies logic.	The commenting feature on the project website, while not a NEPA requirement, was added by the Navy to further facilitate commenting by the public. The Navy placed certain limitations on comments (5,000 characters of text and 1 MB limit for file attachments), to allow the Navy to continue supporting this feature in a cost-effective manner. Over 1,800 comments were received on this project through website commenting and attachments, with very few affected by this limit. The Navy will review this file size limitation for future projects.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>If no significant impacts have ever been found, then why is the public so upset with the Navy's actions, and why are communities and wildlands suffering in ways that have been extensively documented and were not there before the Navy's actions? The Navy is also not responsive to FOIA requests for information that was once freely available to the public. Also: The limitation of 5,000 characters in your online comment form restricts the public's ability to comment on a proposed action that affects many lives. By not informing the public of this online limit in advance, the Navy does not fulfill its statutory obligations for a public process. All of this adds up, and the public is taking note.</p>	
WCAA-02	<p>With the determination of noise impacts by a recent scientific study, published by the University of Washington, that military traffic was responsible for 85 percent of all audible air traffic in three locations on the west side of the Olympic Peninsula, including outside the Olympic Military Operations Area, there is no doubt in anyone's mind but the Navy's that disturbance events, some numbering as many as 80 – 100 per day, are damaging the unique ecological, cultural, social, educational, and economic qualities of the area. And based on the steady stream of everexpanding EISs, there also appears to be no upward limit to the noise the Navy is willing to inflict on surrounding communities and wildlands.</p> <p>The Navy has failed to correct its own noise studies that omitted the low-frequency signatures of Growlers, used modeling and not actual measurements, and relied on software that the DOD's own Strategic Environmental Research and Development Program has determined to be outdated. Thus, the Navy routinely underestimates and understates noise impacts, not only to communities but also to a World Heritage Site and Biosphere Reserve containing many species that rely on hearing to survive. Our comment letter on the original EIS describes this in detail. One hour of nonafterburner Growler flight emits 23 percent more carbon dioxide than a Washington resident emits in an entire year. The increase in exhaust emissions was deceptively presented for the entire impact area; the Navy cannot segment the very air by failing to analyze impacts of exhaust emissions outside the MOA, as it did for takeoffs and landings only in the original EIS. Our previous comment letter described this in detail.</p> <p>The Navy does not consider impacts that occur outside the MOA, but Growlers fly and cause significant impacts well beyond MOA boundaries. Thus it renders estimates of noise and exhaust emission impacts invalid in yet another example of segmentation in the NEPA process. NEPA was never designed to provide the public with the equivalent of death by a</p>	<p>The Draft Supplemental EIS/OEIS was released to the public before the Kuehne report was made available. The Navy has considered this report in the Final Supplemental EIS/OEIS (see Section 3.12 and Appendix J).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>thousand paper cuts. Our previous comment letter describes segmentation problems in detail.</p> <p>The public largely views this incessant warfare activity newly expanded in and around civilian communities and public wildlands, along with the Navy's refusal to back off despite the evidence of harm, as if your neighbors are the enemy you are practicing on. In fact, it appears we are. This may sound off-topic for a Growler comment, but it is an example of the public's holistic view vs the Navy's segmented one: the intent was clearly stated by a Navy representative during a 2018 open house regarding SEALs training in our state parks, beaches, and on private lands along 260 miles of Puget Sound shoreline. He confirmed to a group of astonished listeners that civilians were intended to be used as proxies for the enemy: they would be surveilled as unwitting participants in military exercises, should they wander in unintentionally, and they will not be informed of this. He also said, "you should watch what you do in the woods, because you never know when we'll be watching."</p>	
WCAA-03	<p>Please do not assume that the public separates these issues—SEAL training, Growlers, at-sea exercises—and their impacts, which have been endlessly segmented to apparent insignificance, but which cumulatively are serious. You may win your NEPA argument by segmenting impacts, but only on paper, because the real impacts in their entirety cannot be segmented out of existence.</p> <p>Therefore, please DO assume that the public has a long memory. To most members of the public, the Navy is one giant behemoth of an organization, and when one of your commanding officers does a dress-uniformed meet and greet at our farmers market and tries to say he's at Indian Island and does not represent NASWI, nobody buys it. You wear the uniform, you represent the Navy. All of it. You cannot segment a Navy uniform. National Park Service employees cannot get away with such denial, and neither should the Navy. Any officer who believes that wearing the uniform entitles him to represent only part of the Navy is living in a bubble.</p> <p>Former Secretary of Defense Ash Carter said in a recent interview that when he was Secretary he always tried to be careful, and that he told the troops the same thing. He told them, "You're doing a serious thing. War is a serious business, the public trust is a serious business, and I expect you to behave yourselves. Your conduct and comportment really matters."</p> <p>By its behavior over the last few years, which includes an extremely low-altitude circling of my home twice by a Navy MH-60 helicopter shortly after</p>	<p>The Navy prepares Environmental Impact Statements (EIS) and Environmental Assessments (EA) in order to comply with the National Environmental Policy Act (NEPA). These NEPA documents are intended to ensure decision makers consider the potential environmental effects of a proposed action and its alternatives, provide an opportunity for public involvement, and promote transparency by informing the public of these potential environmental effects. Each NEPA document addresses a specific proposed action, separated from other actions by its purpose and need, independent utility, timing, and geographic location. Some NEPA documents are stand-alone documents; others tier off or expand the analyses of other NEPA documents. NEPA documents for training and testing, including this Supplemental EIS/OEIS, focus on training and testing activities occurring within a range complex or military operation area and involve different types of aircraft, ships, and range complex enhancements. NEPA documents for aircraft homebasing actions focus on aircraft operations in and around the airfield and their facility needs. NEPA documents for installations focus on infrastructure enhancements for host and tenant command missions. Importantly, every environmental document considers the cumulative impacts to the environment from other relevant past, present, and reasonably foreseeable future actions (federal, state, local, and private) in addition to the proposed action.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>I wrote an opinion piece in the local paper, it appears that the Navy no longer prizes good conduct and comportment. I did not include an address in this letterhead, not because I do not wish to hear from you, but because my trust that the Navy respects people who disagree with it no longer exists.</p> <p>By promising its neighbors only a ten percent increase in Growler flights in the 2014 NEPA process and then increasing that to 400 percent in 2019, the Navy demonstrates what the public interprets as disingenuousness. Trust once lost is very slowly recovered, if at all.</p>	
Whale and Dolphin Conservation		
WDC-01	<p>I. Direct threats to Southern Resident orcas from Navy activities in the NWT</p> <p>The EIS incorrectly claims that “Navy actions were not the sources for any of the identified threats” in a report by the Washington State Southern Resident Orca Task Force. We argue that Naval actions including, but limited to, those listed above do significantly contribute to the recognized threats to Southern Resident orcas. Concerns about sonar use were raised in the very first meeting of the Southern Resident orca Task Force, and the final report for Year One included a recommendation to “coordinate with the Navy in 2019 to discuss reduction of noise and disturbance affecting Southern Resident orcas from military exercises and Navy aircraft.” The Task Force report may not specifically cite Naval activities as the source of threats to Southern Resident orcas, but the activities outlined in this draft SEIS all contribute to primary threats impacting the survival and recovery of Southern Resident orcas: noise, vessel traffic and ship strike risk, contaminants, and prey depletion.</p>	<p>The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force's working groups on prey and vessel traffic, to develop solutions to issues pointed out in recommendation #25. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
WDC-02	<p>The draft SEIS anticipates two behavioral responses per year for Southern Resident orcas from training and testing activities in the preferred alternative (Alternative 1), with a total of 15 responses over the 7-year time period of the draft SEIS. We are concerned that this underestimates the impacts to Southern Resident DPS. Resident orcas are highly social and travel in family groups or pods that typically number more than two individuals. Even with monitoring by trained observers and immediate shutdown of any activities likely to result in a behavioral response, it is</p>	<p>Since the Draft Supplemental EIS/OEIS, the Navy has incorporated new estimates of Southern Resident killer whale densities and distributions in the NWT Offshore Area into the quantitative analysis of impacts. The revised density estimates are shown in the technical report <i>U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area (amended September 20, 2019)</i>, available at www.nwtteis.com. As a result, the Navy has revised the number of behavioral takes of Southern Resident killer whales in Appendix E (Estimated Marine Mammal and Sea Turtle</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>highly likely that more than two individual orcas will be impacted at any one time. For example, Hanson et al. 2018 notes that following one tagged Southern Resident orca in 2013 (K25) actually represented the movements of 60 additional orcas associated with the tagged individual, with both K and L pods traveling together. The Navy should consider and analyze the likelihood of impacts to a group of orcas representing the average pod size for the Southern Resident DPS.</p>	<p>Impacts from Exposure to Acoustic and Explosive Stressors Under Navy Training and Testing Activities) of the Final Supplemental EIS/OEIS.</p> <p>The Navy Acoustic Effects Model considers social factors like species-specific group size. The Navy coordinated with scientists at the Southwest Fisheries Science Center (SWFSC) and the National Marine Mammal Laboratory (NMML) to help identify the best available density estimates for marine mammals occurring in the Study Area. The Navy's Acoustic Effects Model accounts for depth distributions by changing each animat's depth during the simulation process according to the typical depth pattern observed for each species. Depth distribution information was collected by literature review and is presented as a percentage of time the animal typically spends within various depth bins in the water column. The distribution of animats in the Navy's Acoustic Effects Model starts with the extraction of species density estimates from the density database for a given area and month. In order to incorporate statistical uncertainty surrounding density estimates into the Navy's Acoustic Effects Model, 30 distributions were produced for each species for each season, each of which varied according to the standard deviations provided with the density estimates. Species-specific group sizes are estimated using literature review, survey data, and density data, and uncertainty of group size estimates are statistically represented by the standard deviation.</p> <p>The Navy Acoustic Effects Model uses Monte Carlo methods to estimate the expected value of behavioral responses. This is accomplished by running multiple simulations in which factors are randomly selected for the selected modeling area, including, but not limited to, the travel path of the platform with a sound source and animat distribution based on a probability density function for the species. Many simulations are run for any given testing and training event to ensure that the mean impacts predicted by NAEMO represent the likely impacts given the potential for a species to be present within the ranges to effect. In instances where the potential for a species to be present at any point in time is very low, as in the case of Southern Resident killer whales, the mean value will be weighted by the large majority of instances in which no impacts would occur. A detailed explanation of the Navy's Acoustic Effects Model is provided in the technical report <i>Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing</i> (U.S. Department of the Navy, 2018), available at www.nwtteis.com.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
WDC-03	<p>Behavioral impacts include harassment and the disruption of natural behavior patterns like feeding, surfacing, nursing, breeding, sheltering, and migration. For a highly endangered population like the Southern Resident orcas, each of these activities can be critical for their survival and recovery; the disruption of normal behaviors including reproduction and caring for young may further impede the orcas' ability to reproduce, give birth, and raise offspring.</p> <p>The Draft SEIS itself states that "a lost reproductive opportunity could be a measurable cost to the individual, or for very small populations to the population as whole (e.g., Southern Resident killer whale); however, short-term costs may be recouped during the life of an otherwise healthy individual." This is correct in noting the potential population-level threat to small and vulnerable populations from a lost reproductive opportunity; however, the Navy must also consider that the Southern Resident orcas are not "otherwise healthy individuals." Research being compiled into a health database for the Southern Resident community shows poor body condition in multiple orcas (including three orcas currently visibly underweight),¹⁰ and compared to Northern Resident orcas, the Southern Resident population has lower survival and reproductive rates. The short-term cost of a lost reproductive opportunity may in fact be a long-term cost to the Southern Resident DPS.</p> <p>A major barrier to the recovery of the Southern Resident orcas is the lack of successful reproduction in the community, and research has shown that 69% of detected pregnancies in recent years are unsuccessful, ending in miscarriage. This is linked to nutritional stress in the population, and activities that interrupt foraging behavior or displace the population from preferred foraging areas may significantly contribute not only to nutritional stress, but also to reproductive failure. The Navy must consider the additional impacts to long-term survival and recovery from anticipated behavioral responses.</p> <p>There are documented cases of Naval activities causing Southern Resident orcas to abruptly change behavior and abandon foraging activities and areas, most notably the USS Shoup active sonar incident in 2003.¹³ More recently, the Canadian Navy set off explosives near a group of Southern Resident orcas from L pod, in federally-protected critical habitat, causing them to flee the area. Activities may also cause direct harm or injury to orcas. Examination of a young Southern Resident orca who died in 2012 found evidence of trauma consistent with an explosion or high-pressure impact. This orca has never been conclusively assigned a cause of death,</p>	<p>As described in Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III) (U.S. Department of the Navy, 2017h), the Navy's analysis incorporates conservative assumptions to account for uncertainty and therefore likely overestimates potential impacts of TTS and behavioral responses. As described in Chapter 3.4 (Marine Mammals), a single or even a few minor TTS to an individual marine mammal per year are unlikely to have any long-term consequences for that individual. Based on the best available science, long-term consequences for marine mammal species or stocks, including Southern Resident killer whales, would not be expected from Navy training and testing activities under the Proposed Action. The Navy has been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and their salmon prey species. No significant behavioral responses such as panic, stranding or other severe reactions have been observed during monitoring of actual training or testing activities.</p> <p>In May 2003, killer whales in Haro Strait, Washington, exhibited what were believed by some observers to be aberrant behaviors, during which time the USS Shoup was in the vicinity and engaged in mid-frequency active sonar operations. Sound fields modeled for the USS Shoup transmissions (Fromm, 2009; National Marine Fisheries Service, 2005; U.S. Department of the Navy, 2004) estimated a mean received SPL of approximately 169 dB re 1 µPa at the location of the killer whales at the closest point of approach between the animals and the vessel (estimated SPLs ranged from 150 to 180 dB re 1 µPa). Per the Phase III behavioral response function for odontocetes, the estimated received level during this exposure would likely have resulted in a behavioral response. However, attributing the observed behaviors to any one cause is problematic given there were six nearby whale watch vessels surrounding the pod, and subsequent research has demonstrated that "Southern Residents modify their behavior by increasing surface activity (breaches, tail slaps, and pectoral fin slaps) and swimming in more erratic paths when vessels are close" (National Oceanic and Atmospheric Administration Fisheries, 2014). For more details about this incident, please refer to the Marine Mammal Strandings Associated with U.S. Navy Sonar Activities Stranding Technical Report (May 2017), available at www.nwtteis.com. Under the Proposed Action, the use of hull-mounted sonars in the Inland Waters portion of the Study Area is limited, and the Navy would follow the mitigations prescribed for the Puget Sound and Strait of Juan de Fuca Mitigation Area as described in Chapter 5 (Mitigation).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	but experts on underwater sound who continue to review the case believe her death was caused by an underwater military explosion. Just one training or testing incident involving Southern Resident orcas can cause significant harm, death, or displacement from preferred habitat.	<p>The National Marine Fisheries Service investigated the stranding of Southern Resident killer whale L-112 (NOAA Technical Memorandum NMFS-NWFSC-133). No U.S. Navy training activities involving sonar or explosives were conducted between 1 and 11 February 2012 in the Northwest Training Range Complex (which includes Washington, Oregon, and northern California). Other anthropogenic activity, including other U.S. military, Royal Canadian Navy, fishing, or construction activities, were also ruled out as potential causes of the observed injuries. The investigation was unable to determine the cause of the observed injuries, although blast injury was deemed unlikely.</p> <p>As described in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment), the Navy worked cooperatively with NMFS to develop an extensive suite of mitigation to avoid or reduce potential impacts on Southern Resident killer whales to the maximum extent practicable, including numerous new mitigation measures developed for the Final Supplemental EIS/OEIS in areas important to Southern Resident killer whales for breeding, foraging, and migration.</p>
WDC-04	The cumulative impacts of the threats to Southern Resident orcas should also be considered in the Draft SEIS, including the additional stress from Canadian Naval activities and other sources of noise and vessel traffic. Training and testing actions conducted by the Navy in the NWTT range should avoid, to the maximum extent practicable, intensifying the stress caused by these other sources of anthropogenic noise and disturbance.	The Final Supplemental EIS/OEIS has been revised to consider Canadian naval activities in the Cumulative Impacts analysis. All other related activities were included in the Draft Supplemental EIS/OEIS.
WDC-05	<p>II. Southern Resident orca habitat</p> <p>The draft SEIS incorrectly states that Southern Resident orcas have only a “seasonal” presence in offshore waters. This is directly contradicted in information from the National Marine Fisheries Service (NMFS), which, based on dedicated tagging and survey effort to identify offshore habitat for Southern Residents, states that “the whales spend well over 50% of their time on the outer coast.”¹⁶ Offshore habitat use reflects the different distribution of the three Southern Resident orca pods – J, K, and L – in different seasons, with J pod appearing more “resident” to the Salish Sea and Vancouver Island area year-round, and K and L pods ranging the west coast of the U.S. in the winter and spring.¹⁷ These studies have confirmed the extent of the Southern Residents’ range and indicated “hotspots” of high occurrence areas, including off the Columbia River and the northern coasts of Washington and California.¹⁸ The Navy must consider the full extent of habitat use by the different pods within the Southern Resident population, and analyze the impacts in offshore areas accordingly – with</p>	The Final Supplemental EIS/OEIS has been corrected to show the Southern Resident killer whale population as “Regular” in the Offshore Area. The analysis of potential impacts did consider their actual presence in the Offshore Area, not a seasonal presence.

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>different pods considered as a “regular” presence in both inland and offshore regions of the Study Area. With the majority of activities occurring in the offshore portion of the Study Area (91% of training and 65% of testing activities), it is alarming that the Navy analyzed the potential impacts on Southern Resident orcas while considering them only “seasonal” in offshore waters. Information on offshore habitat use should be updated and examined to determine the potential overlap with training and testing activities, and to identify potential time/area closures to protect these hotspots of high use.</p> <p>16. National Marine Fisheries Service. 2014. Southern Resident Killer Whales: 10 years of research and conservation. National Marine Fisheries Service, Northwest Region, Seattle.</p> <p>17. Fisheries and Oceans Canada. 2018. Amended Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada. Species at Risk Act Recovery Strategy Series, Fisheries and Oceans Canada, Ottawa, x + 94 pp.; Ford, J.K.B., Pilkington, J.F., Reira, A., Otsuki, M., Gisborne, B., Abernethy, R.M., Stredulinsky, E.H., Towers, J.R., and Ellis, G.M. 2017. Habitats of Special Importance to Resident Killer Whales (Orcinus orca) off the West Coast of Canada. DFO Can. Sci. Advis. Sec. Res. Doc. 2017/035. viii + 57 p.; See National Marine Fisheries Science Center data and reports on Southern Resident tagging project (https://www.nwfsc.noaa.gov/research/divisions/cb/ecosystem/marinemmal/satellite_tagging/index.cfm) and winter distribution surveys (https://www.nwfsc.noaa.gov/news/blogs/index.cfm); Hanson, M.B. et al. 2013. Assessing the coastal occurrence of endangered killer whales using autonomous passive acoustic recorders. The Journal of the Acoustical Society of America, 134(5), 3486-3495; see also Brad Hanson, “Distribution and Diet of Southern Resident Killer Whales” (Northwest Fisheries Science Center, 2015), https://swfsc.noaa.gov/uploadedFiles/Events/Meetings/MMT_2015/Presentations/3.1%20PPT%20ProgramReviewSRKWDistributionDiet071515MBHv2.pdf</p> <p>18. Ibid.; Hanson, M.B., E.J. Ward, C.K. Emmons, and M.M. Holt. 2018. Modeling the occurrence of endangered killer whales near a U.S. Navy Training Range in Washington State using satellite-tag locations to improve acoustic detection data. Prepared for: U.S. Navy, U.S. Pacific Fleet, Pearl Harbor, HI. Prepared by: National Oceanic and</p>	

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Atmospheric Administration, Northwest Fisheries Science Center under MIPR N00070-17-MP-4C419. 8 January 2018. 33 p.	
WDC-06	The draft SEIS also states that “some killer whales such as the Southern Residents have seasonal shifts in distribution from the inland waters of the Salish Sea and Puget Sound to locations that can be up to hundreds of miles both north and south of the Study Area,” which incorrectly implies that the range of the Southern Resident orcas extends far beyond the NWTT Study Area. While the Southern Residents have occasionally been seen as far north as Haida Gwaii in Canada, their primary habitat almost completely overlaps with the NWTT range, including the Salish Sea Inland region and offshore waters down to Northern California, and they are unlikely to leave this historic and accustomed habitat to avoid disturbance from Naval activities.	The range of the Southern Resident killer whale clearly extends as far south as Monterey, CA and north as far as Southeast Alaska as indicated in the Draft Supplemental EIS/OEIS and as presented in the NMFS 2018 Stock Assessment Report (see page 118 and Figure 1; Carretta et al. 2019). The range of the Southern Resident killer whales does in fact, extend far beyond the NWTT Study Area as presented in the Draft Supplemental EIS/OEIS. The text in the Draft Supplemental EIS/OEIS does not characterize or otherwise imply that their range is equal to their core areas or primary habitat. The Navy did not assume that the continuation of such activities would result in Southern Resident killer whales leaving the NWTT Study Area for other parts of their range as the comment suggests; this suggested departure of Southern Resident killer whales from the NWTT Study Area was not part of the Navy’s analysis.
WDC-07	<p>The Southern Residents’ coastal habitat is also currently under consideration for expanded critical habitat designation, a fact acknowledged in the draft SEIS with a plan for future consultation with NMFS. Given the proposed rule is expected by early October 2019, the Navy should not pursue any activities that could adversely affect new critical habitat until a final designation is made.</p> <p>We are also concerned with the potential impacts from NWTT activities in current Southern Resident orca critical habitat. Although Department of Defense sites, including Navy bases in the Salish Sea, are excluded from this designation, sound produced at those sites – especially the proposed increases in pier-side sonar testing described in the draft SEIS – will likely extend beyond the boundaries for the excluded areas and impact critical habitat. The Navy should consider this in analyzing impacts within the Inland portion of the NWTT range.</p> <p>The draft SEIS notes the recent changes in the presence of the Southern Resident DPS in the Salish Sea during their historical spring and summer foraging period, which has been linked to a lack of available Chinook salmon. The Navy suggests that protective measures in the Salish Sea are less important because of this changing presence, and we are concerned that this assumption will result in reduced mitigation efforts. We argue that changing habitat use by the orcas is not a reason to decrease mitigation or exercise less caution in the Inland portion of the Study Area, but instead requires that current levels of monitoring and mitigation be maintained, if</p>	<p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p> <p>As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The commenter incorrectly asserts that the Navy suggests that protective measures in the Salish Sea are less important; however, the Navy has not suggested that and does not consider that to be true. The mitigation measures developed for both NWTT Inland Waters and the NWTT Offshore Area for the Proposed Action represent an increase over the mitigation developed for the 2015 NWTT Final EIS/OEIS.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	not increased, due to the uncertainty of predicting when and where Southern Residents will occur. As their presence in any area is linked to available prey, it is likely that an increase in salmon abundance will result in increased presence in core summer habitat. The Navy should not assume a permanent shift in Southern Resident habitat use of the Salish Sea and continue to operate with caution maximum vigilance to avoid impacting the Southern Resident DPS in the Inland portion of the NWTT range.	
WDC-08	The Navy must also consider that if the Southern Residents are not present in the Salish Sea, they are likely to be increasing their use of their coastal habitat – the offshore portion of the NWTT range. NMFS notes that the orcas can be more difficult to detect and observe in coastal waters, a challenge that should be considered by the Navy when analyzing the impacts of NWTT activities. The Navy should explore the use of newly available apps and technology that can provide real-time monitoring of orca movements and provide an early warning system to mariners, such as the Whale Report Alert System (developed by the British Columbia Sightings Network).	The Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales, as described in Section K.3.3 (Mitigation Areas for Marine Species in NWTT Inland Waters). The Navy will also continue to assess the practicality of other available monitoring techniques as technologies advance.
WDC-09	<p>III. Changes in NWTT activities from the 2015 SEIS</p> <p>We are concerned that changes in activities from the 2015 Final SEIS will increase the effects of Naval activities on the Southern Resident DPS, including increased sonar use, impacts from torpedo and mine explosives, pier-side sonar testing within critical habitat, offshore sonar testing (which was not previously analyzed), and undersea warfare testing. Increased use of sonobuoys in both the offshore area – which, as has already been stated in these comments, contains the majority of the proposed activities and should be considered as regularly-occupied habitat by Southern Resident orcas – and the inland portion of the range, where sonobuoys have rarely been used, is particularly alarming.</p> <p>Mid-frequency active sonar is known to overlap with the hearing range of dolphins, including orcas, and can mask communication – a potentially significant threat for a highly social species. A report by Emmons, Hanson, and Lammers (2019)²¹ found 148 mid-frequency active sonar events detected between 2011 and 2017, with the peak overlapping with three orca communities including the Southern Residents. The draft SEIS states that exposure to mid-frequency active sonar has been linked to the separation of a Transient orca calf from their group, and although it is noted that the calf rejoined the group shortly after, there is no way to understand or assess the potential long-term impacts, or if any permanent</p>	<p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>Emmons et al. 2019 reported a number of detections at Cape Flattery Offshore, but this was not normalized for effort, which was also highest at the Cape Flattery Offshore hydrophone location. This would have the effect of overstating detections in that area. Emmons et al. 2019 reported on detections of MFA sonar, but did not distinguish between various sources (U.S. versus Canadian navies, among other users). Historically, the annual usage of MF1 sonar by the U.S. Navy in the Olympic Coast National Marine Sanctuary (which overlaps with the Cape Flattery Offshore hydrophone) over the last 10 years has been minimal. The Navy does not generally schedule training and testing near Cape Flattery due to the high volume of commercial vessel traffic in that portion of the Study Area.</p> <p>In Chapter 4 (Cumulative Impacts) of the NWTT Supplemental EIS/OEIS, the Navy considered the cumulative impacts of noise, vessel traffic, and</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>or temporary hearing damage occurred. New technology and increased use of mid-frequency sonar described in the draft SEIS has the potential to cause additional masking of communication. It is noted that the “longer-term consequences could include potential decrease in recruitment” for affected individuals, and as previously noted, the Southern Resident orca population already has very low recruitment rates, and any activity causing separation or loss of a calf from their family group, or impacting reproduction or pod cohesion can potentially have long-term, population-level impacts on this small community.</p> <p>The findings from Emmons, Hanson, and Lammers (2019) and Hanson et al. 2018 highlight the use of offshore areas by Southern Resident orcas, and should be used to minimize the adverse impacts of NWTT activities by shifting sonar and explosives testing, or limiting these activities by season and location. We also note that sonar travels much farther than observers or lookouts can reasonably monitor, particularly in offshore conditions when visibility is often limited by sea or weather conditions. Some of the new technology and instruments described in the draft SEIS can range up to 100 nautical miles, a distance at which it is impossible to observe or detect most marine species.</p> <p>The Navy should consider the cumulative impacts of noise, vessel traffic and disturbance that already occur in Southern Resident orca habitat, and how the NWTT activities contribute to overall risk to the orcas.</p> <p>Additionally, while other entities in the region are taking action to reduce the impact of their activities on Southern Resident orcas – including new vessel regulations in Washington state and Canada, an expanded ECHO program to slow ships down and reduce noise in critical habitat, and a sustainability plan by Washington State Ferries – the Navy is proposing to increase activities in the NWTT range. The Navy must increase mitigation efforts to provide a net benefit to Southern Resident orcas from these additional protective measures, otherwise the Navy will be responsible for a larger part of the cumulative impacts and may negate some of the benefits granted by these other actions.</p>	<p>disturbance on Southern Resident killer whales, and how the NWTT activities contribute to their overall well-being.</p> <p>The Navy will implement procedural mitigation whenever and wherever applicable active sonar and explosive activities occur in the Study Area. The active sonar mitigation zones (i.e., area of observation) include a 1,000 yd. and 500 yd. power down and/or a 200 yd. shut down, depending on the sonar source; therefore, Lookouts are not required to survey up to 100 nautical miles as the commenter suggests.</p> <p>The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas, as described in Appendix K (Geographic Mitigation Assessment). For the Final Supplemental EIS/OEIS, the Navy developed several new mitigation measures specific to Southern Resident killer whales. For example, in the NWTT Offshore Area, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery. The Navy’s mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will further help avoid potential impacts from vessel movements and training and testing activities on this species.</p>
WDC-10	<p>IV. Entanglement Risk</p> <p>The draft SEIS states that “abandoned, lost, or otherwise discarded fishing gear constitutes the vast majority of mysticete entanglements,” citing a NOAA report from 2014. This should be corrected, as the report actually says that “While fishing gear, likely including at least some abandoned, lost, or otherwise discarded fishing gear (ALDFG), constitutes the vast majority of baleen whale entanglements, a broader array of ALDFG appears to pose</p>	<p>The language in the NWTT Supplemental EIS/OEIS regarding abandoned, lost, or otherwise discarded fishing gear is an accurate representation of the referenced sources and does not require correcting. The new information that the comment is asking the Navy to consider was considered and cited in the Draft Supplemental EIS/OEIS as National Marine Fisheries Service, 2018a.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>entanglement risks for bottlenose dolphins and perhaps other odontocetes. Thus, most entanglement records pertain to incidental or by-catch in actively fished gear, instead of entanglement in marine debris” (emphasis added). In addition, a review of large whale entanglements in the U.S. found that no reporting regions were able to positively identify an entanglement as ALDFG with the exception of Hawaii. As noted in the report, fishing gear comprises the majority of confirmed entanglements identified to a source, with some ALDFG marine debris; however, most material entangling large whales is never identified –the origins for more than half of confirmed entanglements are unknown. Material originating from Naval activities can neither be confirmed nor ruled out as a potential entanglement risk for baleen whales.</p> <p>The Navy must also incorporate new information on increasing rates of entanglement on the West Coast. Entanglement rates for large whale species, especially humpback and gray whales, increased sharply starting in 2014 and remain well above the 10-year average. The Navy should include more recent information on entanglement risk to whales, available from NMFS as well as from state working groups in Washington, Oregon, and California.</p>	
WDC-11	<p>V. Other orca populations and species</p> <p>The Navy should also consider the potential impacts of activities in the Study Area to the Southern Resident prey base. Fish have hearing similar to other vertebrates, and are most sensitive to sounds between 100-1000 Hz. Lethal impacts and serious injuries have been observed from sound exposure exceeding 229 dB. Sonar use, explosives, and other activities may decrease salmon survival or abundance, causing the secondary effect of further reducing the amount of prey available for Southern Resident orcas. Other orca ecotypes in the Eastern North Pacific – Offshore and Transient orcas – are found in the Study Area and are likely to be affected by NWT activities. Transient orcas in particular are increasing in population size and are now being observed in new areas or for unexpected extended periods of time. This ecotype is especially reliant on sound to locate their prey, and may experience additional impacts from the noise and disturbance caused by NWT activities. The Navy should consider new information on increasing use of the Salish Sea by Transient orcas and the potential for larger observed group sizes as the population continues to grow. The Draft SEIS notes that Transient orcas are occasionally seen in Hood Canal, with sightings in 2003, 2005, and 2018. These random occurrences make their presence hard to predict, and as noted previously, this is not a reason to</p>	<p>The Draft Supplemental EIS/OEIS analyzed potential impacts to every component of the food web. See analysis of impacts to marine vegetation, marine invertebrates, and fishes (Sections 3.7, 3.8, and 3.9, respectively).</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	reduce observation or mitigation efforts – instead, observation may be even more important in areas where orcas occur more randomly, as they may come into an area unexpectedly.	
WDC-12	<p>To Whom It May Concern:</p> <p>The practice of sonar testing is extremely harmful to beings that call the ocean their home. After years of conducting research, results indicate negative harmful effects to them. This practice leaves such beings with high levels of distress and some with loss of hearing. It is unacceptable and needs to be stopped immediately.</p> <p>Thank you for your time and consideration.</p>	<p>The Navy has conducted active sonar and explosives training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
<i>Willits Environmental Center</i>		
Willits-01	<p>The Supplemental EIS/OEIS fails to adequately describe the current health of sea mammal populations and whether or not any or several of these species' populations are at a tipping point now. The SEIS/OEIS concludes that the Navy's proposed testing will not cause whole populations of sea mammals to become extinct, implying that an unquantified number of individuals can die without impact to the species. What is the scientific basis of this conclusion? Further, the SEIS/OEIS fails to assess the impacts on ocean ecosystems in which sea mammals cease to exist.</p>	<p>All of the descriptions and analyses requested in the comment are found in Section 3.4 (Marine Mammals) of the Supplemental EIS/OEIS.</p>
Willits-02	<p>The Supplemental EIS/OEIS fails to look at a full range of alternatives to the proposed testing and training. It fails to address the alternative in which wars would be fought with wind and solar energy, and fought in a way that only those humans who want the war are harmed by it. These are the questions that should be asked when humans are endangering the stability of the Earth's climate. By engaging in war preparations using fossil fuels and other pollutants that contribute directly to increased GHG emissions, and indirectly by reducing the carbon sequestration capacity of the oceans, the Navy is contributing to the end of life on Earth as we know it.</p> <p>The Navy is not separate from the rest of life on planet Earth. Every sector of society - business, manufacturing, home life, government, health, agriculture, transportation, AND the military must dramatically reduce GHG emissions in their respective occupations.</p> <p>The Supplemental EIS/OEIS must first include a thorough look at the reasons for the proposed training and testing and justify them. What are the threats to the United States (and our allies and interests) that demand</p>	<p>The purpose and need for the Proposed Action were provided in Chapter 1 (Purpose and Need) of the Supplemental EIS/OEIS. In this chapter can be found the reasons the Navy's proposed training and testing activities are required.</p>

Table H-4: Responses to Comments from Non-Governmental Organizations (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	preparedness for war? The SEIS/OEIS must than expand its range of alternatives that could reasonably reduce this threat to acceptable levels. For example, the Navy must assess as a legitimate alternative such as one or more of the following: diplomacy; international student exchanges; total emersion in reciprocal cultural and historical education programs; joint international scientific explorations; symbolic warfare, or international sports competitions.	

H.1.4.1 Form Letters and Petitions

The Navy received three different form letters from a number of individuals. The form letters were originally from the Center for Biological Diversity, Friends of the Earth, and National Parks Conservation Association non-governmental organizations. An example of each letters' contents and the Navy's response is provided in Table H-5. The responses to the letters were prepared and reviewed for scientific and technical accuracy and completeness.

Table H-5: Form Letters

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Center for Biological Diversity		
CBD-1	I am writing to urge you to revise your training plans for the Pacific Northwest. Right now these plans would cause unacceptable harm to a wide range of marine life — including critically endangered Southern Resident killer whales, whose coastal habitat spans from Washington to California and includes Puget Sound. The Navy's environmental impact statement fails to fully disclose all the damage that its activities will cause. For instance, the plans will not only deafen and injure marine mammals, but they'll also disrupt feeding and breeding. Some of the animals will be exposed to sonar multiple times, and others will be displaced from their preferred habitat. The environmental impact statement also fails to fully disclose harm that will be done to fish and plankton, which could have effects all the way up the food chain. Please — adopt mitigation measures that will 1) fully protect the critical habitat of endangered orcas and entirely prohibit testing and training in Puget Sound, 2) ban sonar and explosives in biologically important areas, and 3) set limits on activities that can harm marine life.	The Navy thoroughly analyzed potential impacts of the Proposed Action on marine species in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. The analysis considered the full range of potential impacts, including behavioral impacts, such as disruption to feeding and breeding, and other types of potential impacts, such as injury or physiological impacts. Based on the analysis in the Supplemental EIS/OEIS, impacts are likely to be short-term and temporary in nature. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The Navy developed numerous new mitigation areas for the Final Supplemental EIS/OEIS to further avoid or reduce potential impacts on marine species, including Southern Resident killer whales, in key areas of importance for foraging, breeding, and migration.
Friends of the Earth		
Friends of the Earth-01	I am writing to express my concern that the Navy's testing and training activities in the Pacific Northwest will harm critically endangered Southern Resident killer whales and other sensitive marine life. These killer whales are in harm's way since the Navy plans to conduct activities in their coastal habitat spanning from Washington to California, including Puget Sound. The Navy's environmental impact statement fails to fully disclose the damage that its activities will have on marine mammals and their habitat. The massive scale of the proposed activities will not only deafen and injure marine mammals, but it will also disrupt feeding and breeding activities. Some of the same animals will be exposed to sonar multiple times, and whales will be displaced from their preferred habitat.	The Navy has conducted active sonar and explosives training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-5: Form Letters (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Friends of the Earth-02	The environmental impact statement also fails to fully disclose harm that will be done to fish and plankton, which will have effects up the food chain.	The Navy thoroughly analyzed potential impacts of the Proposed Action on marine species in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. The analysis considered the full range of potential impacts, including behavioral impacts, such as disruption to feeding and breeding, and other types of potential impacts, such as injury or physiological impacts.
Friends of the Earth-03	I am writing to urge the Navy adopt mitigation measures that will fully protect the critical habitat of endangered orcas; entirely prohibiting testing and training activities in Puget Sound. The Navy must also ban sonar and explosives in biologically important areas and set limits on activities that can harm marine life.	The Navy worked cooperatively with NMFS during the MMPA and ESA consultation processes and determined that the suite of mitigation developed for the Final Supplemental EIS/OEIS will effect the least practicable adverse impact on marine mammal species or stocks and their habitat. The Navy will implement procedural mitigation to avoid or reduce potential impacts from the Proposed Action on marine mammals, including killer whales, wherever and whenever applicable acoustic, explosive, and physical disturbance and strike stressors are used in the Study Area. In addition to procedural mitigation, the Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in important habitat areas. For example, the Navy will restrict all but one type of explosive activity from occurring within 50 NM from shore in the Marine Species Coastal Mitigation Area year-round, which will help the Navy avoid potential impacts from explosives on marine mammals in important foraging and migration areas. Additionally, the Navy developed the Puget Sound and Strait of Juan de Fuca Mitigation Area to enhance protections of Southern Resident Killer Whales throughout NWTT Inland Waters. Information about the Navy's mitigation areas is presented in Appendix K (Geographic Mitigation Assessment).
<i>National Parks Conservation Association</i>		
NPCA-49	Olympic National Park is too special to be degraded by thunderous jet noise. I am requesting that the U.S. Navy use its considerable resources to avoid flying over the park and instead train in other designated military areas that do not interfere with Olympic and other national parks. The unique qualities of Olympic have been recognized as a national park, wilderness area, International Biosphere Reserve and World Heritage Site. At the heart of the park is the Hoh Rain Forest, one of the quietest places in the Lower 48. Many of us visit places like this specifically to get away from noise, people, and the more obtrusive trappings of modern civilization. Warplanes are antithetical to the very qualities that draw us to this, one of the most quiet, wild, and protected areas in the country. Please consider a training alternative that would avoid Growler training and noise over and around the Olympic Peninsula.	<p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:</p>

Table H-5: Form Letters (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude.</p> <p>2. The Navy, along with other U.S. military forces, have trained over and off the Olympic Peninsula since World War II. The Olympic MOA, one of about 460 MOAs across the United States, was established in 1977.</p> <p>3. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year).</p> <p>4. The proposed increase of 300 total flights per year averages to just over one additional flight per day.</p> <p>5. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.</p> <p>6. Electronic Warfare training, which may use emitters in park-adjacent U.S. Forest Service areas, typically occurs at higher altitudes, usually greater than 20,000 feet, while other training activities, about 30 percent, involve a variety of maneuvers that may include a portion of flight time at lower elevations.</p>

H.1.5 Individuals

This section contains comments from individual members of the public received during the public comment period, and the Navy's response to those comments.

Table H-6: Responses to Comments from Individual Members of the Public

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
A		
A-1	I have learned that underwater sonar tests are fundamentally disrupting the marine ecosystem, diminishing populations of some species as the noise levels disturb feeding, reproduction and social behavior. Some scientists say that it can cause death of sea creatures, from the giants to the tiniest — whales, dolphins, fish, squid, octopuses and even plankton. Other effects include impairing animals' hearing, brain hemorrhaging. This is immoral. The science is proven. Please. Stop.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Acker-1	This project is ill conceived - mainly as it relates to the larger environmental picture we find ourselves in these days. The ocean is in utter distress. A very slight change in acidity has had disastrous consequences for Abalone for example. They cannot form their shells anymore. Our kelp forest has almost entirely disappeared just by a slight change in temperature of 0.5 degrees. Over 70 whales have been found beached in California alone just in 2019. Whales, Dolphins and other ocean creatures are heavily impacted by Navy testing. This all also relates to the biggest challenge we humans have ever faced - the survival of our planet, without which nothing else matters because we won't be here. This project is headed in the completely wrong direction. We need to take care of our natural ocean system and not stress it anymore. Please abandon this ill conceived project and put your energy into restoring the ocean. Thank you.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Ackerman-1	<p>If the president says "they say the noise causes cancer" about windmills, then what will the noise from the increased number of test flights per day of the Navy growlers on the people and nature on Whidbey Island do? Now I don't know who "they" are, but I do know that noise pollution has been a known issue for over 40 years if not longer.</p> <p>Noise pollution, also known as environmental noise or sound pollution, is the propagation of noise with harmful impact on the activity of human or animal life. High noise levels can contribute to cardiovascular effects in humans and an increased incidence of coronary artery disease. In animals, noise can increase the risk of death by altering predator or prey detection and avoidance, interfere with reproduction and navigation, and contribute to permanent hearing loss. While the elderly may have cardiac problems due to noise, according to the World Health Organization, children are especially vulnerable to noise, and the effects that noise has on children may be permanent. Noise poses a serious threat to a child's physical and psychological health, and may negatively interfere with a child's learning and behavior.</p> <p>The large increase of tests per day is ignoring what is already known about the effects of noise in our world. Are you not tasked with the protection of the US territories and citizens? Are you not harming greatly, in the name of "protection"? Is this not insane?</p>	<p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential health effects of Growler and other activities on humans are discussed in Section 3.13 (Public Health and Safety).</p>
Acosta-1	.	No response required.
Adams Am-1	Unnecessary and cruel. We need to protect what we have left, not destroy it further.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Adams An-1	<p>To whom it may concern,</p> <p>I'm writing to express my opposition to the proposed Navy sonar testing in the Salish Sea. At this time, the Southern Resident Killer Whales are on the brink of extinction. Likewise, we've had record numbers of Gray Whales washing up dead along the entire west coast (including a juvenile found in Elliot Bay).</p> <p>The fact that our apex predators are dying off in record numbers is a glaring sign that our waters are not healthy. Knowing this, it would be wise to stop and determine WHY our waters (and the creatures who dwell there) are so unhealthy. Sonar testing at this time will only contribute to these profound problems, and possibly cause these animals to go extinct. Please do not begin sonar testing in the Salish Sea.</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p>
Adams J-1	<p>Stop trying to ruin the Olympic Peninsula and its environs. The noise level involved with your growler program will completely ruin the intention of that National Park. Idaho and Nevada training areas were created for warfare training, a National Park and surrounding Native lands were NOT. As a taxpaying US citizen I am outraged that your department thinks this move is a good idea. Do NOT invade this sensitive area with your obnoxious noise and pollution.</p>	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. For this reason training complexes in Nevada are not reasonable. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Adams-Brown T-1	<p>Without sea life theirs no human life</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Addison-1	STOP! How could one consciously with intent torture any creature, what gives one the right. This is cruel in every way imaginable. Karma is real and it won't be remorseful. You're actions are ruining the most beautiful things our planet has to offer. STOP!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Agacinski-1	I personally feel distressed watching and listening to the noises that marine mammals are exposed to due to navy testing. These are animals that have absolutely nowhere to go and have sensitive hearing, required to communicate with one another and for their survival. It saddens me to see a group (ie, family) of orcas so close to these extremely loud noises. They have done nothing to deserve this. I sincerely hope this kind of testing is stopped!	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Agapoff-1	I am a sole proprietor of an art studio in Eastsound Washington that will be negatively impacted by increased flights over the Salish Sea. I depend upon tourism for my business. Additionally I feel that all Naval tests that could impact the Southern Resident Orcas and their habitat are wrong. These animals and their prey (salmon) are endangered and should be protected, not harassed.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ahern-1	The southern residents are dying and their very survival is in trouble. Please stop Allowing sonar testing there they forage for good and it's a known fact sonar effects their instinctual habits. Please stop studies have shown sonar is devastating to their tribes. The calves born struggle to survive.	The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Aist-1	You must end the use of sonar NOW! The effects on marine life, especially cetaceans, are devastating. You must use the immense resources at your disposal to find another way to achieve whatever you are trying to do via the use of sonar. Our oceans must be protected in all their immense complexity. My family votes and is politically active at the grassroots level. We the People WILL be seeking to bring change to military agencies that do not use ecologically sound, compassionate decision-making. How about you bring the change yourselves without causing the near/extinction of several whale species first?	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Akhgar-1	The coastline of Washington and Olympic National Forest was my proverbial back yard growing up. Although I don't live there anymore, it is still home to hundreds of species of land and water dwelling creatures. The Navy does NOT need to set up shop in this forest region or coastline. The risk of causing permanent hearing loss to hundreds of underwater species is unacceptable through the use of underwater sonar testing. We need to restore the biodiversity of the Salish Sea, and this new testing is anything but helpful for this. Marine mammals, forest dwellers, and humans can all, and need to co-exist; we truly depend on each other in more ways that are	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	not always clear on the surface. Please do not increase flights and sonar testing across the Olympic Peninsula.	
Albarran-1	Doing these tests will certainly and with no doubt put a deadly pressure for the endangered resident orcas. These are iconic animals loved by most of the world, and we want them safe and thriving. Your tests will do otherwise and we won't stand for it. Do the right thing and protect them, don't kill them.	The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Alberto-1	I am 100% against under water sonar testing which has been proven to cause harm to marine animals. These harmful military practices are in unacceptable!!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Alden-1	I do support a navy that have the knowledge to do what is necessary. However, I do NOT support an expansion of the test areas based on the following: 1. The Navy have existed for more than 200 years. By now the navy should be smart enough to know how to use the existing test areas to accommodate their needs for training. 2. The impact on the sea animals are already significant. Whales are slowly recovering from almost being extinct, but they are very sensitive to sound. https://apps.dtic.mil/dtic/tr/fulltext/u2/a593622.pdf http://foodweb.uhh.hawaii.edu/MARE390_files/Miller%20et%20al.%202000.pdf https://royalsocietypublishing.org/doi/full/10.1098/rspb.2013.0657 3. I would prefer to see the whales going up and down our coast line. The economy in some of our area is dependent on the wild life we have. Both tourism and fishing. My vote would be NO to an expansion of the test areas.	The Navy is not expanding the area where training and testing are proposed to occur. The Study Area is the same as was analyzed in the 2015 NWTT Final EIS/OEIS. All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Aldham-1	Please think of the survival of a species at serious risk of extinction before toy proceed with any sonar testing that will have a serious negative effect on the killer whales that reside in the Salish sea. I thank you in advance for any consideration dealing with this sensitive issue.	The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Alee-1	Protect our marine animals!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Alexander-1	<p>To Whom It May Concern:</p> <p>I am writing today to comment on the proposed extension to use the Olympic National Park and surrounding areas for military trainings. I am particularly focused on the increased presence of the Growlers. I have called Port Townsend home for over half of my life, and find the environment and way of life largely unspoiled, compared to so many other places in our nation. I feel gratitude every day for a quality of life that many do not get to experience.</p> <p>This quality of life, however, has been grossly degraded since the introduction of Growler training flights over the peninsula, home to a plethora of species, not just humans, that have appreciated the natural</p>	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>beauty and quietude it affords so many. Once known as the quietest place on the planet, Olympic National Park is that, no more.</p> <p>To look beyond the personal, however, consider climate change and the related 6th Mass Extinction that we are facing. With the US military being the planet's largest consumer of fossil fuel, is there any justification, really, to continue furthering the circumstances that will actually lead to whole island nations going under water, coastal cities in our own country being inundated, and the eventual loss of a million species through extinction, for GOOD?</p> <p>Military action is typically justified in the name of "national security". What nation is really secure when climate change threatens our long range food supply, our weather demonstrates its increasing power to destroy entire towns, and when we know beyond a shadow of a doubt that the burning of fossil fuels makes this threat all more prevalent?</p> <p>Increasing numbers of us feel like the person saying "The Emperor is not wearing any clothes!" and that people in power are not attending to reality. With the current occupant of the White House seeming to be committed to ignoring scientific reality, does that give us all permission to do the same? I don't think so. No. We have to find the courage to face some very hard facts.</p> <p>Please wake up to the fact that our bloated military has to downsize. We have to learn to be at peace with other nations, not engage in endless war, justifying that as a cornerstone of our economy. I would like to see true leadership, based on real science, and for the military to show the courage to lead in this regard, by recognizing its need to shrink, not grow.</p> <p>War is not the answer. It never has been. We live at a true moment of truth where the very survival of life on our planet hangs in the balance. Start by facing reality. Please.</p>	<ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.
Alexandra-1	<p>Wildlife/Marine Life/Bird Populations</p> <ul style="list-style-type: none"> • Puget Sound is the nation's second largest estuary. The waters of the Salish Sea are some of the most biologically significant and productive marine areas in the world, home to both abundant and threatened species of marine life. The rivers of Olympic Peninsula are important habitat where salmon reproduce. Aircraft noise and sonic booms have been implicated as a cause of lowered reproduction in a variety of animals. • The pod of Southern resident orcas that inhabits the Salish Sea is on the decline; only 74 remain. Both high and low frequency noise have negative impacts on whales' ability to navigate and identify food. The carbon dioxide in jet exhaust acidifies the water, damaging the web of marine life that 	<p>The issues described in the comment were addressed in the Draft Supplemental EIS/OEIS in Chapter 3 (Affected Environment and Environmental Consequences).</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>sustain salmon, the orca's primary food source. Additionally, chemical compounds from the Navy's fire fighting fire retardant, already in Whidbey's aquifer, enter Puget Sound as surface run-off. These effects, taken together, will further stress the pod and may make the difference between survival and extinction.</p> <ul style="list-style-type: none"> • The Olympic Coast National Marine Sanctuary includes 3,188 square miles of marine waters off the rugged Olympic Peninsula coastline. The sanctuary extends 25 to 50 miles seaward, covering much of the continental shelf and several major submarine canyons. The sanctuary protects a productive up-welling zone, home to marine mammals and seabirds. Along its shores are thriving kelp and intertidal communities, teeming with fishes and other sea life. Scattered communities of deepsea coral and sponges form habitats for fish and other important marine wildlife. • Olympic National Park is home to the endangered spotted owl and the endangered marbled murrelet. Its coastline is the biannual flyway for billions of migrating birds that depend on navigational signals disrupted by the jets. Growlers also collide with birds. The growlers are hazardous to humans and wildlife. These jets must be moved to a less sensitive and ecologically valuable location. 	
Alinger-1	<p>I would like to respectfully submit the following comments: I have been educated that the Navy's EIS clearly indicates that the Southern Residents will be harmed by testing and training activities, and that this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey.</p> <p>I was informed that in 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. In pursuing these activities, I have also been informed that the this will violate the Endangered Species Act, which should be protecting the orcas.</p> <p>The designation for the orcas' critical habitat is under review and it is important that the Navy should not be allowed to move forward until the designation is final.</p> <p>I am asking that the Navy respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. Please protect the critical habitat of the orcas and prohibit testing and training in these waters. I am also asking that they ban sonar and explosives in these waters.</p> <p>It is absolutely vital that we protect the delicate status of our marine mammals and not engage in any activities that can harm marine life. It is</p>	<p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003. Also, please see the new procedural mitigation measures described in Chapter 5 (Mitigation) and the new mitigation areas described in Appendix K (Geographic Mitigation Assessment) of this Supplemental EIS/OEIS.</p> <p>The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	disappointing and alarming that we do these things regardless of the cost. We should not make future generations try to undo the damage we cause because we were unwilling to listen to the science.	the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The Navy consulted with the National Marine Fisheries Service regarding the Navy's Proposed Action and potential impacts to endangered species, as required under the Endangered Species Act.
Allegrone-1	Stop the sonar testing! Cetaceans are dying. We are living in a period of mass extinctions. Destroying the LIVING planet is NEVER the answer. Wiping out everything good is just that.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Allen D-1	The deleterious impacts from the increased naval operations made to the quality of experience one expects to find within Olympic National Park are substantial and significant. Peace and solitude are readily frangible. Partial mitigation would be to restrict the number of flights and the number of days in which operations occur. A better solution is to move the exercises off shore. Why couldn't they be marine based?	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Allen H-1	I adamantly oppose the use of sonar testing in the Pacific Northwest Ocean. It has been proven to cause irreversible harm to marine life-including our critically endangered Southern Resident Orca. Stop the use of sonar testing in our ocean now!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Alpha-1	It is very sad it is to see thousands of these beautiful creatures being killed in the oceans around the world because of sonar testing. It's their home the sea not ours to destroy!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Alsammach-1	Free all whales	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Alvarez D-1	Oceans are not polluted with rubbish only, but with noise also. Let's give marine animals the right to live without that noise.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Alvarez L-1	.	No response required.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Amanno-1	The whales and other marine inhabitants are in enough distress already. Look at the recent whale die-off in San Francisco beaches. Stop degrading the environment of ocean creatures. NO ARMS TESTING ON THE WEST COAST! Or, any body of water. Let's move forward, not backward.	The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.
Amella-1	Please cease from conducting naval sonar drills in the Salish Sea area. It has been scientifically proven that sonar is deleterious to not only marine mammals, but mostly all forms of marine life (to include fishes). The Salish Sea is home to both an endangered orca population as well as an endangered Chinook salmon population. The orcas are already suffering from lack of food due to decreased chinook salmon numbers. In addition, they face the dangerous effects of pollution and vessel noise in the area. Please do not add to the abuse humans have inflicted on these animals by increasing / continuing to hold disruptive and harmful sonar exercises within close range of their home waters. While the disruption, confusion, and harm that sonar causes marine mammals has been well documented for some time now, more recent research also proves that Sonar interferes with fish feeding and behavior, as well as causes permanent damage to their auditory senses. The SRKW and Chinook salmon they depend on as a good source are facing enough anthropomorphic challenges. Let's not add insult to injury with sonar in their home waters as well.	The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Anderson A-1	The Mendocino Coast is an area dependent on the sea for its livelihood. The Navy is proposing testing in this profoundly depressed economic area. The most recent posted census data states the number of those under 100% of FPL (Federal Poverty Level) in our county as 16.3%. We qualify for a number of federal rules disregards for receipt of public benefits. The passage of large cetaceans through this place, with no molestation is important to our economy now that the bulk of our trees have been logged, our abalone season is closed with little likelihood of return, our crab seasons have been suspended due to the recently annualized presence of neurotoxins undoubtedly related to warm water owed directly to global climate change. Due to same there is no longer a previously lucrative trade in urchins for the Japanese market presenting a great risk for those divers who try in vain to access what is left on peril of bends or embolism due to the lack of kelp and economically viable urchin for export. We have recently suffered a major coastal bird die-off which has been	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>attributed to starvation. These facts filter through our local economy. Lest one point to the panacea of legalised marijuana, those prices have dropped precipitously since legalisation.</p> <p>It is my conviction, as a resident of this place, that the Navy should go elsewhere to conduct such activities if at all. My preference is resolutely for "No Action." I base this statement on the preceding, and contradict without qualm the framing prohibition on any such iteration stated on the EIS/OEIS website which implies a default of we ultimately have no say but might comment on the inevitable. The site limits public comment to 5000 characters or 1 MB for an electronic submission. The Navy's public meeting in our town was no more accommodating, as I will describe below. While I have done my best to be concise, the website's admonishment to submit peer-reviewed studies runs directly counter to the limits placed on the electronic submissions.</p> <p>We as residents of the area must express our opinion on the topic given the likelihood that Navy testing in our waters, albeit outside the twelve-mile limit, may well violate international conventions on the protection of marine mammals. These animals are sensitive to takings similar to those the Navy and others have outlined in their literature regarding this coastline and similar testing areas ("Incidental Take Authorizations for Military Readiness Activities" ref US Navy Target & Missile Launch Activities at San Nicolas Island, California, 2019, "US Navy Operations of Surveillance Towed Array Sensor System Low Frequency Active Sonar" (SURTASS LPA) beginning in 2019,(from NOAA website) and US Navy Hawaii Southern California Training and Testing (HSTI) 12/21/18-12/20/2023, "Marine Mammals and Sonar: Dose-response studies, the risk-disturbance hypothesis and the role of exposure context" Harris, CM, Thomas L., Falcone E.A., Hildebrand, J., Houser D., Kradtsheim P.H., Lam F.P.A., Miller PJO, Moretti D.J., Read A.J., Slabbekorntt, from the Journal of Applied Ecology vol 55 pp 396- 404, 0112018.</p> <p>It is not plausible to conclude that conducting the tests outside of the twelve-mile limit will absolve the Navy of responsibility for adverse effects on marine mammals protected by international conventions or domestic legislation like the Marine Mammal Protection Act (16 U.S.C. 1361 et seq.) which may well apply to these proposed exercises as having an effect within the twelve-mile limit even if conducted outside of it, for sound carries in water and marine mammals rely on a very acute hearing sense for survival.</p>	<ul style="list-style-type: none"> • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>A December 20, 2018 press release from the Center for Biological Diversity (www.biologicaldiversity.org) noted that "In 2004, during war games near Hawaii, the Navy's sonar was implicated in a mass stranding of up to 200 melon-headed whales in Hanalei Bay, Kauai." The possibility of similar unusual mortality events should be completely proscribed here since we have become so reliant on the simple undisturbed presence of these animals offshore as a tourist draw. We cannot expect to survive as an economy if marine mammals are annoyed, injured, or suffer mortality. It is unacceptable to consider that scant remaining fish stocks might be affected in the slightest. To ignore this risk would be foolhardy and cavalier of us. The Navy has outlined the hearing ranges of fish stocks in the area. Given the destruction of nereocystis luetkeana beds locally also due in my opinion to global climate change (it should be noted in saying this the seldom-stated likelihood that the United States military is quite possibly the largest emitter of greenhouse gasses on the planet far and above any nation state including our own) there is more than a strong probability that sustainable fisheries are finished until further notice on this coastline due to the wholesale destruction wrought on the rivers and the sea by our civilization. Salmon stocks are not close to what they once were. The commercial salmon season here has been cancelled at least twice in the last decade. At one time a seemingly limitless source of food that provided sustenance for thousands of years has been destroyed.</p> <p>As a citizen, I can state forthrightly that I see no point in conducting yet another science experiment that might further endanger these weakened stocks which are far more crucial to our survival as a people and a nation than the testing of bombs which do nothing but further our collective suicidal entropic destruction by means of incessant war.</p> <p>Petroleum conglomerates have sought the ability to set off devices off the coastline here. They were rebuffed as the Navy was previously. How can those of us who oppose drilling here do so on a strong footing if the conglomerates are able to point out that the Navy has already conducted similarly invasive events in the sea here? I think the Navy knows how its ordnance works mostly, and if they don't I would like to suggest computer modeling or the open sea as a last resort. Putting this testing within range of the coastline, just outside the twelve-mile limit, exhibits institutional concern about running afoul of domestic regulations regarding takings of marine mammals. Outside the limit, there are still international conventions that exist for the protection of marine mammals whose</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>numbers have been vastly reduced to the point of near-extinction in some cases.</p> <p>It is my understanding from a local press account that a letter requesting "No Action" was passed on to the Navy by a representative of the Mendocino County Board of Supervisors at a recent public meeting held May 03, 2019 in Fort Bragg, California.</p> <p>At the Dana Gray elementary school in Fort Bragg, California the Navy held this non-responsive event which gave no outlet for public input in a transparent effort to neatly absolve the Navy of having to document what were likely to be a series of strongly stated verbal objections, a move I found scandalous. Upon arriving I puzzled over the lack of communications equipment for public input and found there instead various marketing 'stations' with displays at which one might ask questions of Navy personnel there dressed unthreateningly in civilian garb.</p> <p>I also saw upon entering the building curious locked boxes that I paused to examine on my way in. On the wall at a low level accessible to children were coin-operated vending machines which they could use to purchase pencils for up to 25 cents. In the post-proposition thirteen California I grew up in I remember scratchy paper, no air conditioning and few books in the library, but I was never asked to pay for a pencil. I daresay, to paraphrase president Dwight D. Eisenhower's farewell speech, that the irony was altogether too well-stated with regard to his use of the word "theft" when speaking of munitions that January in 1961. Has anyone in the Navy ever had to pay for a pencil?</p>	
Anderson Car-1	<p>The resident orcas are critically endangered. We've almost killed them off by building dams and keeping their food source from them. They are fighting for their very survival. Please don't harm their fragile ecosystem more with these sonar tests.</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Anderson Cat-1	<p>The continued use of underwater sonar is contributing to extreme damage to wildlife. Added to the other stressors marine mammals are currently facing with ocean warming and acidification, and subsequent malnutrition</p>	<p>The Navy has conducted active sonar and explosives training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	issues, this is beyond irresponsible. Do your part globally, and show some decency.	summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Anderson Jene-1	The Olympic National Park is surrounded by small towns where tourism is a growing trend. Not only are you destroying the peace and tranquility that city folk seek, you're robbing sleep from the inhabitants--both 2 and 4 legged. It's a HORRIBLE RACKET--a perpetual Vitnam warzone. Cut it out!!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Anderson Jenn-1	Sonar testing is proven to cause deafness in marine animals and will cause a lot of harm. Please don't harm our marine life.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Anderson Jo-1	I have lived in the area my whole life and can remember hearing propeller driven aircraft shooting at the rocks at the mouth of the Hoh River. I picked 50 cal brass up on the beach afterwards. The chaff from the 50's and 60's fighter plane radar defenses was scattered in our hayfields. I watched low level jets almost on the grass in the fields so low the pressure wave under the planes flattened the hayfield. Training is valuable and please keep it going. Having served in Viet Nam in 1970 gave me the chance to see the good things training can provide. Don't let the negative statements overcome the good you can provide the country by training over the Olympic Peninsula. I don't mind the sounds of freedom.... Thank you, Spec 4,, Army veteran, VFW life member, American Legion member, Legion Rider, and a voting citizen	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Anderson M-1	My family has lived on Whidbey Island since 1909, four generations. My parents have had objections to the harm to our family and farm from the presence of the Navy for decades. We have observed destruction of our	The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>environment with loss of quality of life since 1942. It is devastating to learn our drinking water wells have been tested and found to be contaminated. Growlers fly just above our homes disrupting our sleep and conversation with family and guests at arms length. The foundations of our homes are shaken from loud invasive noise. We have lost friends who died from toxins coming from NAS Whidbey. We have lost property values with restricted rights of use.</p> <p>Our heritage has been destroyed with sprawling population. We are told by Navy personnel if we don't like it we can move. This is a major insult from those who have no roots or heritage living on Whidbey Island. How can citizens who move frequently judge us so harshly.</p> <p>Our serenity is gone our unique cherished space on Whidbey Island has never been a suitable environment for military activities. Our marine life is heavily impacted and in crisis with under water bombing and toxic run off into Dugualla Bay and Puget Sound. We have lost our Salmon and Orcas. We can no longer tolerate the invasion of an ever expanding fleet of Growlers. There are far more suitable locations for training with less impact on public health and the environment.</p>	<p>location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>
Anderson M-2	Letter from U.S. Senator Brock Adams, no response required.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Anderson P-1	Please consider marine life and their right to life in our Oceans.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Andres-1	<p>I want to add my name to those who believe that the use of sonar in the waters used by whale populations and their migratory lanes is detrimental to these creatures. I also do not think that materials used in armaments should be added to the ecology of the oceans unless we are in a wartime navel battle.</p> <p>Explosives and sonar should be used outside the areas known to be used by whales.</p> <p>Please do not allow the Navy to "practice war" anywhere near any whale</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	population areas or migratory paths. Northern bottlenose whales in a pristine environment respond strongly to close and distant navy sonar signals ... https://royalsocietypublishing.org/doi/10.1098/rspb.2018.2592	EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Andrews-1	It is bloody hot and last night I gladly for the first time threw open my windows and doors. I could not, however, sleep because of the close, loud grinding of the growlers over my home in Port Townsend. I think everything has already been said to you, so I am just adding: heckua way to live on this beautiful, quiet Olympic Peninsula.	For information about the Navy's analysis of noise impacts related to training in the Olympic Military Operations Area, please see Section 3.12 (Socioeconomic Resources), Section 3.13 (Public Health and Safety), and Appendix J (Airspace Noise Analysis).
Anonymous-1	It is not possible for an organization or individual to perform an unbiased study upon themself. The results of your study are therefore invalid.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Anonymous-2	Call for Public Support of Tribal Comments on Navy SEIS May 2, 2019 Since 2005, Tribes in Mendocino & Lake Counties have opposed Navy training and testing in the Northwest Training and Testing (NWTT) range. The ten Tribes demanding that their cultural ways of life and the marine environment be protected from impacts of the Navy's training are: Cahto Tribe of Laytonville Rancheria; Coyote Valley Band of Pomo Indians; Hopland Band of Pomo Indians; Little River Band of Pomo Indians; Pinoleville Pomo Nation; Potter Valley Tribe; Robinson Rancheria of Pomo Indians; Round Valley Indian Tribes; Scotts Valley Band of Pomo Indians; and Sherwood Valley Rancheria of Pomo Indians. For countless generations, the Tribes have maintained deeply significant cultural and spiritual ties to the coastline and ocean waters adjacent to Mendocino and Humboldt Counties, California. The Tribes have commented on earlier reviews of the environmental impacts of the training and testing, and are now requesting the public to submit comments on the Navy's current Draft Supplemental EIS (SEIS) to support the Tribes' position. The comment deadline is June 12, 2019. The adequacy of the assessment of Tribal cultural impacts as well as environmental impacts from the Navy's training and testing activities is especially important because these activities take place in the Pacific Ocean, which holds great cultural and spiritual significance for the Tribes and is critically important for the wellbeing of all people and lifeforms on	Please see the Navy's response to comments received from the Yurok Tribe.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>this planet.</p> <p>Please include in your comments to the Navy your support of the following Tribal issues, along with any additional concerns you may have:</p> <p>Ask that the Navy work meaningfully with Pacific coast Tribes to develop measures that will reduce impacts to the Tribes' cultural ways of life, including culturally and spiritually significant marine species and habitat that are vulnerable to Navy training and testing activities.</p> <p>Urge the Navy to expand prohibited activities in the 50-mile mitigation area to include use of sonar. Sonar causes serious harm to the health and wellbeing of whales and other marine mammals.</p> <p>Request that the "best available science" referenced in the Draft SEIS be expanded to meaningfully take into account Tribal Traditional Knowledge. Since time immemorial, Pacific coast Tribes have used and managed their traditional marine environment, including those areas situated within the Navy's NWTT.</p> <p>Request that the Navy's monitoring program be expanded to include effects of training and testing beyond potential harm to species population levels. Population level effects are insufficient to fully take into account the potential harm that Navy training and testing may cause, because this standard does not fully incorporate the concept that impacts to Tribal cultural resources may not be manifested in physical impacts on marine species.</p> <p>Urge the Navy to expand its list of environmental "stressors" to include those parts of the Study Area that encompass Tribal cultural resources, and the concept that those resources have intangible features, such as spiritual connections, which will be impacted by the training and testing.</p> <p>Request that the cumulative effect of ocean acidification should also be considered in the SEIS. The Draft SEIS concludes that the assessment in the Navy's 2015 Final EIS that impacts to water quality from explosives and explosives byproducts in training and testing remains valid and does not need to be reconsidered. Based on studies conducted since 2015, this conclusion neglects to take into account the effect that changes in climate may have on the corrosive power of an increasingly acidic ocean.</p> <p>Specifically, the Draft SEIS does not consider the likelihood that acidification of ocean waters will accelerate corrosion of explosive devices and byproducts of training and testing.</p> <p>For more details on the Draft SEIS, and how to submit your comments, go to: https://www.nwtteis.com.</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

Commenter	Comment	Navy Response
	Thank you for helping protect the future of the sacred ocean and Tribal peoples along the west coast.	
Anonymous-3	With everything on our platter adjusting to maintain viability and balance, it seems to me insane to keep doing what we are doing, like damaging sea life by testing weapons. Please turn your attention to returning well being to all that calls the oceans their home environment. All is interconnected and every considerate act affects whomever is reading these words too. Thank you.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Anonymous-4	yeah [expletive deleted] all that ima blast sounds and point lazars at yall jets and [expletive deleted]. eye 4 and eye. stop the [expletive deleted] sonar of u know wtf it does to our neighbors in the sea!? u have any [expletive deleted] clue? [expletive deleted], sincerely the orcas	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Anonymous-5	Leave my [expletive deleted] whales alone you self centered [expletive deleted]	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Applegarth-1	<p>RE: NWTT Draft Supplemental EIS/OEIS</p> <p>I am advocating for a "No Action Alternative" for the proposed Navy plan. Marine species are under extraordinary stressors now due to climate disruption, environmental pollution and warming seas. A study by New Jersey's Rutgers University, released in April 2019, finds that ocean-dwelling species are dying off at "twice the rate of those on land." This alarming recent finding means the 2015 studies cited in the NWTT Supplemental EIS/OEIS are most likely out of date and not relevant today. With the U.N. reporting an average of 150 extinctions a day globally, we must be very careful not to disturb struggling marine species.</p> <p>The EIS/OEIS states in section 3.4.1.4 that "marine mammals occur in every marine environment in the study area" and that they are sensitive to noise pollution such as what would come from the proposed navy exercises. Stranding deaths of marine mammals can be due to many causes, one of the listed causes being excessive noise pollution, which interferes with many levels of marine mammal life: navigation, finding prey, avoiding predators, communication, reproductive activity and more.</p> <p>The EIS/OEIS lists human caused noise as a "potential habitat level stressor." The EIS/OEIS lists 130 marine mammals, but says hearing sensitivity testing has only been done on 25. This leaves 105 marine mammal species we do not have data on as far as the effect on them by the proposed Navy testing. Most likely the Navy testing would be harmful, as bombings and loud noises usually are on all life forms.</p> <p>Habitats locally are already very stressed from environmental causes due to</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>human influence. I heard a public talk by Dr. Cynthia Catton of the Bodega Marine Lab (Bodega Bay, CA.) on April 28, 2019 in Point Arena CA. She showed how the Northern California coastal ocean environment off Sonoma and Mendocino Counties has turned into an urchin barrens, with the massive die off of bull kelp forests, affecting all species (fin fish as well as most invertebrates) in the near coastal area. This die off also has negative implications for ocean species further out, as well as marine species that feed on invertebrates.</p> <p>Section 3.0.3, 7-7.4 lists the multiple injuries and physiological stressors to marine mammals that can occur due to the proposed testing. Just as with humans, any species living in an area under military bombing, noisy large vessel and aircraft travel become extremely stressed and possibly injured or killed.</p> <p>In addition, the bottom habitat disturbances from mines up to "2.5 meters" plus other dropped bombs/ordinances are a dangerous level of disruption for marine mammals and species who are bottom feeders or dwellers. To suggest that this would be mitigated by limiting the area to previously used exercise areas already disturbed is a poor argument. This does not allow those areas to recover.</p> <p>In short, I strongly oppose the proposed Navy testing exercises on the grounds of environmental harm to already stressed marine species and ecosystems.</p> <p>Robin W. Applegarth</p>	
Aquino K-1	<p>The Navy is part of the planet. They are also part of the population that has a harmful effect on the planet due to their practices. Between the radiation from Fukushima reaching our shores and the US Navy, there is a lot of stress on the ocean inhabitants.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Navy's project website at: www.NWTEIS.com
Aquino L-1	<p>This is horrendous! This is unacceptable to cause hearing loss in all marine life for sonar testing! If is caused all people and species on land to go deaf, would you still do the testing?! Of course not! Where is the common sense in this senseless action?</p> <p>The world is watching with scrutinizing eyes on your next steps. No species or mammals are expendable. Be part of the solution, not part of the problem! Please stop this testing immediately!</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Arce-1	Against the sonar testing	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Archer-1	This is completely unacceptable and needs to stop immediately.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Arias-1	Protect our wild species and stop Sonar Testing!	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Armon-1	Does this NWTT Draft Supplemental EIS/OEIS comply with the Ninth Circuit Court Opinion filed July 15, 2016?	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>If not, please comply. Cumulative impacts on individuals as well as populations of marine species must be considered.</p> <p>The Court held that NMFS must ensure the least practicable impact on marine mammals “even if population levels are not threatened significantly.” It also held that protecting marine mammal habitat from Navy sonar is “of paramount importance” under the law, and that, where data on marine mammal distribution are limited, the agency is compelled to err on the side of overprotection rather than underprotection. NOAA has recognized the coastal areas of California, Oregon, and Washington to be part of the Endangered, Species in the Spotlight, Southern Resident killer whale (SRKW) range, and is in the process of designating these areas as part of the SRKW critical habitat. The same areas are being used by Navy NWTT. How is this addressed, mitigated, in this Draft?</p> <p>I appreciate the Navy's efforts to support and include best available science, public outreach and input, and minimize impacts, however we can do better. Aquatic sounds travel beyond our sight and technology to detect all the marine mammals and other species in the training and testing range and beyond, that are being impacted. Sound is sight for many oceanic species. Even temporary blindness can be catastrophic. Has the Navy considered virtual reality training and testing, and/or conducting training and testing where there are the least amount of species, such as out past the continental shelf?</p> <p>Thank you for your consideration.</p>	<p>Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p> <p>The Navy has considered the use of simulation, and in fact already uses simulation in training and testing whenever possible; please see the discussion presented in Section 2.4.1.4 (Simulated Training and Testing Only) and Section 5.5.1 (Active Sonar) from the Supplemental EIS/OEIS. The Navy has also considered conducting training and testing in other locations, such as beyond the continental shelf; however, as stated in Section 2.4.1.1 (Alternate Training and Testing Locations), other locations fail to provide all the attributes necessary for effective training and testing.</p>
Armstrong H-1	STOP the nonsense! No to military testing!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Armstrong K-1	<p>I don't care if this isn't considered a "substantive" comment, I'm going to share it anyway.</p> <p>I oppose the expansion of the Navy's training grounds on the Olympic Peninsula. The noise pollution caused by the growlers is obscene, and is negatively affecting home owners, business owners and residents that I am personally aware of, in Clallam and Jefferson County.</p> <p>The Navy's noise pollution threatens our peaceful rural way of life. The economy is going to suffer from so much noise pollution too, businesses that are heavily impacted by the disruption and tourists and locals alike are</p>	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year in the Olympic Military Operations Area (MOA).</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>turned off from participating in enjoying the beauty of the Peninsula if they have to compete with growlers jet noise.</p> <p>As a Board Member of Olympic Nature Experience, a local non profit that runs nature schools and "strives to nurture our communities connection with nature and each other through immersive outdoor experiences", your growlers threaten the very landscapes that we are trying to peacefully raise and teach children and adults.</p> <p>I am appalled by the impact the proposed Naval expansion will have on my community.</p> <p>Farmer, Mother Olympic Nature Experience, Board Member</p>	<p>When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to approximately one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved. <p>The potential impacts to socioeconomic resources was analyzed in Section 3.12.3.2 (Airborne Acoustics). The results of that analysis include in part, "Considering that trends in economic indicators have historically increased and are projected to continue to increase, disturbances from airborne acoustics on the Olympic Peninsula are expected to have a negligible impact on socioeconomic resources in the Study Area."</p>
Armstrong M-1	<p>This is criminal - please STOP.</p> <p>We need these creatures - my first thought is to put EACH OF YOU underwater to be faced with the same abuse.</p> <p>With all the technology there IS ANOTHER WAY!</p> <p>PLEASE STOP AND USE WHATEVER ELSE YOU ALREADY HAVE UP YOUR SLEEVES.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Arndt-1	Please stop any sonar testing near any whales. It clearly bothers them and the whale population is in a serious decline.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Arnn-1	<p>Best scientific information based on my experience living here on the Olympic Peninsula: These flights are LOUD. They are disruptive of daily life, and physically and emotionally stressful for me.</p> <p>Good for Boeing, maybe; good for the Navy, maybe, but useless otherwise. Aircraft carriers in the 21st century?</p> <p>The Draft Supplemental EIS/OEIS appears to be nothing but a piece of marketing theater. It now seems apparent that the Navy was never going to pay any attention to public comments or criticisms of its carefully engineered document.</p> <p>Still, I implore you--some other human reading this, to stop this insanity and make the boys in the planes practice their craft in the Yakima Range.</p>	<p>When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to approximately one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved. <p>The Navy has considered other locations (see the NWTTE Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Arnold Je-1	With the reports of a huge increase in the number of dead whales showing up along the California coast, it is unconscionable that the Navy would even consider further stressing these majestic yet struggling animals, This type of testing should never occur, not now, not ever.	The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.
Arnold Ji-1	My wife and I understand the importance of military aircraft and their training needs. However, the Navy's Environmental Impact Statement does not provide any legitimate reason that the training cannot occur in an area designated for warfare training. The Olympic National Park is not a warfare training ground; it is a refuge for people who seek peace and renewal. Growlers thundering overhead make such an experience impossible and threaten the health and well-being of those who live on the coast. Please move your training to an area designated for warfare training. This change would be appreciated so many for so many reasons.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Arves-1	Je suis pour la préservation de la planète x	Merci de participer au processus NEPA.
Ash J-1	I was dismayed to learn our country's Navy would like to conduct sonar testing in the Salish Sea, the home of countless marine animals and the endangered Southern Resident Killer Whales. I am 100% against underwater sonar testing and question why, with all the data regarding sonar testing and sea life, we are still wanting to conduct sonar testing. I am not a scientist or expert in marine animals; however, one does not need to be an expert or have a degree in science to watch a video from 2003 to determine the pod of SRKW are attempting to escape the disruption in their environment that is coming from the Naval vessel that is performing sonar testing. A quick search for "whales and sonar testing" produces a plethora of articles and statistics about whales beaching themselves near areas or time frames of sonar testing. Most interesting were articles of the Navy's own admission that sonar testing leads to hearing loss in marine mammals. We, the citizens of the US, ask other countries to stop the harm done to marine life. We, as a county, have enacted laws to protect our marine life.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i> . Pearl

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Yet we continue to choose actions that are detrimental to the well-being of marine life. Our Navy has some of the smartest, most innovative, brilliant people on this planet. We can do better.	Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.
Ash R-1	Please no. Our Marine animals are suffering enough. the best part about living in Washington state is the wildlife in The great outdoors. You will destroy it.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ashby-1	I am totally against sonar testing or any other kind of underwater activities that have been proven to harm whales and dolphins or any other animal.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ashford-1	I am opposed to any actions by the U.S. Navy that would endanger marine life along the California coast, particular mammal species such as whales and porpoises.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Aspey-1	NAVY SONAR WAR TESTING ALONG THE COAST OF CALIFORNIA Thank you for taking the time to review my comment. We are powerless against the agenda of the Navy regarding the Navy sonar war testing along the coast of California. The marine life that will be affected that uses sonar at a low frequency for survival is also powerless against the effects it will cause to their existence and environment. Perhaps using another location not the coast of California that has been a marine sanctuary could perhaps be an alternative to sonar war testing. Using ice bergs as a sound barrier and the minimal amount of testing required to preserve our marine life that will be effected by the low frequency testing and the sound of explosions and bombs constantly going off in the ocean and the emissions might be an alternative testing ground instead of the migration path of the gray whales along the coast of California. 1966 Congress establishes a Marine Sciences Council led by Vice President Hubert Humphrey. In 1972 October 23 - Congress passes the Marine Protection, Research and Sanctuaries Act which, among other things, establishes the National Marine	The issues described in the comment were addressed in the Draft Supplemental EIS/OEIS in Chapter 3 (Affected Environment and Environmental Consequences). All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Sanctuary Program. Title III of the law is later renamed the National Marine Sanctuaries Act (NMSA).</p> <p>Now up to date in 2019 The Office of National Marine Sanctuaries serves as the trustee for a network of underwater parks encompassing more than 600,000 square miles of marine and Great Lakes waters from Washington state to the Florida Keys, and from Lake Huron to American Samoa. The network includes a system of 13 national marine sanctuaries and Papahānaumokuākea and Rose Atoll marine national monuments.</p> <p>It is our responsibility to keep the oceans safe and habitable and live in harmony with the marine life that reside there in their home in the ocean. The marine sanctuaries were set up for that purpose.</p> <p>If we do not honor and protect our marine life future generations will not have the marine life as it exists today. Once a species is extinct it is permanent.</p> <p>A global effort needs to take place to preserve our oceans. It is not only the Navy that is disrupting the ecosystems of the oceans but all countries.</p> <p>It is up to mankind to decide do we want to continue to destroy each other and destroy our planet and make it uninhabitable or do we want to live in harmony with nature and preserve it. That is the main question on this earth. So far we live in a low frequency of destruction that is in a downward spiral.</p> <p>Educating our children and future generations the importance of keeping our oceans clean and habitable for marine life is one way to move forward. We can continue to support the National Marine Sanctuary, organizations, groups, clubs, and individuals that are cleaning up the pollution, untreated sewage, garbage, fertilizers, pesticides, industrial chemicals, plastic, mercury, and radiation. We need to stop overfishing, and poaching. We need to continue to restore the coral reefs. Stop offshore drilling. Stop Whaling and shark finning. Whale plumes play an important role in the oceans ecosystem by releasing fecal plumes near the surface which support plankton growth. This process is known as the "whale pump." Whales also move nutrients thousands of miles from their feeding grounds in the colder waters of the Arctic to the warmer waters where they travel to migrate to calve.</p> <p>The pH of the ocean waters have become more acidic due to humanity's CO2 flooding the atmosphere. The altered pH of the water makes for a bevy of problems. The sperm-whale defecation removes atmospheric carbon each year by enhancing such plankton growth.</p> <p>We need to use eco friendly products because the runoff goes into the</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	ocean and continue to build eco architecture for marine life.	
Aspinall-1	The proposal to implement sonar testing in the Salish Sea would be extremely detrimental to marine mammals, including harbour porpoises and orcas. The Southern Resident Orcas are already critically endangered, numbering only 76. Sound is vitally important to them. There are videos showing orcas in extreme distress and trying to flee the noise from sonar testing. The Navy itself has stated that sonar testing causes hearing loss in marine animals. This proposal threatens the survival of species who depend on their hearing. Our seas are in crisis and maintaining a healthy balance of it's apex predators is crucial. Over 50% of the oxygen we all breathe is generated by the sea. Please do not implement this destructive testing.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Assaly-1	We are already polluting the oceans with our plastics and killing marine animals. When will enough be enough? We do not own this planet, we SHARE it with every other living creature innocent creatures for sonar testing. Stop & care about the world around you, because everything falls apart without our functioning ecosystem.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Athair-1	SINCE THE INCREASE IN GROWLER RECENTLY HAS BEEN HAPPENING IT HAS BEEN SIGNIFICANTLY UNPLEASANT LISTENING TO THE NOISE NOT ONLY IN THE WILDERNESS AREAS HERE ON THE PENINSULA BUT ALSO IN PORT ANGELES IT SELF.IT DISTURBS ME ALSO THE AMOUNT OF FUEL CONSUMED IN ONE HOUR TIME IS 1100 GALLONS FOR EACH GROWLER ! HOW MUCH WASTE OF NATURAL RESOURCES AND NATURAL QUIET HABITATS AND WASTE OF FUEL WILL CONTINUE TO DIMINISH ALL THAT WE	<p>When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:</p> <p>1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>DESIRE IN LIFE ON THIS PLANET???? PLEASE LIMIT AND DIMINISH THE NUMBER OF GROWLER ACTIVITY AND THE NUMBER OF GROWLERS ESPECIALLY IN WILDERNESS REGIONS FOR PEACE AND QUIET AND TRANQUILITY SO IMPROTANT TO ALL OF US....</p>	<p>2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year).</p> <p>3. The proposed increase of 300 total flights per year averages to approximately one additional flight per day.</p> <p>4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p> <p>The Navy considered reducing the number of training and testing activities. However, as described in Section 2.4.1.2 (Reduced Training and Testing) in the NWTT Supplemental EIS/OEIS, a reduction or cessation of training and testing would prevent the Navy from meeting its statutory requirements and adequately preparing naval forces for operations at sea ranging from disaster relief to armed conflict.</p>
Auclair-1	<p>I just saw some sonar testing recording from Ric OBarry site. I can't believe this is still going on! Not only patrolling in the water close to marine life (cetaceans in particular) causes distress because of engine sounds, now sonar testing?</p> <p>What will it take for you to understand that by killing life we are killing ourselves? No need to train for war. We are killing ourselves slowly but surely by destroying marine life balance.</p> <p>Think about it. Sure extermination of ALL OF US against possible conflict with other equally stupid humans.</p> <p>I'm not asking you to do something about it. Au contraire! DON T DO ANYTHING!! You did too much already.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Auguste-1	<p>Our NAVY is important to our country, but our Wildlife is vital to the world and it's environmental health in general. Since sonar testing is dangerous to marine mammals, especially to endangered species, it a no brainier to</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	STOP. Even the military bares the responsibility with the rest of the world to protect wildlife before it to late. STOP THE TESTING. STOP! 🙅	EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Aum-1	The decibel level of the proposed sonar is higher than the number of decibels it takes to kill some of the marine mammals and would therefore kill many of them. This could be a deadly blow for our already polluted oceans with many mammals such as the whales and also the Common Murres now dying by the hundreds. I hope we can all work together to make the ocean a healthy beautiful place for all. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Avila-1	Under the current NOAA issued Unusual Mortality Event for Gray Whales, any increase in Military Training could very well prove to be more damaging to whales. Our Sea Lions and Seals of all types are starving to death. All Marine Mammals are suffering right now because of lack of food. It is the one common denominator in all species listed for reason of death in necropsies. Necropsies are not testing for Sonar and Seismic damages. So Necropsies are not complete. You have NO Idea what your new weapons will do to marine mammals. You are just guessing. Your Marine Mammal Observers are limited in doing their job when a weapon travels 7 times the speed of sound. Our Southern Resident Orca live in this area where the Navy wants to continue to train for war. There are 75 left with one new baby. The Navy can NOT say their actions will not harm SRKW whales. Our fish populations are low in all areas according to NOAA fish surveys. The Navy admits there will be losses although small. How small? Its just a guess for anyone including the Navy. Virus, Domoic Acid, Infections, Starvation, and the over all condition of the Health of the Ocean Environment for the Pacific is in a fragile state. I am quite sure the Navy could find a area that less damage would occur to practice for war to Marine Mammals and the Environment they call home. I fully understand that need to practice. However I do NOT APPROVE of any	The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities. The Navy's use of new weapon systems such as high-energy lasers, kinetic energy weapons, and biodegradable polymer, while new to the NWTT Study Area, have been tested on other Navy ranges and evaluated in previous environmental documents. Their use in the NWTT Study Area has been thoroughly analyzed in this NWTT Supplemental EIS/OEIS for impacts specific to their use in this environment. In each case, as described throughout Chapter 3, impacts are expected to be minimal to undetectable. The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>additional new testing of military actions for this purposed Area. Especially the types of new weapons you the navy would like to test. You the Navy have no idea what the outcome will be. You suggest that public back up our statements with explanations, facts and references, for that I refer you to your request for permit in the Navys own words about the environmental impact for all species should you be granted this permit. You, the Navy clearly state the additional damages that will and could occur. This is not the time to be adding more damage to an Environmentally damaged area. Connect the dots with NOAA research. General Public does not have the time to show you, exactly where you have stated damages will and could occur from this action. You are the ones who provided the information. If the Navy needs help in locating their own information we are certainly screwed are we not? General Public is well aware of what is going on. Dont make it increasingly hard for public to comment by asking for files uploaded and page numbers with paragraphs to your own information. That is your job. You are the ones requesting Public Comment.. Listen to NOAA findings. Listen to the Scientific Research being provided as well as your own findings in your request for permit...and for Gods sake..Take the time to care as much about Americas Oceans and its life, as you do about protecting its citizens in case of war. Our Oceans and the Marine Mammals who call it home..Are also what makes up America that needs the Navy's protection. For once, think about the Americans who have NO HUMAN voice that live in the ocean. What would America be with out a healthy off shore environment? A baron waste land with no resources for American Citizens. Find a safer, less environmentally damaging area to train. I understand the Golf of Mexico has a Huge Dead Zone. Far larger than your purposed area currently. Go practice war in a dead zone, where you do not add to a already fragile death of a eco system. A place where you do not harm, an already Critically Endangered Species such as the Southern Resident Orca or any other Starving Marine Mammal..Use an area that is already dead. Im sure the Navy has the resources to operate anywhere in the world. Use the resources and change locations for training. Its to high of a price to pay in your current requested location. California, Hawaii, Oregon, Washington and Alaska have suffered enough with Navy War Games. Time to move to a less environmentally damaged area to continue your tests. Give our Coast and Our Marine life a chance to recover the damage that is already done.</p>	<p>unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy consulted with the National Marine Fisheries Service regarding the Navy's Proposed Action and potential impacts to endangered species, as required under the Endangered Species Act.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Avnet-1	<p>I have just learned of an EIS put out by the U.S. Navy on March 29, which is very disturbing to me. The only EIS alternative that is acceptable is the No Action Alternative. The other options given are unacceptable to the environment and life on the Olympic Peninsula. Alternatives 1 and 2 would cause unforgiveable and unnecessary damage to Olympic National Park and the Olympic Coast National Marine Sanctuary. Alternative 2 is the most extreme.</p> <p>The length of the EIS, the great area it affects, and the many people it affects requires a 90-day comment period. This, so the EIS can be examined properly and thoroughly. I ask you for another 14-day extension of the comment period. The noise from multiple jet flights over the western and northern parts of the Peninsula will chase residents and visitors away. This will affect the health and economy of the Peninsula and the state of Washington.</p> <p>The search pattern of jet Growler flights looking for emitters would roar above the ocean beaches; the Washington Islands National Wildlife Refuges; Washington State Department of Natural Resources land; Quinault, Quileute and Hoh Reservations; and thousands of acres of private land, including the towns of Forks and Amanda Park. The Navy admits to 85–100 decibels of noise per pass. That is enough to cause hearing loss and contribute to other health problems. People in Forks have recorded 94 decibel flights under the current operations. While noise is known to affect people and no studies have been done on the iconic Olympic elk, it is not difficult to reason they would be similarly affected, being mammals of a similar weight.</p> <p>The military training in the Marine Sanctuary would do damage to the ocean beaches, the marine animals of the coast, the nesting areas of many of Washington's shorebirds, migrating whales, and the birds that use the Pacific Flyway. The Navy has denied flying over Olympic National Park. This is untrue. Not only is this untrue, it is impossible not to fly these missions over the Park. This degradation of the Olympic Peninsula's environment is unacceptable. For 112 years, Congress and presidents have set aside areas of the Peninsula to protect its valuable environment. Irreparable damage would be caused if the activities are done as stated in the Navy EIS/OEIS Mar 2019 Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing.</p> <p>Please stop this plan by the Navy. The training has been done elsewhere. It can be done elsewhere. Wild places are not empty places just waiting for</p>	<p>The original 60-day comment period was extended by 15 days for a 75-day comment period.</p> <p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential effects of Growler and other activities on the environment are discussed in Chapter 3 (Affected Environment and Environmental Consequences) of the NWTT Supplemental EIS/OEIS.</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	an invasion by the military. Our national security must also include environmental security.	
Ayala J-1	I am a very concerned United States citizen. I appreciate the US Navy but it really saddens me to know about the harm done to marine life that is directly caused by Sonar. Please continue protecting the US while still protecting all marine life instead of harming them. This will help future generations to come and help preserve the health of our only home.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ayala S-1	In support of marine life, which we are all responsible for, I beg you to reconsider.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
B		
Babbe-1	The oceans are getting more ravaged each year, with garbage gyres growing annually (this year measured at the size of the 19th largest COUNTRY in the world, acidification and massive coral reef dye offs, our local lack of bull kelp and urchin infestation compromising sustenance abalone harvests, this year several humpbacks are getting stuck in the SF bay because they do not have the reserves to make the migration to northern waters; not to mention the fisheries-of-no-more all along the entire north coast. All ecosystems of the oceans outside explicitly protected and small reserves that are patrolled are ailing, while an accelerated number of species are rapidly going extinct. Meanwhile, "Active Sonar" is a sound blast at 200 decibels. Death by sound for a HUMAN is at 185 decibels. The destructive capacity for miles with that radius is a real and dire concern given the state of ocean health. Business as usual has left too much destruction in its wake, thus WHY these permits need reviewing every few years. It is a built in safe-guard to human life and the well-being of the oceans in which environmental, social, and economic well being are intimately intertwined. STOP ALL TESTING, EXERCISES, OFF ALL COASTS OF THE UNITED STATES. OUR OCEANS ARE DYING. OUR PLANET IS DYING. STOP NOW!!!	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Backe-1	Olympic National Park is one of the last quiet places in the US. At least it was until fighter jets started flying over it regularly. If jets must practice, please have them fly west over the Strait of Juan de Fuca to the ocean, then go west another fifty miles before they practice their maneuvers.	The Navy considered but did not develop mitigation for aircraft overflights, such as shifting transit routes, relocating aircrew training activities, or modifying flight altitudes, because such mitigation would not be practical to implement due to implications for safety and mission requirements. The Federal Aviation Administration (FAA) controls the National Airspace System

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	This would reduce much of the jet noise over the national park. There are SO FEW quiet places left; please let this national park be one of them.	and routes that overlap the NWT Study Area. The FAA designed the routes to efficiently manage air traffic in the region and to safely deconflict military traffic from commercial and general aviation aircraft, with consideration given to the presence of Canadian National Airspace and traffic to the north. The FAA is the responsible federal agency for determining transit routes and any changes to such routes must be approved by the FAA. The Navy is currently in discussions with the FAA exploring the possibility of shifting the FAA-established transit routes for military aircraft transiting to and from the Olympic MOA from Naval Air Station Whidbey Island to the north of the Olympic Peninsula. The purpose of these discussions is to consider the efficient and safe use of navigable airspace. While ultimately any shift in transit routes is the FAA's decision, it is possible that, if approved, such a shift will have the added benefit of reducing military aircraft noise over the Olympic National Park.
Baglien-1	It is not possible for the USN to mitigate the harm and actual damage that is done to the subject areas. Having been a hiker and backpacker in this area the noise and intimidation factor of Armed Forces flying over a National Park I will never be able to use the park again. There are alternatives to destroying the shorelines and forest lands of the area. Move this training exercise to the base at Attu Island. This is on the frontline and is in a much better location to defend our country from the Russians or the Chinese. This is what the training is about. Do it in a realistic setting where it is useful to the countries objectives. There are American flag Jones act compliant ships that could easily supple the base with all of the needs of the USN and dependents.	The Navy has considered other locations (see the NWT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.
Baglyos-1	I am 100% opposed to under water sonar testing which is harmful to sea creatures of all types. Please do not allow this! Thank you,	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bailey-1	RE: Draft Northwest Training and Testing Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement Dear Naval Facilities Engineering Command Northwest, Thank you for the opportunity to comment on the Draft Northwest Training and Testing (NWT) Supplemental Environmental Impact Statement (Draft EIS). The Friends of the San Juans' letter speaks for all of us who are aggrieved about impacts on the Southern Resident orcas, which are at serious risk of	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. Please see the Navy's response to the Friends of the San Juans' letter.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>extinction. We strongly believe this iconic species is currently, and will continue to be, directly negatively impacted by the training and testing activities. We have been doing all we can here in the San Juans to find ways to protect our remaining Southern Resident Killer Whales (SRKW), including drafting our own initiative with stricter guidelines for how close vessels can be to resident orcas; this will be for the November ballot and will likely resoundingly pass.</p> <p>Sonar testing and explosions are one of the cruelest ways to extinct the orcas and other cetaceans. If you've ever had a burst eardrum and bleeding from the ears (as I have), I can assure you it's unimaginably painful. For species that depend on sonar and echolocation to navigate, communicate, and stay together in family groups, it grieves me to think of them having this fate - all unnecessary.</p> <p>We coastal peoples treasure the marine and avian life that comes here to live among us and was here long before us; they are part of our family and for a great many of us, one of the reasons we stay here. We are a tourist destination and national monument. People come from all over the world to experience our orcas and other wildlife and the natural beauty these lands and waters afford. Our ways of life are so counter to the Navy's idea of "taking" - lands, animals, resources. We strive to protect and honor the marine species of the Salish Sea. We are not a warlike people. We revere life and are horrified at the idea of "taking" it to further any agenda.</p> <p>I include the entirety of the Friends of the San Juans letter as an attachment and agree 100 percent with their recommendations and those of the Task Force.</p> <p>Thank you for your consideration of our input and concerns as you finalize the EIS.</p> <p>Sincerely,</p>	
Baily-1	<p>Not only are your proposed continuous flights over the Olympic National Park and it's environs unnecessary because you have warfare designated areas that do not impact the livelihood of these areas. They are not World Heritage sites with an economy that depends on the peace of the area. The impact you are having on one of the few quiet and serenely beautiful places on earth, with your incessant flights and plans for more are destroying our economy, destroying the environment and all that live within it. What a price to pay for the stubborn insistence that you have the right to claim dominance over this area of profound peace. Because the Growler's do dominate!!! Why, I ask, such a profound insensitivity for those you are charged to care for? You have alternatives!!! It is time you became</p>	<p>When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	the friends that I thought our military was when I grew up during the second world war. I wanted to be a pilot. My father was a pilot during that war! Now it seems we must war with you to get you to see the harm you are doing and planning to do. Sit down, take a look at what is left of our precious world and help us keep safe from noise and disturbance in one of the few areas still capable of healing in the peace and quiet of an exquisite World Heritage site. The Joy you will bring when you end this heartless plan will bring hope and real support for your efforts that can be done where the impact is not so intense.. Thank you.	<p>averaged over a 365-day year).</p> <p>3. The proposed increase of 300 total flights per year averages to approximately one additional flight per day.</p> <p>4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p>
Bainbridge-1	<p>Our national parks are sanctuaries for wildlife and people. They should not be used for electronic warfare exercises. This is a desecration of what the Olympic National Park was preserved for.</p> <p>Olympic National Park is home to the endangered spotted owl and the endangered marbled murrelet. Its coastline is the biannual flyway for billions of migrating birds that depend on navigational signals disrupted by the jets. Growlers also collide with birds. 15 Reported "mishaps" include "large flock of birds hit after takeoff," "bird strike shut down engine," "bird ingested sometime after flight," and "encountered bird flock that FODed (foreign object damage) both engines."</p> <p>I live in Greenbank on Whidbey Island about 20 miles away from the OLF. Yet last night I listened to the Growlers rumbling until 11:00 pm. I did not move to Whidbey to live on an island controlled by the military. Please relocate your Growlers to a less populated, less idyllic place.</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Balducci-1	<p>Please reconsider doing war games and flybys. There's a smarter way to practice for war. And I know this country loves War.</p> <p>I also believe that there are many intelligent people in this country that could think of a different way to practice protecting this country.</p> <p>I don't understand how ruining the residence of so many and harming humans and wildlife is acceptable at all.</p> <p>Isn't that why you're practicing for war in the first place? Maybe I've missed the meaning of the military. For some reason I thought your mission was to protect those very things and not destroy them in the name of protecting them.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Ball-1	I do not support the Navy engaging in any sort of testing that affects animals. Especially marine life in this case who do not have the opportunity to express to the navy their concerns or pain. Do not proceed with this.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ballweg-1	We need to protect our whales, not submit them to the dangers of sonar testing. When will human learn to respect and protect the natural world. Proceeding with these test will have more long-term damage to our environment. Don't proceed. From The SEATTLE Times "The Navy first acknowledged sonar's damaging effects in 2001, after 16 whales stranded — or beached — in the Bahamas in a day and a half's time the year prior. Six animals died; the others were pushed off or escorted to deep water, according to a report from NMFS and the Navy. Several received necropsies. Two animals — the freshest of the dead whales — had hemorrhaging and blood in their inner ears and around their brains consistent with "acoustic or impulse injuries" which likely triggered the strandings, according to the report. The use of midfrequency sonar by Navy vessels near an underwater canyon was likely to blame, the investigation concluded."	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Baltan-1	The Southern Resident Killer Whales live their lives by sound, it's how they hunt and communicate. They can't eat if they can't find their prey because navy sonar is blocking their echolocation. The sonar also is damaging to their senses. DO NOT USE SONAR IN THE SALISH SEA! The SRKW are already on the precipice of extinction, they already are having a difficult time finding enough fish to eat. Don't seal their fate by using sonar.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bancroft-1	I copied here my "substantive" comment, but you are limiting how substantive we can truly be. Attached is my letter.	The commenting feature on the project website, while not a NEPA requirement, was added by the Navy to further facilitate commenting by the public. While the 1 MB limitation restricts larger file uploads, it does allow the Navy to continue supporting this feature in a cost-effective manner. Over 1,800 comments were received on this project through website commenting and attachments, with very few affected by this limit. The Navy will review this file size limitation for future projects.
Bancroft-2	While I agree that we need to have a navy that is well trained in order to defend our nation, I vehemently disagree with using our coastal waters to test bombs and other devices that will have any negative impact whatsoever on our marine life—from sensitive coral and other seabed life, to miniscule fishes and other tiny sea creatures upon which other fish feed,	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>to the largest of our sea mammals.</p> <p>I searched through and read much of the 1500 plus pages of your Supplemental EIS. The prose is impenetrable in many places. After going to the Open House in Ft. Bragg and seeing how impossible the Navy made it to receive and give information, I am cynical enough to believe that the Navy hopes the public will be deterred by the report's scientific verbiage and your repeated requirement that we search somewhere else for answers to our questions. For example, take this passage on p. 147:</p> <p>"Since the release of the Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effect Analysis in 2012 (U.S. Department of the Navy, 2012b), recent and emerging science has necessitated an update to these criteria and thresholds for assessing potential impacts on marine mammals and sea turtles. A detailed description of the Phase III acoustic and explosive criteria and threshold development is included in the supporting technical report Criteria and Thresholds for U.S. Navy Acoustic and Explosive Impact to Marine Mammals and Sea Turtles (U.S. Department of the Navy, 2017b), and details are provided in each resource section."</p> <p>In effect, you are telling us to go elsewhere than your already dense EIS report to find out what the impact of acoustic interference and explosions will have on marine mammals and sea turtles. Why don't you state it simply in your report?</p> <p>Reading further, I found discussion of "animats," in this long, technical passage that also tells me to go elsewhere to be informed of the potential impacts.</p> <p>"The animats do not represent actual animals, but rather allow for a statistical analysis of the number of instances that marine mammals or sea turtles may be exposed to sound levels resulting in an effect. Therefore, the model estimates the number of instances in which an effect threshold was exceeded over the course of a year, but it does not estimate the number of individual marine mammals or sea turtles that may be impacted over a year (i.e., some marine mammals or sea turtles could be impacted several times, while others would not experience any impact). A detailed explanation of the Navy's Acoustic Effects Model is provided in the technical report Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing (U.S. Department of the Navy, 2018)."</p> <p>In effect, I have learned nothing from your report on that topic. Aside from the unwieldiness of your method to assure public access to your study, my critique of your approach rests on a fundamental difference of</p>	<p>minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>opinion about protecting our nation, its people, and its coasts: Many citizens like myself treasure and wish to protect the ocean from the pollution and destruction resulting from navy testing. We are at a time of facing the destruction of the earth in another 50-100 years, in which climate change will drastically impinge on life of our grandchildren and great-grandchildren soon to come. While climate crisis deniers continue to scoff at this notion, the science and reality of climate change are ever more respected. The report that the Navy has provided relies on very technical science to make a case for why the Navy should be able to destroy swathes of ocean life with its polluting testing. If you believe in the veracity of scientific analysis, why not believe in the fundamental principle that we need to stop interfering with nature when possible, and instead become heroic warriors defending the sea?</p> <p>Of so many specifics that you would like the public to respond to regarding your methods, I pick one here, “sightability” of marine mammals present at a testing event. The report states that some are easier to detect than others.</p> <p>“The ability of Navy Lookouts to detect marine mammals or sea turtles in or approaching the mitigation zone is dependent on the animal’s presence at the surface and the characteristics of the animal that influence its sightability (such as group size or surface active behavior). The behaviors and characteristics of some species may make them easier to detect. For example, based on small boat surveys between 2000 and 2012 in the Hawaiian Islands, pantropical spotted dolphins and striped dolphins were frequently observed leaping out of the water, and Cuvier’s beaked whales (Baird, 2013) and Blainville’s beaked whales (HDR, 2012) were occasionally observed breaching. These behaviors are visible from a great distance and likely increase sighting distances and detections of these species.” (p. 148)</p> <p>It seems fairly obvious, even by the report’s admission, that the fact that humans on the surface cannot see the many creatures below the surface makes it inherently wrong to destroy that which you cannot see but has valuable life and purpose in the ocean.</p> <p>Then the report claims, “The Navy implements mitigation measures (described in Section 5.3.3, Explosive Stressors) during explosive activities, including delaying detonations when a marine mammal or sea turtle is observed in the mitigation zone.” What if you have already exploded your devices before the dolphin or turtle were spotted? It is absurd that you can justify saying, in effect, “Oh! Stop! I see a turtle there,” when there are surely hundreds of various species that would be affected but have gone</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>unseen.</p> <p>Even more unsettling are the repeated statements throughout the report such as this regarding short-finned pilot whales (p. 515): “Pursuant to the MMPA, the use of sonar and other transducers during training activities as described under Alternative 1 will result in the unintentional taking of short-finned pilot whales incidental to those activities.” The report repeats this assertion that there will be “unintentional taking” of various species under Alternative 1. Therefore, DO NOT follow Alternative 1. We do not want any unintentional taking of any sea creatures or destruction of sea life of any kind by the Navy.</p> <p>The report (Vol. 2, p. 29) acknowledges, “The quantity of explosives used during testing activities under Alternative 1 would generally increase (Table 3.0-7) compared to levels presented in the 2015 NWTT Final EIS/OEIS.” And under such increase, the damage to marine life will increase (p. 29), as the report states: “the impacts to marine invertebrates would be the same as those described in the 2015 NWTT Final EIS/OEIS. Both pelagic and benthic marine invertebrates could be impacted by explosive stressors. Explosions would likely kill or injure nearby marine invertebrates.” I do not want to see ANY vertebrates or invertebrates killed or injured in your naval testing. There is no justification.</p> <p>And certainly 50 miles out is not sufficient to protect the migratory route of whales, or the sea life that local fishermen and the coastal economy rely on.</p> <p>Another objectionable test is the use of high-energy lasers (discussed in Section 3.0.3.3.2.2). These, you state (p. 31), “are designed to disable surface targets, rendering them immobile. The primary concern is the potential for an invertebrate to be struck with the laser beam at or near the water’s surface, where extended exposure could result in injury or death.” I do NOT want any sea creatures affected, much less injured or killed, by your high-energy lasers.</p> <p>Further objectionable is the detritus that the testing program will leave behind, as you state (p. 38): “Military expended materials include non-explosive practice munitions, other military materials, high explosives that may result in fragments.” It’s already been proven that even miniscule plastic and other materials can strangle marine creatures and otherwise impact the ecology of their environment. With the tons of floating garbage already impacting sea life around the globe, the last thing we need is yet more garbage from the Navy.</p> <p>Alternative 1 and even 2 are sounding ever more noxious to ocean life.</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Here is another example (p. 40, Vol. 2):</p> <p>“Under Alternative 1, the total number of testing activities that include the use of seafloor devices would increase compared to ongoing activities (from 809 to 878). The majority of the activities involve the temporary placement of mine shapes in Inland Waters. Because of the nature of the activity, marine invertebrates on the seafloor may be impacted by seafloor devices by physically removing, crushing the individual, and temporarily increasing the turbidity (sediment suspended in the water) of waters nearby.”</p> <p>“Crushing the individual” does not sound at all “inconsequential.”</p> <p>Further potential damage includes “entanglement stressors that may impact marine invertebrates,” which “include (1) wires and cables, (2) decelerators/parachutes, and (3) biodegradable polymer” (p. 42, Vol. 2). NO entanglement stressors should be introduced to the marine environment.</p> <p>One last complaint about your process: I am familiar with the work of the Intertribal Sinkyone Wilderness Council, representing ten Native tribes along the coast and inland from the coast. Historically and traditionally they were stewards of the lands and seas, utilizing sea life in a way that was never wasteful, not killing only to kill (such as the thousands of buffalo shot by white tourists from rail cars in the late 19th century, left to rot). But rather in the Native tradition, the taking of life aims to sustain their own in respectful ways. If you have ever been to contemporary Indian ceremonies or feasts, you will see how that respect continues.</p> <p>I know that the Council attempted to meet with the Navy and speak about protecting the ocean and coasts from a traditional perspective; however, they were rebuffed. As a non-Native person, like all non-Native people in the United States, I have benefited from the takeover of these lands. But it is not too late for us to learn from traditional Indian values regarding respect for nature and a refusal to destroy wantonly anything that nature provides. What the Navy is proposing is such wanton destruction. We need to listen to the voices of the Native peoples who seek to restore our earth to a more ecological balance, for the good of all people and all life.</p> <p>In conclusion, I do not want to see any of these impacts on the ocean life. The Navy could make the world safer by taking such stressors and destructive practices out of the ocean and helping clean it up, if you really think about it.</p> <p>Thank you for your consideration, not only of my opinion but of the earth and of future generations that hope to thrive here.</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Bane-1	I'm against sonar testing	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/speciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Bannavong-1	<p>PLEASE, stop this testing. The harm you do to the animals of the oceans far out weighs any good you believe you're doing for the sake of society. Keep in mind, when you start destroying the cycle of life, that cycle includes HUMANS. So not only are you putting at risk the beautiful creatures of the seas, you are also putting at risk our future generations!</p> <p>Please don't allow your paycheck to over rule any compassion you may have.</p> <p>Your children will thank you.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/speciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Barber Je-1	The testing should end. It causes noise pollution, which impacts quality of life both for people and nature. I do not appreciate the air traffic going by during the night.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

Commenter	Comment	Navy Response
		<p>minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Barber Jo-1	<p>"The Navy predicts that there would be more than 500,000 instances of marine mammal behavioral impacts, harassment, and injuries over five years, including 275,000 instances of temporary hearing loss, and more than 600 instances of permanent hearing loss."</p> <p>This statement alone, which i believe vastly underestimates the problem, is reason enough to abandon this kind of testing. There should be a world wide ban. As species of large mammals are being decimated around the world it is vital we take every possible step to protect the wildlife that remains.</p> <p>and [expletive deleted] war and anyone one who supports it.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Bare-1	<p>Thank you so much, for protecting me. I know that your exercises are to prepare yourselves to protect this country. Thank you, keep up the good work.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Barger-1	<p>From meeting the Navy environmental science team, it is clear to me that they are sincere and truly desire the best outcomes from their research and from the public comments process. It is in this light that I submit these</p>	<p>The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy will consider additional tribal and</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>comments.</p> <p>In general, I express my support for the issues raised by the Lake and Mendocino Counties tribes. Those who study the ocean from a whole system perspective have the best tools for assessing what changes need to be accounted for; Tribal Traditional knowledge originates from whole system perspectives and would support deeper understanding and less damaging outcomes. For this reason, tribal cultural knowledge should be included and respected in any assessment process. They should be respected on their own value. That respect would be supplemented by incorporating them into scientific research as previously conceived.</p> <p>I support the tribes concerns about sonar: use of sonar (loud noises) in the social environments of complex social beings is like someone else playing loud music in your living room (bedroom, bathroom, kitchen and so on). You may be able to reproduce as much so population level effects may not be detected. Your family's resilience to other stressors may be greatly altered but may not appear for decades.</p> <p>"Population level effects" fail to adequately indicate impacts that could be detected, measured and mitigated. As significant as the inquisition was in European history, population level effects are only detectable by comparing individual towns and show only an impact on population growth between towns of 0.11%.</p>	<p>traditional knowledge provided, maintaining respect for cultural sensitivity and confidentiality.</p> <p>As stated in the Supplemental EIS/OEIS, the term "traditional resources" is used to encompass protected tribal resources.</p>
Barger-2	<p>I have one area of extreme concern about the environmental effects of the Navy's testing: there are no control plots. The Navy is, by its activity over such a range of environments, eliminating the possibility of control plots. When engaging in a damaging, disruptive or destructive behavior (loud noises, explosions) control plots should be held in reserve for future experiments. Otherwise no future testing can be done in unaffected areas. By using the whole range, the Navy is destroying possibilities for future "best available science." This violates both the spirit and the letter of the law. A repeated experiment on the whole system is not an experiment. Thank you for your time and attention and again thank you for your efforts to protect the environment.</p>	<p>The Navy's tests are not experiments of the type requiring control plots as suggested by the comment. The Navy's proposed testing is to evaluate how specific systems function in various natural environments.</p>
Barhum-1	<p>Sonar testing has caused mass strandings in the past. Take for example the Greek stranding of Cuvier's beaked whales on May 12 1996. Four of these whales were found bleeding from the eyes. It wasn't never confirmed that naval sonar testing causes THIS particular stranding, but you do the math. Another event we should remember is the mass stranding of different species in the Bahamas in the year 2000. The variety of species lost and the extended geographical area was of a greater magnitude.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>After this stranding, more laws were put into place. Despite this, the Navy was still found conducting sonar exercises in a narrow channel in close proximity to a pod of orcas, porpoises, and grey whales in Washington (San Juan Island) in 2003. Marine mammal experts found dead porpoises floating ashore. A dead harbor porpoise was found dead bleeding from its eye. The CT scans performed on these animals showed acoustic trauma and hemorrhaging around the brain.</p> <p>These are only a few events in the long list of strandings and marine mammal deaths that can be attributed to sonar testing. There are laws in place meant to protect the home and safety of these innocent animals. A small fine doesn't seem like a big deal to an entity with an enormous budget, but the people are aware. And we stand against this kind of cruel act.</p>	<p>the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Regarding previous strandings, see Section 3.4.3.1.8 (Stranding) of the 2015 NWTT Final EIS/OEIS, and the "Marine Mammal Strandings Associated with U.S. Navy Sonar Activities" (https://www.nwtteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/2019-Supplemental-EIS-OEIS-Supporting-Technical-Documents). Please read the discussion of the 2003 event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>
Barker-1	<p>The Navy has been tightly wound with the University of Washington, with over 200 grants given to UW by the Navy (https://www.grants.gov). Undoubtedly, this relationship, and the relationship with military contractors such as Boeing, has become vital to the economy of the area. This is not a reason to continue the harmful impact of Growler drills on Whidbey Island. Rather than being a good community member, the Navy is causing harm and destruction, and is protected by its comrades in the economy. That the Navy and the Department of Defense have huge pockets of money and that many in the area profit, is not a moral reason to continue damage to the Puget Sound, and to Whidbey. Nor is the damage done in wars that have continued for over 18 years an excuse. Stop the contamination of and violence to local and distant communities.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Barrett-1	<p>Please do not conduct your training in the critically endangered habitat of the Southern Resident Killer Whales of the Salish Sea. You already admit and KNOW your training is harmful to marine mammal hearing. These orca are fighting for their survival against low prey numbers, boat traffic and pollution from oil tankers and area cities. They cannot tolerate another threat. There are only 76 of them. One is a brand new calf. One is so thin you can see the outline of her skull. Your training operations could severely harm or kill both the very young and the very frail AND cause serious of permanent damage to healthy animals. Please conduct your training somewhere else. Or find a way to train via simulation. Anything else. But don't come into this fragile ecosystem with a CRITICALLY endangered</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	species. Please. Please consider the permanent damage your temporary presence can make. Thank you for your time.	will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Barron-1	If we were in the same situation as the marine animals, we would not stand for it. But unlike these animals, we are capable of voicing our opinions and taking a stand. We would detest the idea of a stranger invading our lands and homes with a deafening high pitched sound. Also, in-line these marine animals, our eyesight is far more developed. We use several different forms of communication, while whales and dolphins use mostly sounds and rely on hearing. The sound testing has the capability to completely incapacitate them. What gives us the right to not only invade their homes, but to leave them disabled? Please stop the testing.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Barth-1	Please stop these harmful sonar tests in critical marine mammal habitat	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bartlett-Smith-1	Without reading the document in detail, I'm told the Navy plans to dump toxic waste into our oceans. Our ecosystem is too fragile already, and additional stressors are unacceptable. I cannot believe that we don't have other options for disposal of waste, and treat our oceans as if they are our dumping ground. Please do not follow through with this plan, and find another, environmentally friendly way to dispose of waste.	The Navy does not propose any activities that constitute dumping toxic waste into the ocean. In the course of the Navy proposed activities (listed in Chapter 2 (Description of Proposed Action and Alternatives) of the EIS/OEIS), which do include the use of sonar and similar sound sources as well as underwater detonations, some expended materials are left behind in the ocean. The potential impacts of these actions was thoroughly analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the EIS/OEIS.
Bass-1	This testing has proven harmful if not lethal to marine life please discontinue this SONAR testing in the wild and so it in a man made environment free of animals. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Batista-1	Sonar testing is not acceptable!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Battersby-1	<p>I have a business in Mendocino Village.</p> <p>The type of operations that are listed in this plan would devastate our tourism community as well as the pristine nature of our coastlines. We depend on our coastlines being preserved and respected for all to enjoy.</p> <p>Bombing, using torpedoes, Sonar and other war technologies, would not only disrupt the whale migration in this area, but also totally disrupt the nature of our tourism situation here on the coast.</p> <p>We cannot afford to have the Mendocino coastline be destroyed.</p> <p>There is a strong historic nature to the area, and people have enjoyed it for hundreds of years</p> <p>Please consider a moratorium on navy weaponry within miles of our coastlines.</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Wildlife-dependent recreational activities, such as wildlife viewing, or whale watching, are discussed in Section 3.12 (Socioeconomic Resources). The impacts of the training and testing activities in NWTT on tourism are discussed in Section 3.12.2.3 (Tourism). No negative effects to tourism activities in the Study Area are expected from proposed training and testing activities. Therefore, loss of revenue or employment associated with tourism is not expected to occur.</p>
Bauer-1	100% AGAINST sonar testing. You know it's negative. Don't do it!!!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bax-1	Sonar testing IS NOT OKAY especially when previous comments show that the navy recognised that it is damaging to ALL marine life. Please stop this practice NOW. It's 2019, you should know better!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Baxter-1	<p>Please do not go forward with this underwater sound pollution. It is unacceptable that Endangered Southern Resident Orcas young and old, all ready compromised by starvation would be knowingly subjected to underwater high frequency noise disruptions.</p> <p>They rely on underwater communication and the integrity of their keen senses to hunt, socialize and navigate. The planned testing is reprehensible ~ sadly to say it is inhuman is seems to miss the mark as this kind of senseless testing ignores a bigger far more precious reality than we humans seem to grasp all to frequently.</p> <p>Please rise above to and put a halt to the planed underwater noise assault on these sentient innocent beings just trying to exist and raise there newest family members 🙏</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Bean-1	<p>Pacific Coastal ecosystems are in rapid and explosive decline and grey whales are beaching themselves. Necropsies indicate they are starving. The burden of proof is on the Navy that their training activities have not already caused serious damage to a complex marine ecosystem upon which local communities depend for their survival.</p> <p>To state that no significant human impact would occur as a result of continuing use of sonic and explosive testing underwater in the presence of marine mammal migration routes is specious at best and misleading to the public.</p> <p>Furthermore, The parameters of the impact statement are too narrow to encompass the effects of human activities of this sort upon a system of this magnitude & coimplexity. We have not had the time nor till recently the technology to establish a pre=existing baselline, because the EIS protocol was not established until late into the 20th century, by which time industrial impacts & industrial fisheries had altered the baseline beyond any reasonable estimation of its actual pre-existing state of dynamic equilibrium.</p> <p>What is needed is a moratorium to allow the systems to heal themselves, and a period of observation. Human activity has clearly altered the ecosytem balance, and is at the point of threatening human survival, driven by short-sighted environmental policies and political agendas. True</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	natioinal security means protecting our environmental integrity and food web.	
Beasley-1	<p>For the record, my name is Dale Beasley, president of the Coalition of Coastal Fisheries (CCF) which represents fourteen commercial seafood harvesting and charterboat organizations that fish in the Pacific Ocean, Puget Sound, estuaries along the West Coast, and the Columbia River as well as major seafood processors, related supply and support companies, and coastal ports. I personally have been involved in fisheries for the past 50 years and have been a strong advocate promoting a multiple aim, to protect, preserve, and prevent the depletion of both fish and the people that depended on those fish for a living wage that supports fish dependent communities.</p> <p>The Navy is in the business of ensuring that CCF members and the public have FREEDOM of the SEAS that the Navy protects so that we can freely exercise those basis FREEDOMS of Navigation and Fishing.</p> <p>The Coalition has one very important comment, "THANK YOU, the fish dependent communities really appreciate all you do to protect and guarantee our FREEDOMS.</p> <p>CCF completely agrees with your assessment of any potential adverse impacts, they will be miniscule and localized, NO overall fish/mammal population impacts. Any RISK involved is far out weighed by the benefits of a FREE OCEAN.</p> <p>Your readiness to offer those protections for us is extremely important and we encourage you to do whatever is necessary to maintain top shelf readiness to protect our seas from our nation's potential enemies. Since the last EIS five years ago none of our fishing community has had any conflict for space in the ocean, the Navy has done a good job of avoiding our fisheries, that is also appreciated.</p> <p>Keep up the good work protecting our freedoms.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p>
Becker H-1	<p>I feel as though you have to have the research that this is deadly and extremely harmful to the eco balance of the Salish Sea. We are already seeing the devastating repercussions of man-made decisions happening to our oceans. Please reconsider doing this for the health of the only home we have and the future of not only all the species that make the Salish Sea their home but also for the future of our species as a whole. Let us be on the right side of history.</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Becker S-1	<p>I do NOT support military training and testing activities in the Northwest Training and Testing Study Area- northern coast of California to the Canada border, as proposed by the 2020-2025 environmental review.</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Sonar hurts marine mammals; the region is designated to be of cultural importance, as per the InterTribal Sinkyone Wilderness Council.</p> <p>In December, the U.S. Navy discontinued training and testing activities within 12 nautical miles of Northern California's coastline from the Mendocino-Humboldt county line to the Oregon border following 3 ½ years of discussions with the ten Northern California Tribes that comprise the InterTribal Sinkyone Wilderness Council. These discussions were the result of a 2012 lawsuit over the National Marine Fisheries Service's failure to protect marine life and areas of cultural importance.</p> <p>Please cease and desist from military training/testing activities in this region.</p>	<p>(Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Beckham-1	<p>The United States Navy needs to cease and desist from engaging in this testing and training immediately. This is an urgent matter. The potentially grave harm that may be inflicted on the endangered Southern Resident Killer Whale population is unacceptable. Please, consider the following:</p> <ul style="list-style-type: none"> • The Navy's EIS clearly indicates that the Southern Residents will be harmed by their testing and training activities, and that this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey. • In 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. • In pursuing these activities, the Navy violates the Endangered Species Act, which should be protecting the orcas. • The designation for the orcas' critical habitat is under review and the Navy should not be allowed to move forward until the designation is final. The Navy must respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. The Navy must protect the critical habitat of the orcas and prohibit testing and training in these waters. The Navy must also ban sonar and explosives in these waters. The Navy MUST NOT engage in any activities that can harm marine life. <p>Thank you for your consideration.</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.
Becton-1	As a community member and physician, I am extremely concerned about the dumping of stressors into our water. We are seeing unprecedented change already in this area, loss of sea life, drastic environmental change. This would only compound an already stressed ecosystem. We depend on this water. Environmental toxins risk the health and safety of our citizens in addition to the fish and water mammals who live in it. I urge you not to further poison this area in this time of crisis.	Please see Section 3.1 (Sediments and Water Quality) of the Supplemental EIS/OEIS for the analysis of impacts to sediments and water quality from the Navy's proposed activities. See the various resource sections elsewhere in Chapter 3 for an analysis of potential impacts to those species (3.4 Marine Mammals, 3.5 Sea Turtles, 3.6 Birds, 3.7 Marine Vegetation, 3.8 Marine Invertebrates, and 3.9 Fishes).
Belardinelli-1	I am 100% against the underwater sonar testing. This is debilitating to our marine mammals that rely on sound for survival. If there is any capacity for compassion for an already at risk species, this will be stopped. Thank you and I look forward to seeing the halt in this process.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bell-1	As a resident of Washington State fair request that you do not dump any pollution send the ocean off our shores or conduct any noise test that will damage or hurt the whales in the Dolphins	The Navy does not propose any activities that would "dump any pollution." In the course of the Navy proposed activities (listed in Chapter 2 (Description of Proposed Action and Alternatives) of the EIS/OEIS), which do include the use of sonar and similar sound sources as well as underwater detonations, some expended materials are left behind in the ocean. The potential impacts of these actions was thoroughly analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the EIS/OEIS.
Bellamacina-1	I am writing to express opposition to the Navy's training and testing. Specifically, please address: 1) The adequacy of the assessment of Tribal cultural impacts as well as environmental impacts from the Navy's training and testing activities is especially important because these activities take place in the Pacific Ocean, which holds great cultural and spiritual significance for the Tribes and is critically important for the wellbeing of all people and lifeforms on this planet. 2) The Navy should work meaningfully with the Tribes to develop measures that will reduce impacts to the Tribes' cultural ways of life, including culturally and spiritually significant marine species and habitat that are vulnerable to Navy training and testing activities. 3) The Navy should prohibit use of sonar within the 50-mile mitigation area.	Please see the Navy's response to comments received from the Yurok Tribe.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Sonar causes serious harm to the health and wellbeing of whales and other marine mammals.</p> <p>4) The “best available science” referenced in the draft SEIS should be expanded to meaningfully take into account Tribal Traditional Knowledge. Since time immemorial, Pacific coast Tribes have used and managed their traditional marine environment, including those areas situated within the Navy’s NWTRC.</p> <p>5) The Navy’s monitoring program should be expanded to include effects of training and testing beyond potential harm to species population levels. Population level effects are insufficient to fully take into account the potential harm that Navy training and testing may cause, because this standard does not fully incorporate the concept that impacts to Tribal cultural resources may not be manifested in physical impacts on marine species.</p> <p>6) The Navy should expand its list of environmental “stressors” to include those parts of the Study Area that encompass Tribal cultural resources, and the concept that those resources have intangible features, such as spiritual connections, which will be impacted by the training and testing.</p> <p>7) The cumulative effect of ocean acidification should be considered in the SEIS. The Draft SEIS concludes that the assessment in the Navy’s 2015 Final EIS that impacts to water quality from explosives and explosives byproducts in training and testing remains valid and does not need to be reconsidered. Based on studies conducted since 2015, this conclusion neglects to take into account the effect that changes in climate may have on the corrosive power of an increasingly acidic ocean. Specifically, the Draft SEIS does not consider the likelihood that acidification of ocean waters will accelerate corrosion of explosive devices and byproducts of training and testing.</p>	
Belliveau-1	<p>This is already an endangered species! Please dont make their existence harder than it already is....</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy’s ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy’s Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Bender-1	Stop testing under water. I am against this. You destroy marine life special Dolphins	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Benitez-1	Please stop getting in the way of the orcas and stop sounding out sounds to them 😞😞	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Bennett A-1	I strongly protest the Navy's Sonar testing in areas where the Southern Resident Orca Whales live. This kind of noise has been proven to be disruptive to their own communications, ultimately leading to decreased food intake and overall health.	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Bennett B-1	Please respect this sacred, remote and unique corner of our nation. Air training and exercises fill this space with terrible noise, robbing our citizens of this area of refuge. Please do not use the pacific peninsula for flight exercises.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Bennett G-1	Please refrain from testing in the Salish sea. The sea life is an important part of keeping our environment healthy and the whales which are heavily affected by this testing are key. Stop testing sonar in the Salish sea.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bennight-1	No sonar testing. We need to be working on peaceful solutions not war machines. We need to protect each other as an Earth as a people as an habit it to this Earth to the environment.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bentley-1	Further testing in the Salish Sea is unconscionable. We are destroying our marine life, which are critical to the health of our earth. No more testing!!	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Benz-1	I am against anything that will adversely or negatively affect or damage any sea life, including any training or testing by any agencies or government.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Berg-1	<p>Thanks to an ungrateful person writing a letter to the Peninsula Daily News, in the Peninsula Voices section, today, Sunday, June 9, 2019, giving us the contact addresses how to contact you and our devoted, brave military people who protect us all today.</p> <p>This woman, Katherine Kennedy goes on to tell how annoying you all are, never realizing it is she herself, you all are doing your best to protect, among the many others living on the Peninsula.</p> <p>I send my sincere thank you for your service to our people and country and I hope you remain in our area, doing your job with your flyovers and please know everytime I hear one of our Jets, Helicopters or any military plane flying over, I always ask God to bless them and their pilots and crew, keeping them all safe.</p> <p>Ms. Kennedy should write about the REAL problems of our Olympic Peninsula mountains. The drug syringes, etc. and the many people hiding in our forests, such as Illegal Aliens, drug traffickers and the like. For years, many of us feel unsafe enjoying the beauty of the back roads and surroundings in our local Olympic forests.</p> <p>Keep up the good work, we love and appreciate you all. God bless you.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p>
Bergman-1	<p>I am concerned that Park values like peace and quiet are being usurped on a piecemeal basis and we do not have the entire picture as the Navy expands it's footprint on the Olympic Peninsula and the Salish Sea.</p> <p>If the noise pollution that is occurring in Coupeville and Port Townsend are any example, The Navy has misrepresented the scope of this project and Civic Values are being trampled on. The Navy has proven to be a very poor neighbor, unconcerned with the community values. This State is being run like a War Machine. It is time for the Navy to respect other values than some war they are attempting to drum up in the Pacific and Chinese Seas. The United States needs to quit trying to run the world. NO MORE JET NOISE IN SENSITIVE AREAS. THE NAVY HAS MADE AN ENEMY OF THOSE THEY ARE SWORN TO PROTECT by destroying our peace. Keep the Navy out of Park airspace. best regards, Bert Bergman</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Bernal-1	<p>Good morning</p> <p>By doing this test you are destroying their hearing and that leads for them to find food even harder.</p> <p>They are in critical condition, millions of dollars spent to save them and you're doing this?</p> <p>Please stop those tests now,</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Bernardy-1	These trainings should be moved out of a highly populated area- like Moses Lake or an under populated area. The Navy has been arrogant and plowed through WA state with disregard for anything but their needs. They never followed the EIS process and they should be sued for it. We pay their salaries they should be held accountable.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Berntsen-1	Last Sunday's Seattle Times presented an article by Lynda V. Mapes describing "How our noise is hurting orcas' search for salmon". Surely the navy's use of sonar and explosives contributes to the dire stress experienced by our Puget Sound orcas, which are declining and in danger of extinction. I hope the navy ceases its sonar and explosive testing program in time to give the resident orcas a chance to survive.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Berolzheimer-1	I am opposed to the US Navy, or any other entity, using sonar or other sound that causes any behavior change, or injury to marine mammal and more specifically whales. According to The Marine Mammal Center: GRAY WHALES - 31 whales have been found dead along the West Coast so far in 2019, making this the 3rd largest gray whale mortality total on record. - The Marine Mammal Center has responded to 9 gray whales and identified that 4 were struck by ships and 4 were severely malnourished (one is unknown). - Researchers in Mexico found that 60% of the whales showing up this past winter were skinny and calf counts were down by about 1/3 from the previous year. Our oceans are already depleted, polluted, and unsafe for marine organisms. Humans doing no more harm is necessary to allow the ocean habitats to recover.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.
Berolzheimer-2	Any disturbance to marine mammals is unacceptable! Any additional trash – plastics, etc. should NOT be dumped into the ocean. We Americans need to be a model for stewardship of our oceans – OUR oceans.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Berry-1	<p>For the past 20+ years there have been numerous measures taken to ensure that the whale population has the opportunity to come back from the edge of extinction. Whales are an essential part of our part of our global ecosystem, as I am sure you are aware.</p> <p>One step was to limit the use of any "loud" noises that disrupt their ecolocation such as explosions near to any whale groups and definitely not in the path of any of their migrations. It is my understanding that you are proposing to change this. It would have a severe detrimental effect on the whales during their annual migration. Further that you propose to do this with NO show of urgent need to expand your activities into the path of their migration!</p> <p>Lately there have been some major set backs in overall whale recovery and there is some die back of the whale population. They are washing up dead on the California coast in record numbers. The crab season has been shortened by a month to ensure that there is sufficient food for the whales during their migration. Further, the sardine fishing season has been cancelled on the California coast for the same reason. While these steps do create significant hardship on the fishermen of the coast, these steps are being taken to ensure the long term overall health of our oceans and the whale population.</p> <p>I ask that you seriously reconsider your actions. There is no show of need to destroy parts of our world habitat. There is no show of urgency to invade areas of the ocean that area currently under threat from other sources. There are other options for you to consider and still meet your goals.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Betlach-1	<p>1. The adequacy of the assessment of Tribal cultural impacts as well as environmental impacts from the Navy's training and testing activities is especially important because these activities take place in the Pacific</p>	<p>Please see the Navy's response to comments received from the Yurok Tribe.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Ocean, which holds great cultural and spiritual significance for the Tribes and is critically important for the wellbeing of all people and lifeforms on this planet.</p> <p>2. The Navy should work meaningfully with the Tribes to develop measures that will reduce impacts to the Tribes' cultural ways of life, including culturally and spiritually significant marine species and habitat that are vulnerable to Navy training and testing activities.</p> <p>3. The Navy should prohibit use of sonar within the 50-mile mitigation area. Sonar causes serious harm to the health and wellbeing of whales and other marine mammals.</p> <p>4. The "best available science" referenced in the draft SEIS should be expanded to meaningfully take into account Tribal Traditional Knowledge. Since time immemorial, Pacific coast Tribes have used and managed their traditional marine environment, including those areas situated within the Navy's NWTRC.</p> <p>5. The Navy's monitoring program should be expanded to include effects of training and testing beyond potential harm to species population levels. Population level effects are insufficient to fully take into account the potential harm that Navy training and testing may cause, because this standard does not fully incorporate the concept that impacts to Tribal cultural resources may not be manifested in physical impacts on marine species.</p> <p>6. The Navy should expand its list of environmental "stressors" to include those parts of the Study Area that encompass Tribal cultural resources, and the concept that those resources have intangible features, such as spiritual connections, which will be impacted by the training and testing.</p> <p>7. The cumulative effect of ocean acidification should be considered in the SEIS. The Draft SEIS concludes that the assessment in the Navy's 2015 Final EIS that impacts to water quality from explosives and explosives byproducts in training and testing remains valid and does not need to be reconsidered. Based on studies conducted since 2015, this conclusion neglects to take into account the effect that changes in climate may have on the corrosive power of an increasingly acidic ocean. Specifically, the Draft SEIS does not consider the likelihood that acidification of ocean waters will accelerate corrosion of explosive devices and byproducts of training and testing</p>	
Beuzekamp-1	<p>De wereld.</p> <p>Met al jullie technieken zou je toch denken dat er gewerkt word aan vrede op aarde.</p> <p>Deze trainingen gaan over oorlog.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>En voor dat deze ooit uitbarst hebben jullie de zeeën der wereld uitgeroeid. Ik hoor in de infovideo over het beschermen van de oceaan.....als het leven in deze wateren sterft is er niets meer om te beschermen.</p> <p>We zijn hier niet alleen op aarde!</p> <p>En zijn zeker niet de baas.</p> <p>Ik ben TEGEN deze trainingen ga inplaats van oorlogje spelen de zeeën ontdoen van plastic afval.</p>	<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Bian-1	<p>I am 100% in opposition against sonar testing in the Salish Sea! There are orcas in the sea and their hearing will be impaired by the testing, please stop.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Bianchi-1	<p>To whom it may concern,</p> <p>A 2016 study published in the Canadian Journal of Zoology estimated that 11,233 harbor porpoises live in inland Puget Sound waters, not including the critically endangered 76 Southern Resident Orcas. "For marine mammals that utilize sound extensively, limiting their ability to recognize these frequencies in sound is going to limit their survival," Calambokidis said</p> <p>Over 7 years, harbor porpoises in inland Washington waters would likely experience temporary hearing loss at some frequencies at least 95,943 times from sonar, according to the Navy's calculations.</p> <p>Sonar would cause the porpoises permanent hearing loss at 1,033 times and a "behavioral reaction" (anything from a distraction to prolonged fleeing from sound) at 101,377 times.</p> <p>The Navy uses sonar to track enemy submarines, torpedoes, mines and</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>other potential threats underwater. Sonar operators send pulses of sound through the ocean and then listen for echoes from objects hit by the sound waves.</p> <p>Scientists demonstrated the sound may disrupt the feeding patterns of marine mammals. The sound may also startle some species of whales, causing them to die.</p> <p>It is vital to understand that the ocean is their habitat and we are destroying it with plastic, chemicals, garbage and now this?! Please don't contribute to the destruction of this planet is the only one we have. Said this I'm utterly against underwater sonar testing which has been proven to cause harm to marine animals.</p> <p>I trust the Navy will not allow this practice.</p> <p>Thank you</p>	
Bigelow-1	<p>Please see that reducing vessel noise by the Navy to increase Orca hunting efficiency will buy time for the endangered whales, while also building up chinook runs. Noise is a problem because lack of chinook is a problem.</p> <p>Please don't add to this problem of threatening such an important species as Orcas.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Billo-1	<p>The proposed area of training includes the Olympic Coast National Marine Sanctuary and areas in or adjacent to Olympic National Park. These two locations are prime examples of near pristine northwest coast ecosystems and temperate conifer forest, as well as being prime destinations for recreationalists seeking solitude from industrial noise pollution. Multiple daily flights over these areas with noise amplitudes of up to 100 decibels will greatly impact the user experience in these areas.</p> <p>Furthermore, the Navy is asking for permission for "incidental take" of "marine mammals...and threatened and endangered marine species." This is simply unacceptable, especially in a protected area. There is mountain scientific evidence to show that noise alone can alter the behavior, and ultimately survival, of many species, including the very species that the marine sanctuary and national park were set up to protect. Indeed the Olympic National Park (formerly Olympus National Monument) has been designated an environmentally sensitive area for 112 years.</p> <p>It is reckless and irresponsible to conduct this warfare training around</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	sensitive areas of the Olympic Peninsula when there are many other areas, such as southern Idaho, where the training was previously conducted, that are much more appropriate for this sort of training because conflicts with people and sensitive wildlife species will be fewer.	
Bingham-1	I don't like it when my neighbors mow their lawn at 7am. Sure, it's not up to me, but in my eyes (and rem) it is not okay. It's not even light out, what are you doing. That's how I feel about sailors testing echolocation in the ocean. Yup, that's how much I dislike 7am Saturday mowers. These animals communicate in one way and we are messing with it in multiple ways. I thrive because I get my rest on the wonderful weekend I don't get interrupted by a lawnmower.. do the orcas ever get that same luxury?	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Birdsall-1	Please do not perform sonar testing in the Salish Sea (or any other one) it's been proven to be harmful to our beautiful marine life animals and even cause death (which there is enough of already to both humans AND animals because of humans (weapons, testing, pollution, etc) sound pollution is just as detrimental to these innocent, sentient, nonhuman beings as plastic and other waste and it's time that we start caring for others (other than ourselves!!) Decompression sickness effects their feeding and mating rituals due to throwing off their echolocation, the ocean is THEIR home, they allow us to swim, surf, boat, etc. and they trust that they will be left alone and safe from harm, many species of marine life are curious and don't know that their lives are in danger (they ALL want we want and that's to be with their families freely, haven't we taken enough lives in the name of science? WHEN does it end?! Why do we feel that we are superior to other living, breathing, FEELING (both physical and emotional) beings? We ARE NOT! Please reconsider what you are doing! Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Birks-1	This is our opportunity!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Bishop J-1	Please keep training your young men and women. I got the chance to visit the aircraft carrier John Stennis and saw the deck where they land the	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	planes. What a good job they do. Have to practice to be the best and they are they best. The noise is freedom at it's best. I have lived in Jefferson county all my life (76 years) and I listen with pride. Contact me anytime and I will speak for your young people aabout the good job they are doing. Thank God for the Navy!!!	
Bishop M-1	<p>I am opposed to a plan by the US Navy to begin treetop high training missions over the area from the Hood Canal to the ocean over some of the most sensitive and significant areas in Washington State.</p> <p>The sound profile of the Growler is not only loud but includes a low-frequency vibration that travels farther and vibrates objects in its path. This aspect creates a deadly combination beyond annoyance that impacts human health.</p> <p>The 2011 World Health Organization report titled 'Burden of disease from environmental noise' documented health problems. The studies analysed environmental noise from planes, trains and vehicles, as well as other city sources, and then looked at links to health conditions such as cardiovascular disease, sleep disturbance, tinnitus, cognitive impairment in children, and annoyance. The WHO team used the information to calculate the disability-adjusted life-years or DALYs—basically the healthy years of life—lost to 'unwanted' human-induced dissonance. See https://www.science.org.au/curious/earth-environment/health-effects-environmental-noise-pollution</p>	<p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential health effects of Growler and other activities on humans are discussed in Section 3.13 (Public Health and Safety).</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p>
Bishop R-1	<p>I strongly disagree with the navy's plans to increase aircraft activity and EMP projects in Olympic National Park. That land was set aside as wilderness for a reason, to protect all that lives there and to provide a wild place for people to enjoy. Low flying LOUD aircraft does not fall within the definition of wilderness.</p> <p>Please do not do this. Please do not ruin our remaining wilderness. Please do not take my solitude in the wilderness away from me. Please do not continue to harm the wildlife that lives in Olympic National Park.</p> <p>I say no.</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Blackwell-1	Currently the ocean off the Mendocino and Sonoma Coast is in crisis due to the dessimation of the kelp forests and the over population of purple	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>urchin. This situation has put a significant strain on the fisheries and birds that rely on the kelp for a nursery and food source. While many organizations are working together to restore the kelp, it could take years or decades to return the fisherie to anything close to normal. This has caused great economic harm. Abalone season is closed indefinitely. Red urchins have been reduced by 80 to 90 percent. Crab season was cut short. Salmon season is threatened. Its unconscionable to add additional stressers to an environment that is already sufferring. The reality is that you don't know if your testing will aggravate the problem, because the knowledge base on bull kelp is too small to make that determination.</p>	<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Blaha-1	<p>The majority of these training exercises do not have to be conducted along our shoreline and could instead be conducted far from shore minimizing the impact on birds, fish, marine mammals, other wildlife and communities. There is no evaluation for other locations which could significantly reduce the harmful impacts of these exercises. Training around Olympic National Park, the Olympic Coast National Marine Sanctuary and other sensitive areas could be avoided if that was a priority for the Department of Defense.</p> <p>Also, many of these training exercises can be done via computer simulation. Saving money, not adding to noise pollution and green house gasses.</p> <p>The damage that sonar and explosives due to our whale population and other sea mammals is unforgiveable. The people of Washington want a clean, quiet, place to live, work and play. The Navy plans are not compatible with this.</p>	<p>The Navy has considered the use of simulation, and in fact already uses simulation in training and testing whenever possible; please see the discussion presented in Section 2.4.1.4 (Simulated Training and Testing Only) and Section 5.5.1 (Active Sonar) from the Supplemental EIS/OEIS. The Navy has also considered conducting training and testing in other locations, such as beyond the continental shelf; however, as stated in Section 2.4.1.1 (Alternate Training and Testing Locations), other locations fail to provide all the attributes necessary for effective training and testing.</p>
Blair J-1	<p>Please reconsider this ridiculous expansion of the headache inducing, nausea producing, sleep depriving Growlers. We have already seen a doubling of flights in 2019, with flights now going four days a week into the late night. Please, please find another way to train these pilots !</p>	<p>When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year).</p> <p>3. The proposed increase of 300 total flights per year averages to approximately one additional flight per day.</p> <p>4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p>
Blair K-1	<p>The thing that I love the most about the place where I live is the calm, peaceful, happiness I get when emerging myself in the natural areas of Washington State. These areas should be protected and maintained by the government in which we have selected. And by that I mean left alone as much as possible. It is a shame that the military wants to destroy these beautiful and fragile ecosystems as well as endangered species such as the spotted owl, the peregrine falcon, the orca whales and many more. I do not support this. I hope my six year old son has a chance to enjoy these beautiful places with our future generations. Please consider changing your plans.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marin-species-monitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTEIS.com
Blanc-1	<p>Hello, I m against underwater sonar testing because it hurts sea mammals. Thank you</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Blankenship L-1	When we moved to Camano Island 9 years ago, the sound of the jets from Whidbey Navel Air base was disruptive in a bearable fashion, and acceptable from a patriotic perspective. Today's increased flight frequencies for much noisier jets has severely impacted our normal conversation and sleep patterns. The evening and nighttime touch and goes are especially troublesome.	Growler noise on Camano Island is outside the scope of the NWTT Supplemental EIS/OEIS. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area. With respect to the increase in flight volume, the Navy is not proposing a significant increase in Growler activity. A minor increase in training flights in the Olympic MOA is projected over the next several years; increasing by approximately 300 total flights per year by 2023; approximately 1 additional flight per day.
Blankenship P-1	We have lived on the west side of Camano Island for 9 years. The level of noise when we moved here was bearable. However, recent increases of fighter activity and the much louder noise from them disrupts any conversation (in and outside our home) and our ability to sleep. The evening and night time touch and go activity is particularly disruptive to healthy living. In addition, the excessive noise levels will also reduce our property value, the major part of our retirement investment.	Growler noise on Camano Island is outside the scope of the NWTT Supplemental EIS/OEIS. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area. With respect to the increase in flight volume, the Navy is not proposing a significant increase in Growler activity. A minor increase in training flights in the Olympic MOA is projected over the next several years; increasing by approximately 300 total flights per year by 2023; approximately 1 additional flight per day.
Blankenship R-1	My family spends much time in the wilderness and national parks in the state of Washington. We observe many low flying over these protected lands causing disturbance the wildlife and to the visitors seeking solitude and serenity. I would request that military require all jets to fly at a moderate speed and high elevation through these areas limiting the disturbance. High speed low elevation training should occur anywhere else.	All flights conducted in the Olympic MOA occur at altitudes of 6,000 feet or higher, and at least 1,200 feet above ground level.
Blichfeldt-1	I am a 100% against underwater sonar testing, which has been proven to cause harm to marine animals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Blid-1	I am 100% against underwater sonar testing which has been PROVEN to cause harm to marine animals. There is no protective benefit to this practice whatsoever. It should be stopped immediately.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Blohm-1	Because so many sea creatures and marine mammals will be harmed by this I am completely against this testing. It will be hard enough for our Southern Resident Orcas to recover from their course on Extinction without this type of harmful and even fatal testing going on. We just can't take this chance with our Orcas and the whole Salish Sea ecosystem down to the smallest organism, they are all crucial to each other's survival.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Blume-1	We should not be sonar testing in the Salish sea when our southern resident orcas are going extinct. Find another place or another way to do this testing. The damage will be irreparable and we must eliminate all known interference with their survival.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bobbitt-1	Please stop the sonar testing. You're only harming the animals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bock-1	<p>The Southern Resident Orcas and all Salish Sea marine inhabitants are in harms way from the US Navy 's dangerous & harmful sonar practices. This is unacceptable. I am 100% against underwater sonar testing which has been proven to cause harm to marine animals. A 2016 study published in the Canadian Journal of Zoology estimated that 11,233 harbor porpoises live in inland Puget Sound waters, not including the critically endangered 76 Southern Resident Orcas.</p> <p>"For marine mammals that utilize sound extensively, limiting their ability to recognize these frequencies in sound is going to limit their survival," Calambokidis said. Over 7 years, harbor porpoises in inland Washington waters would likely experience temporary hearing loss at some frequencies at least 95,943 times from sonar, according to the Navy's calculations. Sonar would cause the porpoises permanent hearing loss at 1,033 times and a "behavioral reaction" (anything from a distraction to prolonged fleeing from sound) at 101,377 times. Please do not allow this! I vote NO!</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Bogard-1	<p>Re: Opposition to Sonar and Explosive Testing Off the Coast of Mendocino County</p> <p>To Whom it May Concern,</p> <p>I am writing this letter in opposition to your proposed Sonar and Explosive Testing off the Coast of Mendocino. Thank you for your consideration and weighing in of public, agencies/organizations, city, county and State of CA comments and concerns with regard to the effects, both immediate and long term, that your proposed sonar/seismic testing will have on the flora, fauna, geology and water quality of this fragile marine ecosystem.</p> <p>It is imperative that this project take into account the scientific evidence in consideration of the entire marine ecosystem that will be affected. Species affected are not only the apex predators: cetaceans, pinnipeds, sharks, starfish, but algae(Bull Kelp) invertebrates, crustaceans, fish, marine mammals, pelagic and migrating birds, the sediment on the ocean floor, coral, and ocean water quality that make up and sustain the marine ecosystem and habitat of this coast.</p> <p>The "takes" of marine mammals, by death, physical harm or behavioral disturbance from foraging/navigating/breeding/nursing/stress has the potential to threaten the sustainability of a species to maintain overall health and can lead to extinction and/or decimation of that stock.</p>	<p>All of the issues raised in the comment are addressed in the NWT Supplemental EIS/OEIS in Chapter 3 (Affected Environment and Environmental Consequences).</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>i have concerns for the short and long term affects the proposed project will have on the geology of the ocean floor and reefs and the toxicity from contaminants of the testing occurring as a result of your project.</p> <p>With the current stress on the ocean habitat and fragile ecosystem caused by climate change, ocean warming, increased acidity numerous species are threatened and endangered. Just recently and since 2013, the starfish wasting disease has caused decline of this apex predator and the species have not recovered. The Bull Kelp has also significantly declined and plays an important role in sustaining populations of fish, abalone and many other species. With regard to cetacean species; Gray Whales, Orcas, Blue, Humpback, Fin, Bottlenose Dolphins, Harbor and Dalls Porpoises and others are all affected and will potentially be lethally harmed or their populations disturbed and altered in terms of sustainability. Currently, along the northwest coast and off Mendocino, there is an unusual Gray Whale mortality occurring due to starvation and vessel strikes. Orca species, in particular, Resident fish eating populations which migrate along the coast are facing extinction due to decreasing food sources and environmental stress on their populations. Pinniped species are also noted to have an uptick in disease and mortality due to decreasing food sources.</p> <p>Stellar Sea Lions that reside on the west coast and off the coast of Mendocino, Sonoma and Humbolt Counties are an “endangered” species and it has been noted that along the Alaskan/Washington coasts their population declined and has not recovered due to bombing(detonation of explosive devices) and starvation due to limited food sources. The Guadalupe Fur Seal, a “threatened” species that normally reside in Mexico and Southern California have currently been sited/rescued and are currently showing up dead in Mendocino County. Numerous pelagic bird species and their food sources will be affected and are very susceptible to pollution and toxicity from contaminants. While the causes of mortality are still under investigation, just recently there has been an unusual mortality event with hundreds of Common Murre washing up death on the beaches of Mendocino and all along the north coast.</p> <p>These factors and the scientific evidence all indicate that our marine ecosystem along the Mendocino and west coast are at risk and compromised in their ability to sustain a balanced and healthy environment for the flora and fauna and recover from the current environmental impacts. The future of this diverse, fragile and enriching ecosystem depends on our ability and the actions we take to protect it.</p> <p>Thank you for taking into consideration and review, the effects your project</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	will have on the entire marine ecosystem of the Mendocino and northwest coast. While your project is focused on an aspect of safety, it is imperative that the sustainability and longevity of our marine habitat be protected to promote the life and health of all species.	
Bolter-1	<p>I strongly urge you NOT to conduct testing and training, that will surely affect endangered orcas, humpbacks and other cetaceans. It has been well documented that the decibel level of these tests is well beyond the sounds orcas make, and that it can potentially lead to hearing loss and altered behavior. The southern resident killer whales are social animals and rely on communication with each other, in addition to echolocation to hunt, as do the transient orcas. Not only will the training and testing activity make it difficult or impossible for them to hear each other, it will make it much more difficult to locate their prey.</p> <p>We do not have enough long term science on the damage this testing could cause to accurately assess how bad the damage could be. We don't know whether it will cause temporary hearing loss, permanent hearing loss or worse. SRKW are on the brink as it is - they are starving to death and at their lowest numbers in decades. With dwindling salmon returns, they need all the help they can get in finding prey. At a time of extreme prey scarcity, inhibiting their hunting is absolutely the wrong thing to do. We all need to protect the biological diversity of this precious planet for our own survival as well as theirs. Once the orcas are gone, they're gone forever. The fate of a species that has coexisted peacefully for so much longer than humans is in our hands. Please don't let that be the stain on your hands. Extinction is an undoable tragedy. Thank you very much for considering this comment.</p>	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bond A-1	I am against testing and training in our coastal waters. Our oceans are sick and dying. We need to learn how to work together and communicate non-violently. We will not save the planet using combat or weapons. With 11yrs left before we irreversibly push the planet into environments unsuitable for humans and most other creatures, we need to all tirelessly work together to prevent toxic waste and byproducts from being created.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bond S-1	I live in the Puget Sound area and am very concerned about local sea life, most importantly the Orca population and the wild salmon. I feel that proposed testing would endanger both of these populations and the health of these sea creatures as well as that of other sea life inhabiting our local waters. I therefore request that you refrain from any testing that could contaminate our waterways or endanger any species in our waterways.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Borcich-1	<p>There is NO way the Navy can prove its “allowable take” is accurate. The harm you will do to the marine life in our waters is too great to calculate. Already the die offs and mysterious beached mammals are giving us loud warnings of the fire changes in our oceans. The toxins and garbage these tests will leave behind will further degrade the health of the Earth’s lungs. We need the ocean for our lives, for the diversity of underwater life. The tests are for the benefit of killing. Killing in future wars. Killing of human beings. Killing of children and mothers. And I’m preparing for all this killing you propose to kill uncounted marine animals and pollute the already fragile ecosystem we all depend on.</p> <p>No.</p> <p>Just no. We vehemently oppose this horrible testing. Go away, Navy. We don’t want or need you here or anywhere.</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Borcich-2	<p>How loud can we say it? Louder than your killingly loud tests. NO. Just no. Don’t come here with your lies and lame excuses for wrecking the entire eco system, the entire world. Lexie us and the whales alone. Just leave. NO.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy’s ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy’s Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research’s Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy’s project website at: www.NWTTEIS.com
Borcich-3	<p>US Court finds Navy sonar harming whales and dolphins was improperly approved and its sonar is used across more than 70 percent of the world's oceans</p> <p>By AlessandraPotenza@ale_potenza Jul 18, 2016, 7:13pm EDT</p> <p>The US Navy is now using a particular type of sonar in more than half of the world's oceans under an illegal permit That sonar harms marine mammals like whales, dolphins, seals, and walruses. On Friday, the Ninth US Circuit Court of Appeals in California found that a 2012 regulation that allowed the Navy to use a low-frequency active sonar for training and testing violates</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy’s ocean stewardship programs, visit:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>the Marine Mammal Protection Act.</p> <p>The court found that the National Marine Fisheries Service (NMFS), which gave the authorization, isn't doing enough to avoid harming or killing marine mammals under the law. The Marine Mammal Protection Act calls for the "least practicable adverse impact" on marine mammals and their habitats. The court also found that the federal agency failed to protect areas of the world that its own government experts had flagged as "biologically important" to protect marine life. Such areas include the Galapagos Islands off the coast of Ecuador, the Papahānaumokuākea Marine National Monument off of Hawaii, and Challenger Bank off of Bermuda.</p> <p>The Navy had been authorized to use the high-intensity long-range sonar - called low-frequency active sonar, or LFA - for five years across more than 70 percent of the world's oceans, in areas of the Pacific, Atlantic, and Indian Oceans and the Mediterranean Sea. The NMFS has to set certain limits to activities, like military training, that could harm marine mammals. The goal is to reduce the impact on marine life to its lowest possible level.</p> <p>The Navy uses LFA to detect quiet foreign submarines. The sonar involves the use of 18 speakers lowered hundreds of feet below the surface. It produces low-frequency sound pulses of about 215 decibels (dB) in sequences that last about 60 seconds. That can interfere over hundreds of miles with some marine mammals like whales, dolphins, and walrus that rely on underwater sound for navigating, catching prey, and communicating. LFA sonar can harm the animals by interrupting mating, stopping communication, causing them to separate from calves, and inflicting stress. Sounds above 180 dB can disrupt the animals' hearing and cause physical injury. In 2005, 34 whales became stranded and died off in North Carolina because of nearby offshore Navy sonar training, according to Scientific American.</p> <p>To limit harm, the NMFS requires the Navy to shut down or delay sonar transmission if there are nearby marine mammals. It also forbids the Navy to produce pulses of 180dB or more within about 14 miles of any coastline, or within 0.6 miles of several "offshore biologically important areas." All these regulations exist to try to minimize the impact that the use of LFA sonar has on marine mammals, to try to comply with the law. But the court found that the measures aren't enough.</p> <p>"This systematic underprotection of marine mammals cannot be consistent with the requirement that mitigation measures result in the 'least practicable adverse impact' on marine mammals," the court said.</p>	<ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/speciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>One of the NMFS's arguments is that too little data on marine mammal distribution is available to ensure protection of certain habitats. But even when the federal agency consulted with leading marine mammal experts, their opinion was disregarded, according to Michael Jasny, the director of the Marine Mammal Protection Project at the Natural Resources Defense Council (NRDC), one of the organizations that brought the case against the NMFS.</p> <p>"The NMFS should err on the side of overprotection rather than underprotection"</p> <p>"The court soundly rejected that approach," says Jasny. "In doing so, it has ruled in ways that could significantly alter the way that the agency does business under the law." When enough data is lacking, the NMFS should err on the side of overprotection rather than underprotection, Jasny says.</p> <p>This is the third time that the Navy's authorization to use its LFA sonar has been challenged in court. In 2002, when the Navy first sought authorization for its LFA sonar system, and in 2007, plaintiffs and the Navy reached a court-ordered settlement allowing use of LFA in significantly reduced areas of the world's oceans, according to the NRDC.</p> <p>"What the fisheries service did here was ... consistent with what until now has been an inadequate approach to mitigation that the scientific and conservation communities have frequently criticized the agency for," Jasny says.</p>	
Borden-1	<p>I have just learned of an EIS put out by the U.S. Navy on March 29, which is very disturbing to me. The only EIS alternative that is acceptable is the No Action Alternative. The other options given are unacceptable to the environment and life on the Olympic Peninsula. Alternatives 1 and 2 would cause unforgiveable and unnecessary damage to Olympic National Park and the Olympic Coast National Marine Sanctuary. Alternative 2 is the most extreme.</p> <p>The length of the EIS, the great area it affects, and the many people it affects requires a 90-day comment period. This, so the EIS can be examined properly and thoroughly. Please ask the Navy for another 14-day extension of the comment period.</p> <p>The noise from multiple jet flights over the western and northern parts of the Peninsula will chase residents and visitors away. This will affect the health and economy of the Peninsula and the state of Washington. The search pattern of jet Growler flights looking for emitters would roar above the ocean beaches; the Washington Islands National Wildlife Refuges; Washington State Department of Natural Resources land; Quinault,</p>	<p>The original 60-day comment period was extended by 15 days for a 75-day comment period.</p> <p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential effects of Growler and other activities on the environment are discussed in Chapter 3 (Affected Environment and Environmental Consequences) of the NWTT Supplemental EIS/OEIS.</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations);</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Quileute and Hoh Reservations; and thousands of acres of private land, including the towns of Forks and Amanda Park.</p> <p>The Navy admits to 85–100 decibels of noise per pass. That is enough to cause hearing loss and contribute to other health problems. People in Forks have recorded 94 decibel flights under the current operations. While noise is known to affect people and no studies have been done on the iconic Olympic elk, it is not difficult to reason they would be similarly affected, being mammals of a similar weight.</p> <p>The military training in the Marine Sanctuary would do damage to the ocean beaches, the marine animals of the coast, the nesting areas of many of Washington's shorebirds, migrating whales, and the birds that use the Pacific Flyway. The Navy has denied flying over Olympic National Park. This is untrue. Not only is this untrue, it is impossible not to fly these missions over the Park.</p> <p>This degradation of the Olympic Peninsula's environment is unacceptable. For 112 years, Congress and presidents have set aside areas of the Peninsula to protect its valuable environment. Irreparable damage would be caused if the activities are done as stated in the Navy EIS/OEIS Mar 2019 Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing. Please stop this plan by the Navy. The training has been done elsewhere. It can be done elsewhere. Wild places are not empty places just waiting for an invasion by the military. Our national security must also include environmental security.</p>	<p>however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Bordin-1	<p>Dear NWTT Supplemental EIS/OEIS Project Manager:</p> <p>I am providing my comments, short as they are, but very important in relation to the naval plans to continue training and testing activities at sea and in associated airspace with the study area beyond year 2020. The naval activities include the use of active sonar and explosives for the purpose to maintain, train, and equip combat-ready naval forces.</p> <p>My serious concerns are that the Southern Resident Killer Whales (Orcas) live in the areas of the Salish Sea that the Navy wants to continue with its "activities". As you may know these whales are "endangered" and their numbers are continuing to decline in population due to a number of known reasons, including, but not limited to: noise, water pollution, depleted food source (Chinook salmon), harassment by "boaters", vessel traffic (large and small ships), toxic contaminates, habitat loss and negative land use practices.</p> <p>Sonar and explosives in your training exercises and "activities" will be</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>disastrous to the Endangered Southern Resident Killer Whales, and, all the other marine life (fish, marine mammals, other species of whales, porpoises, et. al.) that live in these native ocean waters. The detrimental effects that are commonly known to whales and other marine creatures within a short distance to miles further from the use of sonar and explosives are: bleeding brains, hearing destruction and loss, confusion, severe shaking/trembling, stranding, and death. (A documentary that I watched a few years ago about divers who were underwater when sonar was used had become: shaken bodily, had confusion and disorientation, had headaches, and sickening stomachs, and the "noise and vibrations" they had experienced was definitely hazardous to their health.)</p> <p>There is no mitigation that serves to undo a distressed, confused/disoriented, shocked/vibrated, bleeding, stranded, and dead Orca whale, gray whale, or other whales, and, marine wildlife when Naval sonar and explosives are used to training and testing activities. Please do not further consider the use of sonar and explosives in your Naval training and testing activities, now and in the future.</p> <p>Please seriously consider my comments today. Living in the beautiful Pacific Northwest has been a blessing to me and my family. Both seeing and knowing that the Orca whales are living and rearing their young in the Salish Sea, lower numbers that they are currently, should be a wake-up call to each human being here in Washington State, and to the human populations in Alaska, Oregon, and California; the areas that the Southern Resident Killer Whales, and, Transient Killer Whales live, forage, and reside. We should be doing absolutely everything within our human powers to save the Southern Resident Killer Whales, and other marine species, including Chinook salmon in the Salish Sea, and other areas that they migrate to and are known to frequent. Sonar and Explosives are not helpful, but destructive.</p> <p>Thank you for your time, and timely consideration in this matter. You may wish to learn more about the Southern Resident Killer whales by directing your attention to Governor Jay Inslee's website under the Southern Resident Killer Whale Task Force. You will be able to follow all the recommendations and check out the accompanying studies, reports, and documents related to the fate of "Our" whales. Once again, Please Do Not Continue to Use Sonar and Explosives in your Navy Training and Testing Activities.</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Botta-1	<p>This has got to stop. The Navy is NOT a good neighbor anymore. The noise is untenable on Whidbey and over Port Townsend and Forks area and in of all places our Olympic National Park and Forest, The dangers of sonar to our marine life in the sound is of serious consequence, Please put your efforts to making peace instead of war and then maybe we can be a great country again.</p> <p>Feelings about the navy are changing. You are NOT being a good neighbor.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/speciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Bouchard J-1	<p>Please don't do these tests knowing the harm you are placing on the marine life. Why must we. as humans, torture & kill everything in the name of 'research'. Please, please STOP these exercises!</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/speciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Bouchard P-1	<p>I do not believe that the Navy has to do its practice sessions over the sensitive wildlife areas of the Olympic National Park and the habitat of the</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>endangered Orcas of Puget Sound. I acknowledge the need for training but I do not believe that this is the only place that you can do it. You are ruining the quality of life of people who have chosen to live here for the wild quiet place that it is.</p> <p>We have chosen to live away from the comfort and convenience of cities because we love the quiet and wild places. It is not right that the navy should choose the same places. The Navy has many other choices.</p> <p>The Navy has not adequately studied the environmental impacts. You have not taken into account the financial impact on tourism in Port Townsend and on Whidbey Island and on home values in those areas.</p> <p>I object very strongly and will continue to oppose this action.</p> <p>Thank you</p> <p>Pamela Bouchard DVM</p>	<p>the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft and ships are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness. The impacts of the training and testing activities in NWTT on tourism are discussed in Section 3.12.2.3 (Tourism). No negative effects to tourism activities in the Study Area are expected from proposed training and testing activities. Therefore, loss of revenue or employment associated with tourism is not expected to occur.</p>
Bouknight-1	<p>Please make this stop, or find a better, and less harmful substitution. These animals in the ocean do not deserve this.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTEIS.com
Bowden-1	<p>I am writing to voice my opposition to the proposed sonar testing in the Puget Sound waters off the coast of Northern California to Alaska.</p> <p>As the Navy is well aware, marine animals rely on sound to communicate, locate food, avoid predators and navigate. By conducting sonar tests in these animals homes, you are exposing them to temporary to permanent</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	hearing loss, as well as forcing them to flee the noise, which moves them from their homes and feeding grounds. Conducting sonar testing in such a sensitive area shows that the US Navy has no regard for the planet and those creatures that reside in its waters. I hope that for the sake of the oceans inhabitants and for future generations of humans that you seriously consider the impact his has on the planet instead of just thinking about yourselves.	Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bowen-1	Stop the noise!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Bowers-1	Research has substantiated the disastrous effects on sea mammals and other marine inhabitants when they are confused and/or overwhelmed by competing underwater noises. These include the various forms of testing done by the U.S. Navy as well as the increasing noises created by pleasure craft and commercial heavy marine sea-going vessels. Additionally, numerous individuals marine inhabitants are being injured and killed by these large vessels making use of the crowded travel lanes in the Salish Sea. It is well past time for humans to assume more responsibility for this damage by modulating these effects through regulation and human concern for sharing the environment with these myriad sentient beings.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bowlin-1	The Navy has known for a long time that sonar affects whales. It destabilizes their ability to find food, so they starve. The amount of whales that have washed up on shore this year tells us, as citizens, that the Navy is doing more sonar games. If whales were to become extinct because of your actions it would have a huge impact on all other life.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Boyd-1	I think you need to stop this sonar testing and stop trying to torture the animals They don't deserve their habitat destroyed just because you think you can	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bradley-1	Stop this torture. Please think about how you would feel in their circumstances. Help the beautiful animals on this planet. Don't kill them	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Branson-1	I am concerned about the impact on the wildlife and the noise issue. I have a friend who moved to that area and she loves it and is a very outdoor person. This noise has become a very major issue and the endangerment to the animals is very upsetting. I am sure there must be a more suitable place. I ask that you please listen to the people and consider other options.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Bravo-1	Stop testing and support our Orcas Respect our oceans as you were to protect it not destroy it	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Breiby-1	Hi, I really hope that you stop this. It is very disturbing to the children, the wildlife and us adults. Please reconsider your actions and their affects on life. Thank you	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Bricker-1	The effects of sonar and high-volume acoustic impulses on cetaceans are well-documented. Why not test in large lakes or areas where endangered or eco-system-critical sea life are not at risk?	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bridges-1	Please don't do this	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Brill G-1	It is imperative that the Navy act responsibly and not dump/minimize accidental dumping of heavy metals and poisons into waterways or the broader ocean environment. Heavy metal and chemical pollution will work it's way up through the food chain and will ultimately have a deleterious effect of all animals, tiny or large. And that effect will ultimately impact the well being of humans as well.	The Navy does not propose any activities that would "dump heavy metals and poisons." In the course of the Navy proposed activities (listed in Chapter 2 (Description of Proposed Action and Alternatives) of the EIS/OEIS), which do include the use of sonar and similar sound sources as well as underwater detonations, some expended materials are left behind in the ocean. The

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	All toxic waste must be minimized in scope and be sequestered in safe and arid land depositories.	potential impacts of these actions was thoroughly analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the EIS/OEIS.
Brill J-1	<p>To Whom it may Concern,</p> <p>I am outraged at the proposed plan by the US Navy to begin treetop high training missions over the area from the Hood Canal to the ocean over some of the most sensitive and significant areas in Washington State. This is some of the most distinctive wilderness in the state and it must be protected.</p> <p>The military already receives an obscene percentage of our resources, far more than any other social agency. This taking, taking, taking has got to stop.</p> <p>The training facilities in Idaho and Nevada are sufficient and the areas were designed for warfare training, the Olympic Peninsula was not. There is no reason the Navy can not continue electronic warfare training in Idaho and Nevada as they have done for decades.</p> <p>It will disturb visitors to, and the wildlife of, Olympic National Park which is the eighth most visited park in the National Park System; 3.4 million visitors to the Olympic National Park in 2017. It includes International Biosphere Reserve and a World Heritage Site.</p> <p>Noise causes and aggravates: High blood pressure, Heart dis ease, Hearing impairment, and Increases or creates mental health problems. The 2011 World Health Organization report titled 'Burden of disease from environmental noise' documented health problems. The studies analysed environmental noise from planes, trains and vehicles, as well as other city sources, and then looked at links to health conditions such as cardiovascular disease, sleep disturbance, tinnitus, cognitive impairment in children, and annoyance. The WHO team used the information to calculate the disability-adjusted life-years or DALYs—basically the healthy years of life—lost to 'unwanted' human-induced dissonance. See the Australian Academy of Science article: Health effects of environmental noise pollution</p> <p>The sound profile of the Growler is not only loud but includes a low-frequency vibration that travels farther and vibrates objects in its path. This aspect creates a deadly combination beyond annoyance that impacts human health.</p> <p>Impact to our economy:</p> <p>People spent \$279 million in communities near the park. That spending</p>	<p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential health effects of Growler and other activities on humans are discussed in Section 3.13 (Public Health and Safety).</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>supported 3,556 jobs in the local area and had a cumulative benefit to the local economy of \$385 million.</p> <p>There must be some human beings there who still have compassion for our world. There is no reason to defend this country if you make it uninhabitable. Your exercises will do just that. Go to Idaho and stay out of the Olympic Peninsula.</p>	
Brisson-1	<p>The following article from "Scientific American" succinctly explains how sonar testing negatively affects marine life, while offering methods as to how the Navy can work to reduce the use of sonar testing to ensure the protection and safety of marine life.</p> <p>"Unfortunately for many whales, dolphins and other marine life, the use of underwater sonar can lead to injury and even death. These sound waves can travel for hundreds of miles under water, and can retain an intensity of 140 decibels as far as 300 miles from their source.</p> <p>These rolling walls of noise are no doubt too much for some marine wildlife. While little is known about any direct physiological effects of sonar waves on marine species, evidence shows that whales will swim hundreds of miles, rapidly change their depth (sometime leading to bleeding from the eyes and ears), and even beach themselves to get away from the sounds of sonar.</p> <p>In January 2005, 34 whales of three different species became stranded and died along North Carolina's Outer Banks during nearby offshore Navy sonar training. Other sad examples around the coast of the U.S. and elsewhere abound, notably in recent years with more sonar testing going on than ever before. According to the nonprofit Natural Resources Defense Council (NRDC), which has campaigned vigorously to ban use of the technology in waters rich in marine wildlife, recent cases of whale strandings likely represent a small fraction of sonar's toll, given that severely injured animals rarely make it to shore.</p> <p>In 2003, NRDC spearheaded a successful lawsuit against the Navy to restrict the use of low-frequency sonar off the coast of California. Two years later a coalition of green groups led by NRDC and including the International Fund for Animal Welfare (IFAW), the League for Coastal Protection, Cetacean Society International, and Ocean Futures Society upped the ante, asking the federal courts to also restrict testing of more intense, harmful and far ranging mid-frequency types of sonar off Southern California's coastline. In filing their brief, the groups cited Navy documents which estimated that such testing would kill some 170,000 marine mammals and cause</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Regarding previous strandings, see Section 3.4.3.1.8 (Stranding) of the 2015 NWTT Final EIS/OEIS, and the "Marine Mammal Strandings Associated with U.S. Navy Sonar Activities (June 2017)" (https://www.nwtteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/2019-Supplemental-EIS-OEIS-Supporting-Technical-Documents).</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>permanent injury to more than 500 whales, not to mention temporary deafness for at least 8,000 others. Coalition lawyers argued that the Navy's testing was in violation of the National Environmental Policy Act, the Marine Mammal Protection Act and the Endangered Species Act. Two lower courts upheld NRDC's claims, but the Supreme Court ruled that the Navy should be allowed to continue the use of some mid-frequency sonar testing for the sake of national security. "The decision places marine mammals at greater risk of serious and needless harm," says NRDC's Joel Reynolds.</p> <p>Environmental groups are still fighting the battle against the sonar, lobbying the government to curtail testing, at least during peacetime, or to at least ramp up testing gradually to give marine wildlife a better chance to flee affected areas. "The U.S. Navy could use a number of proven methods to avoid harming whales when testing mid-frequency sonar," reports IFAW's Fred O'Regan. "Protecting whales and preserving national security are not mutually exclusive." "</p>	
Bristow-1	<p>Thank you for your service.</p> <p>Idea:</p> <p>Crowd-source your passive comms-EW Training around the PNW and elsewhere. Fixed, car, and marine radio broadcast fall into in the 25-100 watt range. (HF operators are much higher wattage). There are many Navy/military enthusiasts which would support this. 1. Navy funded or subsidized equipment. 2. Wireless computer app. 3. Geo-fixed site at residence or business. 4. Centralized [internet] radio control via Coupeville EW site or other area (or even the individual squadrons during their sorties).</p> <p>You will likely have numerous volunteers, the broadcasts fall within both civilian restrictions and would be threat-representative. Minimize need to curry favor with state government folks with political agendas. After relatively low fixed costs for time and money, this will have much higher efficacy, wider geo-area and much cheaper operations than the current RV trucks. It is also in line with current technology and civilian trends for similar efforts. Plus, this would be very low profile for the Navy and volunteers.</p> <p>Comments:</p> <p>Perhaps look at climb out and even higher transition altitudes and corridors as NASWI jets go feet dry into the Olympic Peninsula. (i.e. NAS North Island 20 years ago.)</p> <p>Aggressively look for additional REPI candidates near the Hoh area, with</p>	<p>Thank you for your EW training recommendations. They have been forwarded to appropriate range planners for consideration. Regarding routing of aircraft into the Olympic MOA, the Navy considered but did not develop mitigation for aircraft overflights, such as shifting transit routes, relocating aircrew training activities, or modifying flight altitudes, because such mitigation would not be practical to implement due to implications for safety and mission requirements. The Federal Aviation Administration (FAA) controls the National Airspace System and routes that overlap the NWTT Study Area. The FAA designed the routes to efficiently manage air traffic in the region and to safely deconflict military traffic from commercial and general aviation aircraft, with consideration given to the presence of Canadian National Airspace and traffic to the north. The FAA is the responsible federal agency for determining transit routes and any changes to such routes must be approved by the FAA. The Navy is currently in discussions with the FAA exploring the possibility of shifting the FAA-established transit routes for military aircraft transiting to and from the Olympic MOA from Naval Air Station Whidbey Island to the north of the Olympic Peninsula. The purpose of these discussions is to consider the efficient and safe use of navigable airspace. While ultimately any shift in transit routes is the FAA's decision, it is possible that, if approved, such a shift will have the added benefit of reducing military aircraft noise over the Olympic National Park.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>hopefully overlap into murrelet habitat. Note the San Juans are also key murrelet forage fish habitat esp. during El Niño events, perhaps increased REPI efforts can be made along Lopez, Blakely, and San Juan islands, since that is an approach area during some flight ops. --- The Navy is here for the long term and is a better neighbor than most formalized eco-groups. Use your third-party partners for your conservation efforts to build closer relationships with Oly Park area “people” in the manner of China Lake area (Which has numerous national parks, wilderness areas, a preserve and other parks.)</p> <p>Hire a PR firm via Fleet Forces to genuinely promote and expand awareness of your conservation efforts. During the last few years USN efforts have likely been THE most active and meaningful conservancy in the entire PNW. A few Kitsap Sun articles do not build awareness.</p> <p>Lastly, continue to look for ways to distinguish unique EIS comments. For example, in previous EIS comment periods, very few people generated a considerable number of comments (usually against the Navy). They used the stats from this to indicate higher faux anti-Navy sentiment than what was actually factual. Supporters consider their single comments to equal in weight, to those single people who purposefully make numerous comments as part of an organized campaign.</p> <p>There is nothing in your EIS which is outside PNW environmental concerns and other impacts. You balance these with the national defense mission very well. Thanks.</p>	
Broadhurst-1	<p>I strongly object to your using this fragile and mostly legally protected area as a training ground. The effects on wildlife here, alone, make this a plan that should be illegal and is illegal if you even come close enough to disrupt the environment of Olympic National Park.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Broeck-1	<p>As a US citizen, I am strongly opposed to the Navy's proposal to increase sonar and electromagnetic underwater testing. This testing severely threatens to injure marine mammals and disrupt their habitat. Not only are marine mammals a vital part of ocean ecosystems--the preservation of which deeply impacts of our nation's well being, and that of all peoples--they are living beings who deserve our respect and protection. As an elementary school teacher, I believe we owe it to future generations to do everything in our power to protect the living ecosystems of our planet, and I am deeply disappointed that this increase in testing is even a</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	consideration. I see this increase as a threat to the well being of ocean ecosystems, and therefore a threat to the security of our nation and world. There seems to be limited substantive information given in your report about the long term impacts of sonar and electromagnetic testing on marine habitat in general. I urge you to select the No Action Alternative plan until a more in depth understanding of the long term impacts is developed. In my opinion, the threat environmental degradation through military and economic activity poses to our national and world security is a far greater than that of "enemy" subs. Thank you for your consideration.	
Brohm-1	Why is this going on, everybody knows what's going on with our precious Orcas, we should all be working to protect them not kill them. Do not do this !!!! 😞	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Brohm-2	STOP, this is insane what's it going to take 😞😞😞	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Brooke-1	Your underwater sonar testing is harmful to mammals like dolphins and orcas. Please stop!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Brookler-1	We are at a critical point in climate change and ecosystem/biodiversity collapse and we cannot afford to release ANY more toxic compounds or additional harmful acoustics into our environment! Making smart long-term decisions for the sake of a livable planet is the most important thing we can do right now. Please do not to release ANY heavy metals, depleted uranium, toxic chemicals, or harmful acoustics into the Puget Sound (or any oceans) or its surrounding environment. For all of our children and their children... protect our oceans, our people, our planet. Please.	In the course of the Navy proposed activities (listed in Chapter 2 (Description of Proposed Action and Alternatives) of the EIS/OEIS), some expended materials are left behind in the ocean. The potential impacts of these actions was thoroughly analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. The Navy does not propose the use of ordnance containing depleted uranium. Best management practices include measures that regulate operations to ensure compliance with pollution emission requirements and general resource conservation goals. Navy policies and procedures identified in Navy instructions such as the Environmental Readiness Program Manual, include directives regarding waste management, pollution prevention, and recycling, all of which benefit sediments and water quality in the ocean. Any procedures or practices that benefit ocean sediments and water quality in turn benefit all marine life in the ocean, from plants and invertebrates, to fish and marine mammals.
Brooks-1	I am 100% against sonar testing that endangers an already fragile and endangered(!!!) pod of orcas. Please refrain from all testing that endangers the whales and other marine life. Our oceans are already in peril, please don't add to the problems.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Broome-1	I went to the information night put on by the Navy. I cannot more strongly disagree with the proposed testing. While the Navy may be trying to put safety in place for marine mammals, ecology, and fish, this will not be enough. Our orcas are facing extinction due to starvation. Their tendency to avoid these disruptions, noise, blasts, will cause further starvation by avoiding their normal feeding habitats. They will be crossing these locations and you cannot account for every individual, resident or transient, and protect them and tell them "It's ok. You can go feed." We need all of them healthy. We need to be doing all we can to protect these animals, and the	The Navy is aware that the Southern Resident killer whale population is at risk. The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	delicate balance they keep as apex predators. WHALES and ORCAS ARE STARVING!!! Do NOT place additional obstacles in their way. This is THE WORST time to start this endeavor. There is historical significance to these underwater ecosystems, which will be destroyed, and all the flora and fauna are already being affected by human dams, boating, accidents, pollution, and fishing. We need to do everything in our power to help this community. For their lives, for ours. As a citizen with a scientific background, understanding in ecology, wildlife volunteer, and outdoor enthusiast, I cannot more strongly disapprove of the Naval testing. I guarantee if this goes forward, our southern resident orcas will not recover.	As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Broussard-1	I am aware of the occasional noise as you practice overhead and I SUPPORT THE TRAINING 100%. For all those who complain they need to get a life. Bottom line... I feel that the current method of sustained 15-20 minute periods of jet noise is inconsequential and appreciate that no night time exercise occurs. If the complainers don't realize that our dedicated armed forces need this training to stay current with skills, then they will never understand any common sense. Please continue to do what you do.... Thank you for your service!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Broutin-1	vos sonars sont une catastrophe pour les cétacés et les poissons, ce bruit perturbe leur moyen de se déplacer, de communiquer et sont responsables de échouages de masse	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Brouwer-1	Please stop it right now! If you are at least 1% human you know you have to stop this <i>[expletive deleted]</i> tests immediately! I suffer from hearing loss permanently and hear this crazy stuff 24/7, it's driving me nuts! It's barbaric to do this to living creatures.. so stop it or kill yourself!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Browe	I am writing you with concern about the planned expansion of US Navy war training exercises planned for the Mendocino Coast area. Our local commercial Dungeness Crab harvest was just suspended due to excessive impact on our Gray Whale migration along our coast from February - April when the Gray Whales are returning from birthing their young in Baja	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Mexico enroute along their 10,000 miles to the Arctic. Your planned sonar signals, explosions and training activities could have a detrimental effect on these marine mammals and their young travelling through our coastal waters through this month. I implore you to consider other areas for your war training exercises.</p> <p>I appreciate your meetings planned in Fort Bragg and Eureka in early May to apprise our coastal communities of your training plans. You neglected to give the times of those meetings. You can be sure that the meeting halls will be packed with other concerned individuals eager to hear the extent of your training exercises. Perhaps you should consider adding another meeting in the Crescent City area to receive our coastal resident's input from this extensive coastal geographical area.</p> <p>Thank you for your attention to this matter.</p>	<p>to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>All notification methods (newspaper advertisements, website, emails, etc.) included the time of the meetings as part of the announcement.</p>
Brown J-1	<p>Do it for the newest member of the critically endangered southern resident orcas! Just two more days left to make your voice heard against the proposed sonar testing by the US Navy in the Salish Sea.</p> <p>Go to bit.ly/2EYTO6S and let them know you are against the sonar testing!</p> <p>Photo: John Forde/Tofino Whale Center</p> <p>#dolphinproject #nofishnoblackfish #savethesrkw</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Brown K-1	<p>Can we please consider the impact that sonar has on marine wildlife. The damage that it is doing is well documented and acknowledged by the armed forces. In a time when we are fighting to save our marine life from so many threats this is one that we could instantly remove and help to reduce the great stresses currently placed on the marine mammals that we love so dearly.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Browning-1	Please have respect for our beautiful Pacific Northwest. What good is the strife for freedom if where we live is inhabitable because the Navy's need to play war games in our backyard. The F-18's have made it all but impossible to spend time outside in the this beautiful place. There has to be a place where the Navy can move there installations to better serve our great nation. Please do not renew the Navy's permits.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Browning-2	You have no respect for our community or the sea life that surrounds us. We live in a beautiful and historic place that should be preserved not used as a training grown at your discretion. You (The Navy) have already disrupted life, as we know it, by invading our community with jet noise. Now you want to use our water ways for battle training, shame on you. Why here, did every one else kick you out. Our eco system is very fragile and needs to be protected for future generations. I've been told to move if I don't like what the Navy is doing. I always thought the arm forces were here to protect our freedoms not take them away. Count me out for any support for the Navy in any and all endeavors.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none">• The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/• The Discovery of Sound in the Sea website at: www.dosits.org• The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr• The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology• The Navy's project website at: www.NWTTEIS.com
Browning-3	Something I forgot in me initial comment. We spent a lot of time and a meager amount of money to landscape our property so as to enjoy it outside. We love siting around our fire pit and enjoying the quiet and nature around us. We have yet to spend an evening during the week enjoying our creation since the new, louder and more frequent F-18 flight schedule started. You have taken away the one thing at home that we love. It literally does not feel like home anymore. It was actually quieter living in the city. Now that I'm retired, I do not have the finances (or energy) to replicate this again even if I wanted to move. I know a lot of people that are or have moved because of your presents. Im STUCK with you and Im not happy about it. You, as a representative of are the armed forces, should be ashamed for the disruption in or community and financial hardships for	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	those that chose to leave their homes. Michael	
Bruce-1	Commission an independent study of the effects of sonar on marine mammals then abide by the recommendations of the study.	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy's analysis in the Supplemental EIS/OEIS is in compliance with the National Environmental Policy Act.</p>
Bruels-1	<p>1.5 CJCSI 3500.01H emphasizes training as we fight. The Navy's Title 10 responsibilities require deploying forces that "are trained and ready for employment as joint capable forces." In DoDD 3222.04, EW policy states "Incorporate EW capabilities, tactics, techniques, and procedures into joint exercises and training regimes to the maximum extent possible. As the only Service with an airborne EW capability, the Navy should conduct airborne EW training, both for the Navy and Joint training and exercise. In past years, Whidbey squadrons conducted some training at Mountain Home AFB, working with the AF. They have also supported AF fighter squadrons, providing realistic conditions for them to hone their tactics. Now the intent seems to be to consolidate EW training primarily over the Olympic EW range, thus shrinking the instances of joint training and exercise — at a time when the EW (and cyber) threat to US Forces is growing. The rationale is to reduce cost and improve morale due to reduced travel. The \$5 million savings is a very small percent of the budget, and at the cost of diminished joint training opportunities, money poorly saved.</p> <p>2.2.3, 2.4.1.1 While conducting integrated EW training across naval platforms, both the consolidation of VAQ squadrons at Whidbey and the bulk of Growler EW training in the Olympic MOAs, the amount of joint training and exercise is actually declining. Since we fight jointly, it would seem that we would want to increase joint EW test, training, and exercise. Previous use of the MOAs at Mountain Home AFB provided some opportunities for joint engagement in addition to the annually scheduled exercises. Also, the consolidation ignores other training areas that don't</p>	<p>The training proposed in the NWTT Supplemental EIS/OEIS is Basic Phase training, as described in Section 1.4.2.1 (Basic Phase) in the 2015 NWTT Final EIS/OEIS. This training develops fundamental skills and is required before more advanced joint training can occur. For this Basic Phase training, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. For this reason training complexes in Nevada are not reasonable. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	negatively impact highly populated or wilderness areas to the same extent as those in the Northwest Training area (e.g., Mountain Home, Fallon). Based on the stated desire for “reduction of costs, and reduction of fossil fuel consumption,” it would seem that considering Mountain Home AFB (that the Navy has already used for training) would be a reasonable alternative to be considered.	
Bruels-2	<p>3.0.3, 3.0.3.1, 3.0.3.1.3, Appendix J, 3.4.1.7.4 Aircraft noise is identified as an acoustic stressor and then seemingly dismissed. The depiction of sound pressure levels (both in-water and airborne) were calculated using models to assess the impact on the Olympic MOAs. These data are then further expanded in Appendix J under a variety of aircraft scenarios, altitudes, etc. Recent real world studies (Impact of military flights on Olympic Peninsula Landscapes, Initial Summary of Findings, June 4, 2019; Lauren Kuehne, University of Washington’s College of the Environment) have added significant new data based on collection at multiple locations across (and beyond) the MOAs that appears to present a less dimmer view of the noise impacts. The Supplemental should not be approved before there is reconciliation between the Navy’s model-driven data and recent real world studies/measurements.</p> <p>3.4.1.7.4 Table 3.0-4 listed aircraft-produced in-water stressors, but there was no further discussion of impacts, or any analysis similar to Appendix J for in-water noise effects. Instead, in this section there is an extensive discussion on noise impacts on marine mammals — largely focused on the noise caused by shipping. There is no further discussion of aircraft noise on marine mammals. There is precedent for including such analyses as part of EAs/EISs (e.g., http://www.nmfs.noaa.gov/pr/pdfs/permits/egtrr_ea-draft.pdf). Other studies have shown aircraft noise can result in an acoustic signature at depth. A new study will soon be starting that will measure this acoustic signature at a variety of depths associated with Growler takeoffs and landings at Whidbey Island NAS. This data, when combined with previous study results on the effects of vessel noise on killer whales should provide some useful insights. The Navy should include results of this impending study (and extrapolations thereof), as “best available science” in determining future sortie rates for the Growlers over the Olympic MOAs.</p> <p>3.12.3.2 Recent real world noise data diverges from the Navy’s model-driven data. The noise impacts on tourists extend beyond the borders of the Olympic MOAs. Data received by the NPCA’s Growler Tracker app, used by visitors to the Olympic National Park and environs tend to correlate quite closely to the data Kuehne’s study. The impacts within Olympic NP</p>	The Draft Supplemental EIS/OEIS was released to the public before the Kuehne report was made available. The Navy has considered this report in the Final Supplemental EIS/OEIS (see Section 3.12 and Appendix J). The Navy will continue to use the best available science in its analyses of impacts.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	are exceptional because of what visitors expectations are for a world-class wilderness and one of the three quietest places in the country. Many visitors come for the quiet; several servicemen suffering PTSD have come to the park for the quiet and have been negatively impacted by the growing number of Growler flights. The Supplemental should not be approved until noise data is reconciled. The Navy should also work with the NPS and community leaders to optimize training to minimize the impacts on tourism.	
Bruha-1	The use of sonar tests is extremely harmful to marine wildlife, specially cetaceans. This cruel practice needs to be halted immediately for the sake of protecting the species that depend on their ability to use echolocation to hunt and sonar to communicate.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Brumer-1	We are at a critical point in climate change and ecosystem/biodiversity collapse and we cannot afford to release ANY more toxic compounds or additional harmful acoustics into our environment! Making smart long-term decisions for the sake of a livable planet is the most important thing we can do right now. Please not to release ANY heavy metals, depleted uranium, toxic chemicals, or harmful acoustics into the Puget Sound or any oceans.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Brummitt-1	Please do not continue underwater sonar testing! It is destructive to the local marine life, especially whales and dolphins. By negatively impacting the wildlife, you will also negatively impact all business that rely on these animals for eco tourism (such as whale watching). Of course, that is to say	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	nothing of the importance of biodiversity and the respect we need to have for who we share spaces with. Listen to the locals, your neighbors, and they will tell you NO.	EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Brunel-1	I am 100% against navy sonar testing. It is representating a big danger for marine wild life. It can lead to injury and death for many whales, dolphins and other marine life. "In January 2005, 34 whales of three different species became stranded and died along North Carolina's Outer Banks during nearby offshore Navy sonar training. Other sad examples around the coast of the U.S. and elsewhere abound, notably in recent years with more sonar testing going on than ever before." To protect wild life should be a priority. We co-exist together.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. Regarding previous strandings, see Section 3.4.3.1.8 (Stranding) of the 2015 NWTTC Final EIS/OEIS, and the "Marine Mammal Strandings Associated with U.S. Navy Sonar Activities (June 2017)" (https://www.nwtteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/2019-Supplemental-EIS-OEIS-Supporting-Technical-Documents).
Bruns-1	Regarding the training flights out to and over Olympic National Park: National Parks were set aside for a purpose. They are there for the citizens (and visitors) to have the opportunity to enjoy our heritage, the undisturbed "wild" places that are left on earth. They are obviously very much disturbed by the noise of the jets. Living in Port Townsend, I am subject to the invasive, peace-disturbing, inescapable roar of the jets. I long to be able to go somewhere that still resembles what God created. I no longer have any idea where that would be (that I could get to). Many plan for months, travel at expense to reach a supposedly protected area, in order to experience the wonders and beauty of nature. The Navy has STOLEN this from them. Take your practice flights to designated MILITARY area, not to a designated national forest or national park that don't belong to you for that purpose.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTTC Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Bryant-1	Please stop using sonar in the Salish sea, the Pacific Northwest in general, and please start to be mindful of the animals we share this planet with	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	when running your drills or practices. My dad recently retired after 30 years in the Navy, and I've always been so proud of that. However, as I get older and understand how little thought we as people give to the animals we share this planet with, I am ashamed to be human. The oceans do not belong to us to use as we "need" to deal with petty human crap. Do better.	and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bryson-1	I am completely against underwater sonar testing. It has been proven very harmful to vast forms of marine life. The creatures of our oceans deserve better than to die out and fade further toward extinction because of human negligence.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Bryzhatenko-1	Underwater sonar testing is very harmful for marine animals who utilize sound to find food and communicate with each other. It is unacceptable to run such testing, affecting these animals lives and chances of survival, especially knowing that they are in danger of going extinct, like Southern Residents Orcas.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Buck-1	Please see attached pdf document for comment.	No file was attached to the website comment.
Budner-1	I strongly object to the navy increasing its aircraft operations at the whidbey island naval base. The current aircraft operations already negatively impact the community enough with the noise, and specter of violence. This is the opposite of what a healthy community needs.	Growler noise on Whidbey Island is outside the scope of the NWTT EIS/OEIS. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Bullard-1	As a new homeowner in Port Townsend, I strongly oppose growler flights in the Olympic Peninsula! As a retired medical professional, Nurse Practitioner, I feel that the noise is extremely unhealthy for all of us living here. I understand the need for well trained pilots, but I strongly encourage to seek a different venue for this.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	This is very important! I appreciate your attention in this matter,	minimizes, or mitigates potential effects on the environment from its activities.
Bunker J-1	<p>The Navy war games and testing that include massive explosives and sonar is nothing new. What is new is the ramped up devastating "active sonar" the navy will be including in these war games and new EIS. AND there is a reason they need to RENEW their permits regularly regardless: Things change. Values change. Priorities change. Our oceans are ailing...</p> <p>"Active Sonar" is a sound blast at 200 decibels. Death by sound for a HUMAN is at 185 decibels. The destructive capacity for miles with that radius is a real and dire concern given the state of ocean health. The oceans are getting more ravaged each year, with garbage gyres growing annually, acidification and massive coral reef dye offs, our local lack of bull kelp and urchin infestation compromising sustenance abalone harvests, this year several humpbacks are getting stuck in the SF bay because they do not have the reserves to make the migration to northern waters; not to mention the fisheries-of-no-more all along the entire north coast. Just within the last 3 weeks, hundreds of Common Murres have washed up all along the Mendocino beaches. All ecosystems of the oceans—outside explicitly protected and very small reserves that are patrolled—are ailing, while an accelerated number of species are rapidly going extinct.</p> <p>Meanwhile, "Active Sonar" is a sound blast at 200 decibels. Death by sound for a HUMAN is at 185 decibels. The destructive capacity for miles with that radius is a real and dire concern given the state of ocean health. Business as usual has left too much destruction in its wake—thus WHY these permits need reviewing every few years. It is a built in safe-guard to human life and the well-being of the oceans in which environmental, social, and economic well being are intimately intertwined. Unless they hear from you these destructive permits will be issued.</p> <p>Please do not allow renewal of EIS for permits for navy training including ACTIVE SONAR activities off our coast!</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Since sound in the air and sound underwater are measured on two separate scales (Sound Pressure Level is expressed in dB re 1 μPa for underwater sound and dB re 20 μPa for airborne sound), it is incorrect to compare the dB sound level of sonar in water to the dB sound level of noises through the air.</p>
Bunker R-1	<p>As being one of the services who saves our country who our country respects I just can't understand how you could put your issues above these animals who are endangered. I understand that you need to do sonar training but you do not mean to do it near aquatic wildlife unless you're intentionally doing it to see how it affects them and if you're doing that you are evil truly evil. I have two brothers one served in the Marines the other the air Force and I will never ever tell anybody to join the Navy ever. What you're doing is unethical wrong and you guys know it because you guys</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>have been doing it and all we need is for our animals are aquatic marine life are land mammals all of them to go extinct because of corporations like you cuz that's what you are as a corporation. You should get off your high horse and do what's right and leave these animals alone leave these orcas alone leave any other aquatic animal land animal alone because that's what they need to be is left alone especially from evil corporations like you because that is what I'm now deciding is that you're an evil corporation and nothing nothing else so I will be advocating as much as I can telling people do not join the Navy ever cuz I don't care what you guys have done now if you're willing to do something like this.</p>	<p>EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Burdette-1	<p>The Navy's EIS clearly indicates that the Southern Residents will be harmed by their testing and training activities, and this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey.</p> <ul style="list-style-type: none"> • Please be reminded that in 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. • In pursuing these activities, the Navy violates the Endangered Species Act, which should be protecting the orcas. • The designation for the orcas' critical habitat is under review and the Navy should not be allowed to move forward until the designation is final. Please respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. Please protect the critical habitat of the orcas and prohibit testing and training in these waters. Please ban sonar and explosives in these waters. I am concerned that the Navy should not engage in any activities that can harm marine life, especially the endangered Southern Resident Killer Whales. 	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Burdick-1	<p>I have lived almost all my life on the Olympic Peninsula, and consider it to be one of the most beautiful places in this country. Although much has changed since I was young - logging and increased tourist activity - I consider the Navy's use of this wilderness for their "training" program with Growlers to be totally inappropriate to this last remnant of what used to be a vast wilderness, home to a diverse range of plants and animals whose value to the health of our planet is still unknown.</p> <p>You ask for specific information. You must know that studies of impacts of Growlers on the animals in the affected area are only in their beginning stages. Definitive information - and that on only a small number of those impacts - will not be received until long after approval of this EIS. Effects of Growlers on marine mammals like whales are not yet studied, but it doesn't take a study to understand that their ability to communicate with each other is affected by these flights. They are already under threat in many ways; the Growlers add another stressor.</p> <p>Although we live a considerable distance from the "target" area of the Growlers, we hear them often. Our sympathies are with the people (and animals) who experience this assault on their lives over and over again. The Navy insists that we should accept this increase in Grouler flights as part of their slogan, "the Sound of Freedom." I believe it is an arrogant and thoughtless act that will have irreversible negative consequences.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Burns-01	<p>I recommend that:</p> <ol style="list-style-type: none"> 1. the Navy clarify whether and how it incorporated uncertainty in its density estimates for its animat modeling specific to NWTT and if uncertainty was not incorporated, re-estimate the numbers of marine mammal takes based on the uncertainty inherent in the density estimates provided in Department of the Navy (2019) or the underlying references (Jefferson et al. 2017, Smultea et al. 2017, NMFS SARs, etc.). 	<p>The Navy did incorporate animal abundance and group size uncertainty when seeding the animats in the Navy's Acoustic Effects Model as was done with other Navy Phase III Training and Testing impact analyses. As discussed in Section 4.2 of Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing (U.S. Department of the Navy, 2017) marine mammals and sea turtles are distributed into simulation areas, and multiple iterations are run for each species to account for statistical uncertainty in the density estimates. Each iteration varies according to the standard error associated with the density estimate.</p>
Burns-02	<ol style="list-style-type: none"> 2. the Navy (1) revise the various densities for (a) northern fur seals based on the abundance estimate from 2015 that includes data from Bogoslof Island, (b) Steller sea lions, California sea lions, Guadalupe fur seals, and elephant seals based on growth rates up to at least 2020, and (c) harbor seals in the Strait of Juan de Fuca and the San Juan Islands based on 46 rather than 37 percent of the animals being in the water at a given time based on Huber et al. (2001) and (2) re-estimate the numbers of takes accordingly in the final SEIS and its LOA application. 	<p>(a) We used the estimate provided by Bob DeLong/NMFS and did not integrate the 2015 data mentioned due to a volcanic eruption. The difference between the two abundance estimates and the resulting change in density is approximately a 3 percent increase.</p> <p>(b) The density estimates were historic numbers not future predictions based on when we performed the effort.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>(c) There were also specific haulout factors for other areas within the Study Area that gave lower estimates throughout the Inland Waters. Bob DeLong and Steve Jeffries concurred with the 37 percent.</p> <p>(2) No re-estimation required.</p>
Burns-03	3. the Navy provide the method(s) by which species specific densities were calculated for Western Behm Canal and cite the primary literature from which those data originated in Department of the Navy (2019) for the final SEIS, as well as all technical reports that underpin its density databases for future Phase III and IV DSEISs and DEISs.	<p>There were two primary sources of density data used to establish cetacean density estimates for Behm Canal:</p> <p>(1) U.S. Department of the Navy 2010 (Marine mammal occurrence/density report prepared in support of Navy activities at the Southeast Alaska Acoustic Measurement Facility), and</p> <p>(2) Density estimates derived by the National Marine Mammal Laboratory, Alaska Fisheries Science Center based on systematic surveys conducted in Southeast Alaska (e.g., Dahlheim et al. 2015).</p> <p>These sources were cited as appropriate in the species-specific sections of Department of the Navy (2019); methods by which species-specific density estimates were calculated are described in these reports.</p> <p>Multiple sources were used to establish pinniped density estimates for Behm Canal. All are cited as appropriate and methods described within the species-specific sections of Department of the Navy (2019).</p> <p><i>Department of the Navy. 2019. U.S. Navy Marine Species Density Database Phase III for the Northwest Training and Testing Study Area: Technical report. Naval Facilities Engineering Command Pacific, Pearl Harbor, Hawaii. 258 pages.</i></p>
Burns-04	4. The Navy refrain from using cut-off distances in conjunction with the Bayesian BRFs and re-estimate the numbers of marine mammal takes based solely on the Bayesian BRFs.	<p>The consideration of proximity (cut-off distances) was part of the criteria developed in consultation with NMFS and was applied within the Navy's acoustic effects model. Cut-off distances were used to better reflect the take potential for military readiness activities as defined in the MMPA.</p> <p>As stated in Draft Supplemental EIS/OEIS Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Sonar and Other Transducers), the derivation of the behavioral response functions and associated cut-off distances is provided in the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III).</p> <p>Briefly, much of the data used to derive the behavioral response functions was from nearby, scaled sources, thereby potentially confounding results since it is difficult to tell whether the focal marine mammal is reacting to the sound level or the proximity of the source and/or vessel amongst other potentially confounding contextual factors that are unlike actual Navy events</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		for which the BRF's are being derived. To account for these non-applicable contextual factors, all available data on marine mammal reactions to actual Navy activities and sound sources (or other large scale activities such as seismic surveys when information on proximity to sonar sources is not available for a given species group, i.e. harbor porpoises) were reviewed to find the farthest distance to which significant behavioral reactions were observed. These distances were rounded up to the nearest 5 or 10 km interval, and for moderate to large scale activities using multiple or louder sonar sources, these distances were greatly increased --- doubled in most cases. The Navy's BRF's applied within these distances is currently the best know method for providing the public and regulators with a more realistic (but still conservative where some uncertainties exist) estimate of impact and potential take under military readiness for the proposed actions within this Supplemental EIS/OEIS.
Burns-05	5. the Navy estimate and ultimately request authorization for behavior takes of marine mammals during all explosive activities, including those that involve single detonations.	As stated in Draft Supplemental EIS/OEIS Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Explosives), the derivation of the explosive injury criteria is provided in the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III). This report was provided as supporting documentation to the Draft Supplemental EIS/OEIS. There is no evidence to support that animals have significant behavioral responses to temporally and spatially isolated explosions that may rise to the level of 'harassment' under the MMPA for military readiness activities. The Navy has been monitoring detonations since the 1990s and has not observed these types of reactions. TTS and all other higher order impacts are assessed for all training and testing events that involve the use of explosives or explosive ordnance. All Navy's monitoring projects, reports and publications are available on the marine species monitoring webpage (https://www.navymarinespeciesmonitoring.us/).
Burns-06	6. the Navy in its final SEIS (1) explain why the constants and exponents for onset mortality and onset slight lung injury thresholds for Phase III have been amended, (2) ensure that the modified equations are correct, and (3) specify any additional assumptions that were made.	As stated in Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Explosives) of the NWTT Draft Supplemental EIS/OEIS, the derivation of the explosive injury equations is provided in the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III).
Burns-07	7. the Navy use onset mortality, onset slight lung injury, and onset GI tract injury thresholds to estimate both the numbers of marine mammal takes and the respective ranges to effect.	The Navy used the range to 1 percent risk of mortality and injury (referred to as "onset" in the Draft Supplemental EIS/OEIS) to inform the development of mitigation ranges for explosions. In all cases, the proposed mitigation ranges for explosives extend beyond the range to 1 percent risk of non-auditory injury, even for a small animal (representative mass = 5 kg). In the Draft

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>Supplemental EIS/OEIS, the Navy has clarified that the “onset” non-auditory injury and mortality criteria are actually 1 percent risk criteria.</p> <p>Over-predicting impacts would occur with the use of 1 percent non-auditory injury risk criteria in the quantitative analysis. The Navy, in coordination with NMFS, has determined that the 50 percent incidence of occurrence is a reasonable representation of a potential effect. Rather, ranges to effect based on 1 percent risk criteria were examined to ensure that explosive mitigation zones would encompass the range to any potential mortality or non-auditory injury, affording actual protection against these effects.</p> <p>Although the commenter implies that the Navy did not use extensive lung hemorrhage as indicative of mortality, that statement is incorrect. Extensive lung hemorrhage is assumed to result in mortality, and the explosive mortality criteria are based on extensive lung injury data [See the technical report titled Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III)].</p>
Burns-08	8. the Navy use passive and active acoustic monitoring, whenever practicable, to supplement visual monitoring during the implementation of its mitigation measures for all activities that could cause injury or mortality beyond those explosive activities for which passive acoustic monitoring already was proposed—at the very least, sonobuoys that are expended and active sources and hydrophones that are used during an activity should be monitored for the presence of marine mammals.	<p>As discussed in Section 5.5.3 (Active and Passive Acoustic Monitoring Devices), there are significant manpower and logistical constraints that make constructing and maintaining additional passive acoustic monitoring systems or platforms for each training and testing activity impractical. The Navy’s existing passive acoustic monitoring devices (e.g., sonobuoys) are designed, maintained, and allocated to specific training units or testing programs for specific mission-essential purposes. Reallocating these assets to different training unit or testing programs for the purpose of monitoring for marine mammals would prevent the Navy from using its equipment for its intended mission-essential purpose. Diverting platforms that have integrated passive acoustic monitoring capabilities would impact their ability to meet their Title 10 requirements and reduce the service life of those systems. Furthermore, adding a passive acoustic monitoring capability to additional explosive activities (either by adding a passive acoustic monitoring device to a platform already participating in the activity, or by adding an additional platform to the activity) for mitigation is not practical. For example, all platforms participating in an explosive bombing exercise (e.g. firing aircraft, safety aircraft) must focus on situational awareness of the activity area and continuous coordination between multiple training components for safety and mission success. Therefore, it is impractical for participating platforms to divert their attention to non-mission essential tasks, such as deploying sonobuoys and monitoring for acoustic detections during the event (e.g., setting up a computer station). The Navy does not have available manpower or resources</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>to allocate additional aircraft for the purpose of deploying, monitoring, and retrieving passive acoustic monitoring equipment during a bombing exercise.</p> <p>As stated in Section 5.5.3 (Active and Passive Acoustic Monitoring Devices) of the Navy's 2019 Draft SEIS/OEIS, to develop an estimated position for an individual marine mammal, the animal's vocalizations must be detected on at least three hydrophones. As stated in Section 5.2.1 (At-Sea Procedural Mitigation Development), "Based on the number and type of passive acoustic devices that are typically used, passive acoustic detections do not provide range or bearing to a detected animal in order to determine its location or confirm its presence in a mitigation zone." The commenter took this sentence out of context to imply that the Navy indicated passive acoustic detections do not provide range or bearing to marine mammals in general. The Navy re-emphasizes that the passive acoustic monitoring devices typically used during its training and testing activities do not provide range or bearing to marine mammals, based on the number (e.g., one or two) and type of assets used.</p> <p>As discussed in Section 5.6.3 (Active and Passive Acoustic Monitoring), although the Navy is continuing to improve its capabilities to use range instrumentation to aid in the passive acoustic detection of marine mammals, at this time it would not be effective or practical for the Navy to monitor instrumented ranges for real-time mitigation or to construct additional instrumented ranges as a tool to aid in the implementation of mitigation.</p>
Burns-09	9. Navy conduct additional pre-activity overflights, barring any safety issues (e.g., low fuel), before conducting any activities involving detonations.	As described in Section 5.3.3 (Explosive Stressors) of the Navy's 2019 Draft Supplemental EIS/OEIS, the Navy developed a new mitigation for the Proposed Action requiring additional platforms already participating in explosive activities to support observations of the mitigation zone before, during, and after the activity while performing their regular duties. There are typically multiple platforms in the vicinity of activities that use explosives (e.g., safety aircraft). When available, having additional personnel support observations of the mitigation zone will help increase the likelihood of detecting biological resources.
Burns-10	10. the Navy conduct post-activity monitoring for activities involving medium- and large-caliber projectiles, missiles, rockets, and bombs.	As described in Section 5.3.3 (Explosive Stressors) of the Navy's 2019 Draft Supplemental EIS/OEIS, the Navy developed a new mitigation measure for the Proposed Action requiring the Lookout to observe the mitigation zone after completion of explosive activities. In accordance with the 2015 NWTT Final EIS/OEIS consultation requirements, the Navy currently conducts post-activity observations for some, but not all explosive activities. When developing mitigation for the 2019 Draft Supplemental EIS/OEIS, the Navy determined

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		that it could expand the requirement to other explosive activities for enhanced consistency and to help determine if any resources were injured during explosive events, when practical. If additional platforms are supporting an explosive activity (e.g., providing range clearance), those assets will assist in the post-event visual observation of the area where detonations occurred. The Navy will continue to follow the incident reporting procedures outlined in Section 5.1.2.2.3 (Incident Reports) if an incident is detected at any time during the event, including during the post-activity observations.
Burns-11	11. Navy (1) specify the total numbers of model-estimated Level A harassment (PTS) and mortality takes rather than reduce the estimated numbers of takes based on the Navy's post-model analyses and (2) include the model-estimated Level A harassment and mortality takes in its LOA application to inform NMFS's negligible impact determination analyses.	<p>As stated in Draft Supplemental EIS/OEIS Section 3.4.2.1.2.1 (Methods for Analyzing Impacts from Sonar and Other Transducers) and in Section 3.4.2.2.2.1 (Methods for Analyzing Impacts from Explosives), the consideration of marine mammal avoidance and mitigation effectiveness is integral to the Navy's overall analysis of impacts from sonar and explosive sources. Details of this analysis are provided in the technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing.</p> <p>As discussed in the 2017 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing, animals in the Navy's acoustic effects model do not move horizontally or 'react' to sound in any way. The current best available science based on a growing body of behavioral response research shows that animals do in fact avoid the immediate area around sound sources to a distance of a few hundred meters or more depending upon the species. Avoidance to this distance greatly reduces the likelihood of impacts to hearing such as temporary and permanent threshold shift (TTS and PTS, respectively). Specifically, the ranges to PTS for most marine mammal groups are within a few tens of meters and the ranges for the most sensitive group, the HF cetaceans, average about 200 m, to a maximum of 270 m in limited cases; however HF cetaceans such as harbor porpoises, have been observed reacting to anthropogenic sound at greater distances than other species and are likely to avoid their zones to hearing impacts (TTS and PTS) as well.</p> <p>As discussed in the 2017 technical report titled Quantifying Acoustic Impacts on Marine Mammals and Sea Turtles: Methods and Analytical Approach for Phase III Training and Testing, the Navy's acoustic effects model does not consider procedural mitigations (i.e., power-down or shut-down of sonars, or pausing explosive activities when animals are detected in specific zones adjacent to the source) which necessitates consideration of these factors in the Navy's overall acoustic analysis. Credit taken for mitigation effectiveness</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		is extremely conservative. Not considering animal avoidance and mitigation effectiveness would lead to a great overestimate of injurious impacts. The NMFS has concurred with the analytical approach used.
Burton E-1	I love the Navy and all military however there needs to be a new process for testing that will not injure, harm or disrupt our beautiful sea creatures. We all live together on this amazing planet and truly need to help not hurt each other. There are so many intelligent scientists that work for our military who can perhaps come up with a solution that will NOT cause detrimental damage to other lives. All lives matter even our spectacular sea creatures. They do not have a voice so I hope in some way this does help them. Thank you for reading my opinion. God bless Emily	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Burton J-1	While testing is important, we as a people can't look past the dangers this poses to our environment. This is the only planet we have, so we have to protect it and keep it safe!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Bushatz-1	Whitby Island is already suffering enough from Naval activities. Please preserve the beauty and quit of the Olympic National Park and Olympic National Forest, Please move these important Growler activities to another location, preferably an existing training range.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Butler-1	I strongly disagree with underwater sonar testing. This testing has been shown to cause significant harm to marine life which rely heavily on their hearing for survival. Among the animal life at risk are the SRKW which are endangered.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Butow-1	<p>I am writing to express my strong objection to the Navy's Proposal to use the Olympic Peninsula designated as an International Biosphere Reserve and World Heritage Site, as a training ground. What jumps out at me is how ironic it is that a place deemed a Sanctuary, meaning a place of safety and quietude, will now be decimated through constant noise, driving both human and wildlife inhabitants crazy!</p> <p>I am a 61 year old Washingtonian who raised a family here and took them on yearly expeditions to the Olympic Peninsula specifically to enjoy the quiet and nature at it's finest. This coming summer, I will be hosting foreign friends and our destination of choice is none other than the Olympic Peninsula. How can it be that the Navy whose very purpose is to protect the safety of the citizenry, is now proposing to trash a national refuge with overwhelming noise and pollution?</p> <p>The residents of Forks and surrounding areas have suffered enough. Although I am glad that logging of Old Growth has ceased, I empathize with the job loss and damage to families that this caused. Forks and surrounding residents have tried desperately to find alternative sources of revenue and tourism to the area is a main draw.</p> <p>I can assure you that if given a choice, tourists will avoid traveling, to and spending money in a place, that sounds like a war zone. Not to mention the impacts the Navy's actions will have on the myriad of wildlife that are supposedly protected in this refuge.</p> <p>As a Social Worker, I can tell you first hand about how noise affects people with Dementia, Depression, Anxiety, Sensory Integration Disorders and those on the Autism Spectrum. Loud noises startle victims of trauma, provoke those with stress-induced disorders and ignite those with short fuses. I don't think the Navy would want to be responsible for harming and traumatizing the very people it is here to protect.</p> <p>In sum, the only reasonable response is to extend the comment period and to adopt the No Action Alternative.</p>	<p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential health effects of Growler and other activities on humans are discussed in Section 3.13 (Public Health and Safety).</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p>
C		
Caballero-1	<p>Sonar testing in the Salish Sea and Puget Sound is 100% unacceptable. Please please stop this as it is terribly damaging to an endangered group of orcas among many animals it is harming.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cabot-1	In December, the U.S. Navy discontinued training and testing activities within 12 nautical miles of Northern California's coastline from the Mendocino-Humboldt county line to the Oregon border following 3 ½ years of discussions with the ten Northern California Tribes that comprise the InterTribal Sinkyone Wilderness Council. These discussions were the result of a 2012 lawsuit over the National Marine Fisheries Service's failure to protect marine life and areas of cultural importance. Please finalize the decision to suspend training activities off of our coast. Protect the wildlife and respect the tribe. Thank you.	The Navy does not conduct training or testing within 12 nautical miles of the Northern California coastline.
Cain-1	Please STOP the harmful practice of sonar testing! As a Pacific Northwest Native, I am not only extremely concerned with the protection of Orcas (restoring their habitat and food source i.e. clean seas and bolstering the salmon population) but concerned with their vitality as well. And damage to their hearing caused by sonar testing is instrumental in propelling their endangerment. Please STOP contributing to their extinction by stopping Naval Sonar Testing. Thank you for hearing the public's Opinion and honoring this heartfelt plea.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cairns-1	I'm in utter shock that this has even been considered. We would never tolerate this on land why are we allowing them to mame our sea creatures. We have one ocean one lifetime. Is nothing sacred, does nothing matter. This is disheartening and a real shame if this is allowed to happen. The Orcas are already being starved because of our mismanagement of our oceans don't allow this to deafen them and thus not be able to communicate or fish basically killing the entire population. Just disgusting.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Calafiore-1	Dear sirs, there are so many device you can use alternatively. Please consider to not use this sonar, please think that the earth is suffer and we All need to save her.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Campbell C-1	I appreciate the need for testing, but not at the expense of the marine mammals that rely on their own sonar to navigate. This impacts their ability to live, find food, maintain contact, etc. We all know testing can be skewed to benefit whoever is doing the testing. We also know grey whales and orcas are having a hard time surviving. This is their environment. With the funding and ingenuity of the armed forces, I know you can find another way without further impacting Puget Sound, the Salish Sea. Please do so.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Campbell H-1	Pleas Do Not proceed with your plan to harm our coastlines,oceans and marine animals. Our environment is already under attack with the policies of the thug in chief. Have the consequences of these practices been adequately analyzed?	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Candiano-1	I have just learned of an EIS put out by the U.S. Navy on March 29, which is very disturbing to me. Please ask the Navy for another 14-day extension of the comment period so we can get the word out. Please stop this plan by the Navy. The training has been done elsewhere. It can be done elsewhere. Wild places are not empty places just waiting for an invasion by the military. Our national security must also include environmental security. The noise from multiple jet flights over the western and northern parts of	<p>The original 60-day comment period was extended by 15 days for a 75-day comment period.</p> <p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential effects of Growler and other activities on the environment are</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>the Peninsula will chase residents and visitors away. This will affect the health and economy of the Peninsula and the state of Washington. The search pattern of jet Growler flights looking for emitters would roar above the ocean beaches; the Washington Islands National Wildlife Refuges; Washington State Department of Natural Resources land; Quinalt, Quileute and Hoh Reservations; and thousands of acres of private land, including the towns of Forks and Amanda Park.</p> <p>The Navy admits to 85–100 decibels of noise per pass. That is enough to cause hearing loss and contribute to other health problems. People in Forks have recorded 94 decibel flights under the current operations. While noise is known to affect people and no studies have been done on the iconic Olympic elk, it is not difficult to reason they would be similarly affected, being mammals of a similar weight.</p> <p>The military training in the Marine Sanctuary would do damage to the ocean beaches, the marine animals of the coast, the nesting areas of many of Washington's shorebirds, migrating whales, and the birds that use the Pacific Flyway. This degradation of the Olympic Peninsula's environment is unacceptable.</p> <p>For 112 years, Congress and presidents have set aside areas of the Peninsula to protect its valuable environment. Irreparable damage would be caused if the activities are done as stated in the Navy EIS/OEIS Mar 2019 Draft.</p>	<p>discussed in Chapter 3 (Affected Environment and Environmental Consequences) of the NWTT Supplemental EIS/OEIS.</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Cannon-1	I think this is awful, we need these fish, whales and dolphins to thrive in these waters or they will be gone forever! Please think about our future here on the West coast, it is so important!	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cant-1	<p>Leave the orca's habitat for good.</p> <p>They do not have other home besides the ocean.</p>	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Capellazzi-1	This is 100% intolerable! We need to protect and save the orcas!	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		to avoid or reduce potential impacts from the Proposed Action on marine species.
Capen-1	I am extremely concerned about the planned expansion of the Naval activities in this region. I am concerned not only about the significant impact on large aquatic mammals as outlined (e.g. thousands of incidence of disorientation and temporary deafness), but also the impacts on other species that are not as well studied or visible. The assumptions made by the Navy are questionable (see attached) and further study and mitigation, as well as more robust protections, are needed. Thank you.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Caputo-1	The inhabitants of our oceans are in enough distress without adding sonar testing to the list. We know this testing leads to hearing loss and worse for animals who rely on their voices and hearing to hunt for food and to communicate with their pods and family units. We wouldn't allow these sounds in our neighborhoods because they are so deafening; why should we allow them anywhere?	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Carbone-1	I respect and support our military. The purpose of our military is to protect and serve. Protection of all animals on earth should be included. This is torture and inhumane. We are better than this. We live in a great nation and we should be doing better. These animals deserve better. They're beautiful and majestic and important to our ecosystem and way of life. It's sad enough to know they are stolen from their homes for entertainment purposes and sold off to amusement parks, but to be torturing them in their home is terrible. I really hope the navy takes this message seriously. We are better and they deserve better. Let's be better.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Carlisle-1	I am 100% against sonar testing due to the harm it causes to creatures in our oceans.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Carlson N-01	Please see attached letter for my comments. Thank you. Norris Carlson	See responses below.
Carlson N-02	<p>1. Navy impacts on Southern Resident orcas were in fact recognized as an issue by the Orca Task Force in Washington state.</p> <p>The EIS inaccurately claims that “Navy actions were not the sources for any of the identified threats” in the report by the Southern Resident Orca Task Force (Office of the Washington Governor, 2018) (page 3.4-46).</p> <p>In fact, concerns about the Navy’s use of sonar equipment impacting the Southern Residents was raised in the very first Orca Task Force meeting (5/1/2018 meeting minutes). Recommendation 25 in the final report was “Coordinate with the Navy in 2019 to discuss reduction of noise and disturbance affecting Southern Resident orcas from military exercises and Navy aircraft.” It further continued: “The governor should meet with the U.S. Navy’s Commanding Officer for the region that includes Washington state to address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state. The governor should request the Navy participate on the Vessels working group in Year Two and identify actions to reduce the Navy’s impacts to Southern Resident orcas” (emphases added) (Office of the Washington Governor, 2018).</p> <p>In addition, potential impacts from Naval activities are recognized as a threat to Southern Resident orca survival and recovery in both the U.S. and Canada Southern Resident orca recovery plans.</p>	<p>The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor’s Task Force in 2018, was not previously requested to participate in the Task Force, and the Navy was not made aware of conversations held during meetings in 2018. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force’s working groups on prey and vessel traffic. The Navy participated in the Governor’s Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.</p>
Carlson N-03	<p>2. Given the small size of the endangered Southern Resident orca population today, and the fact that they travel in groups, harm to a single individual orca can easily mean a population-level effect.</p> <p>Each individual orca in the current population matters if the population is to avoid extinction. There has been a net loss of 12 individual Southern Resident orcas since 2011. The population has continued to decline since the 2015 NWTT EIS. In 2016, the National Marine Fisheries Service (NMFS) declared that Southern Resident orcas are one of the marine species most at risk of extinction nationwide. The final EIS will need to be updated with</p>	<p>There are several sources of abundance numbers for marine mammal species. For consistency, the Navy uses abundance numbers of Southern Resident killer whales (as well as other marine mammal species) provided by NMFS in the most recent Stock Assessment Report. The Navy tracks this species closely and will continue to use the most recent available data.</p> <p>The Navy is aware that the Southern Resident killer whale population is at risk.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>the latest number of Southern Resident orcas alive today, which is currently fewer than the 77 stated in the draft.</p> <p>The Draft EIS states that “the use of sonar and other transducers during training activities as described under Alternative 1 will result in the unintentional taking of killer whales incidental to those activities” (page 3.4-190). The EIS Fact Sheet Booklet states that 99.84% of all estimated takes of marine mammals would be Level B harassment, disrupting natural behavior patterns such as feeding, surfacing, nursing, breeding, sheltering or migration to those point where those patterns are abandoned or significantly alter. These—and especially feeding, breeding, and nursing—are all critical activities for the Southern Resident orcas now, given that they have produced only two surviving calves in the last three years, two orcas are visibly emaciated, and nutritional stress is recognized as a primary threat to the population. Up to 69% of all detectable pregnancies between 2008 and 2014 were unsuccessful, and low availability of Chinook salmon appeared to be a significant cause of late pregnancy failure (Wasser et al. 2017); Level B harassment by Navy activities that interferes with both feeding and breeding or displaces orcas from preferred foraging areas is of significant concern and will further contribute to the Southern Resident orcas’ low reproductive success.</p> <p>Table 3.4-40 in the EIS estimates two behavioral impacts to Southern Resident orcas per year from sonar and other transducers. It is unclear whether that means just two individual orcas will likely be affected; if so, we question whether that is realistic given that pods of orcas travel together. We are particularly concerned about new and increased impacts to Southern Resident orcas from mine explosives, which can cause injury or death, and the use of mid-frequency sonar, which can impact other marine mammals out to 16 km offshore. wildlife within 2,000 square miles – well outside the reasonable area that marine mammal observers are able to survey to record marine mammal sightings and initiate mitigation measures. In fact, military exercises have been documented to impact orcas right here in the Salish Sea.</p> <p>In a population with strong family ties, the loss of one orca also directly affects the others’ chance of survival. When a female resident orca dies, it increases the mortality risk of her male offspring under age 30 by 3.1 times, and the mortality risk of her male offspring over age 30 by 8.3 times (Foster et al. 2012). In late 2018 and early 2019, for example, it was reported that male Southern Resident orca K25 was observed to be doing poorly after the death of his mother, K13.</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>3. There are documented cases in this region of U.S. and Canadian naval activities, including active sonar training and explosive testing, causing direct harm to the Southern Resident orcas.</p> <p>In 2003, an active sonar training exercise conducted by the U.S. Navy in the eastern Strait of Juan de Fuca and Haro Strait caused one of the Southern Resident killer whale families (J pod) to stop foraging and exhibit abnormal behaviors and movement, change direction multiple times, and group together in shallow water where they are at increased risk of stranding. In a video recording of the incident, sonar can clearly be heard above the water. More recent incidents involving testing of sonar and explosives by the Canadian Navy in Southern Resident orca habitat are examples of the potential impact of the activities proposed in this EIS. A juvenile Southern Resident female was stranded in 2012 with evidence of trauma consistent with an explosion or high-pressure impact, a week after the Canadian Navy had been conducting sonar exercises in the region. An exact cause of death was not determined, but experts in underwater noise who continue to review her case believe that the most likely cause of death was an underwater military explosion. In 2017, explosives detonated by the Canadian Navy near a group of Southern Residents (L pod) caused the whales to group together suddenly and flee the area. These examples show that just one incident of training and testing activities impacting Southern Residents can cause significant harm, death, or displacement from preferred habitat.</p>	
Carlson N-04	<p>4. Other agencies and operators are taking new, meaningful steps to reduce noise and disturbance affecting Southern Resident orcas. The Navy must also increase its protections, or it will become responsible for a larger share of the cumulative impact and potentially negate some of the benefits of the other actions being taken.</p> <p>In 2019, Washington state has taken big steps to reduce impacts on Southern Resident orcas from other vessel types, recognizing that noise and disturbance have significant adverse consequences for this endangered population. In May 2019, Governor Inslee signed into law a bill that increases the distance that vessels must stay away from the Southern Residents and enacts a 7-knot speed limit within a half nautical mile of these orcas. The legislature also allocated funding for a new hybrid ferry and funding to convert some ferries to hybrid-electric power. Washington State Ferries is also doing a baseline noise inventory and developing solutions to address noise and frequencies of concern. Meanwhile, in 2019, voluntary ship slowdowns will continue and expand for the third year</p>	<p>The Navy is fully aware of the plight of the Southern Resident killer whales. In 2019 a team of Navy subject matter experts and Navy officers began to participate with the Governor's Southern Resident Killer Whale Task Force working groups on prey and vessel traffic. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales.</p> <p>The Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in areas that are particularly important for biological life processes, such as feeding and migration.</p> <p>Procedural mitigation measures already in place and proposed to continue include ceasing activities that could be harmful to marine mammals when marine mammals are detected within defined mitigation zones.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	through the Vancouver Fraser Port Authority-led Enhancing Cetacean Habitat and Observation (ECHO) Program – a Canadian program that directly benefits Southern Resident orcas in the inland waters. The Navy should increase its own mitigation efforts so that there is still a significant net benefit to the Southern Residents in terms of reduced noise and disturbance when all these other entities are increasing their protective measures.	The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.
Carlson N-05	5. The designation for Southern Resident orca critical habitat is likely to change later this year. The Navy should not make final decisions about training and testing in the potential new critical habitat areas off the coasts of Washington, Oregon and California until this designation has been made. NMFS has committed to proposing a rule with an expanded designation of critical habitat off Washington, Oregon and California by early October 2019 – an area encompassed by the NWTT range. Advancing this EIS now for activities in an area that is on the cusp of being designated as critical habitat is irresponsible. The Navy should wait until NMFS makes its final designation for expanded critical habitat before pursuing activities that would adversely affect the area. Changes in the Navy's mitigation measures are likely to be necessary so that the proposed action does not "result in destruction or adverse modification of critical habitat."	The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.
Carlson N-06	6. Recent variations in Southern Resident orca presence in the Salish Sea are complex and should not be an excuse for exercising less caution in the inland waters. The EIS states that "foraging during the spring in Salish Sea by Southern Resident killer whales has declined in recent years as they shift their range and forage for Chinook salmon or other prey species elsewhere in response to reduced prey availability in that historically used inland waters foraging area" (p. 3.4-26). Even spending time elsewhere, Southern Resident orcas are not getting enough food and are showing signs of malnutrition. The inland waters foraging area is still critically important if they are going to survive and thrive. In recognition of this fact, state and federal governments are actively working to restore salmon populations in the inland waters. It is difficult to predict orca presence on a long-term or even annual basis, and the Navy should not assume that the shift outside of the Salish Sea in the spring and summer is a permanent change. The Southern Resident orcas are still sighted in the Salish Sea frequently. In fact, Olson et al. 2018 noted that K and L pods have been increasing the duration of their stay in the inland waters by staying in the Salish Sea through the fall and into the early winter. The Navy should consult with	The statements quoted from the Supplemental EIS/OEIS are part of an establishment of the environmental baseline the Navy then uses to estimate potential impacts resulting from the Navy's activities. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The commenter incorrectly asserts that the Navy suggests that protective measures in the Salish Sea are less important; however, the Navy has not suggested that and does not consider that to be true. The mitigation measures developed for both NWTT Inland Waters and the NWTT Offshore Area for the Proposed Action represent an increase over the mitigation developed for the 2015 NWTT Final EIS/OEIS.

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>orca biologists to gather other recent information, in addition to reviewing recent published literature on Southern Resident orca presence in the Salish Sea.</p> <p>The EIS implies that changes in the Southern Residents' presence in the Salish Sea mean that protections there are less important than they used to be. In fact, it should be reason for an extra layer of caution. Reducing noise and disturbance in the heavily-trafficked inland waters could enable the Southern Residents to forage there more effectively and therefore spend more time there as they have historically. Recent information on foraging locations should not be interpreted as a reason to decrease or discontinue mitigation efforts to avoid impacts to Southern Residents in the Salish Sea. Additionally, the Navy should consider that when the Southern Resident orcas are not in inland waters, they are likely to be in their offshore area, which is subject to additional training and testing activities that do not occur in the Salish Sea. The Navy should consider additional mitigation and monitoring in the orcas' offshore habitat given the potential increased use of this area and the unique activities—such as active sonar—that take place in this portion of the NWTT range.</p>	
Carlson N-07	<p>7. The EIS should include two additional studies related to impacts on Southern Resident orcas: Wieland et al. 2010 and Emmons et al. 2019. Wieland, M., A. Jones, and S. C. P. Renn. 2010. Changing durations of Southern Resident killer whale 23 (<i>Orcinus orca</i>) discrete calls between two periods spanning 28 years. <i>Mar. Mam. Sci.</i> 26(1):195–201. This study found that the Southern Residents make a behavioral adjustment as a result of vessel noise, as measured through an increase in mean durations of discrete calls. "Because they are adjusting their vocal behavior, we must consider the very real possibility that engine noise is hindering their ability to communicate, and may well impact their efficiency at using acoustics to forage and navigate, as well" (Wieland et al. 2010). These findings should be incorporated into 3.4.2.1.1.4 on masking (page 3.4.103, which talks about other species but not killer whales) and into the odontocete discussion on page 3.4-120.</p> <p>Emmons, C.K., M.B. Hanson, and M.O. Lammers. 2019. Monitoring the occurrence of Southern Resident killer whales, other marine mammals, and anthropogenic sound in the Pacific Northwest. Prepared for: U.S. Navy, U.S. Pacific Fleet, Pearl Harbor, HI. Prepared by: National Oceanic and Atmospheric Administration, Northwest Fisheries Science Center under MIPR N00070-17-MP-4C419. 25 February 2019. 23p.</p> <p>This report states that there were 148 mid-frequency active sonar events</p>	<p>Wieland et al., 2010 was incorporated in Section 3.4.1.7.4 of the Final Supplemental EIS/OEIS as recommended by the commenter.</p> <p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>The Navy does not frequently conduct training or testing activities in the location of the Cape Flattery Offshore hydrophone since that area is highly utilized by commercial vessel traffic, making it an undesirable location for the Navy to conduct activities, especially sonar training or testing.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	detected between 2011 and 2017, with the peak overlapping with occurrence of the three killer whale communities (including Southern Residents). This is concerning because, as the EIS states, exposure to mid-frequency sonar has been directly linked to separation of a killer whale calf from its group (page 3.4-102); the separation and loss of a single calf would be a serious blow to the small population, given that there are so few calves and the southern residents have had limited reproductive success in recent years. Exposure to mid-frequency sonar has also been directly linked to mass strandings of cetaceans (page 3.4-127). In addition, the EIS states that newer high-duty or continuous active sonars have more potential to mask vocalizations, particularly for mid-frequency cetaceans like killer whales, and “longer-term consequences could include potential decrease in recruitment” (p. 3.4-102). The Southern Resident orcas cannot afford any further decrease in their already very low recruitment rates. The findings from Emmons et al. 2019 regarding seasonal use of different offshore areas by Southern Resident orcas and other whales should also be used to minimize adverse impacts by shifting sonar and explosives testing and training by season and by location.	
Carlson N-08	8. New whale report alert systems should be used for real-time monitoring and early warnings to build on the limited capacity of lookouts. The Navy should explore the use of newly available apps and technology that provide real-time information on whale presence in the Salish Sea and along the coast. Using this technology could expand the ability of the Navy’s marine mammal observers to be aware of and respond to the presence of Southern Resident orcas. For example, the Whale Report Alert System (WRAS), developed by the British Columbia Cetacean Sightings Network, alerts mariners to the presence of whales so that mitigation measures may be enacted to reduce the risk of disturbance and collision. Orca Network, Whale Scout, and other organizations in Washington also contribute to a Whale Sighting Network with close to real-time reporting in the Salish Sea.	The Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales, as described in Section K.3.3 (Mitigation Areas for Marine Species in NWTT Inland Waters). The Navy will also continue to assess the practicality of other available monitoring techniques as technologies advance.
Carlson N-09	9. Additional information is needed on the anticipated timing of the proposed activities. The EIS should detail the times of year during which the proposed activities will take place. The Southern Resident orcas have exhibited seasonality in their movements, and information from tagging studies, coastal surveys, and passive acoustic monitoring allows some degree of prediction for when and where they may be traveling and foraging. Any overlap in their seasonal movements and the Navy’s testing and training activities will	As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The duration of the Supplemental EIS/OEIS is for the foreseeable future, while the Marine Mammal Protection Act permits would be in place for seven years.

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	increase impacts on these species. Information about timing should be made public in the EIS and the Navy should seek to adjust the timing of their activities to minimize such overlap.	
Carlson N-10	10. The intended duration of the EIS is not clear. This EIS is unclear as to the duration of the planned activities. A change in the 2019 Naval Defense Authorization Act extended the Navy's authorization for marine mammal take and harassment under the Marine Mammal Protection Act (MMPA) from five to seven years. It is not stated in this EIS whether the proposed activities were analyzed for impacts over a five-year time period or for the extended seven-year time period.	The duration of the Supplemental EIS/OEIS is for the foreseeable future. The analysis would remain valid unless the Navy makes substantial changes in the proposed action that are relevant to environmental concerns, or there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. The Marine Mammal Protection Act permits would be in place for seven years.
Carlson N-11	11. Increasing the Navy's testing and training activities at this time is counter to what the endangered Southern Resident orcas need right now to have a chance at recovery. Without bold and immediate actions, the Southern Residents are likely to go extinct within our lifetimes. Everything we can do now to protect the Southern Resident orcas is critical. In a time when we should be taking action to address and decrease threats facing the population, including reducing noise and disturbance, the Navy's proposed activities increase the risks from ocean noise, vessel strike and disturbance, potential direct harm and injury to Southern Resident orcas, and displacement from preferred habitat. The Navy must consider the current crisis facing the endangered Southern Resident orcas and make new adjustments in its testing and training activities. Despite being listed under the Endangered Species Act for nearly 14 years, this unique population is not recovering and is continuing to decline. It is obvious that status quo actions, including the Navy's training and testing activities, are not serving the Southern Resident orcas. Given their highly endangered status and continuing decline, the Navy should be considering how to reduce impacts and increase protections for Southern Resident orcas.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Carlson P-1	My name is Peter Carlson, and I am a farmer, small businessman, property owner, and community member here on Orcas Island in beautiful San Juan County, Washington State. I am writing to express my concern over the US Navy's plans to increase the scale of operations in our region both of the existing Navy Growler practice flights from the Naval Air Station on Whidbey Island, WA and the proposed build-up of an anti-submarine training program as described in the document. What the analysis is not taking into account is this region's reliance on the economic benefits of our beautiful natural environment, where the vast	The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Orcas Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	majority of commerce in this county is generate from tourists who are coming to enjoy our outdoor activities and sightseeing. These activities include whale and bird watching, camping, fishing, hiking, boating, and outdoor sports, all of which will all suffer from the proposed increase in the Navy's environmentally destructive plans. Your own analysis outlines a number of adverse side effects from these activities. Your plans jeopardize my livelihood and the livelihood of our entire community, which for the last century has struggled to find and establish a delicate balance with our ecosystem here that takes into account both the needs of people and our natural flora and fauna in this beautiful region. Your document makes little to no mention as to the effects of these proposed Navy activities on our tourist based economy.	
Carlson R-1	Please accept this letter as public comment concerning potential environmental impacts associated with conducting proposed ongoing and future training and testing activities within the NWTT Study Area. I strongly oppose the Navy using active sonar and explosives at sea. The potential harm to the ocean and marine life outweighs any benefits of the testing. Recent reports about ocean acidification, species extinction, climate upset, and other environmental imbalances are alarming and indicate that natural resource conservation and preservation must take priority over consumption, development, and pollution. In today's local paper, the Associated Press reported that "an unusual number of gray whales are washing up dead on West Coast beaches NOAA Fisheries ... declared the die-off an 'unusual mortality event.'" The use of active sonar and explosives at sea for Navy military exercise is an extravagant example of consumption and pollution and poses potentially significant harm to marine life and the ocean ecosystem. The oceans, marine life, the environment, in general, have been imperiled because of human activity. The federal government, generally speaking, lacks credibility when making claims about the need for U.S. military action of any kind and, furthermore, because of U.S. military actions, Americans at home- and abroad are substantially less safe than ever. In short: the Navy testing program is not justified.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Carman-1	i moved to the olympic peninsula 11 yrs ago for peace and quiet. i live on 20 acres very very close to the olympic nat'l park. all day, what i hear now, are growlers flying in the same stupid circle over and over and over and over and over and over again. today, i'm getting very shaken as it's incredibly disturbing. there is a big huge ocean just west of here that the	Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	growlers could fly in the same circles over and over and over and not disturb so many residents. i know, the gov't employees, officials, and politicians do not at all care. i also know that we can all count on all levels of gov't to be consistent at one thing; that is to significantly decrease our quality of life in as many aspects as possible. sooooooooo many jets flying over head very frequently now. the nat'l park is suppose to be a quiet place. it no longer is. it has LOUD jet noise all day most every day. i moved here first then the gov't decided to ruin my life. there's not just an ocean right next door to practice your flying in circles, there's a big open desert just east of here. move your training there. we despise you.	<p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.
Carpenter G-1	Our country has so much sparsely populated open space there is no good reason to practice over a national park. The gunnery range in Arizona is an example of a usable site. the full length of the Rocky Mountains provides similar terrain with thousands of miles of open space. If you want to practice for a desert or seacoast environment is Las Vegas or Miami likely sites? All these available places are within minutes of travel for the Growler. Why pick very special places that are designated as unique to ruin. Is it attention seeking or punishment for voting Democratic ?	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. For this reason training complexes in Arizona, Las Vegas, or Miami are not reasonable. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Carpenter S-1	First I want to say that I appreciate the Navy and the protection it provides to our country. However, I find it ironic that the things we value most are	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	being threatened by the same group that protects us. The Olympic National Park holds many special features that cannot be found in other areas, one of which is the noted quiet and lack of traffic and airplane noise. It is becoming more difficult to find such rare treasures and I feel strongly that this one should be saved from noise pollution. Surely there are other areas that can serve as training locations that would be less offensive to those of us who value tranquility and natural beauty.	<p>the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Carpio-1	Cruelty is cruelty. I am against it.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Carr R-1	Please STOP the sonar testing in the ocean! We are not only losing hundreds of cetaceans a day but thousands around the globe from sonar testing. What have we become to not consider these magnificent beings that are being killed as just nothing but a fish 🐟 Please stop so our oceans and the families that call it home are safe. Thank you	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Carr W-1	<p>The Olympic Peninsula in general, and specifically the Olympic National Park is a popular destination for many individuals and groups intending to enjoy the quiet and peacefulness of this special area, recognized as a World Heritage Site. The noise intrusion really does not belong, and everything that can be done to reduce or eliminate the planned exercises and resulting levels of noise, should be done.</p> <p>There should be close monitoring of noise levels, carried out or verified by independent third parties, with results made public. After all, the Olympic National Park is a public institution, owned and funded by the American citizenry and their tax dollars!! We do not deserve to have the privilege of</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	visiting one of the quietest national parks undermined. There are other alternatives for these exercises and they must be considered. And when considering the impacts of these exercises, the Draft SEIS MUST consider not only the Military Operations Area noted, but ALL areas of the Olympic Peninsula which are impacted by the flight patterns employed, including transit flights to and from NAS Whidbey Island.	Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness. In Appendix J, the Navy considered the noise impacts resulting from aircraft transiting into the Olympic MOA.
Carty-1	This must not happen.All marine life is at risk.It has been proven that these test cause whales and other sea life to beach.It must stop	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Carvalho C-1	I am completely against navy sonar testing due to its known harms to marine mammals in proximity.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Carver-1	The Navy's underwater sonar practices are dangerous and harmful to Southern Resident Orcas. According to studies, "for mammals that use sound extensively, limiting their ability to recognize these frequencies in sound is going to limit their survival". I am against underwater sonar testing which has been proven to cause harm to marine animals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cascario-1	The upcoming sonar testing has not been properly supported with sufficient evidence. Particularly; there has not been a showing that the testing will not negatively impact whales. The current proposal is arbitrary and capricious for lack of scientific support.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Casellas-1	This sonar testing in the Salish sea is yet another step in the continued degradation of this critical habitat. Species, such as the orcas- specifically the southern resident killer whales- need increased protection and sonar is scientifically proven to interrupt their behavior. Other common species (harbor porpoise, transient killer whales, humpbacks, etc.) are just as effected by the testing. A stop must be put to this effort for not only the future of the species in the Salish sea, but the millions of people who depend on the sea for their livelihoods and recreation. There must be a stop to the navy sonar testing.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Casey-1	Sonar testing in the Salish Sea is utterly unacceptable!!! Un-American. Horrible. Protect our orcas. Please.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Casscles-1	God bless our navy flyers and keep them safe. I have lived and been in the mountains of New York state as well as other parts of our great country and the sound of freedom has never bothered me, keep up the good work. Our best wishes to all of you who keep our country free. Ron and Sandy Casscles	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Cassee-1	I strongly urge the Navy and the national Marine fisheries service to not move forward with this latest proposal for testing that will threaten the health and well-being of the Pacific North West Marine environment. There are already a multitude of stressors having significant negative impact on our marine environment. Declining populations of orca, and whales beaching themselves are just two immediate examples. There is no question that these animals require our protection. There is also no question that underwater sonar testing negatively affects marine creatures. That makes it an excusable. Period.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Time to use our ingenuity and resources to find a gentler alternative. Anything else is inexcusable.	
Castillo-1	Due to the known harm underwater sonar testing inflicts on marine animals, I am 100% against it. The SRKW are already starving with the lack of food supply, please do not cause more harm to them.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Catroll-1	Please stop northwest training and testing. Is it really necessary to harm endangered animals? The sound causes irreversible damage, stress, deafness to death to any animal that uses sonar. Instead of destroying not only their home and their only means of communication and navigation stop testing and find a way to preserve them and oceans. Whales and dolphins and other marine life have a hard enough time surviving man. Please don't add more tragedy to the mix.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cavallin-1	This is not right. Why are we willing to harm these animals? Is it worth it? Would you like it be done to you?	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Ceazan-1	I am opposed to a plan by the U.S. Navy to begin treetop high training missions over the area from the Hood Canal to the ocean over some of the most sensitive and significant areas of Washington State. Idaho and Nevada training areas are designed for warfare training the Olympic Peninsula is not. It will disturb visitors to and the wildlife of, Olympic National Park. It includes International Biosphere Reserve and a World heritage Site.	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTTE Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. For this reason training complexes in Nevada are not reasonable. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Celani-1	We need to preserve and respect the home of other species. Humans do not own everything. Humans have to stop being entitled to do whatever they want and think there are no consequences. We were put on this earth to share it with other species and not destroy it. Have respect for living life no matter what shape or form. We will one day realize this when there is nothing left! It will be too late!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Celik-1	I am 100% AGAINST underwater sonar testing which has been proven to cause harm to marine animals !!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Chadd-1	<p>A resident of Port Angeles, WA, I am involved with advocacy and education on behalf of our Southern Resident Orcas. The J, K and L pods of the Salish Sea are on the decline; only 76 remain.</p> <p>Aircraft noise and sonic booms have been implicated as a cause of lowered reproduction in a variety of animals. Both high and low frequency noise have negative impacts on whales' ability to navigate and identify food. The carbon dioxide in jet exhaust acidifies the water, damaging the web of marine life that sustain salmon, the orca's primary food source.</p> <p>Additionally, chemical compounds from the Navy's fire retardant, already in Whidbey's aquifer, enter Puget Sound as surface runoff. These effects, taken together, will further stress the pods and may make the difference between survival and extinction. The potential risk of further harm to these critically endangered orcas is reason enough to deny the expansion of naval training operations in our area.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Chambers-1	<p>All I can say is that I cannot support what the Navy intends to do.. As intelligent as they are, this is a gross lack of the fact that the Navy did not adequately analyze the huge impacts on biological resources..</p> <p>Please think about how serious this would be on the life in the waters you will affect.</p> <p>Please</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Chamblin-1	Sonar testing is deleterious to cetaceans.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Chandler D-1	The Southern Resident Orcas deserve to live in a healthy, undisturbed environment. They are wild symbols of the Northwest and bring tourist revenue to the area that exceeds 65 million dollars per year. Please do not add to the list of things that are terrorizing these beautiful and important creatures.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTEIS.com
Chandler R-1	I have ptsd and use a service dog. The noise severely stresses me and interferes with my service dogs duties. I have also observed and noted stress and behavior changes to the wildlife.	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude.</p> <p>2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year).</p> <p>3. The proposed increase of 300 total flights per year averages to just over one additional flight per day.</p> <p>4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.</p>
Chandler R-2	This is an area that should be 100% in its natural state. That means no noise from you. It harms wildlife and people with ptsd.	See response above.
Chantler-1	Why is this happening? There is plenty of evidence that plainly shows cetaceans suffer and die due to sonar testing. STOP IT NOW!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Charbonneau -1	<ul style="list-style-type: none"> • The Navy's EIS clearly indicates that the Southern Residents will be harmed by their testing and training activities, and that this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey. • in 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. • In pursuing these activities, the Navy violates the Endangered Species Act, which should be protecting the orcas. • The designation for the orcas' critical habitat is under review and the Navy should not be allowed to move forward until the designation is final. 	The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Please stop trying to get around compliance of environmental issues and be respectful for once.	<p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>
Charest-1	The Navy has known for a long time that sonar affects whales. It screws up their ability to even find food, so they starve. The amount of whales that have washed up on shore already this year tells us, as citizens, that the Navy is doing more sonar games. If whales were to become extinct because of your actions it would have a huge impact on all other life in the oceans (it already does) Science has proof that the ocean would lack oxygen and die. So why are you still playing your war games and killing the ocean? I am stunned by the Navy's lack of responsibility for LIFE. This needs to change, pretending you are protecting us while killing the oceans just doesn't work. We, nor our planetary home, can't live without water.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cheston-1	<p>Please stop acting like the mega-corporation you have become and be a 1,000% better steward of our planet.</p> <p>You share this earth with all of us. Why are you knowingly destroying it, piece by piece. Water, air-space, national park, all of it. It is totally egregious, horrific.</p> <p>I had to move from Coupeville to Greenbank because of the untenable jet noise.</p> <p>Thanks. I used to be proud of our Navy. Now I hate it. You have become a money-making machine. It is not about war, it's about money.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Chickman-1	<p>Regarding the Naval proposal for Northwest Training and Testing:</p> <ol style="list-style-type: none"> 1. I strongly request that you select the NO ACTION Alternative for Growler jet testing on the Olympic Peninsula. The cumulative negative impacts are unacceptable. 2. Please extend the comment period to be for 90 days. <p>I have many concerns that the proposed naval Growler testing over Olympic National Park, residential areas, and inside the Washington coastal waters of the Pacific Ocean will adversely affect our lands, waters, wildlife, and personal lives in the norwestern corner of Washington State. Please stay where you have done your training for decades. Please stop considering conducting naval warfare games and use of Olympic National Park, our national marine sanctuaries, national forests, and private/personal lands. We who live here on the peninsula do not want to live under training jets all day long...we do not want the use of sonar to impair our ocean animals...we do not want tourist business to be impacted...we do not want to harm the endangered bird species (such as the Marbled Murrelet) who are already living under pressure of habitat loss.</p> <p>Please select the NO ACTION Alternative of the EIS.</p> <p>Thank you for allowing me to comment.</p>	<p>The original 60-day comment period was extended by 15 days for a 75-day comment period.</p> <p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year. When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.
Chil-1	<p>Sonar testing underwater needs to stop. You do this several times a year, creating chaos in the water and damaging the animals which live in the area. They were there first. Are there other ways to test your systems without blasting it in the water?</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Choraliev-1	<p>Please stop the underwater sonar testing, it's killing the marine mammals or harm them to kill themselves.</p> <p>A 2016 study published in the Canadian Journal of Zoology estimated that 11,233 harbor porpoises live in inland Puget Sound waters, not including the critically endangered 76 Southern Resident Orcas.</p> <p>"For marine mammals that utilize sound extensively, limiting their ability to recognize these frequencies in sound is going to limit their survival," Calambokidis said.</p> <p>Over 7 years, harbor porpoises in inland Washington waters would likely experience temporary hearing loss at some frequencies at least 95,943 times from sonar, according to the Navy's calculations.</p> <p>Sonar would cause the porpoises permanent hearing loss at 1,033 times and a "behavioral reaction" (anything from a distraction to prolonged fleeing from sound) at 101,377 times.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Christensen L-1	<p>I am apposed to the navy expansion. Our environment can't take this ! Very concerned about the impact on our marine life.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Christensen R-1	<p>This is the most egregious, ignorant, condemnable, evil action, along with all others that violate the sanctity of life, given to us by our Creator. This is heinous, torturous murder that were you committing it directly against humans, it would be worthy of the death penalty.</p> <p>These beings are no less God's children and creations than we are. They predate us, in some cases by millions of years.</p> <p>This complete and utter disregard for life is nothing less than genocidal.</p> <p>And, in effect, you are committing these atrocities against humanity, as</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>well.</p> <p>Not only does the science back this up, but so does sacred Scripture. The earth and all in it are His. Period.</p> <p>You commit these atrocities against our Creator, in every way and degree you commit them against these living beings.</p> <p>Our human, bullish arrogance is the ultimate atrocity, acting without conscience, in immoral denial of your culpability and accountability.</p> <p>Every hand is bloody.</p> <p>Every hand that takes part in this is as bloody as Pontius Pilate.</p> <p>There is no "passive" participation here. None.</p> <p>Every. Man and woman is guilty.</p> <p>There is one Judge you will not escape. The same we all must face.</p> <p>You will answer for this, perhaps not in this life, but assuredly in the next.</p>	
Christenson-1	<p>I am against the sonar testing! This is disruptive to the sea life and their way of life and communications! Man has to find other ways to do what they want done and not at the expense of our sealife!</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Christophi-1	<p>The proposal to implement sonar testing in the Salish Sea would be extremely detrimental to marine mammals, including harbour porpoises and orcas. The Southern Resident Orcas are already critically endangered, numbering only 76. Sound is vitally important to them. There are videos showing orcas in extreme distress and trying to flee the noise from sonar testing. The Navy itself has stated that sonar testing causes hearing loss in marine animals. This proposal threatens the survival of a species who depend on their hearing; thus making this testing totally irresponsible. Our seas are in crisis. Maintaining a healthy balance of apex predators is crucial. Over 50% of the oxygen we all breathe is generated by the sea. Please do not implement this destructive testing.</p> <p>Thank you for your time on this matter</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Chute-1	<p>Your Northwest Training and Testing will do irreparable harm to many marine mammals some of them in the endangered category. Please find an alternative to This planned testing.</p> <p>Thank you</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Cincilla-1	<p>According to experts, this testing you are proposing could be catastrophic to our marine life. Causing generational damage, and perhaps even killing off entire species.</p> <p>The technology you're testing is impressive, but the testing of it in our near waters is not a reasonable choice.</p> <p>I object to your planned testing. It's too dangerous to these creatures.</p> <p>Quoted from The Seattle Times, 24/28 May 2019 https://www.seattletimes.com/seattle-news/navy-plans-testing-of-futuristic-technology-sonar-harm-to-mammals-in-pacific-northwest/?amp=1&__twitter_impression=true</p> <p>"Many marine animals rely on sound to communicate, locate food, avoid predators and navigate. Exposure to sound could change their behavior," said John Calambokidis, a research biologist and founder of Cascadia Research Collective.</p> <p>Intense or repeated exposure to certain frequencies of sonar could also affect animals' ability to hear sounds in those ranges, he said.</p> <p>"For marine mammals that utilize sound extensively, limiting their ability to recognize these frequencies in sound is going to limit their survival," Calambokidis said.</p> <p>Over seven years, harbor porpoises in inland Washington waters could experience temporary hearing loss at some frequencies at least 95,943 times from sonar, according to the Navy's calculations.</p> <p>Sonar would cause those porpoises permanent hearing loss 1,033 times and a "behavioral reaction" — anything from a distraction to prolonged</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	fleeing from sound — 101,377 times, according to the estimate. "It may be something that distracts the animal from normal activities, such as feeding or reproduction," Mosher said. Many of these animals could be exposed to sonar multiple times. A 2016 study published in the Canadian Journal of Zoology estimated that 11,233 harbor porpoises live in inland Puget Sound waters. Dozens of other creatures in the Salish Sea would be affected in lesser numbers, including endangered southern resident killer whales, which the Navy predicts would exhibit behavioral responses about 15 times over seven years. The documents say endangered humpback whales in waters off California, Oregon and Washington would suffer temporary hearing loss 277 times and alter their behavior 221 times because of sonar."	
Claire S-1	So sad we are still acting this way, knowing all the harm we are doing. Will we evolve one day ?	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Clark C-1	Don't	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Clark G-1	I attended the U.S. Navy's "Open House Public Meeting" last May 2, 2019 in Eureka, California. Please include my comments and questions below as part of the EIS/OEIS public testimony regarding the Navy's sonar and bomb testing off the California, Oregon and Washington coasts. 1) According to the EIS/OEIS, the surface visual and subsurface audio identification methods used ensure that few impacted species are present prior to testing, however, the EIS/OEIS fails to consider or mention that fewer impacted species are detectable due to plummeting populations that cannot afford more losses. On May 6, 2019, the United Nation's Intergovernmental Science Policy Platform on Biodiversity and Ecosystems Services estimated that one million species are threatened with extinction within the next generation. A) Why does this EIS/OEIS omit and fail to consider well-known science documenting the rapid collapse of land and sea biodiversity, commonly	The Navy considered the best available science regarding the current state of the environment, found in the Affected Environment section within each Chapter 3 resource section.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>referred to as "the sixth largest extinction event" in life's history on earth?</p> <p>B) Why does this EIS/OEIS fail to provide the parameters and explanations for the specific number of impacted specie losses it considers acceptable?</p> <p>2) The stated purpose of navy testing is "national security", yet, nowhere in the EIS/OEIS is the diminishing quantity and quality of our ocean food-source either mentioned or considered as part of our nation's national security except for native tribes. According to scientific reports, our ocean's large fish species have declined by 90% over the past 40 years.</p> <p>A) Why is the rapid collapse our nation's ocean food security not being considered in this EIR as part of our national security?</p> <p>Thank you for your consideration and response to my testimony.</p>	
Clark R-1	<p>I am opposed to a plan by the US Navy to begin treetop high training missions over the area from the Hood Canal to the ocean over some of the most sensitive and significant areas in Washington State. Idaho and Nevada training areas were designed for warfare training, the Olympic Peninsula was not.</p> <p>There is no reason the Navy can not continue electronic warfare training in Idaho and Nevada as they have done for decades.</p> <p>It will disturb visitors to, and the wildlife of, Olympic National Park which is the eighth most visited park in the National Park System; 3.4 million visitors to the Olympic National Park in 2017.</p> <p>It includes International Biosphere Reserve and a World Heritage Site.</p> <p>Noise causes and aggravates</p> <p>High blood pressure</p> <p>Heart disease</p> <p>Hearing impairment</p> <p>Increases or creates mental health problems</p> <p>The 2011 World Health Organization report titled 'Burden of disease from environmental noise' documented health problems. The studies analysed environmental noise from planes, trains and vehicles, as well as other city sources, and then looked at links to health conditions such as cardiovascular disease, sleep disturbance, tinnitus, cognitive impairment in children, and annoyance. The WHO team used the information to calculate the disability-adjusted life-years or DALYs—basically the healthy years of life—lost to 'unwanted' human-induced dissonance. See the Australian Academy of Science article: Health effects of environmental noise pollution</p> <p>The sound profile of the Growler is not only loud but includes a low-frequency vibration that travels farther and vibrates objects in its path. This aspect creates a deadly combination beyond annoyance that impacts</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p> <p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential health effects of Growler and other activities on humans are discussed in Section 3.13 (Public Health and Safety). The potential impacts to the economy are discussed in Section 3.12 (Socioeconomic Resources).</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>human health.</p> <p>Impact to our economy: People spent \$279 million in communities near the park. That spending supported 3,556 jobs in the local area and had a cumulative benefit to the local economy of \$385 million.</p> <p>In this EIS the Navy is asking NOAA for a continuation of their 2015 NOAA permit which states" reauthorization of incidental takes of marine mammals under the MMPA and incidental takes of threatened and endangered marine species'</p>	
Cleary-1	<p>Growler training flights should be shifted elsewhere. The majority of these training exercises do not have to be conducted along our shoreline and could instead be conducted far from shore minimizing the impact on birds, fish, marine mammals, other wildlife and communities. There is no evaluation for other locations which could significantly reduce the harmful impacts of these exercises. Training around Olympic National Park, the Olympic Coast National Marine Sanctuary and other sensitive areas could be avoided if that was a priority for the Department of Defense.</p>	<p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Clemens-1	<p>Please stop doing sonar tests, it's harmful and cruel to the sea life.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Clifford-1	<p>Cetaceans are important to marine ecosystems. They are intelligent sentient beings and should be able to live their lives without harm from the Navy.</p> <p>Hundreds of whales and dolphins are washed up dead each year on the west coast of Britain especially in the outer Hebrides. The cause of this mass death is most certainly sonar being used by the US Navy. This has got to stop, the wildlife of our planet is necessary to our own survival and we cannot afford to keep killing everything and expect no adverse effects to our own life support systems which are inextricably entwined with that of other living creatures on Earth. We live on Earth and are depended to upon it for our air water and nourishment. By continued wanton destruction of</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	our habits and environments we are making it impossible for Earth to look after us.	
Cline-1	<p>We in this household are against underwater sonar testing in Washington State, especially near the Salish Sea. The Salish Sea is home to countless marine mammals who depend on hearing for their basic survival. If their hearing becomes damaged due to underwater noise pollution such as sonar testing, they cannot hunt, communicate, nor navigate. The Salish Sea is also home to the critically endangered Southern Resident Killer Whales, who have lived there for generations and have become a cultural icon to those in Washington State. The Southern Residents depend on a prey species known as Chinook salmon, who are also critically endangered. The orcas are already having a difficult time finding food due to a decrease in their prey, and adding unnecessary noise pollution and damaging their hearing is further damning them to extinction. Don't let your actions be remembered as those who drove this iconic, intelligent, and wildly beloved species to extinction.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Clos-Versailles-1	<p>- The Navy's EIS clearly indicates that the Southern Residents will be harmed by their testing and training activities, and that this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey.</p> <ul style="list-style-type: none"> • In 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. • In pursuing these activities, the Navy violates the Endangered Species Act, which should be protecting the orcas. • The designation for the orcas' critical habitat is under review and the Navy should not be allowed to move forward until the designation is final. Please respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. They need to protect the critical habitat of the orcas and prohibit testing and training in these waters. Please ask them to ban sonar and explosives in these waters. Stress that the Navy should not engage in any activities that can harm marine life. 	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

Commenter	Comment	Navy Response
		Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i> . Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Close-1	And I'm representing myself in this. I've done a review of the difference between five years from now and now. And it seems like there were some minor mitigations and changes. And it seems what I'm understanding is that NMFS, the National Marine Fisheries Service, might only be requiring the Navy to reauthorize every seven years. And it seems that the Navy could voluntarily ask to shed daylight on this every five years instead of going with the seven-year recommendation because a lot of knowledge about mitigation impacts, migration and other factors can occur over the five years. And five years is definitely a long enough amount of time to -- if you are issued a permit, that it allows to take to seek the reauthorization, that it should come up at least every five years if not more often. So I'd ask the Navy to voluntarily agree to EIS public scrutiny and reauthorization from NMFS at least as often as is currently being done which is every five years. And that's about it. The other comments I'll try to send in. Thanks.	NMFS agreed that a 7-year permit was appropriate for the Navy's proposed activities. The Navy and NMFS hold an annual adaptive management meeting over the timeframe of the permit to discuss any changes that may need to be made to provisions of the permit, including changes based on new science or effective implementation of mitigation. In the event that there are any significant changes that would affect the analysis supporting the permit, the Navy would inform NMFS and work collaboratively with NMFS scientists to provide an updated analysis based on those changes. If necessary, the Navy would reinstate consultation under MMPA or ESA (depending on the species involved) to address those changes under the permitting process. In addition, pursuant to 40 Code of Federal Regulations (CFR) section 1502.9(c)(1), the Navy would be required to prepare a supplement to its EIS if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.
Cloyd-1	The oceans and the associated waterways can no longer be considered a convenient dumping ground for pollution. Please stop using them as such. Thank you.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Coburn-1	This is totally unacceptable. We have highly vulnerable animals that need protection. There has to be a better way to do things. We have all science and technology necessary to make the necessary changes to prevent any further damage to our wildlife. This planet is home to billions of people and animals. You do not take precedence over them. Surely you can see that you have a responsibility to protect, not only people, but the earth and all of its inhabitants, as we are connected in a complex web of biodiversity. This must end. Shame.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ The Discovery of Sound in the Sea website at: www.dosits.org The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Coffey-1	Please stop the endless poisoning of our planet. This further contributes to the demise of our planet and our species. Reconsider. For the sake of your children and their children, reconsider.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Coffield-1	Please stop this terribly damaging sonar testing. You know full well the damage and death it causes ocean inhabitants. Every time you blast this sonar around whales die and who knows how many other aquatic creatures. It is murderous, insane, and unnecessary. You've done countless tests and killed thousands already. Enough. Go protect the border. Do something useful.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Coleman-1	Please end sonar testing in the Pacific Northwest and everywhere else! This is cruel this testing can kill them or literally make them go insane. Please stop seeing wildlife as something you don't care about. Humans are animals too will hold you accountable if you continue to abuse marine life in this disgusting manner.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Coleman-2	Please, please stop underwater sonar testing! Humans aren't the only species that have a right to live on this planet. Sonar testing is evil and can inflict extreme harm onto marine animals, such as orcas. Have a heart and stop this NOW!!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Colton-1	When you perform military exercises in our National Forests, you shame the sacrifice of the service members who gave their lives that this country should be free. Shame shame shame on you for turning our military against our citizens, and for destroying everyone's ability to enjoy the beauty that is the Pacific Northwest of the United States of America.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Colton-2	There should be no military drills, exercises, or presence of any kind in our National Parks and our National Forests. None. Period. War games are the opposite of the purpose of our Parks.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Colton-3	The idea that "average sound pressure levels" are a meaningful or functional way to evaluate the effect of a long series of high-intensity events separated by majority periods of quiet is obvious and shameful nonsense. It is insulting to the intelligence of the citizens that you would even propose something so ridiculous. Show us that you actually understand the science: use on-site sound	DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses ¹ . The following text ² states DoD's position regarding the preference for modeling:

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	monitoring, look at the peak sound pressure levels, their duration, and frequency, and then have a factual discussion about the damage these aircraft are doing to the citizens near the flight path. You have zero credibility until you do.	<p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Coltrain-1	Please do not conduct this testing in the Puget Sound and surrounding areas. The damage to marine mammals would be irreparable. Surely there are other ways to conduct these tests without danger to already-endangered marine mammals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Combee-1	I am 100% against sonar testing as it has been proven harmful to the hearing of (at least!) marine mammals, which use that sense to hunt and find food. There are already hardships for the animals in that area, the testing will only stand to cause further demise for the residential species.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Conley-1	My substantive comment is simple - these marine mammals are known to be critically endangered and sonar testing is known to physically harm these same animals so the two statements together offer a simple conclusion. The Navy must not engage in practices that push an endangered species closer to extinction. That is common sense. Defending America means to me keeping safe everything that represents our amazing country - and our wildlife must be included in that. Any time there is footage of "America the great " - it includes vistas from our national parks and our wildlife. Protection is your duty - but to me as a proud American - America is more than the sun total of its people. It's the land and the sea and the people privileged enough to be here. So apply simple logic, compassion and TRUE patriotism for our country in its entirety and the answer becomes simple - protect these animals - do not knowingly harm them. The Navy has many brilliant minds - task them with alternate solutions. Innovation is definitely an American trait.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Conquest-1	I am a resident of Sequim, living on the Miller Peninsula with a clear view of Whidbey Island. I am 100 % in favor of your current and upcoming training mission that are or will happen. I am excited that our military has an area that accommodates the training that is so vital to completing the missions of protecting our nation. I am excited to hear the sounds of freedom and feel secure seeing the aircraft and ships that keep us safe. I feel the EIS is complete and impacts well documented.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Conrad-1	Oh PLEASE, PLEASE don't do this. Those that call the OCEANS home are having a hard enough time trying to survive. With alk the garbage and other pollutants we humans are slowly killing them. PLEASE don't add more stress and anxiety to them. They need to survive	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Conroy-1	I am opposed to allowing the Navy to practice war games — the damage these practices do to our mariane wildlife is untenable and unjustifiable. There is a lot of research to backup my statement. It is wrong fr one branch of government to be allowed to destroy our national natural heritage. It is simply immoral.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Contreras-1	Please respect the wishes of the Tribal Sinkyone Wilderness Council. Please do not repeat the history of the United States disregarding the ecological knowledge and cultural significance of indigenous peoples. The impacts on marine life have not been adequately analyzed.	<p>The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy will consider additional tribal and traditional knowledge provided, maintaining respect for cultural sensitivity and confidentiality.</p> <p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Conway J-1	I am completely OPPOSED to this training and testing. Our oceans are an incredible delicate ecosystem and this has a direct negative impact on vulnerable populations, especially southern resident orcas. If this testing takes place it will cause irreparable harm in the are and further degrade an already suffering ecosystem.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Conway K-1	<p>Please consider the extremely negative effects of sonar testing on all Marine Mammals, particularly those who rely on echo location capability in order to seek food and communicate with their closely bonded family members.</p> <p>It is most crucial that no disruptive, damaging sound waves occur where the highly endangered Southern Resident Orca population must be protected in the Salish Sea.</p> <p>Pollutants and lack of their main food supply of salmon, along with boat strikes are having negative impact on these resident Orcas, resulting in starvation and loss of both adults and calves.</p> <p>With their overall numbers drastically dropping, there must be no further strain on their threatened existence as we rather work to try and improve conditions they currently endure.</p> <p>Thank you for considering the welfare of Marine inhabitants, vital to the health of our oceans, when making the decision to not conduct sonar testing in or near the Salish Sea.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Conway M-1	Please do not go through with this sonar testing. It will be detrimental to the whales and dolphins that live in the Salish Sea, causing problems such as hearing loss. Whales and dolphins need their hearing; they communicate through vocalizations and use their natural sonar to locate prey. They obviously cannot do any of this if their hearing is damaged. Because of this, it may harm or even destroy that ecosystem. I am against it.	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cool-1	PLEASE stop this harmful practice! Our Marine life are the basis of our food chain, & our lives. PLEASE protect our Marine life, without them, we die.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cooter-1	My family and I are 100% against the Navy's use of underwater sonar testing. It has been proven to damage the sea life that are exposed to these frequencies. Especially the living creatures that use frequencies for communication. These animals are extremely smart. Some are able to show empathy and have saved humans from danger. At some point we have to start taking care of the earth and the creatures that are needed for the overall good of the world. Not just your world or my world, but OUR world that we are destroying at a dangerous pace. Please, reconsider this action. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cornelius-1	It's true that the new sonar and Sperm whales can emit the same frequencies. The difference is: Whales focus their lethal hunting beam to a few feet wide while lethal Naval sonar is 360°. My grandfather was a market hunter, he could shoot 150 geese on the ground w/ ten 10 gauge shotgun shells costing 15¢ each, selling the geese for 25¢ each. That was declared illegal in 1918 because of hipster-like fad marketing and indiscriminate by-kill of a limited resource. There's a parallel between the navy proposal and the migratory bird act: The people doing the killing share a conceit that disconnects them from the result of the slaughter. They do it because someone tells them it's ok and they don't consider the results. It's not OK. Don't do it. Each pulse can maim or kill hundreds if not thousands of fish, birds and mammals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cornelius-2	The navy is planing exercises off the N. California coast which will disrupt marine life there, specifically Gray whale migration. Mendocino and Humbolt counties costal economies really do depend on tourism. Much of the tourist appeal is for whale watching and boat tours. We actually need those whales. Previous Navy exercises have led to other cetacean mass strandings of various species showing broken eardrums. The ocean is big, please don't	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	conduct war games near migrations, and perhaps turn down the sonar for close quarter practice everywhere.	
Corsick-1	<p>The public attending the meeting need and want microphones.</p> <p>No Action option</p> <p>No Action option</p> <p>No Action option</p> <p>We stand with tribal concerns</p> <p>Absolutely no sonar, no explosives, no chemical contamination</p> <p>Mendocino County Supervisors are for the No Action option.</p> <p>We stand with the county supes.</p> <p>I am source energy becoming aware of itself in every moment. We are all connected to each other This is time to protect and support the oceans & the earth.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Costa V-1	I am 100% against the use of sonar anywhere near the southern resident killer whale population or areas where marine mammals may be harmed by it.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Costello-1	Please do not allow the United States Navy, or anyone else from the public or private sector, to dump anything into the waters off of the Pacific Coast. Surely, there are better ways to manage this besides to pollute our waters and kill our ocean life that's already in peril.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cote-1	Hello, I would like to respectfully comment on the situation regarding environmental concerns over noise generated by the Growlers: I live in close proximity to Whidbey Island and have been experiencing loud booming noise much more often and for much longer duration than in the	When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>past from the Growlers. It is quite unfortunate that we live in such a peaceful environment that is now burdened with excessive noise pollution from the added number of jets. We hear the noise, even inside our house through our triple paned windows morning, day, evening and night. It is very disruptive to our living environment, not to mention those times that we would like to take hikes in our Olympic National Park nearby and expect absolute solitude and peace. Please reconsider the noise pollution being generated by these jets. It is very disturbing to the many people living here in this beautiful environment. We are transplants - we used to live in a very noisy California fast paced environment and were so lucky and blessed to have found this part of the world to relocate. There just aren't many places like this anymore to seek the kind of peace we once had. It is deeply disturbing to realize we don't have it anymore.</p>	<ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to approximately one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved. <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p>
Courtney-1	<p>HOW WILL THE NAVY MAKE ACCURATE COUNTS FOR "TAKE" AND still remain WITHIN THE ALLOWED "INCIDENTAL TAKE" NUMBERS?</p> <p>Recently I Saw and HEARD an absolutely alarming video of orca whales trying to escape the overwhelming, deafening sounds of underwater sonar from a Navy training ship. I had to cover my ears it was so loud! There was a pod of whales that came together breaching and diving over & over, going one direction, then going back - staying in the tight little pod- no where to get away from the horrible sound!</p> <p>These sounds are so great as to cause deafness in whales and other creatures. This is the way they communicate. If they can't find their way, or their offspring, or the rest of the pod they will die. A deaf whale is a dead whale!</p> <p>Please let me know how you will have any idea of the numbers of "TAKE" from a scenario that I just described??</p> <p>How will the Navy guarantee that ALL forms of Marine Life will not be harmed by the Navy Northwest Training & Testing?</p> <p>Right now scientists are calling it a Wildlife Emergency! This includes our</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy consulted with the National Marine Fisheries Service regarding the Navy's Proposed Action and potential impacts to marine mammals and endangered species, as required under the Endangered Species Act.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	oceans, and here at home on our West Coast. This is a big issue for our coastal community - including tourism and fishermen's livelihood. Many species living here have already been compromised by warming seas and overfishing - not to mention the record numbers of curious deaths of whales and recently of the common murre found dead on our beaches. I do not see how your operations will do anything but add to the already fragile situation in our ocean and in our coastal community. Please respond to my question.	
Cowgill-1	I would rather see tax dollars working to save the environment rather than destroying it. As we've lost abalone season this year, we can hardly find sea stars or sea cucumbers and the otters have left this part of the coast, we aren't in a position to play war games with our oceans. Please turn around and use the money and equipment and tremendous man power to clean the gyres, to reduce plastics, for bioremediation, soil remineralization and perhaps a planetary inventory of our precarious hold onto life. Remember we are earthlings and we depend on the health and life of our host.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Coyne-1	I am opposed to expansion of these flights for the following reasons. The majority of these training exercises do not have to be conducted along our shoreline and could instead be conducted far from shore minimizing the impact on birds, fish, marine mammals, other wildlife and communities. There is no evaluation for other locations which could significantly reduce the harmful impacts of these exercises. Training around Olympic National Park, the Olympic Coast National Marine Sanctuary and other sensitive areas could be avoided if that was a priority for the Department of Defense. I monitored decibels at am home when the jets fly over and it always exceeds the measuring limit of 130 decibels.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Cr-1	Please stop sonar blasts which are DESTROYING the lives of vital marine life within our oceans. This is HEARTLESS and needs to end.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Craddick-1	The impact of sonar on whales is not conclusive & submarine exercises being linked to several high-profile mass strandings. The US Navy has admitted concerns over sonar's effects on marine mammals. Submarines' sonar has been implicated in whale strandings. But military-sponsored tests now suggest that low levels of sonar, which do not cause direct damage to whales, could still cause harm by triggering behavioural changes.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cramer-1	Other National parks are protected from this abuse. Please stop ruining our silence.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.
Crasto-1	I just plain and simple don't agree with the sonar practices that endanger our animals. The ocean is their home and even though we can use it we need to respect their lives and be careful to not destroy their lives and habitat. We need to protect them.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Crilly-1	What you are doing is wrong and you know it. How are they meant to communicate with each other if they are deaf. This is beyond cruel and disgusting. Please end this. Educate yourself on these incredible, social and amazing animals and stop destroying them.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Cristol-1	<p>First, I thank the Navy for all it does to keep our country and my family safe. I served in the Army and have a deep appreciation for the military and its complexity. But with an entire ocean to the west of Whidbey Island, and many far less inhabited areas than southwest Snohomish County in potential flight paths, I have to stand against this proposal. The noise will degrade property values and quality of life in Edmonds. It will even impinge on many home-based businesses in professional services that rely on speakerphone conference calls, presentations over the Internet, Skype and other teleconference communications, and even recording -- all of which require relatively noise-free environments.</p> <p>We do not want to be penalized with the use of our own taxpayer money for this disruption and annoyance, and respectfully insist that you do the right thing and find lower-impact ways of using the vast skies for testing away from southwest Snohomish.</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Whidbey Island, Edmonds, or Snohomish County. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>
Croci-1	<p>Sonar testing is affecting marine life especially cetaceans. It is changing their behavior and their eating habits.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Crome-1	<p>please dont do this</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Cronin-1	<p>I appreciate the opportunity to submit public comment NWTT Draft EIS. I am strongly opposed to increasing growler flights over Olympic National</p>	<p>When looking at the proposed increase in EA-18G Growler flights in the Olympic MOA, it is important to consider this increase in the proper context:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Park. Olympic National Park is a National treasure due in part to it being one of the quietest places in the country. My family and I make multiple trips annually into the park and I was born and raised on the Olympic Peninsula. I do not want to see any increased noise level associated with growlers or other aircraft over the park.</p> <p>I am also very concerned about the impact to Southern Resident orcas which are on the brink of extinction. The draft EIS as I read it identifies that the Navy's proposed actions put the Orcas further at risk. Please shift any Navy activity that negatively impact or has the potential to negatively impact Southern Resident orcas to other waters.</p> <p>Thank you for your consideration I am not affiliated with any organization.</p>	<ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to approximately one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved. <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p> <p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Crook-1	<p>Please do not do your testing while we are trying to protect the lives of our j pod orca. They are so stressed now. We must protect them. I was fishing in straits and could not believe the loud and obnoxious sounds. I can only imagine amplification under water. Thanks for hearing me.</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Croonquist-1	I fully support the US Navy testing and training programs as outlined. While Alternative 1 is the preferred option, I am comfortable going to Alternative 2 if necessary to meet the needs for training efforts that will keep US Navy personnel trained up to the highest level necessary to meet our national security needs. I enjoy hearing the "sound of freedom" and seeing US Navy vessels and aircraft in Puget Sound, the Strait of Juan de Fuca and along the Washington coast.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Cropper-1	Please stop underwater sonar testing in Puget Sound, the Salish Sea and all other areas within the Southern Resident Killer Whales hunting and living waters.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Crosby-1	Please research the effect on grey whales of your activities in the Pacific Northwest and incorporate it into your plans. It is devastating to these mammals. I know others have forwarded to you these study results. Thank you for your serious consideration.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Crosier-1	I am 100 percent against sonar testing!!! oUR sOUTHERN rESIDENT oRCA AND ALL MARINE MAMMALS HAVE A RIGHT TO AN OCEAN WHERE THEY CAN FEED HUNT LIVE AND THRIVE WITHOUT MORE HUMAN	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	ENCROACHMENT. Sonar is known to severely panic and stun dolphins and whales even killing them HOW DARE YOU!!!!!! You do not have the right to cause harm or death without, discretion!!!! Our orca and dolphins as well as other marine life matter We should protect them for future generations! Our southern resident orca need all the help they can get to find salmon and survive for another generation The orca don't need another interference to their ability ti feed successfully. SHAME ON YOU FOR BEING SO CALLOUS TO OTHER SPECIES WE SHARE OUR WORLD WITH. NO SONAR SAVE OUR WHALES!!!!!!	Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cross-1	I am very much against all testing and training which has any negative environmental impacts on the oceans or the living beings in the oceans. I oppose all training and testing activities at sea and in associated airspace within the Study Area at any time.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTEIS.com
Crowell-1	<p>No new jets. No new flights.</p> <p>I have lived in the La Conner area for 20 years. For 14 of those years I commuted to Redmond five days a week. I had to leave my house by 5:30 each morning to make my commute, so I went to bed by 9:00 pm. The invasive and torturous noise of the practice flights disrupted my sleep for years and contributed to stress and poor health.</p> <p>I'm no longer commuting, but the flights are still horrendous disruptions in an otherwise idyllic rural life. I cannot believe the arrogance of the Navy to ignore the obvious issues here with your stubborn insistence on expanding these life-disrupting practices.</p> <p>The intensity, frequency, duration, and altitude of the Growlers is a threat to public health.</p> <p>It's bad enough that the Navy has been knowingly killing sea mammals for</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>years due to its sonar practice, but these Growlers will affect every living thing subjected to the deafening noise.</p> <p>Allowing unskilled pilots to practice over residential areas is another concern. The blatant disrespect of these pilots (I'm thinking of the penis drawn in the sky) is not amusing and not appreciated. They are wearing headphones. Those of us on the ground who have no control over what we're being subjected to are not.</p> <p>I have written to my my representatives numerous times to oppose this expansion. It's clear people don't want it, that it will damage resources, lower property values and destroy the peace and quiet in our beautiful area. This is expansion is damaging to our area and is unnecessary.</p> <p>No new jets. No new flights. Stop this madness now.</p>	
Crowley-1	<p>We continue to oppose the Northwest training and testing activities at sea. We are more opposed to the continuation of these activities than ever before because of the issues of climate change and species extinction. Our oceans and the species that depend upon them are more stressed than ever. Our local fishing industry is all but collapsed. Crab season has been shortened after several dismal years due to stress on migrating whales. It is time for the Navy to reconsider this testing based upon current, alarming science.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/speciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Crudland-1	<p>Please don't do sonar tests that can confuse our marine life. They are suffering enough through lack of food, disease, noise and plastics. Please don't do this, I beg of you.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Cruz-1	I am against the sonar testing! #dolphinproject #nofishnoblackfish	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cueff-1	Is there not an other way to test you equipment in a lab without impacting natural environment.	The Navy already uses simulation in training and testing whenever possible; please see the discussion presented in Section 5.5.1 (Active Sonar) from the Supplemental EIS/OEIS. In addition, see the discussion in Section 2.4.1.4 (Simulated Training and Testing Only) of this Supplemental EIS/OEIS that discusses the need for live training specifically for aircrews.
Cummings-1	<p>I have just learned of an EIS put out by the U.S. Navy on March 29, which I view as problematic. The only EIS alternative that is acceptable is the No Action Alternative. The other options given are unacceptable to the environment and life on the Olympic Peninsula. Alternatives 1 and 2 would cause unforgiveable and unnecessary damage to Olympic National Park and the Olympic Coast National Marine Sanctuary. Alternative 2 is the most extreme.</p> <p>The length of the EIS, the great area it affects, and the many people it affects requires a 90-day comment period. This, so the EIS can be examined properly and thoroughly. Please ask the Navy for another 14-day extension of the comment period.</p> <p>The noise from multiple jet flights over the western and northern parts of the Peninsula will chase residents and visitors away. This will affect the health and economy of the Peninsula and the state of Washington. The search pattern of jet Growler flights looking for emitters would roar above the ocean beaches; the Washington Islands National Wildlife Refuges; Washington State Department of Natural Resources land; Quinault, Quileute and Hoh Reservations; and thousands of acres of private land, including the towns of Forks and Amanda Park.</p> <p>The Navy admits to 85–100 decibels of noise per pass. That is enough to cause hearing loss and contribute to other health problems. People in Forks have recorded 94 decibel flights under the current operations. While noise is known to affect people and no studies have been done on the iconic Olympic elk, it is not difficult to reason they would be similarly affected,</p>	<p>The original 60-day comment period was extended by 15 days for a 75-day comment period.</p> <p>The Navy’s proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential effects of Growler and other activities on the environment are discussed in Chapter 3 (Affected Environment and Environmental Consequences) of the NWTT Supplemental EIS/OEIS.</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA’s designation in 1977. Prior to the MOA’s designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>being mammals of a similar weight.</p> <p>The military training in the Marine Sanctuary would do damage to the ocean beaches, the marine animals of the coast, the nesting areas of many of Washington's shorebirds, migrating whales, and the birds that use the Pacific Flyway. The Navy has denied flying over Olympic National Park. This is untrue. Not only is this untrue, it is impossible not to fly these missions over the Park.</p> <p>This degradation of the Olympic Peninsula's environment is unacceptable. For 112 years, Congress and presidents have set aside areas of the Peninsula to protect its valuable environment. Irreparable damage would be caused if the activities are done as stated in the Navy EIS/OEIS Mar 2019 Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Northwest Training and Testing.</p> <p>Please stop this plan by the Navy. The training has been done elsewhere. It can be done elsewhere. Wild places are not empty places that can be used in such a way without consequences. Our national security must also include environmental security if we are to protect our quality of life.</p>	
Cunningham Be-1	<p>In a time when we, as humans, have been shown exactly how detrimental certain actions are to the health and wellbeing of animals and the planet there is no excuse to continue behaving in this way. We need to be responsible about our behaviour and the impact we have on the planet and strive to help animals who have no choice but to live with the consequences of our actions. I fully oppose the Navy's planned actions as it will have a significantly negative impact on an immeasurable number of animals. Please re-consider this course of action and use the Navy's incredible resources to do better and play your part in sustainable techniques moving forward.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Cunningham Br-1	<p>On-site monitoring of aircraft overflights, rather than modeling, is needed to truly evaluate impacts on people and wildlife in Olympic National Park. In the EIS/OEIS the evaluation of impacts from sound is based on modeling rather than on actual monitoring of how aircraft noise affects wildlife and the experience of park visitors. Speculation and unsupportable extrapolation is no substitute for actual monitoring, data collection and analysis. Potential serious impacts to Olympic National Park, a World Heritage site and International Biosphere Reserve famed for its natural quiet, should be based on science, not speculation.</p> <p>The aircraft sound information in the Supplemental EIS/OEIS unrealistically minimizes the jet noise levels and frequency of overflights park visitors are already experiencing. I live in western Skagit County and am all too familiar</p>	<p>DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD's position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>with the noise generated by the EA-18G Growler. While the Supplemental EIS/OEIS claims that overflights of the Olympic Peninsula will typically be at least 2,000 feet above ground level, the document admits that these flights could be as low as 1,500 feet. To then suggest that Growler noise at that elevation will be roughly equivalent to a human whisper reveals how little actual monitoring of noise has been conducted by the Navy. This statement has put the credibility of the entire document into question and makes it a subject of ridicule by those who live with the Growler noise every day. The Navy clearly needs to do monitoring, not just modeling, to realistically evaluate the noise impacts of the present, and expanded, overflights of the Olympic Peninsula.</p> <p>The Supplemental EIS/OEIS fails to include a reasonable range of alternatives.</p> <p>The scale and complexity of the activities which the EIS/OEIS examines are massive, yet only 3 alternatives are examined: a continuation of the present testing and training with some additions (e.g. more Growler flights), a continuation with a greater increase in activity, and the required no action alternative, which would mean a cessation of training and testing in the study area. There is no alternative that looks at avoiding overflights of Olympic National Park, for example, and restricting water-based activities to areas outside the Olympic Coast National Marine Sanctuary. That these changes would be inconvenient or more expensive for the Navy are not sufficient reasons for not including such an alternative.</p> <p>Environmental Impact Statements are to examine a range of reasonable alternatives, which in this case would certainly include more than the three presented. At the very least, the Navy should design a solid, scientifically-based plan for eliminating or severely limiting negative impacts of aircraft overflights to Olympic National Park visitors and wildlife.</p> <p>In light of the inadequacies of the EIS/OEIS and its failure to address issues of significance I urge you to select the No Action Alternative.</p>	<p>databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Cunningham I-1	<p>I am against these exercises. We must protect the Orcas at this time, as even small disruptions to their existence may be the difference between survival and extinction. Please, do not move forward.</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Cunningham T-1	<p>To Whom it May Concern,</p> <p>I am writing to strongly oppose any expanded Naval operations over the Olympic Peninsula, or any increase in sonar activities in the Salish Sea. We live in a time of environmental crisis. The marine life of the Salish Sea, from the largest whales to our areas beloved salmon, are under extreme pressure. Between the effects of human development, military sonar testing and the now unfolding effects of climate change, we see marine life under assault. The heartbreaking vigil of Tahlequah (the whale who carried her dead calf for weeks and weeks all over the Salish Sea) was a call to action. We must take our responsibility as stewards of our environment seriously - all of us, private citizens as well as all the branches of the military. As a parent of two young boys it is very important to me to work to pass on both a love for our land and seas as well as the knowledge and commitment to work to protect the natural wonder and beauty of this incredible area.</p> <p>In the study below, you will read that when marine life is exposed to the high decibel levels of naval sonar, it leads to changes in diving patterns that can cause whales and other marine creatures to dive too deep, too fast in order to quickly escape the punishing decibel levels of sonar. https://royalsocietypublishing.org/doi/pdf/10.1098/rspb.2018.2533 Just as humans are negatively affected by the high-decibel noise of the Growler Jets, so to are marine creatures affected by sonar.</p> <p>The Olympic National Park is one of the great treasures of America, and is one of the quietest places on earth. Our National Parks and National Historical Reserves such as Ebey's Landing are the wrong locations for high-decibel military training. These places were created and set aside for preservation and for enjoyment by all. The US Military has vast holdings of unoccupied land that should be used for training, not our national parks and reserves.</p> <p>Noise pollution is just as devastating as other kinds of pollution. Recent articles in the New Yorker and New York Times (see links below) lay out very clearly the damages caused to humans, marine life and environmental health by noise pollution.</p> <p>As America's population shifts more and more to urban areas, the refuge provided by the sound of silence in our National Parks (and in particular by the incredible silence of the Olympic National Park and Forest) becomes</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The potential effects of Growler and other activities on the environment are discussed in Chapter 3 (Affected Environment and Environmental Consequences) of the NWTT Supplemental EIS/OEIS.</p> <p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>more and more vital as a way for people to connect with our pre-history. I understand that military training is a necessary part of keeping our military in top shape. However, a report from the Congressional Research Service shows that the "Department of Defense (excluding the U.S. Army Corps of Engineers) administers 11.4 million acres in the United States (as of September 30, 2014), consisting of military bases, training ranges, and more." (https://fas.org/sgp/crs/misc/R42346.pdf)</p> <p>Please use some of the 11.4 million acres administered by the Department of Defense. Encroaching upon public treasured public lands is not the solution.</p> <p>https://www.nytimes.com/2019/01/22/science/oceans-whales-noise-offshore-drilling.html</p> <p>https://www.nytimes.com/2018/09/23/us/silence-escapes-noise-pollution-travel.html</p> <p>https://www.nytimes.com/2018/12/31/well/live/hearing-loss-threatens-mind-life-and-limb.html?searchResultPosition=17</p> <p>https://www.newyorker.com/magazine/2019/05/13/is-noise-pollution-the-next-big-public-health-crisis</p>	
Custer C-1	<p>There should be no new jets and no new flights at the Whidbey Island Naval Station. The current level of flying is already extremely noxious to those who have to listen to it day in and day out. I have lived on the north end of Camano Island for many years. In the past, flights over our house were noisy but very intermittent. Days might go past where there were no planes. Planes flying over every day all day and well into the evening past midnight are making our wonderful home a place I don't want to be. This is a beautiful area. Many of the people moved here for the beauty but also the rural feel and the quiet. Noise is a pollutant just like polluted water and polluted air. The Dept. of Defense should not be allowed to ruin this area for their convenience. Perhaps it wouldn't be the best place to relocate if the Navy was paying the true costs of what it is doing to this region.</p> <p>The Navy needs to mitigate for the damage it has already done. No other federal agency would be allowed to have such a negative impact and not mitigate. All homeowners who are in the flight paths should have the option of selling their homes to the Navy or having them insulated for noise reduction. The increase in noise and the frequency of flights the Navy is proposing is going to make many places on Whidbey Island, Lopez Island, Camano Island places where people no longer want to live. You had no public meetings on Camano Island about this increase and you monitored</p>	<p>The activities proposed in the NWT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Whidbey Island or Camano Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>two places on the Island but neither place was at the north end where we seem to be getting most of the noise.</p> <p>The Navy should not be able to use the excuse that they are not authorized to mitigate. If you are not authorized then get authorized. Any of your congressional friends can make this happen. People should not have to fight their government to get them to do the right thing. No other federal agency would be allowed to do what the Navy is proposing and not mitigate!!</p> <p>The EIS did not do a good job of addressing the impacts to wildlife in the area. It did not address the scientific information gathered that confirms the proposed increased flights and testing would harm the already endangered resident areas which make Puget Sound their home. The Navy should not be allowed to ignore the damage that these new actions will do because of national security when other options are available.</p> <p>If national security is an issue it would seem like locating all of these planes in an earthquake zone would also be a cause for concern for national security.</p> <p>Not only must we put up with increased noise during the day. There will increased flying at night. I thought the EIS did a very poor job of modeling how often people would be awakened by planes. There is no consideration given to people who are awakened and then can't get back to sleep. When these planes are flying over at night you can't get to asleep let alone be awakened.</p> <p>The assumption was also made that people here don't open windows because we live in a cool climate and that is incorrect. We start opening our windows in May and have them open until September. We open them especially at night to help cool down our house after it has been warm during the day. Having windows open makes the noise even worse.</p> <p>The noise pollution in the National park and the many state parks should not be allowed.</p> <p>It may make sense to the Navy to have your Growler planes at one location, but no single area of the country should be forced to bear the brunt of the training flights for all of the Growlers. They have been at separate bases and they should continue to be at separate bases. If you have to have all of these planes together you need to spend the money and find a place where the training flights do not have the negative impacts to the environment and the people that is happening here.</p> <p>Anyone who thinks that increasing these flights is a good idea should come and spend some time living in our homes and see what these noisy flights</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	do to them. There should be no new planes and no new flights and the Navy should mitigate for the problems you have already caused!	
Custer M-1	Our resident orcas will clearly be hurt by sonar testing, and they can not afford such a blow. Please do not proceed with sonar testing.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Czapik-1	This needs to end now. This is harming the ocean life	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marin-species-monitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
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Da Costa-1	Help to Orcas 🙏🙏🙏	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Dady-1	<p>I can't believe we have to have a conversation about how this sonar testing is unacceptable.</p> <p>This isn't just a PNW problem, but is ESPECIALLY concerning given the small waterways of the Haro Strait/Pudget Sound areas. It is proven and admitted that this causes SEVERE issues, even death, in marine mammals. In direct comment to the PNW testing area, the Southern Resident Killer Whale population is already so fragile, this testing, if unfortunately continued at all, should definitely NOT be done in this area.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Daily-1	<p>Please stop all of this! Its killing our oceans and everything that lives in the ocean! Stop now!</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Dalby-1	I am strongly against this proposal.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Dalrymple-1	Please protect marine mammals (especially the Southern Resident orcas) by prohibiting sonar and loud noises in Puget Sound (especially by the Navy). There are newly born and elderly orcas that are quite vulnerable to loud noises.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Daly-1	I respectfully and with appreciation for your mission request that the Navy find a less sensitive area to conduct training exercises. There are few areas as pristine as this. We live in such an overdeveloped world, please help us protect the few places we still have.	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft and ships are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.
Dame-1	The program to increase training can be relocated simply and economically. It is only a matter of a few years before manned flight for tactical maneuvers will be outdated. The trajectory of the increase will destabilize the region.	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft and ships are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Daniels J-1	I am 100% against underwater sonar testing which has been proven to cause harm to marine animals!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Daniels K-1	This is not the time to start being MORE abusive to these iconic and valuable marine mammals. They need our HELP, not more of our complete disregard for the environment they EVOLVED TO THRIVE IN before we got here and messed everything up! We need to breach the dams, stop whale watching, slow down the boats, stop polluting their waters and their food, and we definitely need to stop ignoring their pleas for help. IF YOU WEREN'T TRAUMATIZED BY THE IMAGE OF TAHLEQUAH PUSHING HER DEAD CALF THROUGH SALISH SEA WATER FOR 17 DAYS SEARED INTO YOUR NIGHTMARES, YOU ARE PART OF THE PROBLEM. There is no reason, no excuse, no justification possible for not doing something to HELP them and if what you have planned doesn't HELP THEM, then you need to get out of the way of the people who are. I would also appreciate it if you would quit it with all the loud planes flying over all the time, its disturbing! If it bothers us, it surely bothers these whales. Stop with the constant flyovers, quit it with the loud booming and destructive and pollutive activities. If you really have America and her interests at heart, you have ALL of America, including the innocent creatures that we SHARE this space with. DO THE RIGHT THING. Be their champion. Be on the right side of history for once.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
D'anjou K-1	My name is Maeva Kelly and i give you my voice today for my opposition about the Us navy sonar test in the salish sea. This is unacceptable and endanger the precious marine life. This is so important to protect them. I say no to Us navy sonar for 1000%.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
D'anjou M-1	I introduce myself Maeva Kelly and sends you my comment by my opposition 1000% for underwater sonar tests. It has been proven that they can do a lot of harm to marine animals, including our 76 southern resident orcas who are currently so fragile. This is unacceptable, we refuse sonar tests underwater!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Danner-1	Please be part of the solution, not the problem. The resident orca of SJI need protection, no irresponsible testing by the US Navy. Please be aware of your actions and realize this population is on the brink of extinction.	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Dardecker-1	With the threats to the marine environment and worldwide increase in mass strandings of marine mammals this practice is unacceptable.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Darlington-1	It has come to my awareness that the Navy is doing Sonar testing in the pudget sound often right next to orcas whales who are are being tortured by these sounds and trying to escape, this is cruel and unnecessary. Please be sensitive to the living things that call these waters their homes and respect their habitat.	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Darrow-1	<p>August 19th, 2018: While setting up our tents near Blue Glacier in Olympic National Park, Growler jets flew low overhead, shattering the natural quiet that had so far been an outstanding feature of our rare weekend of backpacking.</p> <p>April 28th: A friend reports that military jets were doing low laps around Mt. Rainier while he was climbing the peak.</p> <p>May 25th: My friends 3 year old daughter burst into tears when Growler jets flew low over their home in Port Townsend, screaming "Make that noise stop, Grandma!"</p> <p>May 30th: While visiting a friend near Fort Worden at 3:40 in the afternoon, we had to pause our conversation until Growler Jets passed over, because we could not hear each other over the sound of the jets.</p> <p>June 7th: We were enjoying a pleasant hike on the Union Creek trail in Wenatchee National Forest when three Growler jets flew low overhead at about 2:30 p.m. It took more than an hour for my ears to stop ringing.</p> <p>These are just five specific instances of times when the noise of Growler jets has dominated my family's soundscape (Although I cannot confirm that the jets at Mt. Rainier and Union Trail were Growler Jets; they may have been another type of military jet.) Dozens of other nights, such as this one (9:30 p.m. on June 11th 2019), as I write this comment, the constant roar of jets taking off and landing on Whidbey Island goes on for hours in the background, even though I am indoors with the doors and windows closed. Many times during the day, jets roar low over my home on the Quimper Peninsula.</p> <p>While I understand the need for training as well as the importance of the military to Washington State's economy as well as the Nation's security, I feel that minimizing impacts to communities and wild soundscapes is important. For me, this type of noise is a cause of anxiety not only because of the audible impact, but because we all know that it represents our country's continuing dependence on a military industrial economy. The sounds of war are not comforting to me, as opposed to those who like to suggest that it is the "Sound of Freedom." Could we accomplish the goals of providing a secure defense for the region and our country, as well as training our military, by using technologies that have less impact on our collective soundscape? What is your team doing to address this issue?</p> <p>The EIS states that the Naval Training alternatives I and II "would not</p>	<p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential health effects of Growler and other activities on humans are discussed in Section 3.13 (Public Health and Safety). The potential impacts to the economy are discussed in Section 3.12 (Socioeconomic Resources).</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	adversely affect public health." However, the studies fail to assess the long term and cumulative effects of jet noise on mental health. Assessments were done purely on decibel levels. While these measurements may equal or be less than ambient noises of traffic, music, or other ambient sounds in the local urban environment, it is the quality of the sound that matters when assessing mental health. We are living in a war zone. This is not a "normal" acoustic environment for humans or any other creatures to live in, and should not be considered "necessary" collateral damage for providing national security. Thank you for the opportunity to submit my comments for the EIS.	
Dashko-1	I strongly oppose the Navy's proposed off-shore testing. In new research published in the Proceedings of the Royal Society B, they discovered that the sound emitted by sonar is so intense that marine mammals will swim hundreds of miles, dive deep into the abyss or even beach themselves to flee from the sounds that are literally unbearable to them. In particular, beaked whales are one of the marine mammals that are often found beached due to sonar testing. Prior to the 1960s, beaked whale strandings were extremely rare. But once the 60s rolled around, the Navy started to use mid-frequency active sonar (MFAS) to detect submarines. And from the 60s onwards, whales washing up on beachings became a very common occurrence. The paper recently published is a summary of what was discussed at a 2017 meeting of beaked whale experts in the Canary Islands and revealed that sonar distresses beaked whales so much that the marine mammals ends up with nitrogen bubbles in their blood very similar to what divers would call decompression sickness or the bends. The nitrogen can cause hemorrhaging and damage to whales vital organs. This is just one piece of evidence and the list goes on and on. With global climate change affecting our world at unprecedented rates, this is not the time to harm our oceans even more than they have been harmed. Please do not continue with the proposed testing.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Dashko-2	I do not support the Navy's plan to perform sonar testing along our shores. Research shows that sonar testing can be harmful to marine life, and therefore, to the vibrancy and sustainability of our oceans. Along with many of my community members, I urge the Navy not to perform sonar testing as outlined in Draft Supplement EIS/OEIS. Thank you for considering the wellbeing of our ocean.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Dautaj-1	Plz do not destroy the enviroment of orcas	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Davies-1	No No No sonar testing causes whales to go wildly off course going from known,safe routes to unknown waters.... This has been the cause of hundreds of beaching episodes as they find themselves in too shallow waters... The whale population is under immense threat already (whaling, plastic debris, toxic pollution and low fish stocks)so as well as dying in large numbers there's the threat of beaching....	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Davis Ka-1	Our oceans are imperiled. Much of our marine life is endangered. We are witnessing mass extinctions at an unprecedented rate. We need to do everything we can to save and protect precious marine life. Naval testing is terrible damaging to sea life. There is no justification for it.	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Davis Kr-1	Sonar testing in the open waters without regard for the health and well-being of the sentient creatures who reside there is barbaric, ignorant, and destructive. This must not continue.	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Dawes-1	<p>I am deeply concerned about the economic hardship that is occurring to the residents of Whidbey Island and other affected areas. Numerous people living in the noise zones are putting their homes up for sale usually at reduced prices.</p> <p>Whidbey Island depends on tourism and the increased roar of jets overhead will have a negative impact on our tourist dollars.</p> <p>Citizens can experience increased health care costs due to lost sleep and the health implications that accompany it.</p> <p>There are many factors that are vital for the well being our our citizens and keeping us safe from attack is certainly one, but not to the exclusion of all others. Our Pacific Northwest is a treasure that needs to be protected in all areas, not just one.</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>
Dawson-1	<p>I would like my comments to be entered in the record in opposition to the Navy's planned expansion of weapons testing in the Pacific Ocean. I am not a scientist; I don't a lot of facts and figures prepared for you. I am opposing this action as a human being who is concerned about the continued existence of life on this planet. I oppose these actions on moral and environmental grounds.</p> <p>War has to be the most damaging of human activities for the health of the planet and its inhabitants. Science has overwhelmingly confirmed that our planetary ecosystem is on the verge of collapse. The ocean ecosystems are sick and dying. The oceans are the lifeblood of our planet; AS THE OCEANS GO, SO GOES THE PLANET.</p> <p>The NOAA has made an official declaration of an "unusual mortality event" for the Eastern North Pacific population of gray whales, a designation the agency defines as an unexpected and significant die-off of any marine mammal group. This is a five-fold increase this year alone. There is no doubt that military testing in the ocean has a significant negative impact on whales and other sea mammals which use sonar to navigate, and who depend on a toxic and stress free environment to survive. The web of life involves ALL members of an ecosystem in mutually dependent existence. The destruction of one element has repercussions throughout the system. Instead of wasting valuable resources on finding new ways of killing humans and other species of animals, we need a new paradigm for the future; seeking peace and cooperation with other nations. Anything less is mutual suicide, by the destruction of the ecosystems which sustain life on earth.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	It is your responsibility as human beings to stop these destructive practices. Think about your children and grandchildren. Please!	
De Carvalho-1	I'm totally against sonar testing which are proven to harm marine mammals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
de Klerck-1	Science provided us with technology. Science provided us to end the second world war. Science also taught us a lot about race, history of the planet, the climate and how it turned into an emergency nowadays, and about wild life and it's coherence with the ecosystem and the planet. Marine life is a key part of the thermocyclis on earth and is essential for the regulation of life on this planet. Among them there are several of the most intelligent species on the planet, and one of the largest species and mammals of the planet. These beautiful creatures however are given a very hard time by sonar sound tests created by you, Navy. I understand that during war you must have some nice working material, but there is no war. You are causing species to have PERMANENT hearing damage, endangered and intelligent species. We have technology for everything. You can't convince me that there isn't an alternative way of testing the sonar than the way it's been tested now. Artificial basins, barriers, computer based or sound labs. Enough is enough. Humans are destroying the planet in every way possible. It's time to change this. We are guests, not rulers.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
De la Cuadra-1	I am 100% against the harmful practices of underwater sonar testing. These practices have proven to cause harm to marine animals, PLEASE STOP! I am begging you because these animals cannot.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
De la Mora-1	Stop King the Wildlife. Its not your right	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
De Rooy-1	<p>Having attended a number of public hearings on this issue I lack all faith in the governments likelihood to amend its planned program. That Jene McCovey's questions were not answered at the hearing speaks loud and clear. Ms. McCovey is a highly respected member of the Yurok Tribe who, although wheelchair bound, manages to attend and contribute to hearings of this sort and ignoring her questions is a slap to the entire community. What the Navy plans to do will harm whales and dolphins and even the smallest take of that population should not be allowable. The damage done to the ocean environment, including the toxic garbage left behind is not acceptable, particularly in an already severely damaged ocean environment. We need to be repairing, preserving, not further damaging our precious resources. The trainings must stop.</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
De Souza-1	<p>I am writing to state that I strongly OPPOSE the sonar testing the navy is doing in the oceans. Scientific research shows that all dolphins and whales utilize sonar to hunt and communicate. By blasting sonar in the oceans you are effectively disrupting their only way to source for food and stay together as a pod. Case studies have already shown dolphins and whales beaching themselves after sonar testing has been performed in the area or basically starving to death if they are unable to hunt. Please stop this extremely cruel and inhumane testing immediately!!</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Debas-1	<ul style="list-style-type: none"> • The Navy's EIS clearly indicates that the Southern Residents will be harmed by their testing and training activities, and that this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey. • I would like to remind the Navy that in 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. • In pursuing these activities, the Navy violates the Endangered Species Act, which should be protecting the orcas. • The designation for the orcas' critical habitat is under review and the 	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Navy should not be allowed to move forward until the designation is final. I urge the Navy to respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. You need to protect the critical habitat of the orcas and prohibit testing and training in these waters. Please ban sonar and explosives in these waters. The Navy should not engage in any activities that can harm marine life.</p> <p>Thank you for taking these concerns seriously and please do not conduct trainings in the habitat of orcas or other endangered species that could potentially harm them.</p>	<p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>
Decrona-1	<p>There are many indications that marine mammals and fish are impacted negatively by the use of Sonar in their environment. After reading about the efforts currently being made by the U.S. Military to understand the hazards that Sonar present to the marine biosphere, I acknowledge that the Navy is not indifferent or unaware of these problems with using Sonar in the marine environment. I am concerned, however, that the harm Sonar does to the marine animals is not granted the importance that it deserves, in my opinion, and that appropriate action is not taken to protect the species adversely effected.</p> <p>In a quote from Jon Li's article, "Military Sonar and its Effects on Whales", April 1, 2019, the adverse effects upon whales and dolphins is summed up thus:</p> <p>"Numerous long-term studies have shown that when marine life is impacted by intense sound waves, it can disrupt breeding and feeding patterns, and even migrations. In some cases, whales will swim hundreds of miles out of their way to escape from intense sound waves, abandoning their pods or calves, or simply beaching themselves. In other cases, temporary or permanent hearing damage can be caused through exposure to such intense sonar, leaving whales unable to communicate or navigate, meaning that they are vulnerable to attack or starvation."</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Dee-1	Cetaceans, including Killer whales, have sensitive hearing. They rely on sound for everything they do in their home waters. In other words, they use their echolocation to navigate, hunt, socialize, and protect one another from predators. Since sound travels fast over long distances, sonar and other man-made noises interfere with cetaceans' daily lives and the outcome can be downright disastrous with injuries and untimely deaths. I strongly urge you not to consider engaging in any military training exercise in areas teemed with cetaceans, including and especially the critically endangered Southern Resident Killer whales. Many thanks for your understanding and consideration.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Defossez-1	It goed beyond all reason to put animals through such damaging events!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Dehaven-1	It is deceitful and counterproductive to conduct an EIS that is only intended to facilitate what you've already decided to do. We saw how ineffective this process was when the OLF / Growler expansion was being considered. You are doing again what you did then: using a whitewashing EIS to justify your preconceived plans. You should be ashamed of your lack of integrity. Our military used to pride itself on being accountable to the people. You have abandoned that principle.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Dekker-1	Despite its length, the DEIS failed to provide essential information. Important statistics (like the 22 crashes since 2000 of the EA-18G and its closely related F/A-18 E,F aircraft) were withheld. It also omitted several aggravating factors at the Outlying Field that are conducive to catastrophic accidents capable of	The noise model used, MR_Nmap uses state of the art science and is the appropriate method to evaluate aircraft noise in special use airspace such as the Olympic MOA. This model is approved by the FAA for these types of analyses.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>endangering the populace, the environment, local properties, and the pilots themselves.</p> <p>To provide acceptable civilian safeguards and livability, the Navy prefers at least 2,000 unsettled acres to conduct a training program of this kind. Yet, repeatedly, the Navy has granted itself waivers on Whidbey, and local policymakers have looked the other way. Today, there are training missions over 664 acres of populated land on Whidbey Island. Thus, the Navy is in violation of its own safety standards, thereby putting islanders at risk. Aircraft noise levels included in the Navy's DEIS are wrong. They are generated by a flawed and outdated computer model. In addition, they represent only an average of flying and non-flying times.</p> <p>You asked for "substantive" comments with specifics on the EIS. Here is substantive: Thousands of people, and myriad wildlife already hear and feel the bone-rattling, ear-drum shaking roar of these aircraft already. Multiply each additional proposed fly-over by the number of people and wildlife that experience this noise EACH FLYOVER and then multiply that by the proposed number of flyovers; THAT is indeed substantive. You cannot hide it, bury it, or dismiss it. No new jets; no new flights. Period.</p>	
Deleeuw-1	<p>Please do not go forward with sonar testing!! Our whales are in an already critical survival situation, this will cause more detriment to the struggling whales!! Please do not do this, for the sake of our ocean life.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Delgadillo-1	<p>I am 100% against underwater sonar testing which has been proven to cause harm to marine animals. As someone who has lived with sensory processing disorder, living in a state of fight, flight or freeze in reaction to noise stimuli—I know how profoundly disruptive noise can be. For marine mammals who's life depends on sounds and frequencies, you are sentencing them to a devastating life and demise.</p> <p>A 2016 study published in the Canadian Journal of Zoology estimated that 11,233 harbor porpoises live in inland Puget Sound waters, not including the critically endangered 76 Southern Resident Orcas.</p> <p>"For marine mammals that utilize sound extensively, limiting their ability to recognize these frequencies in sound is going to limit their survival,"</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Calambokidis said.</p> <p>Over 7 years, harbor porpoises in inland Washington waters would likely experience temporary hearing loss at some frequencies at least 95,943 times from sonar, according to the Navy's calculations. Sonar would cause the porpoises permanent hearing loss at 1,033 times and a "behavioral reaction" (anything from a distraction to prolonged fleeing from sound) at 101,377 times.</p> <p>I am 100% against underwater sonar testing! Please stop this!</p>	
Dellas-1	<p>This is my first public comment regarding this issue, though ive been aware of these activities for many years. I address the over arching philosophical question of who are we, what are we trying to acomplish and whether or not its acceptable to further harm nature in our pursuits. Given the preponderance of evidence i think any reasonable person would agree that activities such as the navy proposes are not justified and no mitigations will offset the potential harms. In closing i believe it is indisputable that the collective effect of human activity over particularly the last one hundred years is destroying the earth and with it all life on earth. I question whether these activities further this destruction, and if so, why?</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Demits-1	<p>My concern is marine life. They communicate through sonar, and all the mammals will beach themselves and die. They're already in a distressed position due to the overfishing and all the toxins and trash that we have put into the ocean. Now the Navy wants to come in with sonar testing and explosives in our ocean? We will have no more marine life for the future. The children growing up will only see pictures of whales, they won't see the whales spout. I have been in commercial and sport fishing, and from my knowledge of the law, you're not allowed to even follow a whale with a boat, let alone torment them and destroy their habitat and their ability to communicate with each other. I think it's very important that we preserve our oceans. And I'm very against any oil drilling, any kind of war games. I think the money would be better spent in educating people how to save our environment and save our animals. Something for our children for the future. We need to clean up our messes. We can start by cleaning up garbage, not blowing them up.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
DePalma-1	<p>No more flights. Defund the military!</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		minimizes, or mitigates potential effects on the environment from its activities.
DesRochers-1	GET SONAR TESTING OUT OF THE SALISH SEA. The orcas are having a hard enough time with farmed salmon diseases. Stop harming coastal marine life.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
DeVincet-1	<p>I first take issue with the Navy's assertion that: Navy activities are unlikely to have long term consequences on marine mammal populations." *****</p> <p>According to Oceana:</p> <p>" The U.S. Navy's training and readiness activities in the ocean cause considerable harm to marine mammals, primarily through the use of high-intensity active sonar and the detonation of underwater explosives. For the current five-year period of activity, the Navy estimated that it would kill more than 250 whales and other marine mammals; cause permanent injury, including lung and hearing damage, to 3,000 more; and disrupt foraging and other vital behavior more than 30 million times."</p> <p>Beyond that the Navy has suggested that the effects of the active sonar and explosions are local and time limited however, a study by Oceana on the effects of the Sonar reported:</p> <p>"In 1997, another experimental sonar trial took place off the coast of California close to the island of San José, ending up with the stranding of three whales and a sperm whale. According to scientists in the area, the sound waves from this experiment could be recorded along the whole length of the Californian coast".</p> <p>It is meaningless to say that the effects are localized when there is no place to go. Furthermore, the effects of the sonar and the explosions impact all ocean creatures, including those that the whales consume. Just this year whales have been found dead on shores with 80 pounds of plastic in their digestive tracts. There have been so many whales washed up on Pacific beaches this year alone (70+) that NOAA is beginning to investigate. Some have been caused by ship strikes but many are dying from starvation. These factors add up and yet the Navy wants more explosions?</p>	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>Regarding the PROPOSED ALTERNATIVES: Importance of Training and Testing with Active Sonar and Explosives NEW EVALUATION for using the NO ACTION ALTERNATIVE: While the Navy states that “Defense against enemy submarines is a top priority for the Navy” – Please note this reason for blowing up explosives on the West Coast may no longer be necessary – at least not as it once was. We now have a president, and a good portion of the Senate, that no longer fear Russian aggression – and indeed may have already succumbed to it. Although Russian Submarines had been the nemesis of the US Navy for many decades, it would appear that is no longer the case. Furthermore, what is the point of blowing up the Ocean when the president lets the enemy in the front door and the Oval Office and the Senate refuses to stop future election intrusions by this hostile nation? Why not just let the ocean creatures alone now that our leader sees immigrants on the Southern border as the real threat? When both the President and the Senate are giving the Russians a free pass to choose our politicians, defense of the ocean ports is rendered futile and thus all the sonar and explosions just for practice are completely unjustifiable.</p>	
DeVoid-1	<p>It is my belief, that by flying these planes through Port Angeles, Olympic National Park and many other air spaces, the Navy will be robbing these places of something growing quite rare. Quiet. The Olympic National Park is home to many unique flora and fauna that bring people here from all around the world. I believe this noise pollution will adversely affect both the animals and tourist’s experiences, which in turn will impact local businesses with revenue loss. Please do not proceed with this plan and ruin one of the last quiet places in the lower 48.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
DeWeea-1	<p>This testing has proven to be harmful to marine life so it must be stopped now. When one species is affected, all life in the ecosystem is affected, which in turn affects us. Please do not harm our ecosystems further.</p>	<p>All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Dickerson-1	<p>The increased activity of the Growler jets in the vicinity of the OLF will be extremely disruptive to me and the other people I work with. our office is directly under the flight path of the jets, and when they fly, we are unable to conduct business over the phone or have clients in the office. It also makes concentration very difficult. There are eleven people that work in the office and adjacent shop regularly.</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Whidbey Island or the OLF. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Dilling-1	<p>Draft Supplemental EIS/OEIS.</p> <p>Greetings,</p> <p>Please include me on the Supplemental EIS/OEIS mailing list to receive notification of public meetings and project information.</p> <p>Here are my comments for the Draft Supplemental EIS/OEIS.</p> <p>1. What are the mitigation proposals for curbing the noise over the Olympic Peninsula? Real noise data - not just computer generated data needs to be gathered. The EIS for the addition of 36 more Growlers at Ault Field did not use real data. An Outdated system which the Navy defines as "probably not legally defensible" was used. Here in San Juan County we know that the decibels projected by NoiseMap are not accurate. The same 36 Growlers are now flying over the Olympic Peninsula and it appears that the same faulty outdated computer software is being used to predict Growler impacts on the Peninsula.</p> <p>2. It has come to my attention that the Navy will be upgrading the Growlers Twin F414 Engines that have 17,000 pounds of thrust with new engines that will have 26,000 pounds of thrust. This means MORE GROWLER NOISE not less. WHEN DO WE GET TO COMMENT ON THE EIS THAT ADDRESSES THE NOISE IMPACTS OF THE NEW ENGINES WITH 26.000 POUNDS OF THRUST?</p> <p>3. Convenience for Navy Personnel rather than what is good for residents and the environment of the Olympic Peninsula and the NW Washington region seems to be the priority. We have many members of the Navy in our family and have always respected the Navy community - but now it appears that the Navy is the BULLY IN THE ROOM and does not care at all for the tax payers whose homes are now being degraded and the veterans who have chosen the quiet of the Olympic Peninsula to help them recover from their tours of duty from the various wars they have served in. I have spoken with many PTSD veteran residents of the Peninsula who are struggling to understand why the Navy is not choosing to mitigate the noise or base the War Training Operations in more suitable locations. - which DO exist.</p> <p>4. As our resident Orca population struggles to survive, the Navy continues to use sonar where they live and hunt. These "takings" are excessive and should be stopped immediately.</p>	<p>The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.</p> <p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p> <p>The engines used for the noise model were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The GE F414-400 enhanced engine is currently only in a research phase for the Navy, and is not installed in any aircraft, nor are there plans to purchase or install it. If this engine were to be introduced to the fleet of F/A-18E/F and EA-18G aircraft, the Navy would measure the noise emissions from this new engine.</p> <p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Dimondstein-1	I'm against the entire spectrum of war games. The US military is a prime actor driving climate change and extreme weather, world wide. Sonar impacts marine mammals up to 300 miles. There's no way the navy can live up to mitigating its aquatic terror.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/specops/navsource/naocean/naocean.htm • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Diomedou-1	Our oceans are dying from pollution, seismic activity and over fishing. Naval activity needs to consider the needs of these highly intelligent mammals - it's their oceanic habitat NOT ours... humanity will never learn and we will all suffer it's ignorance	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/specops/navsource/naocean/naocean.htm • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Dionne-1	This magnificent animals deserve total respect and protection from us humans. They have already suffered and endured enough. Please respect their environment and stop the training an testing of	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	EIS/OEIS. Thank you in advance	<p>minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
DiVall-1	Stop It!!! This is wrong!! These animals are being harmed--- they are basically endangered!! Stop it!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Divenere-1	PLEASE NO SONAR TESTING!!!	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Dizin-1	I do not believe that this type of testing is necessary for the Navy. There are too many harmful effects to marine life and the environment. The testing is a destruction and expensive waste of time. Our Navy can be strong and effective without it.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology <p>The Navy's project website at: www.NWTTEIS.com</p>
Dlouhy-1	Please find another location for your test. The sound will hurt the resident orcas. This is their home, you can do your tests somewhere else.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Dobson-1	The Southern Resident orcas are critically endangered due to previous and ongoing damage by man to their environment and food sources. The last	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>thing they need now is for sonar testing which will have a dreadful, adverse effect on their means of communication, food locating, and navigation. They and the other inhabitants of the Salish Sea should be protected not be subjected to further harm.</p> <p>If sonar testing is really necessary it should only be carried out in any area after extensive and thorough research into the location, its inhabitants, existing environmental damage and the potential harm that will be caused. Where a species is critically endangered, as are the Southern Residents, a different, more suitable location for the testing should be found.</p> <p>As the ex wife of a military veteran I fully support the military but the days have gone when testing could be carried out without heed of the damage it might cause.</p> <p>We are the custodians of this planet and it is our duty to protect it and all its inhabitants for this and future generations. Please do not push ahead with sonar testing in this area - if it must be done at all!</p> <p>Thank you</p>	<p>and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Dodge-1	<p>I ask that the Navy respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. The Navy needs to protect the critical habitat of the orcas and prohibit testing and training in these waters. Please ban sonar and explosives in these waters. The Navy should not engage in any activities that can harm marine life. The Navy's EIS clearly indicates that the Southern Residents will be harmed by their testing and training activities, and that this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey. In 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. The Southern Resident Orcas have two calves and we should give them every chance at survival possible.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>
Doe-1	<p>Stop your sons resting in that sea place</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Doherty-1	<p>The Navy predicts that there would be more than 500,000 instances of marine mammal behavioral impacts, harassment, and injuries over five years, including 275,000 instances of temporary hearing loss, and more than 600 instances of permanent hearing loss. This is unacceptable and inhumane.</p> <p>Vessel strikes from increased water traffic will increase marine mammal death rate. We have already seen the loss of nine Grey whales in the San Francisco Bay area in the last six weeks. The western North Pacific population of grey whales is estimated to include fewer than 200 individuals.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Dohrmann-1	<p>Please stop these testings. You know they disturb/hurt the marine mammals. They are so beautiful and they really do have enough problems caused by humans... We are the most intelligent species on this planet. We should care more for those, who can't help themselves! We do have this responsibility.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Donahue-1	I oppose the increase in testing in California waters. I encourage the Navy to work with the Sinkyone Intertribal Council to exclude California from testing 12 miles from shore.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Donaldson-1	Dear Sirs, As guardians of our glorious world, please, reconsider this testing as it is extremely harmful to marine-life within the area! There have been scientific evidence sent to your good-selves on this subject and I do hope you will consider this with an open mind and reconsider the project and any-other similar testing in the area, thank you for your time and patience! Pamela Donaldson	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Doneson-1	I completely object and am against this type of testing. We are destroying the oceans for this cruel and unusual testing which offers very little Benifet	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Doody-1	You admit that you understand this practice harms their hearing, a sense that is essential to their survival, but you do it anyway? Really? Sad and unacceptable. This needs to end now.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Dougherty-1	<p>1- because the National Environmental Protection Act (NEPA) suggests asking the National Marine and Fisheries Service (NMFS) and/or the National Oceanic and Atmospheric Administration (NOAA) to serve as lead agencies when a proposal concerns oceans; this EIS asked the National Marine and Fisheries to be a lead agency however since this is such an enormous plan for the next 7 years I strongly object to not asking the NOAA to join as a lead agency also. Would the NOAA have granted this plan to extend for 7 years which is two years longer than the 2010 five year training and testing EIS, and the 2015 five year training and testing EIS?</p> <p>2 - because this study's cumulative effects does not consider the recent Gray Whale extreme die off, labeled by the NOAA as an Unusual Mortality Event or UME.</p> <p>3 - because there is evidence some of the dead gray whales washing ashore on the Coasts of Alaska, Washington, Oregon and California are emaciated and starving and because one of their major feeding areas in the North West is exactly the hub of your proposal activity and has been the hub of activity in Puget sound since 2010. (designated by National Marine Fisheries as important to feeding during the March through May season). Your map shows both of these statistics, your study in Puget Sound and the feeding grounds of the Gray Whales overlap precisely. (There are other factors being found to cause the deaths of this population and the year's NOAA study is not complete.)</p> <p>4 - because according to this EIS the eastern boundary of study is 12 miles out. The migration corridor's outermost boundary for the whales is 10 kilometers offshore which is 6.2 miles. In K-3-3 section the EIS states that aerial surveys covering the near-shore portion of the study area document gray whales were present during all surveys within 25 kilometers of the coast (Adams et al, 2014). 25 kilometers is 15.5 miles. I strongly object to your use of nautical miles for one measurement and kilometers for others. Furthermore why are you disregarding that the habitat of the California Gray Whales has no undersea borders? It is their habitat and they are affected by low frequency active sonar for hundreds of miles. The parachutes and all debris from the training and testing do not obey boundaries on a map, neither do the whales, neither do underwater acoustics. The lines on these real to us maps are clear to human minds for</p>	<p>In August 2018, the Marine Mammal Protection Act (MMPA) was amended by the John S. McCain National Defense Authorization Act (NDAA) for Fiscal Year 2019 to allow for seven-year authorizations for military readiness activities, as compared to the previously allowed five years. The Navy's activities qualify as military readiness activities pursuant to the MMPA as amended by the NDAA for Fiscal Year 2004. Therefore, it is appropriate that the Navy request a seven-year authorization from the National Marine Fisheries Service (NMFS). It is will be determined by NMFS whether or not to grant the Navy's request.</p> <p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p> <p>NMFS makes the determination of species considered as distinct stocks or population segments. However, the Navy did consider the gray whale presence in Puget Sound in its analysis of potential impacts.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>communication but useless to whales living and communicating in fluid currents, underwater sound conduction, shifting food chain patterns, etc.</p> <p>5 - because the Pacific Coast Feeding Group gray whales have been documented within the Study Area in the spring, summer and fall months and this EIS designates them as a small group. I object to your description of this group as "small. They are approximately 200 in number. They should be considered differently because they stay around the Puget Sound for more time than the others but their size does not matter in this analysis. We are looking at the cumulative impact on all Gray Whales.</p> <p>6 - because the NEPA site was compromised by censorship of pertinent information needed and wanted prior to January of 2017 and thereafter. On the top of the epa.gov website is printed "We've made some changes to EPA.gov. If the information you are looking for is not here, you may be able to find it on the EPA Web archive or on the January 19, 2017 snapshot" The link led me to "This content is not maintained and may no longer apply for current information visit epa.gov." In January, 2017, in the first days of the Trump presidency many governmental sites were excised and information erased, notably (that I am aware of without further research) for the environment: EPA and NASA and National Parks' sites. This should be prosecuted in court as a well planned Executive censorship of scientific data which had been collected and held in trust for the common good of American citizens and global citizens and all life on earth.</p> <p>7- because I could not print information off the NEPA website for my research The Summary of the Endangered Special Act: Laws and Regulations section on epa.gov would not allow me to cut and paste and print this page. Or print it directly from the site.</p> <p>8- Because I consider the Environmental Protection Agency as it exists presently (as are all Federal Departments in our government since 2017), a political tool; no longer faithful to its mission of protecting the environment. I also witness daily how each federal department and agency are actively dissembling, and destroying their stated missions. This is not to say there are not people still sincerely working in such agencies for the common good, however they are being obstructed every step of the way. Therefore, I cannot trust the CEQ's assessment of my objections to a conflict with the Navy's NWTTEIS 2019 assessment of adhering to law.</p>	
Dougherty-2	<p>9- I was told at the May 3rd meeting Fort Bragg that because Executive Order 12114 (1979) mandates the Navy must test newest weapons for National security and further I was told that the constitution mandates the military to protect American citizens, first. Period. It is the primary mission</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>of the Navy and the Navy must comply with NEPA requisites as a secondary. I challenge this position as biased towards the Weapons industry in which many politicians have stock, have worked for and/or lobbied for, and/or are members on Boards of Directors and profit extensively from global weapon trade. Weapon escalation and its effects: creating, testing and training selling and using this weaponry endangers the safety and welfare of American citizens, global citizens and all life on earth. I challenge this position because it can be proven that United States Military's actions around the globe are contributing to climate change and that this endangers all American life for generations, as well as global citizens as well as all life on the planet. Your "protection" is killing us. One of the Naval scientists at the May 3, 2019 meeting in Fort Bragg responded to this fact with "the Navy is not the only one." To which I honestly and wholeheartedly agree. However you are asking me for my input into this EIS; we are looking at the Navy and the environment. Good for us to be honest here.</p> <p>10 - because weapons escalation has accelerated beyond any rational, common sense of defense and protection and is a real danger to all. "United Technologies Corp is nearing a deal to merge its aerospace business with U.S. defense contractor Raytheon Co and form a new company worth well over \$100 billion ... " "Raytheon, maker of the Tomahawk and the Patriot missile systems, and other U.S. military contractors are expected to benefit from strong global demand for fighter jets and munitions as well as higher U.S. defense spending in fiscal 2020, a lot of it driven by U.S. President Donald Trump's administration." Reuters, June 8, 2019</p> <p>11- because military expenditure in our country and globally are depleting resources vital for American citizens' and global citizens' rights of the pursuit of survival and health, and because such funding if used for the benefit of all life could solve many of the areas of conflict between other nations and ourselves: famine, drought, poverty, migration, lack of healthcare, lack of education, lack of sustainable farming, lack of sustainable fishing, failing infrastructure, the use of war and threats to solve differences instead of negotiations and non-violent communication. In 2015 the Military spending of China, Russia, Japan, France, India, United Kingdom, and Saudi Arabia all totaled equaled \$567.2 billion and the military spending for the United States alone that year was \$596 billion. (Business Plan for Peace, Scilla Elworthy: p 19)</p>	<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Dougherty-3	<p>12A - Cumulative Impacts: because you define "cumulative impacts" in a limited, selective manner. I will use two charts as an example of this and for simplification 1 will only use examples for Alternative 1 as shown in this EIS. Chart p 3-39: the Annual number and location of extended decelerators and Parachutes. This chart illustrates these two items and also illustrates where they would be used: offshore or inland waters. They are also separated into 3 categories: small, medium and large; they are also categorized into testing and training use. And, finally these figures for Alternative 1 of this 2019 study are compared to the final 2015 EIS. To begin with it is good to note these are not actual statistics but projections, they are estimates into the future. 2015 final EIS shows the yearly probable statistics for the study from 2015 to 2020 and Alternative 1 of this 2019 study projects what will most likely be occurring between 2020 and 2027.</p> <p>Small decelerators and parachutes for this 2019 EIS - offshore, training= 9,354 inland training = 0 offshore testing= 1,759 inland testing= 224 total= 11,337</p> <p>Medium decelerators and parachutes for this 2019 EIS offshore, training= 4 inland training = 0 offshore testing = 0 inland testing = 0 total - 4</p> <p>Large decelerators and parachutes for this 2019 EIS offshore training =98 inland training = 0 offshore testing =0 inland testing =0 total - 98</p> <p>If we take the three totals and multiply by 7 for the seven years of the study. 11,337 small decelerators and parachutes x7 = 79,359 4 medium decelerators and parachutes x7 = 28 98 large decelerators and parachutes x 7 = 686 and if we total those figures it means 80, 073 But even this is not the accurate figure of the accumulation of decelerators</p>	<p>In the Supplemental EIS/OEIS, the Navy considered the current Affected Environment, which includes the existing materials expended during previous years' training and testing.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>and parachutes in the ocean in the study area.</p> <p>If we take the items from 2015 Final EIS</p> <p>Small decelerators and parachutes offshore = $8,928 \times 5 = 44,640$</p> <p>Medium decelerators and parachutes offshore $24 \times 5 = 120$</p> <p>Large decelerators and parachutes offshore = $145 \times 5 = 725$</p> <p>total decelerators and parachutes from 2015~2019 = 45,485</p> <p>So adding up estimates of decelerators and parachutes in the ocean from 2015 till 2027 = 80,073</p> <p>45,210</p> <p>total = 125,283</p> <p>And this does not include the decelerators and parachutes from 2010 EIS from 2010-2015. This is a brief example of my argument with the faulty framing of cumulative impacts and the gap between tables and numbers and the reality to marine life who live in real time in the only ocean they have.</p> <p>Example 2:</p> <p>Chart 3.0-19 Annual Number and Location of Expended Wires and Cables.</p> <p>Fiber Optic Cables EIS 2019</p> <p>offshore training= 0</p> <p>Inland training= 0</p> <p>offshore testing= 36</p> <p>inland testing = 197</p> <p>total = $233 \times 7 = 1,631$</p> <p>Guidance wires</p> <p>offshore training = 2</p> <p>inland training = 0</p> <p>offshore testing = 152</p> <p>inland testing = 230</p> <p>total = $384 \times 7 = 2,688$</p> <p>Sonobuoy Wires</p> <p>offshore training = 9,338</p> <p>inland training = 0</p> <p>offshore testing = 4,049</p> <p>inland testing = 48</p> <p>total = $13,435 \times 7 = 94,045$</p> <p>so the total of wires and cables to be placed in the ocean from 2020 to 2027 =</p> <p>1,183</p> <p>4,298</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>94, 045 total= 99,526 PLUS the EIS from 2015 - 2019: Fiber Optic Cables offshore training= 0 inland training = 0 offshore testing = 0 inland testing= 122 total = 122 x 5 = 610 Guidance wires offshore training= 0 inland training = 0 offshore testing= 92 inland testing =155 total= 247 x 5= 1,235 Sonobuoy Wires offshore training = 8,928 inland training = 0 offshore testing = 1,000 inland testing = 6 total = 9,934 x 5 = 49,670 total wires and cables in ocean from 2015-2019 = 610 1,235 49,670 total =51,515 There will be approximately 51,515 plus 99,526 or a total of 151,041 cables and wires in the ocean in this study area by2027. (Not counting the wires and cables in the ocean from 2010 to 2015.) Here are specifics of just two types of materials accumulating in the ocean and we are then to consider these total figures to be permissible in the general category of stressors of entanglement? We are then to consider continuing down the general list of stressors: high energy lasers, physical disturbance, and strikes from vessels, vessel movement, in water devices expended or recovered, explosive munitions that may result in fragments, not to mention sound and pressure, annual number of expended or recovered targets, annual number and location of sea floor devices, annual number and location of expended chaff and flares, sound producing activities such as sonar and explosions, injury from rapid pressure changes,</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>auditory injury, possible nitrogen super saturation, injuries affecting reduced ability to acquire food as examples in which in each category you assess the effects to be acceptable to each species studied? Some of the tables in this EIS separates items such as parachutes and decelerators into 13 categories (offshore training, inland training, offshore testing, inland testing, Alternative 1, Alternative 2, 2015 EIS offshore training, inland training, offshore testing, inland testing, Alternative 1, Alternative 2 and this data is given as annual numbers for a seven year plan. This is helpful to see each the data on each major category however it is misleading when it comes to understanding the cumulative impact if these numbers. Cumulative is also a consideration of events outside of this study, such as climate change. In the week of January 18th of this year the Pentagon released a report "Effects of Changing Climate to the Department of Defense". This study looked, (arbitrarily) at 79 mission assurance priority installations of all the armed forces and found that 53 of the 79 are at risk for flooding and 36 out of 79 are at risk of wildfires. "The effects of a changing climate are a national security issue with potential impacts to Department of Defense missions, operational plans and installations." This congressionally mandated document was delivered to lawmakers but not officially announced or reported to the public. Numerous environmental organizations released the report.</p> <p>Many military bases are already running into issues caused by climate change. One example of many from the report: Langley-Eustis in Virginia has seen a 14" rise in sea level since 1930 with flooding at the base becoming "more frequent and severe." The rising temperatures (one aspect of change) in oceans are causing dramatic changes in marine life population and weather. Just because you may not believe the Navy is responsible for the starvation of gray whales this year (or maybe it is because of heavy presence in Puget Sound) the fact THAT IT IS HAPPENING and affecting the California Gray Whale Population is part of assessing cumulative impacts on this population along its entire habitat range. Climate change, vessel collisions, oil spills, nuclear reactor spills, decline and shift of food chains, may not be entirely created by the Navy but must be seen as factors contributing to the decline of Marine life and habitat over the years. If you take a study in 5 or 7 year segments and start each study with the last study without acknowledging declining Pacific Ocean species and habitat you are not assessing the cumulative impacts on our environment. You are not abiding by the guidelines of the NEP</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Dougherty-4	<p>12 B - Cumulative Impacts</p> <p>because this NWTTEIS does not include the impacts of from the Hawaii-Southern California Training and Testing (HSTT) EIS/OEIS 4,000 page, 2018 document which affects the same whale population in their migration. That particular HSTT EIS was for testing and training to begin late 2018 for five years. How long have those training and testing operations been going on, for how many years? Same whales.</p> <p>" ... the Navy's use of sonar and underwater explosives has come under fire by environmental conservation groups that have sued the Navy for harming marine and mammals. Three years ago, a federal judge ordered the Navy to implement some temporary restrictions on training and ship transits, in line with its 2013-2018 permit. Those limitations don't carry through into the new permit, however." USNI News, Navy Issues Final Study Seeking Continual Use of Training Ranges Hawaii California Ranges Gidget Fuentes, 10/29/2018. Same whales.</p> <p>If we are truly talking cumulative impacts of simultaneous Naval operations in their migratory route and not simply two different locations as separately impacting that migration, if we are truly adding up ALL THOSE parachutes, wires, cables, sonar testing, etc etc etc impacts in the ocean from both sites over all the years of operations, THEN WE ARE TALKING CUMULATIVE IMPACTS. And though your science may not verify this, it is the assertion of many scientists that such huge impacts in the ocean off the Northwestern United States, San Diego, Hawaii and Florida affect the entire earth which affect all populations of life on earth as we are all connected and affected by negative impacts on any form in this web of life.</p> <p>For these reasons and those I have not had time to fully research for this proposal, (am a working grandmother with a limited amount of time) - I ask you to cease all naval testing and training off the coasts of Alaska, Washington, Oregon and California.</p>	<p>In the Supplemental EIS/OEIS, the Navy did consider the Hawaii-Southern California Training and Testing (HSTT) EIS/OEIS and its potential for Cumulative Effects (see Table 4.3-1).</p>
Douglas D-1	<p>I am the General Manager of the most luxurious ocean front hotel in Fort Bragg, CA. We rely on tourism for survival and much of our tourism is driven by guests coming to see our whales and other sea life. Fort Bragg used to rely on logging and fishing, but times change and we now are a tourism driven economy. I implore you not to do the Navy's testing off our coastline. There must be another way to ensure our countries safety than killing off more sea life. Please reconsider your decision.</p>	<p>Wildlife-dependent recreational activities, such as wildlife viewing, or whale watching, are also discussed in Section 3.12 (Socioeconomic Resources). The impacts of the training and testing activities in NWT on tourism are discussed in Section 3.12.2.3 (Tourism). No negative effects to tourism activities in the Study Area are expected from proposed training and testing activities. Therefore, loss of revenue or employment associated with tourism is not expected to occur.</p>
Douglas J-1	<p>I am completely against underwater sonar testing because it is proven to be extremely harmful to the sea life that inhabit this earth alongside us.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Douglas K-1	Hello, please do not practice your Navy under water sonar testing in the Salish sea. It would greatly harm all the Marine life there including the endangered orcas that live in this area. I understand that perhaps the welfare of the sea is not a top priority for you, however it should be because if the biodiversity of the sea plummets, even in this small area, so will the human population, as we, and every living thing, depend on the sea to live. This message is targeted at the US Navy however I believe that we all need to cop on.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Douglas L-1	I 100% disagree with sonar testing. The sound hurt my ears listening to it trough my phone, I can't imagine how unbearable it must be for the animals. Please put a stop this nonsense.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Douglass-1	While I deeply appreciate the need to train our military forces, I am an Army Mom, I would respectfully submit that this part of WA state has not only many human inhabitants affected by the noise but is home to many species of wildlife too. There must be some other place that isn't so dense in human and other inhabitants to practice in. Please do not just consider financial economies. When an ecosystem is placed under environmental stress, there are consequences that ultimately affect us all.	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft and ships are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.
Downey-1	My husband is a former US Marine. My patriotism should not be called in question when I report that the flights over my home have become abusive and oppressive. I'm no expert and I don't know why some nights the noise is more piercing than others. Perhaps the wind coupled with the acoustics of living in a more densely populated part of Fidalgo Island (in central	The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Fidalgo Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Anacortes). Training beyond midnight seems excessive. There are days I have to cover my ears indoors and certainly times I cannot even speak to a neighbor who is less than 2 feet from me due to noise. I'm deeply concerned about the proposed increase in training flights. I hope the Navy will reconsider the impact this training has on the people of Anacortes and Fidalgo Island.	http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Downward-1	Please do not test sonar equipment in the Salish Sea or Puget Sound. Our resident orca population is struggling to survive and cannot thrive with sonar testing in their home waters. I appreciate the Navy's protection and understand the need to test equipment, but I plead with you not to do the testing in the Salish Sea or Puget Sound. Thank you for your service.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Doyle-1	The Navy's EIS clearly indicates that the Southern Residents will be harmed by your testing and training activities, this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey. In 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. In pursuing these activities, the Navy violates the Endangered Species Act, which should be protecting the orcas. The designation for the orcas' critical habitat is under review and the Navy should not be allowed to move forward until the designation is final. Please respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. We need to protect the critical habitat of the orcas and prohibit testing and training in these waters. Please ban sonar and explosives in these waters. Please do not engage in any activities that can harm marine life.	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i> . Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.
Drell-1	First of all, this format is an insult to the public. I know that the ten tribes of the Intertribal Sinkyone Council has been asking for several weeks that the format be a more traditional format so that the people who come can hear each other's questions and hear the answers that they get. That's a format where we all learn. The cocktail party style open house is extremely difficult. I've tried to navigate several of those and it's hard to hear, you get different answers from different booths, and the worst of it is that the community that comes to learn about the situation, become informed, is denied the benefit of hearing the concerns and the information that their fellow community members want to share. So it's a disservice to everybody except those who arranged it and apparently want to hide behind their little tables. So, I am submitting comments. My name is Ellen Drell. I am with the Willits Environmental Center, and I'm submitting comments on behalf of the Willits Environmental Center. And along with our comments from the Center, we also incorporate the comments submitted by the Intertribal Sinkyone Wilderness Council by reference. The -- the thrust of these comments is that we humans on the planet are facing a crisis of spiraling climate change. Everybody, every nation on earth, has pledged to try and do something about it. And the "do something" means to reduce to zero, in the not distant future, our greenhouse gas emissions and to do everything we can to sequester carbon. That includes doing everything we can to maintain -- well, I should say, to maintain at least the present state of health of the ocean. Because a healthy ocean is one of the most important carbon sequestration ecosystems on earth. The Navy also has to participate in that activity. And rather than proposing to do the same old war testing and training that they hope will not cause too much damage, they need to devise a defense system that does not emit greenhouse gases and that actually starts to do some healing on the planet. That's the thrust of our comments. I go into more detail. But the Navy must be a partner with the rest of us. They don't stand apart. And if we don't turn around and do something to control this warming climate and the catastrophic climate changes that are affecting every corner of the globe, there will be nothing	The Navy went to a great amount of effort to coordinate and organize the public meetings to meet the needs of all of the public. The format allowed for ample opportunity for valuable exchange of information between the public and Navy subject matter experts. The subject matter experts were available and answered questions throughout the entire meeting. The meetings also provided opportunity for individuals to comment in writing or orally privately to a stenographer. The Navy has received feedback from meeting attendees that the open-house format is more conducive to promoting public understanding and constructive dialogue. Open house meetings allow a greater number of individuals to directly engage and interact with Navy team members and ask questions about the Supplemental EIS/OEIS, as well as provide comments on the document.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	left to fight for. And I'm not saying there aren't things to defend. There are certainly things about this country, our freedoms, our way of life, the beauty of our natural environment, that I want to defend. And so I understand the need to defend what we hold dear. But we cannot defend it by contributing to the destruction of the worldwide environment. So our various arms of the military have to join with the rest of the citizens of the world and get on the same page and start working to devise a system of defense and a system of life that does not contribute to global warming.	
Dryfhout-1	I feel the Navy has been very thorough in their assessments to continue training and testing on the North Olympic Peninsula. As United States Citizens, we have a dire need for our Armed forces and their continued training to be prepared to defend this country. I fully support the Navy's efforts and their proposed continued training and testing on the North Olympic Peninsula. I am proud of their efforts and work to protect us and I hope my fellow citizens are as well.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Dubowski-1	To whom it may concern, All Marine Mammals (cf. UME of Gray whales, endangered southern killer whales, etc...) are suffering right now because of lack of food. Idem for marine birds in the Bering sea (tufted puffins). Acoustic shockwaves (explosions, sonars, airguns (seismic prospection)) produce letal traumas on all membranes but there is NO necropsy rightly performed to put it in evidence (cf. the attached document on the lesions). The power of your guns are increasing when membranes are not more resistant ! So, the only effect of your naval game will be a full destruction. And you know it perfectly, and this public consultation is just an hypocrisy to look like "democratic" when you will do what you want. Your military training are made to protect the access to energy abroad, not to protect US citizens. It's the reason behind all the wars (and the reason of being of NATO), whatever the damages on citizens, whatever the damages on environment. Oceans are agonizing thanks to you In conclusion, and definitely, Sibylline Oceans NGO's asks for the cancelling of your military's plan in Northwest Training and Testing	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none">• The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/• The Discovery of Sound in the Sea website at: www.dosits.org• The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr• The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology• The Navy's project website at: www.NWTTEIS.com
Dundo-1	I Say no yo sonar!! Digo no al sonar en el mar,estás especies están en peligro y probar sonares en su hábitat daña severamente su vida. Por favor no hagan más pruebas de sonar	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Dunn C-1	<p>While this comment is specific to the Olympic Peninsula, it applies to other parts of Washington. I frequent the Kettle River Valley, the Cascades, and Olympic Peninsula. While there are occasional military planes, and while there is some point where parks and forests can be overwhelmed by noise, we are nowhere near that. I find it thrilling when planes buzz through the Kettle River Valley. There is some limit for specific areas, but on a general basis, military planes are nowhere near being a burden on any recreational land that I hike in frequently.</p> <p>I was informed of this comment period by the Washington Trails Association, of which I am a member.</p> <p>Park Service and Forest Service employees are best positioned to comment on whether overflights are "excessive." While some limitation is necessary, my outdoor experiences do not make me believe we are at a point on the Peninsula that we need limitations. That may change in the future, of course.</p>	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Dunn S-1	<p>Yesterday Navy Growlers flew so low over my home in Greenbank, Washington, they cast a shadow on the deck. Too low, and too loud. In the 16 years I have lived here full time, the planes have gotten louder, fly more often and yet I feel less safe! Now the Navy wishes to expand the flights over Olympic National Park - a wonderfully pristine park we should all be able to quietly enjoy.</p> <p>None of my concerns expressed over the years seem to have been considered substantive because the damage continues to occur. The Navy just continues to do what it wants, what is wanted by the politicians owned by corporations who make money with government contracts - selling fear. Damage is done to our wildlife, and to the human life. We all need peace to prosper.</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include aircraft flights in the vicinity of Whidbey Island or the OLF. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p> <p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.
Duplessis-1	Stop sonars and let the orcas alone. They are in them element, not you. Oceans, seas are their home not yours ! Too many creatures die by our stupidity and cupidity, enough !! An angry French girl.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Durham-1	You need to stop blasting sonar testing near endangered populations of whales. The southern resident killer whale population doesn't need you blasting sonar near them when they are already endangered. They are already suffering without you adding more to it so please knock it off.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Durkee-1	I demand a minimum of 100-mile wide test free corridor along the Pacific Coast.	The Navy's mitigation involves numerous distance-from-shore restrictions for active sonar, explosive, and non-explosive training and testing activities. For example, the Navy will not conduct explosive training or explosive testing (except explosive Mine Countermeasure and Neutralization Testing) 50 NM from shore in the Marine Species Coastal Mitigation Area. For the Final Supplemental EIS/OEIS, the Navy developed several new mitigation measures, including development a new mitigation area known as the Juan de Fuca Eddy Marine Species Mitigation Area. It would not be practical for the Navy to prohibit all training or testing activities within 100 miles from shore for the reasons described in Chapter 2 (Description of Proposed Action and Alternatives), Chapter 5 (Mitigation), and Appendix K (Geographic Mitigation Assessment) of the Final Supplemental EIS/OEIS.
Durkee-2	Hello: Please work meaningfully with Pacific coast Tribes to develop measures that will reduce impacts to the Tribes' cultural ways of life. Expand prohibited activities in the 50-mile mitigation area to include use of sonar. Use the "best available science" referenced in the Draft SEIS be expanded to meaningfully take into account Tribal Traditional Knowledge. Expand your monitoring program to include effects fo training and testing beyon potential harm to species population levels. Expand your list of environmental "stressors" to include those parts of the Study Area that encompass Tribal cultural resources, and the concept that those resources have intangible features, such as spiritual connections. The cumulative effect of the ocean acidification should be considered in the SEIS.	Please see the Navy's response to comments received from the Yurok Tribe.
Durriyah-1	In a few years ago I've free ticket to watch a sircuss (dolphins, whale, sealion, and etc) At the first time I feel happy for seing them near and close. But, I think they are not happy like us who enjoyed the show. So I think that we are a selfish people if we don't stop this bad habit. And I hope we can be a best superhuman to save our 'friends' from God. With Love +62	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none">• The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/• The Discovery of Sound in the Sea website at: www.dosits.org

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Duvall-1	<p>The Navy has adequate bases all over the planet. We don't want you in the Olympic peninsula; it is largely a public land area which should be reserved for wildlife, trees and recreation of humans. We don't want you killing marine life with war games in the Ocean waters off the Washington coast. There is no impact on these land or ocean ecologies that is acceptable. There is no "acceptable taking" on these lands or waters. use one of your current bases. Stay out of the Pacific North West.</p> <p>Main article: List of United States Navy installations Domestic[edit]</p> <p>United States Navy (59)</p> <p>State/Territory Base State Base</p> <p>California NAWS China Lake Mississippi NCBC Gulfport</p> <p>NB Coronado NAS Meridian</p> <p>NAS Lemoore NS Pascagoula</p> <p>NPS Monterey Nevada NAS Fallon</p> <p>NAS North Island New Jersey NWS Earle</p> <p>NB Point Loma NAES Lakehurst</p> <p>NB Ventura County-NAS Point Mugu New York NSA Saratoga Springs</p> <p>NB Ventura County-NCBC Port Hueneme Pennsylvania NAS Willow Grove</p> <p>Naval Base San Diego Rhode Island NS Newport</p> <p>Connecticut NSB New London South Carolina NSA Charleston</p> <p>Washington, D.C. Washington NY Tennessee NSA Mid-South</p> <p>United States Naval Research Laboratory Texas NAS Corpus Christi</p> <p>Florida Corry Station NTTC NAS JRB Fort Worth</p> <p>NAS Jacksonville NAS Kingsville</p> <p>NAS Key West</p> <p>NS Mayport Virginia Chesapeake NSGA</p> <p>NSA Orlando NSASP</p> <p>NSA Panama City Training Support Center Hampton Roads</p> <p>NAS Pensacola NAB Little Creek</p> <p>NAS Whiting Field NS Norfolk</p> <p>Georgia General Lucius D. Clay National Guard Center NAS Oceana</p> <p>NSB Kings Bay Wallops Island ASCS</p>	<p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft and ships are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Dobbins ARB NWS Yorktown Guam Naval Base Guam Guam Andersen Air Force Base Hawaii NS Barking Sands Washington NBK Bangor Joint Base Pearl Harbor Hickam NBK Bremerton Illinois NS Great Lakes NAS Whidbey Island Indiana NSWC Crane Division NS Everett Louisiana NASJRB New Orleans West Virginia NIOC Sugar Grove Maine Portsmouth NS Maryland Cryptologic Warfare Group Six[34] (Fort Meade) NSA Annapolis[35] (Annapolis) NAS Patuxent River NSF Thurmont United States Naval Academy Indian Head Naval Surface Warfare Center (in Maryland, but a part of NSASP of Dahlgren, Virginia) Joint Base Andrews (USN/USAF) Overseas[edit] Bahamas[edit] Naval Undersea Warfare Center, Detachment AUTEK Bahrain[edit] Naval Support Activity Bahrain Brazil[edit] United States Naval Support Detachment, São Paulo British Indian Ocean Territory[edit] Naval Support Facility Diego Garcia Cuba[edit] Guantanamo Bay Naval Base Djibouti[edit] Camp Lemonnier Greece[edit] Naval Support Activity Souda Bay, Souda Bay, Crete Italy[edit] Naval Air Station Sigonella Naval Support Activity Naples NCTS Naples Japan[edit] Naval Air Facility Atsugi Naval Forces Japan, Okinawa	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>United States Fleet Activities Yokosuka United States Fleet Activities Sasebo Kuwait[edit] Kuwait Naval Base South Korea[edit] Commander Fleet Activities Chinhae Spain[edit] Rota Naval Station United States Air Force[edit] Main article: List of United States Air Force installations Domestic[edit] United States Air Force (71)</p>	
Dyer-1	<p>Using sonar is highly detrimental to porpoises who utilise sound extensively in day to day life which in turn will LIMIT THEIR SURVIVAL. A 2016 study published in the Canadian Journal Of Zoology estimated that 11,233 harbour porpoises live in inland Puget Sound waters. This does not include the 76 CRITICALLY ENDANGERED SOUTHERN RESIDENT ORCAS. over 7 years harbour porpoises in inland Washington waters will likely experience temporary hearing loss at some frequencies at least 95,943 times from sonar, according to Navy calculations. Sonar will cause the porpoises permanent hearing loss at 1,033 times and a 'behavioral reaction', (anything from a distraction to prolonged fleeing from sound), at 101,377 times.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Dyer-Kindy-1	<p>Please reconsider this training as it will undoubtedly disrupt the fragile ecosystem of the area including causing irreparable harm to mammals dependent on sonar for survival. Please see this Seattle Times article listing the various studies that have been done in this area. https://www.seattletimes.com/seattle-news/navy-plans-testing-of-futuristic-technology-sonar-harm-to-mammals-in-pacific-northwest/ The Navy can do better.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
E		
E-1	<p>Please rethink the sonar testing. It really is damaging and painful for the sea life. Whales Dolphins orcas will all suffer. Imagine someone letting off that kind of sound and energy in your home and how you would feel. What would you do? Where would you go? How would you manage this? The sea is their home. Please rethink.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Eaton-1	Don't disturb the orcas with your tests. Protect the environment and its inhabitants! Not just humans, animals matter too. We need them as much as they need us. Stop your sonar testing!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Eaves-1	I support the training for our pilots. It is extremely important the training is very detailed and realistic. Jet noise is not a problem and hasn't been with the extra OLF training on Whidbey Island with the Growlers.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Edwards-1	I am a resident of the Mendocino coast in California and I have an AS degree in marine Science. Over the last few years some very unusual conditions have impacted the Eastern Pacific Ocean over the continental shelf. Many species such as birds, crab, Seastars, Abalone, Nereocystis kelp forests and marine mammals have been severely affected by warming oceans, wasting disease and starvation. Crab season has been delayed in our area due to low meat development and domoic acid levels. Seastar Wasting Disease has led to the canceling of the Northern California Abalone season this year. Purple Urchin are a main prey Seastars and their populations are usually controlled by them. Without Seastars the multitude of Urchins are eating all the kelp which is the main food of Abalone, leading to their starvation. Scarcity of food has also caused the starvation Sea Lion pups and whale strandings. I feel that all biological resources in the Eastern Pacific (examples above) are under extreme stress and that the Navy has not sufficiently analyzed the impact of continued weapon testing and noise on an already compromised environment.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Efremova-1	I am 100 percent opposed to sonic testing because of the effect that it will have on marine life. It is known to be harmful and disruptive, and we must	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	protect our southern residents and all the other species that call the Salish Sea home from threats like this.	Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Egan J-1	Please stop doing this when marine mammals are present in the testing area. If you cannot be sure that the area is clear, then move to more open, vacant waters for the tests. You know that you are harming wildlife so act like the protectors you claim to be....	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Egan L-1	I am sending this with deep appreciation and respect of marine mammal life that exists within the naval test patch on the west coast. The species that rely on sonar as their bridge for survival for communication and food need to be protected by humanity not further endangered. We, as humans, were intelligent enough to create this technology, we can find an adapted way to test that doesn't destroy critical life and intelligence in their habitat. The repercussions and connections of this technology on sonar reliant species is already being documented. We know better. We are better than this. Our greatest potential of power as humans when we can work in relation and partnership with other forms of intelligence, which may require modifications and re-adaptations along the way. These sonar reliant species hold forms of technology that we humans can't even understand yet. Our biggest role as humans include caretaking, guardianship, and stewardship aspects. We are bigger than this. I	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	appreciate the Navy extending the public comments space so us slow East Coasters can catch on.	
Eide-1	<p>Stop YOUR underwater activities in Puget Sound. The remaining Orcas deserve to have a quiet environment. Their existence is becoming unbalanced.</p> <p>Instead dig in and make their environment better. Patrol the tourist boats and kayakers, support quiet waterways and invest in San Juan and Island County for the generations to come.</p>	<p>The Navy is fully aware of the plight of the Southern Resident killer whales. In 2019 a team of Navy subject matter experts and Navy officers began to participate with the Governor's Southern Resident Killer Whale Task Force working groups on prey and vessel traffic. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales.</p> <p>The Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in areas that are particularly important for biological life processes, such as feeding and migration.</p> <p>Procedural mitigation measures already in place and proposed to continue include ceasing activities that could be harmful to marine mammals when marine mammals are detected within defined mitigation zones.</p> <p>The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.</p>
Eifert-1	Yesterday I endured three hours of hiking along the Obstruction Road in Olympic National Park. I watched your jets go overhead in a constant barrage of noise, far beyond what a national park should be. It was over powering. How is this protecting America? What is the point of protecting anything if we kill the very thing we're supposedly fighting for? Olympic National Park is our heritage, our legacy and the exact thing you guys are fighting for - and are killing. Please just consider going offshore on your trips out and back. What is wrong with you people?	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Eis-1	I simply do not want the oceanlife disturbed so drstically. What if someone piped that same sound or sounds into your home day shameful....	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTEIS.com
Ekrem-1	We must limit/outlaw all sonar testing in ocean waters immediately to protect marine life and heal our oceanic biomes.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Eldred-1	<p>The Navy's EIS clearly indicates that the Southern Residents will be harmed by their testing and training activities, and this is not acceptable. Our Southern Residents need quiet in order to "hear" their prey.</p> <ul style="list-style-type: none"> • Please be reminded that in 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. • In pursuing these activities, the Navy violates the Endangered Species Act, which should be protecting the orcas. • The designation for the orcas' critical habitat is under review and the Navy should not be allowed to move forward until the designation is final. Please respect the Southern Resident Orcas' Endangered Species status and take steps to mitigate further harm. Please protect the critical habitat of the orcas and prohibit testing and training in these waters. Please ban sonar and explosives in these waters. I am concerned that the Navy should not engage in any activities that can harm marine life, especially the endangered Southern Resident Killer Whales. 	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>
Ellers-1	Please see attached letter.	See responses below.
Ellers-2	<p>Dear Sir or Madam:</p> <p>I am a resident of Port Townsend, WA, and often hear the growler flights originating on Whidbey. They already keep me up at nights and disrupt my daily activities like gardening outside with the current level of noise from their operations. Any further expansion is unacceptable.</p> <p>Moreover, I am involved with advocacy work and actions on behalf of our critically endangered Southern Resident Orcas. The potential risk of further harm to the orcas in itself merits the denial of the expansion.</p> <p>More details supporting my position that opposes this expansion are below.</p> <p>Wildlife/Marine Life/Bird Populations. Puget Sound is the nation's second largest estuary. The waters of the Salish Sea are some of the most biologically significant and productive marine areas in the world, home to both abundant and threatened species of marine life, including six endangered whale species, threatened Stellar sea lions, threatened and endangered salmon, steelhead, and rockfish species, and endangered leatherback sea turtles.</p> <p>The rivers of Olympic Peninsula are important habitat where salmon reproduce. Aircraft noise and sonic booms have been implicated as a cause of lowered reproduction in a variety of animals. The J, K and L pods of Southern resident orcas that inhabits the Salish Sea is on the decline; only 76 remain as of the date of submitting these comments. Both high and low frequency noise have negative impacts on whales' ability to navigate and identify food. The carbon dioxide in jet exhaust acidifies the water, damaging the web of marine life that sustain salmon, the orca's primary food source. Additionally, chemical compounds from the Navy's fire fighting fire retardant, already in Whidbey's aquifer, enter Puget Sound as surface run-off. These effects, taken together, will further stress the pods</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>and may make the difference between survival and extinction.</p> <p>The Olympic Coast National Marine Sanctuary includes 3,188 square miles of marine waters off the rugged Olympic Peninsula coastline. The sanctuary extends 25 to 50 miles seaward, covering much of the continental shelf and several major submarine canyons. The sanctuary protects a productive upwelling zone, home to marine mammals and seabirds. Along its shores are thriving kelp and intertidal communities, teeming with fishes and other sea life. Scattered communities of deepsea coral and sponges form habitats for fish and other important marine wildlife. Olympic National Park is home to the endangered spotted owl and the endangered marbled murrelet. Its coastline is the biannual flyway for billions of migrating birds that depend on navigational signals disrupted by the jets. Growlers also collide with birds. 15 Reported "mishaps" include "large flock of birds hit after takeoff," "bird strike shut down engine," "bird ingested sometime after flight," and "encountered bird flock that FODed (foreign object damage) both engines." National Parks and Other Protected Lands. Puget Sound is bordered by 68 state parks and 8 national parks and monuments, wildlife refuges, forests, and public lands. These assets help drive approximately \$9.5 billion in travel spending, including 88,000 tourist-related jobs that bring \$3 billion to the region, much of it to Washington State. Increased noise over the Olympic National Park threatens its status as a UNESCO World Heritage Site and Biosphere Reserve.</p> <p>The San Juan Islands National Monument encompasses 1,000 acres spread across a unique archipelago of 450 islands, rocks, and pinnacles that includes scientific and historic treasures, a refuge for wildlife, and a classroom for generations of Americans.</p> <p>Deception Pass State Park is Washington's most-visited state park, offering fishing, swimming, hiking, and bird-watching opportunities. During flyovers by the jets, campers have chosen to pull up stakes and fold up their tents, shortening their stay to escape the noise. The U.S. has a proud tradition of setting aside lands for public enjoyment. Public enjoyment is inconsistent with the purposes of a military installation conducting warfare exercises.</p> <p>Pacific Northwest reserves, parks, and monuments provide a home for birds, mammals, and marine life. Migration patterns, mating habits, and feeding patterns are disturbed by noise from the Growlers. The presence of the Growlers conflicts with an important mission of the National Parks Service to preserve the soundscape of parks.</p> <p>Particularly negatively impacted will be Whidbey Island's Ebey's Landing National Historical Reserve, the first and only in the nation, which tells the</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>story of the Native Americans who occupied the prairies and forests and the settlers who followed. The Reserve draws visitors seeking to experience an authentic setting; its tilled fields, estuaries, and quiet skies represent the best of “heritage tourism.” Yet, Ebey’s Reserve bears the brunt of Growler jets as they “touch and go” on the nearby runway. Noisy jets flying overhead are incompatible with the peace and authenticity of a historical reserve.</p> <p>40 years ago, the community on Central Whidbey made the decision to protect Ebey’s Reserve; property owners gave up their development rights. Allowing military jets unlimited access to the airspace above the Reserve diminishes the significance of this community effort. Historical structures—barns, cabins, storehouses—are threatened by Growlers that fly 300-600 feet overhead.</p> <p>Section 106 of the National Historic Preservation Act requires that adverse effects on historic properties must be avoided, minimized, or mitigated. While weakening of the structures and outright damage from intense low frequency vibrations from the Growlers is virtually guaranteed with 100 flights on busy training days, the Section 106 requirement has been disregarded. Although the Navy is required to consult with local authorities— mayors, commissioners, and managers of Ebey’s Reserve—it has failed to do so, instead issuing a “memorandum of agreement” that none of the partners have agreed to. The Navy terminated negotiations in November.</p> <p>Climate Change A four-fold increase in Growler flights will add 60,000 metric tons of additional carbon dioxide—a known cause of climate change— and speed ocean acidification, harming coral reefs, shellfish, and marine ecosystems.</p> <p>Native Americans. An increase in Growler flights will impinge on the treaty-promised hunting and fishing rights of native peoples. Pacific Northwest native tribes rely on the forests, rivers, and oceans for their survival and way of life. The lands and seas on which they depend are subjected to military maneuvers: bombing practice, ship-sinking, and sonar buoys that have killed whales, dolphins, porpoises, and other marine mammals.</p> <p>Water (Drinking, Agricultural). For years, Navy personnel trained with a chemical foam to extinguish a potential fire at a Growler crash site. Two of Coupeville’s community wells have been contaminated by these chemicals. While industry and local fire stations are required by law to eliminate this type of fire-fighting foam, the Navy—along with refineries and chemical plants—is exempt and maintains a</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>stockpile. A four-fold increase in operations at the OLF increases the likelihood that foam will be used. • Central and South Whidbey islanders have no access to fresh water apart from the aquifer underlying the island. This natural reservoir makes Whidbey Island habitable. One Growler crash could contaminate all of Central Whidbey's water supply and its single-source aquifer.</p> <p>New studies reveal safe levels of these toxins is a tenth of the current EPA standard. Coupeville water is above the new limits. In August of 2018, Senator Maria Cantwell, joined by other senators, introduced legislation to hold federal agencies, including active and decommissioned military bases, responsible for contamination of ground water by fire-fighting chemicals.</p> <p>Toxic Noise. The intensity, frequency, duration, and altitude of the Growlers is a threat to public health, igniting a firestorm of protest in several counties because of the deafening and toxic noise they produce. Aircraft noise levels included in the Navy's DEIS are wrong. They are generated by a flawed and outdated computer model. In addition, they represent only an average of flying and non-flying times. They do not reflect actual noise measurements at Coupeville's Outlying Field (OLF). The Navy's noise assessment is inaccurate and misleading.</p> <p>Measurements taken at Ebey's Reserve near Coupeville show damaging levels of noise, up to 115 decibels— well past the 85-decibel level that begins to cause permanent hearing loss.³ • Children exposed to loud noise show decreased reading comprehension, delayed development, impaired cognition, and memory loss. In 2013, the US Air Force disclosed that operations of the F-16 fighter aircraft in a Vermont neighborhood assaults children with noise sufficient to cause learning impairment and estimated that 45 percent more children will have their learning impaired if the F-35 jets are based in that neighborhood.</p> <p>The children of Central Whidbey are at risk. A moving aircraft causes compression and rarefaction, setting air molecules in motion and producing pressure waves. High-thrust engines, like those in the Growlers, emit low-frequency “windows rattling” pressure waves that penetrate into body organs and cause medical problems. The Navy recognizes the dangers of jet noise and protects its pilots and ground personnel. All personnel working in such areas receive hearing protection devices and are routinely monitored for health effects. Residential areas under the OLF flight path far exceed the Navy's threshold of a hazardous noise zone, yet civilians are left to fend for themselves.</p> <p>Risk of an Accident. The Growler's F-18 airframe is one of the most</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>accident-prone military airframes in existence. Between 1980 and 2014, the F18 sustained 39 accidents; 22 crashes of the EA-18G and F/A-18 E,F have occurred since 2000. The F-18 Super Hornet platform has a mishap rate well above the average of all military aircraft, including two serious mishaps involving EA-18G Growlers, since December of 2016.⁶ Given this history, increased flights would endanger schools, hospitals, homes, parks/play fields, and highways located near the runway. Parts of state Route 20, the only north-south highway on Whidbey Island, lie beneath the Growler's highest-risk crash zone. Coupeville's elementary, middle, and high schools are all located within four miles of the runway. Hospitals and fire stations are also close by, as are businesses and residences. To provide acceptable civilian safeguards and livability, the Navy prefers at least 2,000 unsettled acres to conduct a training program of this kind. Yet, repeatedly, the Navy has granted itself waivers on Whidbey, and local policymakers have looked the other way. Today, there are training missions over 664 acres of populated land on Whidbey Island. Thus, the Navy is in violation of its own safety standards, thereby putting islanders and visitors at risk. The runway itself is unsafe. The 5,400-foot runway, built prior to 1943 to accommodate aircraft built in the 1940s, is nearly 3,500 feet too short for Growler jet "touch and go" operations, which require 8,800 feet. The runway cannot be extended. For 32 years, the runway has failed to meet Navy runway safety standards. Thus, the Navy is putting its own pilots in danger by asking them to train on an inadequate runway. Our pilots should have the best possible training, and the Navy should provide a training site that provides realistic carrier landing and takeoff conditions in a way that does not needlessly endanger pilots or civilians. A single Growler costs \$85-100 million. These very expensive weapons, paid for by taxpayers, should be deployed in an area equipped to handle their needs. At present, the runway cannot do that.</p> <p>Property Values and Property Taxes. Proposed increased operations will likely cause Accident Potential Zones (APZs) to be imposed. Island County will have to change zoning designations to prevent development. Similar downzoning has had negative effects on other communities, making mortgages and home loans difficult, impeding housing sales, and reducing property values.⁹ Unoccupied houses and deterioration of affected areas presents social, public health, and safety issues. Approximately 4,400 land parcels with an assessed value of \$1.3 billion will be affected.</p>	
Ellers-3	<p>Tourism</p> <p>Many communities around Puget Sound depend on tourism, especially</p>	<p>The impacts of the training and testing activities in NWTT on tourism are discussed in Section 3.12.2.3 (Tourism and Recreation). No negative effects to</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>those on the Olympic Peninsula and our islands. (Olympic National Park is by far the largest contributor to the Olympic Peninsula economy.) Allowing the area to become a giant military staging ground will cripple the tourism industry and threaten small businesses: inns, B&Bs, restaurants, farms, wineries/distilleries, retailers, and outdoor recreation (whalewatching, diving, kayaking, paddle boarding, boating). • Coupeville is the second oldest town in Washington State. It attracts upwards of 90,000 tourists per year.¹¹ A four-fold increase in Growler flights would drive tourists away and diminish the economic vitality of Coupeville.</p> <p>Outdoor recreation is valued at \$21.6 billion and helps to create 199,000 jobs. Outdoor enthusiasts spend the most when they are recreating on the water. This is more than the \$15 billion contributed to our economy by military and defense industries. Jobs in Washington depend on its pristine skies, lands, and waters.</p>	<p>tourism activities in the Study Area are expected from proposed training and testing activities. Therefore, loss of revenue or employment associated with tourism is not expected to occur.</p>
Ellers-4	<p>Farming, Fishing, Local Economies. Farms on Central Whidbey produce food for the island and for restaurants throughout the region. They contribute to the island's local economy and food security. But farmers cannot tend their crops during Growler operations because of noise deemed unsafe for workers by the Occupational Safety and Health Administration. Quadrupling flights threatens farming on Central Whidbey.</p> <p>Jet engines do not burn cleanly, but their toxic by-products tend to disperse high in the atmosphere. But, because the Growlers fly at low altitudes during landing practices, toxic particulates fill our air, fall into our waters, and drift down to our soils. Healthy food cannot grow on acreage exposed to constant pollution from above, which is why California—with strict clean air regulations— prohibits such maneuvers.</p> <p>The average annual commercial value for Puget Sound crab, shrimp, mussel, oyster, geoduck, and other clams is \$44 million. Recreational shell fishing is valued at \$42 million per year; recreational fishing in Puget Sound at \$57 million a year; commercial fishing at \$4 million a year. What might the additional noise and carbon dioxide pollution from more military jets do to water quality and to these economies?</p> <p>Economic Effects of Hosting the Naval Base. The presence of the Navy means lost revenue for Island County and increased demand for county services in the following ways: Although Navy children attend district schools, the school system is reimbursed only 25 percent of the cost of educating them. Sailors often use local support services funded by sales and property taxes paid by civilians. The military brings in people who are given a “market rate” housing allowance that has driven up rent prices,</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>forcing out those who can no longer afford higher rents. •</p> <p>A workforce housing crisis exists on Whidbey Island. Local businesses cannot keep up with demand for housing or expand because employees cannot find affordable places to rent. Although only 109 new housing units are created annually in Island County, the Growler squadron expansion will import an estimated 634 personnel and their families. The Navy has no plans to expand housing on the base. Why not? Housing additional Navy personnel off base creates more hardship for working class community members.</p> <p>The external costs of living with jet noise is imposed without warning or recourse on citizens across the region: in San Juan, Skagit, Jefferson, Clallam, and even Snohomish and Okanogan Counties. The proposed expansion will likely increase these costs. The effects of inflated housing markets and increased traffic congestion in Island County are also felt by residents of Island County's neighbor, Skagit County. The proposed expansion will likely magnify these effects.</p> <p>National Security and Operational Readiness. It runs counter to military policy to station all crucial defense assets on one base, yet the Department of Defense plans on doing just that by locating the entire Growler squadron on Whidbey Island. Whidbey Island sits atop five fault lines. Growler squadrons are vulnerable to an earthquake.</p> <p>In summary, this action by the Navy does not honor public process and our irreplaceable natural resources, and must be rejected. This decision—to single site all Growlers in Puget Sound—comes from “the other Washington,” which has no sense of our state, regional, or local conditions and needs. Thank you for considering my comments.</p>	
Elliot-1	<p>To whom it may concern,</p> <p>The Salish Sea is an important contributor to biodiversity and ecosystem health. In turn, this supports healthy socio-economic functions of the local communities surrounding the Salish Sea. Sonar testing is proven to severely disrupt marine organisms, ones that are already tolerating threatening conditions due to human activities. We do not need to put more pressure on these ecosystems, and instead need to find way to reduce pressures and support them so they can continue to support our socio-economic functions. I urge you to reconsider your use of sonar. If not for the animals, or the coastal communities, for our children and the future. There is a rapid loss of wonder in this world, please do not let nature become just a childrens story. Allow them to experience and see what we have been able to.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Elliott-1	Sonar Testing causes permanent hearing loss for all marine mammals. It is inhumane to do this to the dolphins and whales whose communication relies on their advanced hearing that can hear sounds for miles. You are debilitating already endangered species. No more sonar testing	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ellison-1	I object to underwater sonar testing which has been proven to harm marine animals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Elmasian-1	Let the orcas live in peace! They don't bother us, why do humans torture them?	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Eltringham-1	The impacts of military sonar tests on marine mammals and other marine fauna is substantial, despite your awareness of this you continue to stage	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	such tests across the coastal United States. It is irresponsible and causes irreparable damage to marine systems that are already at risk due to human activity. If the United States Navy has any respect for our seas or the health of waters utilized by thousands of families then these tests should either be cancelled permanently or relocated to areas where marine mammals are at least not frequenting, the idea of testing in the middle of a territory occupied by an endangered population of killer whales is ludicrous. I sincerely hope you reconsider your plans to blast the Salish Sea with high pressure 235 decibel sound waves and cause irreversible damage to a critical and diverse marine habitat.	and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Elwell-1	We are all sharing this planet that we all call home - humans, animals other cetaceans are highly sentient, intelligent beings that have been decimated in their millions, captured and stolen from their families, harassed by boats, chopped up by propellers, stabbed with harpoons, endlessly polluted by our trash and now their brains are being invaded by your irresponsible & frankly petrifying sonar! Imagine being subjected to a car alarm in your ears and not being able to hear anything or catch food!! That is what you are doing! Stop this now, please. Where there is no blue, there is no green.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Emerson-1	I am 100% against US Navy Sonic testing in the Salish Sea. This harmful practice endangers all marine life. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Emerton-1	Please stop sonar testing! It harms whales and is inhuman, immoral and unethical!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Endicott-1	As a member of a military family I appreciate the service and know training is need. As these southern resident orcas are endangered; I ask that some out of the box ideas be entertained; so training is not in thier habitat. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Endress-1	Please do not allow ANY sonar testing in the Salish Sea. The marine life in this sea is already facing so many obstacles. This would be devastating. We used to travel to your area specifically to see your marine life. After a disappointing trip a couple of years ago, we will not spend our money travelling there again until we see a real effort to protect the marine life, not encouraging even more harm.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Erickson-1	Please dont do this. Please think twice about what you would be allowing. We are talking about the extinction of a species. These whales deserve a chance and we are the only ones who can give them that chance. This sonar hurts them. It could kill them. They are starving as it is. This isnt right. We are better than this.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Erion-1	This is a time where our planet and ecosystem are at such high risk with climate change. Please protect the Olympic peninsula which is a rare and precious treasure from terrible noise pollution which will have a negative impact on a vital ecosystem.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ervin-1	We know you care about our oceans too. And you've got some of the best talent in the country to come up with innovation. Please stop the sonar practice. Show the world something new!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Esselstyn-1	I am very much opposed to the use if sonar in the Salish Sea.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Etchart-1	I am in strong opposition of sonar testing and deeply concerned it will impact wildlife	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Ethier-1	I am shocked that the Navy would carry out these risky exercises with out thinking of these whales. I look upon the Navy as a protector of our oceans not a destroyer.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Ettelson-1	<p>On May 31, 2019 the NOAA declared an "Unusual Mortality Event" on stranded and dead whales along the coast in California, Oregon, Washington, and Alaska.</p> <p>This NEW INFORMATION should be considered in the Cumulative Effects Analysis in the DEIS since it documents a Wildlife Emergency that will significantly add to the negative impacts on whales in addition to what has already been documented in your existing analysis bringing this species under greater threat than was accounted for in your study requiring additional mitigation measures than what has already been proposed.</p> <p>Thank you for your considering my concern.</p>	<p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p>
Ettelson-2	<p>The recreational and commercial fishing industry in Mendocino, Humboldt, and Del Norte counties along the north coast in California has a significant economic impact on those communities. This is also true in the coastal communities in Oregon, Washington, and Alaska. Potential negative impacts resulting from your project may impact this fishery resource.</p> <p>The existing condition of this industry should be considered in the analysis. For example; According to the Final Report to the Coastal Conservancy, CALIFORNIA'S NORTH COAST FISHING COMMUNITIES HISTORICAL PERSPECTICE AND RECENT TRENDS, Pomery, Thompson, Stevens, AUG 2010; "Since 1998, landings and value have been consistently below 45 million pounds and \$50 million, respectively." (P. 28). Although this industry has diminished, it is still a significant economic component to this area. "Reduced fishing opportunities has increased economic stress and uncertainty for fishery participants." (P. 54).</p> <p>An Economic Analysis to recognize this fishery's impact on the effected region must be included before you can assess your Project's direct, and</p>	<p>The Navy revised the affected environment description to include information more specific to the Northern California fishing industry, in addition to the existing description of the regional fishing industry.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	indirect impacts on this fishery. Cumulative impacts from already dwindling marine populations in addition to whatever the consequences resulting from your current proposal can cause some economic damage that should be analysed so all the impacts can be considered.	
Ettelson-3	<p>On May 31, 2019 the NOAA declared a; "Unusual Mortality Event" on stranded and dead whales along the coast in California, Oregon, Washington, and Alaska.</p> <p>This new information should be considered in the Cumulative Effects in the DEIS since it documents a "Wildlife Emergency" that will significantly add to the negative impacts on whales, in addition to what has already been documented in your existing analysis, bringing this species under greater threat than what was accounted for in your study requiring additional mitigation than what has already been proposed.</p> <p>Does the "Wildlife Emergency" identified by NOAA affect your analysis?</p> <p>Thank you for considering my concern.</p>	<p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p>
Evenson-1	<p>The document does not adequately evaluate the recent mass die-off of whales beaching on our shores.</p> <p>Why has the Navy not evaluated this situation?</p> <p>Why has the Navy not investigated the die-off to determine what was causing it?</p> <p>The Navy continues to train and exercise in the Pacific and could be affecting these protected species, but doesn't even try and find out if this is so. Certainly Navy training and exercises are one of a number of factors.</p> <p>The public has the right to know more of the relationship between the die-off and the Navy's activities. This document is inadequate to that task.</p> <p>The Navy takes the position that it has not been proven that its past activities have caused harm. But when harm is caused and alarming, the Navy must find out if that position is borne out. It is not acceptable to the public that proof of harm must be supplied by the public or other agencies before the Navy will alter their plans. Employing the "Precautionary Principle," the Navy must suspend this EIS until a full investigation on the whale beachings is completed and peer reviewed.</p>	<p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p>
Evenson-2	<p>The environmental document does not adequately address many species adequately, but focuses mainly on whales, salmon, and marine mammals. The ocean is a web of life. What affects small life forms, affect larger life forms. By not addressing impacts to all these life forms, you are missing the big picture of what training exercises do to our ocean.</p> <p>There are too many species to list here, and that is the point. The Navy is subjecting the ocean and its life forms to high energy waves, polluting</p>	<p>In the Draft Supplemental EIS/OEIS, the Navy thoroughly analyzed the potential impacts to all forms of marine life and habitats. See Section 3.3, Marine Habitats; Section 3.4, Marine Mammals; Section 3.5 Sea Turtles; Section 3.6 Birds; Section 3.7, Marine Vegetation; Section 3.8, Marine Invertebrates; and Section 3.9, Fishes.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	substances, increased traffic and sound (both motors, sonar, and the presence of a large metal craft slapping its way over the surface or knifing its way through the depths). Picking out a few species to consider is doing a piecemeal job, something that does not survive legal muster in California or the nation.	
Everett-1	I live in Crocket Lake Estates. The planes fly directly over our house. With all windows closed the sound was so intense that we could not hold a conversation. My dog could not find a place to get relief from the sound. Just out of curiosity we recorded the decibels and they were close to a hundred. It has gotten way out of hand. I usually have no problem with the planes, but it has gotten out of hand now. Please reconsider your schedules and flight routes.	The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island, including the Crocket Lake Estates. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
F		
Faber-1	Well, I just want to say that this coastline, which we protect and that's why we live here, is very special, because there's an upwelling of the water from at least south of Point Arena to north, here. And it upwells in such a way that there's more food and more critters than in other places, so it supplies the ocean with life. However, recently, under global warming with climate change, the water's been heating up and then getting cold and heating up, and a lot of life, a lot of critters, are getting sick, and the food chain has been incredibly compromised. In fact, there are people here who are a part of a diving team that are trying to replenish the water, the ocean, with seaweed and things that sustain life. They are trying to replenish the plant life that's been dying. There's a whole diving team. Because we're very aware of the fact that this is a really critical area for the life of the ocean. Meanwhile, we have climate change and the entire ocean is threatened and life everywhere in this ocean is seriously threatened. This ocean is life for human beings, and it cannot sustain what the Navy wants to do. They can go a hundred miles out and it will be better. I wouldn't like them to do any of it, but if they have to, if they're further out they won't be in the pathway of the traveling animals. And this is critical to human survival. And they need to stop doing business as usual. This is not business as usual. We have serious climate change on this planet, and they have to do it differently, and they cannot stay here. They cannot do what they want to do here. They cannot disturb the waters in the same way and expect that this ocean is going to sustain the life that it's been sustaining.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTIEIS.com
Fackerell-1	Though I support our troops, the noise pollution over our populated areas of Coupeville and Greenbank due to the increased Growler flights is harmful and unbearable.	The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island, Coupeville, or Greenbank. Please see Chapter 2 (Description of Proposed

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Surely the Navy can find ways to significantly reduce the noise or find less populated areas over which to practice. The cost to our children 's health due to noise pollution should be enough for the navy to find alternate solutions. Central Whidbey 's nature reserves are already being negatively impacted due to the noise affects on the animals that we are working so hard to protect for so many years. Tourism is negatively impacted by the noise created by the Growlers. People simply are not choosing to visit Central Whidbey. This has already hurt our local economy. Please find meaningful alternatives to increasing these very noisy planes over Central Whidbey which are having a very negative impact on the lives of thousands of local Central Whidbey residents who up to now have supported and valued our relationship with the US Navy.Thank you very much!	Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Fagerholm-1	The Navy was for many years a good neighbor...as the planes flew over, it was easy to dismiss the noise as "the sound of freedom". Sadly, that's in the past. The increase in frequency of flights and the elevated noise level of the growlers feels like total disrespect and a disregard for our beautiful rural way of life. Total disregard for the sanctity of the Olympic National Park and all the surrounding communities. The penis in the sky says it all..."we're the U.S. Navy...we can do whatever we want...we're in control here". ...and all of us who live here are just collateral damage...we don't count. This is not right.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Fain-1	I'm not sure what you mean by "substantive" comment Your testing obviously. effects Marine life in a negative way. I don't really think this is going to do any good commenting but I have to try. Please stop testing, our oceans are in trouble. Our Marine life on the Northern California Coast have already been stressed due to dwindling food scources, but you know that. Stop testing because it simply adds more stress. Do the right thing, I hope this counts as substantive.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Fairbanks-1	I strongly encourage the Navy to go with the NO ACTION ALTERNATIVE. Please do not let our Olympic National Park, coastline, people and animals be harmed!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Farber-1	I am a patriotic supporter of the US Military and moved to Whidbey Island with my wife in 2005. We were made aware of the activities of NAS Whidbey and were more than happy to support them.	The activities proposed in the NWT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island or Coupeville. Please see Chapter 2 (Description of Proposed Action and

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>However, as flight missions have increased 400% (starting in March of 2019), it has become increasingly difficult to experience a satisfactory "quality of life" due to increased training missions over our home (and our neighbors' homes). Much as we support the military, the military must also support the US citizenry, and activities that make it impossible to enjoy outdoor life as well as very difficult to enjoy indoor life (due to the noise level increase) must be taken into consideration by the navy.</p> <p>Noise level outside our home has increased to a decibel range of 100 - 120; noise level inside our home has increased to 80 - 100 decibels. And, unlike many of our neighbors' homes, our home was built with extra sound insulation, including all triple-glazed windows and doors.</p> <p>With the proposal of increased training activities, the corresponding increase in noise levels at our home will make it impossible to continue to live in Coupeville or the surrounding area. The health and well-being of patriotic US citizens must not be overlooked by the US military. We are not asking that the military stop all (or even most) of their activities; we are asking that the military work with the local homeowners, understand the noise levels within and outside our homes, and understand the impact that this has on our lives.</p> <p>Due to the four-fold expansion in training missions over Whidbey, any additional expansion of naval operations (such as the use of this area as an additional training center) is unacceptable, as it will make civilian life in our area untenable. The burden of supporting the US military is something that should be borne fairly and equitably among ALL citizens of the U.S. Putting some extreme burdens on just one local group of civilians -- to the point where you are forcing us out of our homes and jobs -- is NOT what a democracy is all about. We ask, in all fairness, that the navy look for an alternative location for its planned expansion of military training activities.</p>	<p>Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>
Farrell-1	<p>recently, both the atlantic monthly and the new yorker magazines have been publishing solidly researched articles on the significant impact "as well as doing devastating damage to ecosystems," that sound has on human life.</p> <p>from the new yorker: "Scientists have begun to document the effects of human-generated sound on non-humans—effects that can be as devastating as those of more tangible forms of ecological desecration." (https://www.newyorker.com/magazine/2019/05/13/is-noise-pollution-the-next-big-public-health-crisis)</p> <p>in order to know what's happening--actually happening--to humans as well as our living environment, actual data related to noise must be collected.</p>	<p>DoD's position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD's position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>the failure of this project to address ACTUAL sound considerations--by refusing to take responsibility to for the objective collection of date related to the sound they are proposing to introduce to our social and natural environment on whidbey island--is unconscionable. how are we to agree on appropriate noise-abatement strategies when we don't know, for real, what's being introduced?</p> <p>unless and until the navy accounts for the impact of their actions in a credible and objective fashion, they have no ethical--and possibly legal--right to proceed.</p>	<p>databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015.</p> <p>² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Farver-1	Is there a net positive effect on the ocean and its creatures because of any of this? If not please find a new way to train. Perhaps invest \$ into simulators like the FAA. Cheaper, safer and more effective.	The Navy already uses simulation in training and testing whenever possible; please see the discussion presented in Section 5.5.1 (Active Sonar) from the Supplemental EIS/OEIS. In addition, see the discussion in Section 2.4.1.4 (Simulated Training and Testing Only) of this Supplemental EIS/OEIS that discusses the need for live training specifically for aircrews.
Fattel-1	I am against testing in the Salish Sea. Orcas are important to natives, the water is important to natives. Orcas are already starved and endangered in this area. Please do not harm them or their importance any further.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Faulkner-1	<p>The serious condition of the ocean and all the living beings in it is infinitely more of a security threat than the possibility of war with North Korea or China. At the Navy's May open house meeting in Fort Bragg the Navy heard one comment loud and clear:</p> <p>WAR IS OBSOLETE</p>	The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>The current disruption of ocean ecology is a threat to all of us humans; we can't survive long on a planet with a dead ocean. To live up to its mandate to protect the citizens of the United States, the Navy with all its resources, should be actively addressing the calamitous condition of the ocean not dropping plastic bombs into an environment already strangling on plastic, not deafening sea mammals with low frequency sonar; they depend solely on their hearing to survive. Has the Navy taken into account that 80 dead whales have washed up on the beach of Mendocino County? What about the hundreds of little grey murrelets who bailed out of the ocean, staggered up the beach and then died?</p> <p>Has the Navy ever heard of a body of knowledge that has sustained both the indigenous peoples of the earth and the land and seas that they have taken care of for thousands and thousands of years before the genocidal attacks on them? This knowledge is called Indigenous Traditional Ecological Knowledge or ITEK. I don't see it in the supplemental EIS. ITEK is based on the understanding that all living beings are related. Perhaps the mindset of the Navy has not allowed it to grasp this simple fact of relatedness. It seems that any Inuit in a kayak knows more about whales than the Navy.</p> <p>Representatives of the ten Native American tribes of the Sinkyoune had requested that the Navy's May open house be organized so that we could all be together while we listened to the Navy and got answers to our questions. The Navy did not honor that request. Instead the Navy mumbled and murmured from all sides of the room at once rendering itself incomprehensible. The EIS is equally muddled, concealing more than it reveals about the Navy's takings of sea life.</p> <p>The Navy should reconsider the Tribe's request. Create another meeting along the lines that they wanted so we can get the information about the bombing and the deafening that we have a right to know. Throw out that dysfunctional EIS and start over with one that actually communicates. Address the danger to us human beings as ocean ecology fails.</p>	<p>examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p> <p>The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy will consider additional tribal and traditional knowledge provided, maintaining respect for cultural sensitivity and confidentiality.</p>
Favorini-Csorba-1	<p>I am completely against SONAR testing as it has been proven to harm marine animals. Our orcas need protection more than anything now, and testing that actively harms them is simply cruel.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Feehan-1	Please do nothing to put the marine animals at risk	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Feen-1	<p>The Ninth US Circuit Court of Appeals in California on July 19, 2016, ruled that the low-frequency active sonar (LFA) systems used by the US Navy for training missions violates the Marine Mammal protection Act, and negatively impacts whales, dolphins, and walruses who rely on sound to navigate the seas.</p> <p>Coastal Mendocino County is my home. I have been blessed to watch Grey Whales on their yearly migration for the past twenty years. I have also been witness to the many impacts of multiple ecological stressors on our Oceans. I am deeply concerned that the Navy's LFA training missions along our coast will have profound negative impacts.</p> <p>The court said, "This systematic under-protection of marine mammals cannot be consistent with the requirement that mitigation measures result in the 'least practicable adverse impact' on marine mammals."</p> <p>Michael Jasny, director of the National Resource Defence Council (NRDC)'s marine mammal project said, "It's important to understand that the ocean is a world of sound, not sight. Marine mammal species perceive these SURTASS/LFA sounds as a threat and react accordingly."</p> <p>I encourage the Navy to consider that performing these training missions along the path of the Grey Whale Migration during the Whale's migration is a serious violation of the intention of "Incidental Take." It is well known scientific fact that these training missions will result in deafness (a deaf whale is a dead whale), hemorrhage, and death for Grey Whales and other marine mammals. If LFA training missions are carried out along migration paths while Grey Whales are migrating, "Incidental Take" becomes "Intentional Take."</p>	The Navy's proposed activities do not include use of the Navy's LFA system, described in the comment.
Feinberg-1	No to sonar! SAVE THE RESIDENT ORCAS!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Feitelberg-1	The whales do not have various navigation systems. The Navy can change where and how it practices. Leave the whales alone.	All of the potential effects from Navy training and testing activities were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the Supplemental EIS/OEIS. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Fellows-1	<p>I first off want to thank you for all protecting our shoreline boarders. I grew up in the Pacific Northwest, the ability to see Killer Whales in the wild is unlike any where else. It is a magical, powerful and unique experience for all those lucky to see them swim wildly through the Salish sea and San Juan's. This image is an identifier for western Washington. It brings people To western Washington which created economic growth to communities and surrounding areas.</p> <p>Currently we have 76 killer whales in our southern resident population. They are suffering from pollution issues and starving from lack of food (salmon). Sonar testing would increase unneeded harm to the killer whale populations.</p> <p>If the Navy decides to continue to test and use sonar in the areas proposed. They will be one of the main reasons why our southern resident Killer Whales will disappear and go extinct. Sonar testing has been proven to harm and cause extreme neurological damage to not only Killer Whales but many other marine animals. Many studies of sonar testing harming marine mammals have concluded that sonar can harm echolocation of Killer Whales and other marine mammals which will effect their ability to hunt and communicate causing further starvation.</p> <p>Please understand that losing our killer whale populations would be detrimental to the Pacific Northwest's identity, community, economy and ecological prosperity. Please do not allow sonar testing in the Salish Sea and the areas that have known Southern Resident Killer Whale activities.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>With this in mind, wildlife-dependent recreational activities, such as wildlife viewing, or whale watching, are also discussed in Section 3.12 (Socioeconomic Resources). The impacts of the training and testing activities in NWTT on tourism are discussed in Section 3.12.2.3 (Tourism). No negative effects to tourism activities in the Study Area are expected from proposed training and testing activities. Therefore, loss of revenue or employment associated with tourism is not expected to occur.</p>
Feltham-1	<p>Dear Department of Defense and U.S. Navy,</p> <p>You have asked the public to comment on the Northwest Training and Testing (NWTT) Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS).</p> <p>I am unable to attend a public meeting, but do want to share my comments. I am deeply concerned about your "Proposed Action" for three</p>	Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>reasons.</p> <p>First, the effect on humans. As a resident of Port Townsend, the noise from Growlers and other Navy aircraft is already far too loud and far too frequent. It affects our health to constantly be hearing Navy training. I am shocked and upset that you propose increasing the current level by 300 flights per year in the Pacific Northwest. Our towns and parks should be protected from noise. For example, Olympic National Park is a UNESCO treasure, and people come from all over the state, the country, and the world to experience the beauty and tranquility here.</p> <p>Second, the effect on animals. I am firmly opposed to the use of sonar, explosives, and dropping of excess fuel in the sea. I do not believe what you have written about "Navy training and testing activities are unlikely to have long-term consequences on marine mammal populations." Many animals communicate and protect themselves by hearing, which is blocked by the noise of aircraft and sonar. The noise from Navy aircraft affects marine mammals, other mammals and birds in the Olympic National Park, national forests, state parks on the Olympic Peninsula, and in Puget Sound and along our Pacific coast. Please watch the film "Sonic Sea:" http://www.sonicsea.org/ We should be working to reduce the noise pollution in our oceans from transportation, commerce, oil exploration, and the military, not increasing it.</p> <p>Third, the effect on the environment. Sonar, explosives, and dropping of fuel in the sea are very harmful to our local ecosystems. Our oceans are fragile, and already imperiled by ocean acidification. Although I and many others have written many letters and attended your forums expressing concerns about the noise and the environmental effects of an expansion of Growlers on Whidbey Island, the Navy selected their "Preferred Alternative." Please listen to our concerns!</p>	<p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.
Fergus-1	<p>Protect The People and The Environment; not the corporations, not the industrial complex!</p> <p>I am adamantly opposed to the military's off-shore training and testing. There is plenty of ocean not near the shore, where training can happen with out affecting the wilds of the ocean! We are loosing our wildlife, as we destroy the ocean. It needs to stop!</p> <p>Additionally:</p> <ol style="list-style-type: none"> 1. The adequacy of the assessment of Tribal cultural impacts as well as environmental impacts from the Navy's training and testing activities is especially important because these activities take place in the Pacific Ocean, which holds great cultural and spiritual significance for the Tribes 	<p>Please see the Navy's response to comments received from the Yurok Tribe.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>and is critically important for the wellbeing of all people and lifeforms on this planet.</p> <p>2. The Navy should work meaningfully with the Tribes to develop measures that will reduce impacts to the Tribes' cultural ways of life, including culturally and spiritually significant marine species and habitat that are vulnerable to Navy training and testing activities.</p> <p>3. The Navy should prohibit use of sonar within the 50-mile mitigation area. Sonar causes serious harm to the health and wellbeing of whales and other marine mammals.</p> <p>4. The "best available science" referenced in the draft SEIS should be expanded to meaningfully take into account Tribal Traditional Knowledge. Since time immemorial, Pacific coast Tribes have used and managed their traditional marine environment, including those areas situated within the Navy's NWTRC.</p> <p>5. The Navy's monitoring program should be expanded to include effects of training and testing beyond potential harm to species population levels. Population level effects are insufficient to fully take into account the potential harm that Navy training and testing may cause, because this standard does not fully incorporate the concept that impacts to Tribal cultural resources may not be manifested in physical impacts on marine species.</p> <p>6. The Navy should expand its list of environmental "stressors" to include those parts of the Study Area that encompass Tribal cultural resources, and the concept that those resources have intangible features, such as spiritual connections, which will be impacted by the training and testing.</p> <p>7. The cumulative effect of ocean acidification should be considered in the SEIS. The Draft SEIS concludes that the assessment in the Navy's 2015 Final EIS that impacts to water quality from explosives and explosives byproducts in training and testing remains valid and does not need to be reconsidered. Based on studies conducted since 2015, this conclusion neglects to take into account the effect that changes in climate may have on the corrosive power of an increasingly acidic ocean. Specifically, the Draft SEIS does not consider the likelihood that acidification of ocean waters will accelerate corrosion of explosive devices and byproducts of training and testing.</p>	
Fern-1	<p>It has got to stop. Completely inhumane and unnecessary.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		minimizes, or mitigates potential effects on the environment from its activities.
Fernandez-1	<p>The EIS clearly indicates that the Southern Residents will be harmed by the testing and training activities, and that is not acceptable. Our Southern Residents need quiet in order to “hear” their prey. In 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. You will be violating the Endangered Species Act, when you should be protecting the orcas. The designation for the orcas’ critical habitat is under review and the Navy should not be allowed to move forward until the designation is final. Please respect the Southern Resident Orcas’ Endangered Species status and take steps to mitigate further harm. You need to protect the critical habitat of the orcas and prohibit testing and training in these waters. Please ban sonar and explosives in these waters as well. Please do not engage in any activities that can harm marine life.</p> <p>Protecting these beautiful wild creatures is so very important.</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy consulted with the National Marine Fisheries Service regarding the Navy’s Proposed Action and potential impacts to endangered species, as required under the Endangered Species Act.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>
Ferrell-1	<p>I was very disappointed to hear about your testing which will put the Southern Orca residents at risk. There are two calves whose health could be serious impacted negatively in addition to the harm to the general population as indicated in the Navy’s EIS. The Orcas are dependent on sound to find their prey and the sound chaos will decrease their ability to hear and force them to move to areas where the needed prey fish are not. In 2003 during a training session, the J pod quit foraging and instead spent time and calories trying to leave the area instead of hunting and eating. Critical habitat is under review and the Navy should postpone or change location.</p> <p>Such activity violates the Endangered Species Act and that responsibility should not be forgotten or ignored. The population has been decreasing since the 1960s and it is obvious that humans created the problem</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	(removal of wild orcas) and should accept the responsibility of trying to help them sustain and grow in numbers. I respectfully request that the Navy cease this harmful practice.	the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS. Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTT Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i> . Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.
Fields M-1	How on earth can anyone think it is a good idea to conduct warfare jet training in an environmentally sensitive area that has been designated as a wildlife refuge and a National Park?? Add to that the plan for “incidental takes of marine mammals ... and incidental takes of threatened and endangered marine species” and you have a recipe for ecological disaster. If such training is necessary and such damage has to occur somewhere, make it somewhere that has already been damaged, not one of the last pristine areas in the country.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Fields T-1	Ban testing on Orcas and all sea animals	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy’s ocean stewardship programs, visit: <ul style="list-style-type: none">• The Navy’s Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/• The Discovery of Sound in the Sea website at: www.dosits.org• The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Fincher-1	No, to sonar testing in the Salish Sea. We have critically endangered species, the Southern Resident Killer Whales, among many other marine mammals that can't handle these loud and damaging sounds. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Finholm-1	Please reconsider this destructive and fatal testing. Scientific evidence is abundant on the effects of sonar on marine mammals. Pay attention to it. The results speak loud and clear, mammals beaching themselves, washing up dead. What further examples do you require? To ignore the evidence and facts is irresponsible, your actions matter.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Finley-1	Sonar "testing" in open ocean waters is extremely destructive. Nothing could justify the amount of damage being done to wildlife by this activity. Please stop damaging ocean dwellers.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Fiskeseth-1	Please consider the safety, health and well-being of marine mammals when conducting any military test or experiment	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids,</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Fissenden-1	I totally oppose the navy to do sonar testing in the Salish Sea.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Flanigan-1	National Parks were established as sanctuaries to protect Natural Resources, animals of all ilk, and maintain natural beauty for all generations. No matter a person's financial standing, Parks were to be a refuge from the press of people and the noise of machinery in our modern world. I am an outdoor enthusiast, backpacker and environmentalist. The Navy's use of Olympic National Park, a World Heritage Site and designated Quiet Place, as well as the Olympic Marine Sanctuary for training purposes with the "Growler Jets" destroys the sanctity of these places. Wild animals and birds like the Marbled Murrelet cannot arbitrarily move from their current homes to escape the jet noise. Whales, seals and other marine creatures who depend on quiet water and a free expanse of air to communicate with each other are under attack from the Growlers. And so are Humans. I have heard the Growlers at my Port Angeles home, but recently, I was sitting on a friend's porch along the Calawah River and experienced the bombardment of noise, louder than I've heard in PA, but just as loud as in the mountains. We had to stop our conversation entirely	The Navy has considered other locations (see the NWTTE Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>due to being drowned out by jet noise. I could no longer hear the river or birds. Even the local dogs barking could not be heard as the jets flew overhead.</p> <p>Training IS necessary for Navy personnel. The location of that training over Olympic National Park and Sanctuaries is NOT necessary. Jets can practice maneuvers farther out to sea. Leaving Whidby Island and flying over the Olympic mountains is NOT necessary. Increasing the bombardment of noise with additional jets is preposterous. I lived in the Forks area for 20 years. My friends on the West End moved there for solitude, beauty and quiet. The level of noise from these Growler Jets is louder than any other aircraft I have experienced in my 30 years of teaching in Forks. Children are distracted in class, playground aides have difficulty communicating with their charges, and adults experience the same frustration, anger and impatience as I do.</p> <p>I have seen no studies of sound recordings' impact on wildlife, impact on children, and the sustained impact on adults. It amounts to a type of incessant harassment when the jets are flying over the West End. Obliterating all natural sounds like rivers, birds and even wind in the trees as I hike is not acceptable.</p> <p>I want to see Olympic National Park keep its Quiet Zone designation. I want the Navy to move their training farther out at sea and totally avoid flying over the Olympic Mountains where I hike. I want to see scientific studies of the impact of Growler Jet noise on endangered species, migrating species and humans. The 2010 sound data from three lowland locations is not sufficient to fully understand the louder impact of these Growlers, resounding up the Hoh River, booming over the trees and wind on the Rugged Ridge Trail, or deafening the sound of waves/water at Thompson Creek (all regions I love to hike). Take them out of the Park and Sanctuary regions, please!</p> <p>All of this must be considered and be addressed as part of the EIS requirements.</p>	
Fleming-1	<p>If tests have been done and proven to be to the detriment of the testee's and in this/these instance/s the marine life of Orcas etc, then the tests should stop immediately. To harm these creatures and jeopardise their well-being is absolutely ludicrous. Please stop if you have a heart that beats for health & love ♥</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Flesch-1	I am the proud son of a Navy veteran and I am vehemently against the sonar testing proposed, especially in the Salish Sea/Puget Sound. I do not support the proposed testing anywhere, but the Salish Sea is similar to an island, in that it is holding a vast amount of biodiversity, sometimes not found anywhere else in the world. When we, as humans, make decisions, we affect the ecosystem as a whole. We are the keystone of the keystone species, and it is my opinion that we must do what we can to mitigate our negative impacts on the environment. It is an acknowledged fact that this proposed testing will have negative and even detrimental affects on the marine life that share these waters with us. How are we making decisions? What kind of values and principles are we applying? I believe we need to be more holistic in our decision making, considering what is it that we do the things we do in service to? Is it in service to thriving life? America is a global leader in most categories, I would very much like to see more consideration for the environment and lives other than humans when we make decisions. This proposed testing by the Navy is unacceptable. Please withdraw the plans to do harm to marine life.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Fletes-1	I am against all Navy sonar practices in the Salish Sea and in any area that is harming the beloved and endangered Southern Resident Killer Whales as well as all sea life! Please STOP all Navy sonar practices!!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Flint-1	I am 100% *against* underwater sonar testing, which has been proven to cause harm to marine animals. Please stop this disturbing practice.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Flores Ga-1	This is a terrible terrible thing you are considering doing. Why is this even being considered knowing what it does to an already endangered species?! Like we haven't done enough harm as it is you insist on doing more. I know you need these things for your reasons of national security and so we can win wars for money and oil. But there's gotta be another way. You've got genius's working for u if they can figure out how to do half the crazy <i>[expletive deleted]</i> u guys do they can come up with a safer less harmful way to do this. How could you sleep at night. WEVE KILLED OFF TGIS WHOLE ENTIRE SPECIES! WEVE KITERALLY WIPED OFF THE FACE OF THE EARTH NEARLY COMPLETELY AND ITS NOT COMING BACK does our military really not care?! You people are sick and should be the ones wiped off the face of the earth if you could really do this to such a beautiful creature and many others as well SO STOP THIS	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Flores Gi-1	Being able to experience the silent forest is something I never would have imagined. It was worth it to hike in the middle of the jungle and experience the surrounding sound. I would never, especially coming from San Francisco, CA imagined that I would have the time to experience something so precious and pure about nature. I would preserve this national forest until the end of time and fight to make sure that we keep this purity alive.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Flores L-1	Please stop torturing all sea animals with this sound!!!! These animals belong in the sea and we don't have the right to bother them in their habitat. Thank you	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Foe-1	Please stop. Why are these tests done? For me they seem senseless. Isn't it enough that there are millions of ships driving through the oceans and all the plastic in the home of the dolphins and other mammals. The ecosystem of the ocean keeps us humans alive but we keep destroying it?! Please	The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	stop!! A change in everyone's thinking about nature is highly relevant today.	Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Forbes-1	Based on data and analysis by military and other government-funded research, the harms to marine mammals caused by sonar testing in the Puget Sound and contiguous ocean bodies is unacceptable. I strongly protest continued sonar testing and urge the military to come up with other ways to maintain our safety without this collateral cost to our ecosystem, the health of which is also vital to our biological and economic well-being.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Foreman-1	We are at a critical point in climate change and ecosystem/biodiversity collapse and we cannot afford to release ANY more toxic compounds or additional harmful acoustics into our environment! Making smart long-term decisions for the sake of a livable planet is the most important thing we can do right now. Please do not to release ANY heavy metals, depleted uranium, toxic chemicals, or harmful acoustics into the Puget Sound (or any oceans) or its surrounding environment.	The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Forrest-1	No seismic testing! This is harmful to marine life! I oppose this practice that can harm endangered marine life and other mammals that depend on sonar.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Forster-1	These amazing, beautiful creatures need to be saved and deserve to be protected.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Forsyth-1	<p>I live in Saanich, BC, Canada, and we are regularly bombarded by noise from your fighter jets. Even when I am in my house with all the doors and windows closed, I can hear them above my television set. Sometimes this goes on for days at a time. It is particularly disturbing since the sound of the jets is exactly like the sound of a small earthquake, and every time I hear one I stop to see if there is an earthquake and I need to take shelter. This impacts my mental health. It's worth noting that I live fairly far inland and don't hear the jets as loudly as residents of Oak Bay and other places along the shoreline.</p> <p>I can only imagine how terrible this must be for citizens of your own country who live closer to the military base where the sound is much louder. It must be absolutely unbearable for them. They are suggesting that an independent party measure the sound levels around the islands and the Olympic Peninsula. I think this is a very good idea - objective scientific data would help you find a solution that people can live with and would also show that the military cares about its citizens.</p> <p>I understand that you need to train your military to protect your country. That's an unfortunate reality. But these jets are extremely loud and a nuisance across a large populated area, not to mention some beautiful parks. I think the purpose of the military is to serve and protect its citizens, and to ensure peaceful relations with other countries, so people can live a life of peace and freedom and enjoy their beautiful country. But at the moment your jets are aggravating your own citizens to the point where they are being forced out of their homes, and annoying citizens from other,</p>	<p>The Navy has considered other locations (see the NWTTE Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	friendly, countries, like Canada. That doesn't really fit with your mandate, does it? You need to get quieter jets, or move the training to an unpopulated area, or just make peace with your enemies so you don't need them in the first place.	
Fossum-1	Sonar testing should not happen in the habitat of endangered Southern Resident Killed Whales (The Salish Sea). These whales are already struggling to survive as they slowly starve from lack of Chinook salmon. Sonar and boat traffic have both been proven to interfere with foraging behaviors in SRKWs, making the already difficult job of finding the salmon even harder. They have been shown to expend more energy on foraging when boats are present and sonar can interfere with their own echolocation practices. Experimental Navy sonar practices have been well documented as the cause of strandings and deaths of cetaceans around the world. We should be doing everything we can to improve the living conditions of the SRKWs that have lived in these waters long before humans, not adding to their difficulties.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Foster A-1	The impact of this project will be devastating to the Southern Resident orcas. They have suffered enough, please leave them be!	The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Foster D-1	Southern Resident Orcas and all marine inhabitants of the Salish Sea are being seriously harmed by the US Navy's harmful sonar practices. The Orcas are struggling for survival already and desperately need our protection. Please stop this destructive testing!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Fowler S-1	Please maintain a 100 mile wide test free corridor along the pacific coast.	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations);

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		however, the Navy needs access to training complexes within proximity to where the aircraft and ships are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.
Fowler V-1	We are destroying the earth.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Fox A-1	<p>I am writing in response to the NWTT Supplemental EIS/OEIS. As a daughter and a wife of men who have served honorably in our U.S. Navy, I am well aware of the need for the Navy to train to defend our nation against all foreign adversaries.</p> <p>The Navy contends that their guidelines for training and the number of possible tests and munitions are not negotiable. I do feel that the NMFS needs to continuously monitor all Navy operations so that there can be alternate options available at all times in the permit time table.</p> <p>Our ocean environment is under attack from many outside sources besides the impact of the Navy. We have an island of plastic growing daily in the Pacific. Climate change is real and we are suffering the impact on a daily basis from global warming. We each have to evaluate how we can limit our environmental impact.</p> <p>The dropping of live ordinance in fishery areas, harms to marine mammals and sea creatures from sonar and underwater detonations, harmful chemicals to sediments and water quality all contribute to what you consider "incidental" harm. These are actual causes of death and debilitation to marine life and are not " incidental" in our cycle of life.</p> <p>I am pleased that the Navy recognizes "new science". In 2015 a settlement was reached with the Navy making whale habitat in Hawaii and Southern California off limits to sonar. A federal appeal court also ruled that the Navy should not have been allowed to use low-frequency, long-range sonar in some locations.</p> <p>These factors are biologically important, especially now, as our Southern Resident Killer Whales are on the brink of extinction. I have heard their communications on hydrophones and their calls to one another cease as they are drowned out by underwater noise. Recently, we have two new baby SRKW. Will their fate be that of their cousin, who died so young last year, or will we give them every opportunity to survive?</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	It is imperative that we be flexible to not only defend our nation, but to defend our environment that is degrading at a rapid rate. Our legacy and future lie in the hands of agencies who are to uphold and defend our nation and our environment. It is your responsibility to balance the scales.	
Fox R-1	It is well known and scientifically accurate to state that SONAR, especially the high-energy types employed by UNN warships, is very damaging, even lethal, to all cetations, seals, and, on a cellular level, all oceanic life, period. Our country has devastated the seas for far too long. This must end, now!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Fox V-1	I am 100% against the navy doing sonar testing. This is clearly affecting the marine life and should not be allowed to continue Please STOP!!!!!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Franceschini-1	I do not approve of this. I think we, the human population as a whole, need to be very considerate of murky future of the Southern Resident orca community along with other marine life. Their future is in our hands now and we need to act responsibly and respect the wildlife we share our only home planet with.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Frank-1	<p>As you are aware, marine mammals that depend upon sound will be adversely affected by these plans. This includes harbor porpoises, killer whales and humpback whales.</p> <p>Harbor porpoises will experience temporary hearing loss, at a minimum, nearly 100,000 times from the sonar according to the Navy's own information. In addition, they will suffer permanent hearing loss approximately 1,000 times and negative behavioral reactions over 100,000 times. This could negatively impact the species in this region.</p> <p>These animals will be exposed to sonar multiple times. Killer whales, a group already in decline, would exhibit negative behavioral responses during the seven year period. In addition, humpback whales, also endangered, would experience temporary hearing loss or negative behavioral reactions nearly 500 times because of the use of sonar. This is an unacceptable cost and the Navy needs to develop alternative plans.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Franks-1	<p>As you know Marine life is already stressed due to global warming, plastic pollution, overfishing, etc. Species extinction is really happening. The last thing we need is a new hardship thrown into the mix Please do your testing way offshore in relatively dead zones or do not do it at all.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ The Discovery of Sound in the Sea website at: www.dosits.org The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Free-1	<p>I do not agree with Northwest training and testing. It's devastating to wild animals in the water.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Freed-1	<p>When we moved out to our place seventeen years ago, which is eight miles west of Port Angeles, up against the ONP, we were blown away by how peaceful and quiet it is. Now there are more noisy planes, jets and helicopters flying over pretty much every day. Why on earth would you think that flying over a national park, known for it's quiet, peaceful setting would be okay? Let alone practicing for war? Please take your maneuvers and practice over your own space. At the very least find communities who are happy to see you fly over and do it there. The people who visit the ONP don't want you. The wildlife certainly doesn't want you. The neighboring property owners don't want you. I don't want you!!!!</p>	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Far more training events then involved low-level maneuvers due to the type of aircraft involved.
Freedlund-1	I, Ali Freedlund, a private citizen of Petrolia, California write the following comments regarding the NWTI Draft EIS/OEIS on behalf of myself. That said, I have worked to restore the Mattole river watershed for the past 23 years. 1 attended hearings on the matter and wrote comments the last time this subject came to Eureka. Because of job timing I could not attend this year. I support the fact that explosives will not be used within 50 Nautical miles of the coast due to impacts to ocean life, fisherman, and cultural uses. However, I am adamant that this limit be extended and that sonar also not be used in testing and training due to the impacts on the wellbeing of whales and other marine mammals that are federally protected. What does federal protection mean anyway?? From the document we know that whales and other marine mammals are affected, often to their death from this practice. What about their sense of family (communications), stability, travel? They are bound to be confused if not deafened when being bombarded by ghastly ear-bombing levels of sound. What about the effects on migrating salmon? It is well known that our populations of whales, marine mammals and salmon continue to decline. We must protect this vital ocean web of life. Please prohibit the use of Sonar and other Training and Testing for 100 miles of our coast!	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy considered restricting sonar and explosives even further from shore, but for the reasons stated above, rejected this measure as unnecessary.</p>
Freeman-1	It's time to put the safety of ocean life above testing weapons against the imaginary enemies of the U.S. There will be collateral damage. From the point of view of ocean life this scheme is a no-brainer.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Freidberg-1	I absolutely oppose the planned Navy training and testing exercises that will negatively impact marine mammals in Puget Sound and in Pacific coastal waters. There is plenty of solid science indicating that noise pollution and noise injury to marine mammals threatens their ability to communicate, feed, and survive. Some of the affected species are already endangered (Southern Resident Orcas). They need all the protection they can get if we are to have any hope of preventing their extinction.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Freitas-1	This is unacceptable. Why no one in the Navy nor in the government care about it? Get out of there! Our marine wildlife don't deserve this.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
French-1	<p>We have known for a long time that naval sonar has devastating effects on marine life but just exactly how it leads to sickness and death was a mystery till now. In new research published in the Proceedings of the Royal Society B, they discovered that the sound emitted by sonar is so intense that marine mammals will swim hundreds of miles, dive deep into the abyss or even beach themselves to flee from the sounds that are literally unbearable to them.</p> <p>In particular, beaked whales are one of the marine mammals that are often found beached due to sonar testing. Prior to the 1960s, beaked whale strandings were extremely rare. But once the 60s rolled around, the Navy started to use mid-frequency active sonar (MFAS) to detect submarines. ? And from the 60s onwards, whales washing up on beachings became a very</p>	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>common occurrence. The paper recently published is a summary of what was discussed at a 2017 meeting of beaked whale experts in the Canary Islands and revealed that sonar distresses beaked whales so much that the marine mammals ends up with nitrogen bubbles in their blood very similar to what divers would call decompression sickness or the bends. The nitrogen can cause hemorrhaging and damage to whales vital organs. The big question that was brought up was how an animal that lives in the ocean and is adapted to perform deep water dives for hours at a time can obtain decompression sickness? Well simply, the sonar is so powerful, the animals dive deep too quickly causing the sickness.</p> <p>?In the presence of sonar they are stressed and swim vigorously away from the sound source, changing their diving pattern,? lead author Yara Bernaldo de Quiros told AFP.</p> <p>?The stress response, in other words, overrides the diving response, which makes the animals accumulate nitrogen. It?s like an adrenalin shot.? The conclusions are drawn from autopsies of dead whales, although a handful of animals were killed by other threats inflicted by humans, such as collisions with ships or entanglement in fishing nets, as well as disease. The authors note that to mitigate the impacts of sonar on beaked whales, we must ban its use in areas where they?re found. A moratorium on the use of MFAS around the Canary Islands in 2004 shows just how well this works ? no atypical strandings have been seen since. The researchers urge other countries where sonar is deployed, such as the US, Greece, Italy, and Japan, to follow suit.</p>	
Freudenberg-1	<p>We have no right to do infringe upon protected lands and waters: the Makah wanted that tip of land because they see themselves as people of the sea; more clearance needs to be protected around the Makah and Quinault reservations. They deserve more respect, and their having already shared so much of their original homeland as our Olympic National Park necessitates that that Park be protected from such noise pollution as well. The resident orca population are already struggling. Flying further out to do such testing would protect the Puget Sound as their habitat, as well as helping to protect salmon runs.</p> <p>American identity is diminished if we secure military might at any price. These are vital protections, and we will not be able to undo the damage if we take for granted the very core of this region's native life.</p>	<p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft and ships are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS.</p>
Friedlander-1	<p>I am very concerned about the Navy's use of sonar. The southern resident orcas are endangered and any additional harm to them right now is unconscionable. Please, do not go through with this dangerous testing. It is</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	likely that marine life will suffer from temporary deafness which will make communication between orcas impossible.	Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Friedman-1	Scientific studies have repeated shown that acoustic and seismic testing have a serious impact on sea life. A study in 2017 showed that seismic testing had a major negative impact on zooplankton. If sonic pollution has a serious impact at that basic level of sea life, imagine the impact on higher level sea life, including mammals, with the continued increase in sound pollution of the seas. While I understand the need for some testing, and the need to ensure that the Navy meets its statutory mission, the science is clear. Testing directly harms the environment of the sea, and therefore, the waters connection to the human environment.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Friel-01	See attached letter.	See responses below.
Friel-02	1. Navy impacts on Southern Resident orcas were in fact recognized as an issue by the Orca Task Force in Washington state. The EIS inaccurately claims that “Navy actions were not the sources for any of the identified threats” in the report by the Southern Resident Orca Task Force (Office of the Washington Governor, 2018) (page 3.4-46). In fact, concerns about the Navy’s use of sonar equipment impacting the Southern Residents was raised in the very first Orca Task Force meeting (5/1/2018 meeting minutes). Recommendation 25 in the final report was “Coordinate with the Navy in 2019 to discuss reduction of noise and disturbance affecting Southern Resident orcas from military exercises and Navy aircraft.” It further continued: “The governor should meet with the U.S. Navy’s Commanding Officer for the region that includes Washington state to address the acoustic and physical impacts to Southern Resident orcas from Naval exercises in waters and air of Washington state. The governor should request the Navy participate on the Vessels working group in Year Two and identify actions to reduce the Navy’s impacts to Southern Resident orcas” (emphases added) (Office of the Washington Governor, 2018). In addition, potential impacts from Naval activities are recognized as a threat to Southern Resident orca survival and recovery in both the U.S. and Canada Southern Resident orca recovery plans.	The Task Force Final Report did not identify Navy sonar among the major threats. The major threats identified in the report are a lack of prey, disturbance from noise and vessel traffic, and toxic contaminants in the waters they inhabit. The Navy, as acknowledged by the Governor's Task Force in 2018, was not previously requested to participate in the Task Force, and the Navy was not made aware of conversations held during meetings in 2018. The Navy has since been invited to take part and, as a result, a team of Navy subject matter experts and Navy officers began to participate with the Task Force’s working groups on prey and vessel traffic. The Navy participated in the Governor’s Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales. The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Friel-03	<p>2. Given the small size of the endangered Southern Resident orca population today, and the fact that they travel in groups, harm to a single individual orca can easily mean a population-level effect. Each individual orca in the current population matters if the population is to avoid extinction. There has been a net loss of 12 individual Southern Resident orcas since 2011. The population has continued to decline since the 2015 NWTTS EIS. In 2016, the National Marine Fisheries Service (NMFS) declared that Southern Resident orcas are one of the marine species most at risk of extinction nationwide. The final EIS will need to be updated with the latest number of Southern Resident orcas alive today, which is currently fewer than the 77 stated in the draft.</p> <p>The Draft EIS states that “the use of sonar and other transducers during training activities as described under Alternative 1 will result in the unintentional taking of killer whales incidental to those activities” (page 3.4-190). The EIS Fact Sheet Booklet states that 99.84% of all estimated takes of marine mammals would be Level B harassment, disrupting natural behavior patterns such as feeding, surfacing, nursing, breeding, sheltering or migration to those point where those patterns are abandoned or significantly alter. These—and especially feeding, breeding, and nursing—are all critical activities for the Southern Resident orcas now, given that they have produced only two surviving calves in the last three years, two orcas are visibly emaciated, and nutritional stress is recognized as a primary threat to the population. Up to 69% of all detectable pregnancies between 2008 and 2014 were unsuccessful, and low availability of Chinook salmon appeared to be a significant cause of late pregnancy failure (Wasser et al. 2017); Level B harassment by Navy activities that interferes with both feeding and breeding or displaces orcas from preferred foraging areas is of significant concern and will further contribute to the Southern Resident orcas’ low reproductive success.</p> <p>Table 3.4-40 in the EIS estimates two behavioral impacts to Southern Resident orcas per year from sonar and other transducers. It is unclear whether that means just two individual orcas will likely be affected; if so, we question whether that is realistic given that pods of orcas travel together. We are particularly concerned about new and increased impacts to Southern Resident orcas from mine explosives, which can cause injury or death, and the use of mid-frequency sonar, which can impact other marine mammals out to 16 km offshore. wildlife within 2,000 square miles – well outside the reasonable area that marine mammal observers are able to survey to record marine mammal sightings and initiate mitigation</p>	<p>There are several sources of abundance numbers for marine mammal species. For consistency, the Navy uses abundance numbers of Southern Resident killer whales (as well as other marine mammal species) provided by NMFS in the most recent Stock Assessment Report. The Navy tracks this species closely and will continue to use the most recent available data.</p> <p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Please read the discussion of the event involving the USS SHOUP presented in the 2015 NWTTS Final EIS/OEIS, this Supplemental EIS/OEIS, and the cited U.S. Department of the Navy (2004) <i>Report on the Results of the Inquiry into Allegations of Marine Mammal Impacts Surrounding the Use of Active Sonar by USS SHOUP (DDG 86) in the Haro Strait on or about 5 May 2003</i>. Pearl Harbor, HI: Commander, U.S. Pacific Fleet, for an accurate understanding of the event involving the USS SHOUP in 2003.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>measures. In fact, military exercises have been documented to impact orcas right here in the Salish Sea.</p> <p>In a population with strong family ties, the loss of one orca also directly affects the others' chance of survival. When a female resident orca dies, it increases the mortality risk of her male offspring under age 30 by 3.1 times, and the mortality risk of her male offspring over age 30 by 8.3 times (Foster et al. 2012). In late 2018 and early 2019, for example, it was reported that male Southern Resident orca K25 was observed to be doing poorly after the death of his mother, K13.</p> <p>3. There are documented cases in this region of U.S. and Canadian naval activities, including active sonar training and explosive testing, causing direct harm to the Southern Resident orcas.</p> <p>In 2003, an active sonar training exercise conducted by the U.S. Navy in the eastern Strait of Juan de Fuca and Haro Strait caused one of the Southern Resident killer whale families (J pod) to stop foraging and exhibit abnormal behaviors and movement, change direction multiple times, and group together in shallow water where they are at increased risk of stranding. In a video recording of the incident, sonar can clearly be heard above the water. More recent incidents involving testing of sonar and explosives by the Canadian Navy in Southern Resident orca habitat are examples of the potential impact of the activities proposed in this EIS. A juvenile Southern Resident female was stranded in 2012 with evidence of trauma consistent with an explosion or high-pressure impact, a week after the Canadian Navy had been conducting sonar exercises in the region. An exact cause of death was not determined, but experts in underwater noise who continue to review her case believe that the most likely cause of death was an underwater military explosion. In 2017, explosives detonated by the Canadian Navy near a group of Southern Residents (L pod) caused the whales to group together suddenly and flee the area. These examples show that just one incident of training and testing activities impacting Southern Residents can cause significant harm, death, or displacement from preferred habitat.</p>	
Friel-04	<p>4. Other agencies and operators are taking new, meaningful steps to reduce noise and disturbance affecting Southern Resident orcas. The Navy must also increase its protections, or it will become responsible for a larger share of the cumulative impact and potentially negate some of the benefits of the other actions being taken.</p> <p>In 2019, Washington state has taken big steps to reduce impacts on Southern Resident orcas from other vessel types, recognizing that noise</p>	<p>The Navy is fully aware of the plight of the Southern Resident killer whales. In 2019 a team of Navy subject matter experts and Navy officers began to participate with the Governor's Southern Resident Killer Whale Task Force working groups on prey and vessel traffic. The Navy participated in the Governor's Task Force, as the group identified ways to support recovery efforts for the Southern Resident killer whales.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	and disturbance have significant adverse consequences for this endangered population. In May 2019, Governor Inslee signed into law a bill that increases the distance that vessels must stay away from the Southern Residents and enacts a 7-knot speed limit within a half nautical mile of these orcas. The legislature also allocated funding for a new hybrid ferry and funding to convert some ferries to hybrid-electric power. Washington State Ferries is also doing a baseline noise inventory and developing solutions to address noise and frequencies of concern. Meanwhile, in 2019, voluntary ship slowdowns will continue and expand for the third year through the Vancouver Fraser Port Authority-led Enhancing Cetacean Habitat and Observation (ECHO) Program – a Canadian program that directly benefits Southern Resident orcas in the inland waters. The Navy should increase its own mitigation efforts so that there is still a significant net benefit to the Southern Residents in terms of reduced noise and disturbance when all these other entities are increasing their protective measures.	<p>The Navy developed mitigation areas to further avoid or reduce potential impacts from the Proposed Action on marine mammals in areas that are particularly important for biological life processes, such as feeding and migration.</p> <p>Procedural mitigation measures already in place and proposed to continue include ceasing activities that could be harmful to marine mammals when marine mammals are detected within defined mitigation zones.</p> <p>The Navy has also been a key contributor to marine species monitoring projects for a number of years to advance scientific knowledge of Southern Resident killer whales and the salmon they rely on. For decades, the Navy has implemented habitat improvement projects on its installations in Puget Sound that benefit the Southern Residents.</p>
Friel-05	5. The designation for Southern Resident orca critical habitat is likely to change later this year. The Navy should not make final decisions about training and testing in the potential new critical habitat areas off the coasts of Washington, Oregon and California until this designation has been made. NMFS has committed to proposing a rule with an expanded designation of critical habitat off Washington, Oregon and California by early October 2019 – an area encompassed by the NWTT range. Advancing this EIS now for activities in an area that is on the cusp of being designated as critical habitat is irresponsible. The Navy should wait until NMFS makes its final designation for expanded critical habitat before pursuing activities that would adversely affect the area. Changes in the Navy’s mitigation measures are likely to be necessary so that the proposed action does not “result in destruction or adverse modification of critical habitat.”	The Navy has consulted with NMFS on designated critical habitat as required under the Endangered Species Act. The Navy has been aware of the proposed revision to Southern Resident killer whale critical habitat. As NMFS noted in the Proposed Rule, during preparations for the revision to the critical habitat, NMFS provided the Navy (and other DoD entities) with information regarding the areas under consideration for Southern Resident killer whale critical habitat, and requested the Navy identify areas they own or control which may overlap with the areas under consideration. NMFS also asked the Navy to identify any impacts to national security that might arise from the proposed designation of critical habitat. The Navy included discussions of the proposed critical habitat in the Final Supplemental EIS/OEIS.
Friel-06	6. Recent variations in Southern Resident orca presence in the Salish Sea are complex and should not be an excuse for exercising less caution in the inland waters. The EIS states that “foraging during the spring in Salish Sea by Southern Resident killer whales has declined in recent years as they shift their range and forage for Chinook salmon or other prey species elsewhere in response to reduced prey availability in that historically used inland waters foraging area” (p. 3.4-26). Even spending time elsewhere, Southern Resident orcas are not getting enough food and are showing signs of malnutrition. The inland waters foraging area is still critically important if they are going to	The statements quoted from the Supplemental EIS/OEIS are part of an establishment of the environmental baseline the Navy then uses to estimate potential impacts resulting from the Navy’s activities. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The commenter incorrectly asserts that the Navy suggests that protective measures in the Salish Sea are less important; however, the Navy has not suggested that and does not consider that to be true. The mitigation measures developed for both NWTT Inland Waters and the NWTT

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>survive and thrive. In recognition of this fact, state and federal governments are actively working to restore salmon populations in the inland waters. It is difficult to predict orca presence on a long-term or even annual basis, and the Navy should not assume that the shift outside of the Salish Sea in the spring and summer is a permanent change.</p> <p>The Southern Resident orcas are still sighted in the Salish Sea frequently. In fact, Olson et al. 2018 noted that K and L pods have been increasing the duration of their stay in the inland waters by staying in the Salish Sea through the fall and into the early winter. The Navy should consult with orca biologists to gather other recent information, in addition to reviewing recent published literature on Southern Resident orca presence in the Salish Sea.</p> <p>The EIS implies that changes in the Southern Residents' presence in the Salish Sea mean that protections there are less important than they used to be. In fact, it should be reason for an extra layer of caution. Reducing noise and disturbance in the heavily-trafficked inland waters could enable the Southern Residents to forage there more effectively and therefore spend more time there as they have historically. Recent information on foraging locations should not be interpreted as a reason to decrease or discontinue mitigation efforts to avoid impacts to Southern Residents in the Salish Sea. Additionally, the Navy should consider that when the Southern Resident orcas are not in inland waters, they are likely to be in their offshore area, which is subject to additional training and testing activities that do not occur in the Salish Sea. The Navy should consider additional mitigation and monitoring in the orcas' offshore habitat given the potential increased use of this area and the unique activities—such as active sonar—that take place in this portion of the NWT range.</p>	<p>Offshore Area for the Proposed Action represent an increase over the mitigation developed for the 2015 NWT Final EIS/OEIS.</p>
Friel-07	<p>7. The EIS should include two additional studies related to impacts on Southern Resident orcas: Wieland et al. 2010 and Emmons et al. 2019. Wieland, M., A. Jones, and S. C. P. Renn. 2010. Changing durations of Southern Resident killer whale 23 (<i>Orcinus orca</i>) discrete calls between two periods spanning 28 years. <i>Mar. Mam. Sci.</i> 26(1):195–201.</p> <p>This study found that the Southern Residents make a behavioral adjustment as a result of vessel noise, as measured through an increase in mean durations of discrete calls. "Because they are adjusting their vocal behavior, we must consider the very real possibility that engine noise is hindering their ability to communicate, and may well impact their efficiency at using acoustics to forage and navigate, as well" (Wieland et al. 2010). These findings should be incorporated into 3.4.2.1.1.4 on masking (page</p>	<p>Wieland et al., 2010 was incorporated in Section 3.4.1.7.4 of the Final Supplemental EIS/OEIS as recommended by the commenter.</p> <p>The Navy-funded research presented in Emmons et al. 2019 was considered in the Draft Supplemental EIS/OEIS, but the report was not cited because it was still in the process of being edited by the authors and had not been finalized. The report has since been finalized and is cited in the Final Supplemental EIS/OEIS.</p> <p>The Navy does not frequently conduct training or testing activities in the location of the Cape Flattery Offshore hydrophone since that area is highly</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>3.4.103, which talks about other species but not killer whales) and into the odontocete discussion on page 3.4-120.</p> <p>Emmons, C.K., M.B. Hanson, and M.O. Lammers. 2019. Monitoring the occurrence of Southern Resident killer whales, other marine mammals, and anthropogenic sound in the Pacific Northwest. Prepared for: U.S. Navy, U.S. Pacific Fleet, Pearl Harbor, HI. Prepared by: National Oceanic and Atmospheric Administration, Northwest Fisheries Science Center under MIPR N00070-17-MP-4C419. 25 February 2019. 23p.</p> <p>This report states that there were 148 mid-frequency active sonar events detected between 2011 and 2017, with the peak overlapping with occurrence of the three killer whale communities (including Southern Residents). This is concerning because, as the EIS states, exposure to mid-frequency sonar has been directly linked to separation of a killer whale calf from its group (page 3.4-102); the separation and loss of a single calf would be a serious blow to the small population, given that there are so few calves and the southern residents have had limited reproductive success in recent years. Exposure to mid-frequency sonar has also been directly linked to mass strandings of cetaceans (page 3.4-127). In addition, the EIS states that newer high-duty or continuous active sonars have more potential to mask vocalizations, particularly for mid-frequency cetaceans like killer whales, and “longer-term consequences could include potential decrease in recruitment” (p. 3.4-102). The Southern Resident orcas cannot afford any further decrease in their already very low recruitment rates.</p> <p>The findings from Emmons et al. 2019 regarding seasonal use of different offshore areas by Southern Resident orcas and other whales should also be used to minimize adverse impacts by shifting sonar and explosives testing and training by season and by location.</p>	<p>utilized by commercial vessel traffic, making it an undesirable location for the Navy to conduct activities, especially sonar training or testing.</p> <p>The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on Southern Resident killer whales and other marine species in key foraging, breeding, and migration habitat areas, as described in Appendix K (Geographic Mitigation Assessment). For the Final Supplemental EIS/OEIS, the Navy developed several new mitigation measures specific to Southern Resident killer whales. For example, in the NWTT Offshore Area, the Navy developed a new mitigation area, the Juan de Fuca Eddy Marine Species Mitigation Area, which encompasses waters off Cape Flattery. The Navy’s mitigation now includes annual limits on hull-mounted mid-frequency active sonar and prohibits explosive Mine Countermeasures and Neutralization Testing in the Juan de Fuca Eddy Marine Species Mitigation Area. All other explosive activities are required to be conducted 50 NM from shore in the Marine Species Coastal Mitigation Area. In addition, the Navy developed a new mitigation to issue annual awareness notification messages to alert ships and aircraft to the possible presence of increased concentrations of Southern Resident killer whales seasonally, which will further help avoid potential impacts from vessel movements and training and testing activities on this species.</p>
Friel-08	<p>8. New whale report alert systems should be used for real-time monitoring and early warnings to build on the limited capacity of lookouts.</p> <p>The Navy should explore the use of newly available apps and technology that provide real-time information on whale presence in the Salish Sea and along the coast. Using this technology could expand the ability of the Navy’s marine mammal observers to be aware of and respond to the presence of Southern Resident orcas. For example, the Whale Report Alert System (WRAS), developed by the British Columbia Cetacean Sightings Network, alerts mariners to the presence of whales so that mitigation measures may be enacted to reduce the risk of disturbance and collision. Orca Network, Whale Scout, and other organizations in Washington also</p>	<p>The Navy developed new mitigation for Navy biologists to initiate communication with the appropriate marine mammal detection networks in NWTT Inland Waters prior to conducting explosive mine neutralization activities involving the use of Navy divers, Unmanned Underwater Vehicle Training, Civilian Port Defense – Homeland Security Anti-Terrorism/Force Protection Exercises, and Small Boat Attack Exercises. This mitigation will help the Navy plan activities in a way that minimizes the potential for exposure of Southern Resident killer whales, as described in Section K.3.3 (Mitigation Areas for Marine Species in NWTT Inland Waters). The Navy will also continue to assess the practicality of other available monitoring techniques as technologies advance.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	contribute to a Whale Sighting Network with close to real-time reporting in the Salish Sea.	
Friel-09	<p>9. Additional information is needed on the anticipated timing of the proposed activities.</p> <p>The EIS should detail the times of year during which the proposed activities will take place. The Southern Resident orcas have exhibited seasonality in their movements, and information from tagging studies, coastal surveys, and passive acoustic monitoring allows some degree of prediction for when and where they may be traveling and foraging. Any overlap in their seasonal movements and the Navy's testing and training activities will increase impacts on these species. Information about timing should be made public in the EIS and the Navy should seek to adjust the timing of their activities to minimize such overlap.</p>	<p>As stated in Section 2.3 (Proposed Activities), because of the nature of training and testing requirements for forces that must be ready to deploy at all times, activities could occur throughout the year. The Navy added additional details on seasonality and day/night requirements of its activities to Appendix A (Navy Activities Descriptions) of the Final Supplemental EIS/OEIS. The Navy did consider seasonal movements and behaviors of marine species in its effect analysis. The Navy developed mitigation areas to avoid or reduce potential impacts from the Proposed Action on marine species either seasonally or year-round in key foraging, breeding, and migration habitats, as described in Appendix K (Geographic Mitigation Assessment).</p> <p>The duration of the Supplemental EIS/OEIS is for the foreseeable future, while the Marine Mammal Protection Act permits would be in place for seven years.</p>
Friel-10	<p>10. The intended duration of the EIS is not clear.</p> <p>This EIS is unclear as to the duration of the planned activities. A change in the 2019 Naval Defense Authorization Act extended the Navy's authorization for marine mammal take and harassment under the Marine Mammal Protection Act (MMPA) from five to seven years. It is not stated in this EIS whether the proposed activities were analyzed for impacts over a five-year time period or for the extended seven-year time period.</p>	<p>The duration of the Supplemental EIS/OEIS is for the foreseeable future. The analysis would remain valid unless the Navy makes substantial changes in the proposed action that are relevant to environmental concerns, or there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. The Marine Mammal Protection Act permits would be in place for seven years.</p>
Friel-11	<p>11. Increasing the Navy's testing and training activities at this time is counter to what the endangered Southern Resident orcas need right now to have a chance at recovery.</p> <p>Without bold and immediate actions, the Southern Residents are likely to go extinct within our lifetimes. Everything we can do now to protect the Southern Resident orcas is critical. In a time when we should be taking action to address and decrease threats facing the population, including reducing noise and disturbance, the Navy's proposed activities increase the risks from ocean noise, vessel strike and disturbance, potential direct harm and injury to Southern Resident orcas, and displacement from preferred habitat.</p> <p>The Navy must consider the current crisis facing the endangered Southern Resident orcas and make new adjustments in its testing and training activities. Despite being listed under the Endangered Species Act for nearly 14 years, this unique population is not recovering and is continuing to decline. It is obvious that status quo actions, including the Navy's training</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	and testing activities, are not serving the Southern Resident orcas. Given their highly endangered status and continuing decline, the Navy should be considering how to reduce impacts and increase protections for Southern Resident orcas.	
Froebe-1	<p>06/12/2019</p> <p>To Whom It May Concern:</p> <p>My name is Brel Froebe, and I am a resident of the Mendocino Coast. I am very concerned about the proposed trainings. The proposed trainings by the Navy will harm dozens of protected species of marine mammals -- Southern Resident killer whales, blue whales, humpback whales, dolphins, and porpoises -- through the use of high-intensity mid-frequency sonar. The use of sonar has been directly connected to many instances of beached whales that have died from baro-trauma after military sonar exercises. A deaf whale is a dead whale.</p> <p>How will the Navy guarantee marine animals will not be harmed when sound travels and there are no sound barriers in the ocean to stop it? Since the release of this EIS, the NOAA has declared a gray whale emergency, due to the 77 whale deaths that have washed up on the west coast. Scientists estimate that these 77 whales are only 10% of the number of gray whales that have died off.</p> <p>https://www.montereyherald.com/2019/05/31/feds-declare-emergency-as-gray-whale-deaths-reach-highest-level-in-nearly-20-years/</p> <p>Can the Navy revise the EIS so that it reflects this new data and state of emergency?</p> <p>How will this new information impact the navy's "take" of marine mammals?</p> <p>How will the Navy make accurate counts for take and stay within the allowed incidental take numbers?</p> <p>Also since the drafting of the EIS, it has been reported that there has been a die-off of over 300 common murrelets. Scientists do not know the cause of this major die-off.</p> <p>https://www.advocate-news.com/2019/05/24/major-die-off-of-common-murrelets-underway-along-the-mendocino-coast/</p> <p>Will the Navy postpone their testing plans until it is certain that no murrelets will die as a result of the testing?</p> <p>Will the Navy revise the EIS to take this new information into consideration?</p> <p>The InterTribal Sinkyone Wilderness Council has already submitted a statement to you opposing the testing expansion proposed in the EIS.</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities. The Navy will continue to consult with the Tribes. Through Government-to-Government consultations, the Navy will consider additional tribal and traditional knowledge provided, maintaining respect for cultural sensitivity and confidentiality.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>These tribes have been stewards of this ecosystem long before the Navy ever existed. I urge the Navy to listen to what these tribes are telling you. They have knowledge of and relationship with this land that is unique and their culture depends on the sustainability of our pacific ocean ecosystem. According to the Navy's Northwest Training and Testing environmental impact statement (EIS), in the thousands of warfare "testing and training events" it conducts each year, 200,000 "stressors" from the use of missiles, torpedoes, guns and other explosive firings in US waters happen biennially. These "stressors," along with drones, vessels, aircraft, shells, batteries, electronic components and anti-corrosion compounds that coat external metal surfaces are the vehicles by which the Navy will be introducing heavy metals and highly toxic compounds into the environment.</p> <p>How will the Navy guarantee that they are not releasing toxins into the oceans? How will the Navy guarantee it will not cause stressor that severely injure and kill marine life?</p> <p>As a concerned citizen, I stand in solidarity with the InterTribal Sinkyoune Wilderness Council in opposing all Navy testing off the west coast that has any negative effect on marine mammals, kelp, fish, and bird life.</p>	
Froebe-2	<p>So after listening to the presenters today, I feel strongly, based on the facts that have been presented, that the environmental impact and costs far outweigh the benefits of any Navy testing on the Mendocino coast or anywhere along the western United States coastline. The amount of hazardous waste that will be dumped in the oceans, paired with the negative impacts on marine life, will destroy the ocean as we know it. I want to appeal to the conscience of whoever's reading this to please look in their hearts and imagine seven generations from now. Meaning, think about your future children's children's children's children, and what kind of ocean and world do you want to leave to them? If the Navy continues to pollute the ocean at the rate that it is, it will negatively impact the oceans to a point where the vibrancy of life as we know it will no longer exist. I also want to express my anger about the way in which this public information session was held. It seems like a deliberate attempt to silence this community and not let community members hear each other and have a unified understanding of the issues. I hope that, in the future, traditional public information forum and comment format will be used, rather than having separate information booths that dissipate the power of communal voice. Thank you.</p>	<p>The Navy went to a great amount of effort to coordinate and organize the public meetings to meet the needs of all of the public. The format allowed for ample opportunity for valuable exchange of information between the public and Navy subject matter experts. The subject matter experts were available and answered questions throughout the entire meeting. The meetings also provided opportunity for individuals to comment in writing or orally privately to a stenographer. The Navy has received feedback from meeting attendees that the open-house format is more conducive to promoting public understanding and constructive dialogue. Open house meetings allow a greater number of individuals to directly engage and interact with Navy team members and ask questions about the Supplemental EIS/OEIS, as well as provide comments on the document.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Froess-1	This is a stain on our great Navy. We have done enough to these poor, magnificent creatures. Enough is enough! Please, please, stop this testing!!!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Frost C-1	I just wanted to show our household's support for your plan.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Frost S-1	Please keep the Navy's garbage out of our oceans, lakes, and streams.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Fuller-1	<p>To quote Gordon Hempton in his book, One Square Inch of Silence, I do not want "silence to go extinct." The Growlers are loud, louder than commercial aircraft. To add their, as an addition to the current aircraft flying above Olympic National Forest, is to further press silence into extinction.</p> <p>And one more thing...has the Navy forgotten Pearl Harbor? I'd like to know why it's a good plan to house all of this type plane in one place, Whidbey Island – where I do happen to live under the flight path of Paine Field now.</p>	<p>Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II.</p> <p>While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year.</p> <p>When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context:</p> <ol style="list-style-type: none"> 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day averaged over a 365-day year). 3. The proposed increase of 300 total flights per year averages to just over one additional flight per day. 4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.
Furlong R-1	<p>I have 2 degrees in the biologic Sciences from the University of Washington, including a doctoral degree.</p> <p>I am writing to comment on proposed Noise exposure increase in the Salish sea, related to Navy growler activities.</p> <p>The marine industry, which includes shipping, whale watching, and recreational and commercial boating and fishing, are all going to be asked to make alterations in operations to accommodate the need to reduce noise that impacts the orca population and their ability to feed. It is an</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>absurdity, and an anathema, that the the Navy not only neglects to participate in this effort, but is planning to actually increase operations and noise exposure of this harmful type. See the attached letter re the science regarding the impacts of noise on the Orca whales, as well as dolphins in the Salish Sea.</p> <p>We strenuously object to any Navy growler operations changes that do not involve substantial REDUCTION. An increase in operations and consequently noise exposure, is unacceptable.</p> <p>Richard Furlong MD</p>	
Furlong Z-1	<p>"In a recent project review of the Trans Mountain Expansion (TMX) Project, the National Energy Board (NEB) found that the increase in marine vessels associated with the Project would further contribute to cumulative effects that are already jeopardizing the recovery of the SRKW (Southern Resident Killer Whales)."</p> <p>https://waves-vagues.dfo-mpo.gc.ca/Library/40646713.pdf</p> <p>https://www.seattletimes.com/seattle-news/navy-plans-testing-of-futuristic-technology-sonar-harm-to-mammals-in-pacific-northwest/</p> <p>https://news.ucsc.edu/2019/03/marine-mammal-hearing.html</p> <p>"A deaf whale is a dead whale"</p> <p>https://www.theguardian.com/environment/2015/jun/14/stranded-whales-ocean-navy-sonars</p> <p>"The deafening noise of sonar, used by warships to detect enemy submarines, can injure dolphins and whales, driving them to surface too fast or beach themselves — with sometimes fatal consequences — to escape the din."</p> <p>https://local12.com/news/nation-world/more-dolphins-die-in-aegean-sea-group-suspects-navy-drills</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
G		
G-1	<p>Please recognize the pain, distress, and utter cruelty you are imposing on the orcas and other affected inhabitants of the ocean. Please STOP SONAR TESTING. Stop ignoring that your actions have direct and long term consequences. Stop ignoring the destruction you are causing the EARTH- a living entity. This is what happens when small minded, ignorant, confused humans are positioned into power and am disgusted with embarrassment regarding how the world must view it from the outside. Please, do better. please honor the lives of the ocean and of the earth. Please stop contributing to the embarrassment of this nation! please stop causing animals pain and discomfort. please consider the well being of the world, and please ACT to promote genuine, thoroughly-considered changes.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Gage-1	The Salish Sea should not be the location of sonar testing or use due to the negative impact on the habitat of the critically endangered Southern Resident Orcas. Thank you	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Galera-1	Please stop this cruelty!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Galliher-1	Absolutely against! In a world full of hate and cruelty, I don't feel testing sonar when we know it causes hearing loss and puts animals in distress, is worth it. I support our military 100%, but I sure hope they make the right choice on this one. That or they need to come out with one heck of an explanation for why we should even consider sonar testing to be worth the cost to the animals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Galm-1	our world today is being tortured, tormented, beaten, abused, threatened, and shamelessly killing off the smallest of creatures to the largest. we are being selfish in our ways that your dream can come true at the cost of damaging our planet to where it cannot come back to its original state. no matter how long or how much time we would put into restoring our earth, it is now a hopeless feat. this earth is beyond repair and the most abused, abandoned, and tortured are our wildlife that have no say in what man is doing from day to day destroying their homes and their food sources. we dont have that right. how dare man put a crown on his head making him a king of the land. no one is a king. if all this testing, building, cutting trees, making room for man and his visions, in a very short time coming, there will be no earth, land, water and seas for us to exists even just a simple life	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	without the luxury of the amazing world of our animal species. THIS ALL MUST STOP NOW SO WE ALL HAVE A FUTUREIF ITS NOT TOO LATE ALREADY.	
Galvan-1	Can the US Navy please chill with the sonar testing?? Like i dont think someone is gonna attack you guys. The only this the US is good at is <i>[expletive deleted]</i> other places up, now they want to <i>[expletive deleted]</i> with the ocean. Please leave them the <i>[expletive deleted]</i> alone and use the money for environmental issues.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Galvin-1	I strongly object to the sonar testing. It could have catastrophic effects for animals who are already under pressure from pollution, noise and a lack of food. Please do not put the Southern Resident orcas more at risk than they already are!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gan-1	I 100% against the underwater sonar practices which can cause harm to the marine animals. This practice limit the ability of marine mammals that utilise sound extensively to recognise the frequencies in sound, thus, limiting their survival. Please stop this.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Garbett-1	Please don't conduct war games in our ocean! I'm strongly against sonar testing! It is a death sentence to our endangered resident orcas along with everything else. Hearing loss or damage would prevent the resident orcas from finding the fish the need to survive. They are strictly fish eating orcas.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Garcia-1	This is very wrong! Please stop hurting animals! What would you do if they hurt your family! You can protect yourselves but animals can't this is our job to do so...	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gardner M-1	Please stop,destroying the planet that is home to so much more than humans! We don't need sonar testing! What is that for? Is that for killing? What a sick twisted world we live in.The marine life should be able to live in peace, the world is on the brink of meltdown with the 6 th mass extinction and deforestation. Enough is enough!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gardner P-1	Concern about our environment and the impact on our wildlife, plant life and farm lands. Putting so many Growlers in one place makes us more of a target from Eastern Asia. The flights rattle structures, the ground around Deception Pass bridge where that is a main on/off way to get off our island. The noise is creating a decrease in tourists at the parks in our region. Property values are no doubt going to go down.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>With the increase of military to accommodate these Growlers has and will stress our community, roads, traffic and they do not pay taxes here which the locals must cover.</p> <p>I don't know about the Growlers flying over native /tribal lands in area - but think that may be an issue.</p> <p>This area used to be call "God's Country" now no longer - sad</p>	
Gardner R-1	<p>We are suppose to be the guardians of Earth, we are killing our earth. Please do not do sonar testing or any testing that can harm wildlife and Earth.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Garreton-1	<p>I propose the Navy consider an additional mitigation zone off the California coast near Petrolia. According to research and studies conducted by Dr. Dawn Goley, Professor of Marine Biology at HSU, a new colony of elephant seals (<i>Mirounga Angustirostris</i>) have made a home along the coastline of the Punta Gorda lighthouse. (GPS: Lat- 40-14-57.48"N/Long- 124-21-1.08"W) Little is known about this new colony and the reasons for their interaction in this remote area. Please consider additional mitigation in this area to protect this new, developing colony.</p>	<p>The Navy considered the commenter's mitigation request; however, the suggested location is situated outside of the NWTT Study Area. The Navy did not develop mitigation areas outside the Study Area (e.g., in areas along the California coastline) because those areas would not overlap the locations where training and testing activities will occur under the Proposed Action; and therefore, would not be effective mitigation.</p>
Garsson-1	<p>NOAA and the U.S. Navy have known for decades the negative impacts of Sonar on Marine Mammals. The recent use of dangerous electromagnetic weapons testing off the West Coast, has also contributed to the deaths of over 100 Grey Whales—from Baja California up to Alaska. We have also seen what damage it has caused to the coral reefs on Kauai's North Shore at Barking Sands. No animal or person is safe from this deadly war technology.</p> <p>The Pacific Northwest Salish Sea is Home to the endangered Southern Resident Killer Whales. Why would the Navy be allowed to threaten their extinction with ongoing Sonar and EM Weapons(Raytheon) testing in the waters they call home.</p> <p>There are already enough man made threats, including diminished food sources and toxic pollutants. But the single biggest contributor to our planet's environmental degradation is the U.S. Military. Enough is Enough, we must protect the only home we know, and all it's inhabitants.</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.
Gaulding-1	As an American citizen i do not approve of environmental terrorism. Please reconsider doing anymore harm to the creatures God created, and be safe yourselves, I understand the fear of enemies, but sea creatures are an important part of holding this world together. Peace and blessings	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marin-species-monitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gay-1	Your actions will negatively affect humans and other mammals	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Gelbart-1	Do not cause the deaths of any more cetaceans. Stop the excessive use of deadly sonar. we must better protect endangered species. http://seavoice.com/news/2019/01/31/researchers-have-identified-how-naval-sonar-is-killing-and-beaching-whales/?fbclid=IwAR1bK6SR_7AEwSPf6VJwePyqVgLXQInnPKo9ksuqFHverQkp6qjDyRVxZlg It is our duty to protect species,not cause their demise.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Genevro-1	Please discontinue underwater sonar testing as its disrupting the wildlife that maintains our delicate ecosystems. Whales and other cetaceans have	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	no ability of escaping these damaging noises. Research has indicated sonar testing has even resulted in the death of these animals due to the intolerance of the noise. We beg you to stop and find more ethical means of testing sonar.	and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
George-1	My parents have been traveling to Whidbey Island for 15 years and now call the Island home in retirement. Never has it been a more obnoxious and unwelcoming place to live than now! The increase in growler test flights is pointless, obnoxious and a nuisance to every living creature in the region. Literally use your brains and do what is right a proper for the public and environment for once. People obviously don't like jets flying by 24/7 for gods sake.	The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Gernsbacher-1	Please desist from sonar testing. The Pacific Northwest orca population is dire. We must do everything possible to encourage a healthful life for them.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gertler-1	With climate change already creating disruptive and unprecedented changes in the ecosystem, it's clear that the ocean is not a limitless supply of resources, raising questions about just how much marine environmental ecosystem disruptions it can take. Chemicals and Waste: The chemical contamination, debris, sonar and other effects of the training will put the sensitive ecosystems in harms way. The draft SEIS concludes that the assessment in the 2015 final EIS that impacts to water quality from explosives and byproducts in training & testing remains valid and does not need to be reconsidered. This conclusion does not take into account the effects that climate change may have on the corrosive power of an increasingly acidic ocean. Specifically, the draft SEIS does not consider the likelihood that acidification will accelerate the corrosion of explosive devices and byproducts that remain. The Navy has documented that it plans to use 20,000 tons of heavy metals,	The Navy discusses ocean acidification in the context of climate change in Section 3.1.3.3 (Climate Change and Sediments) and 3.1.3.6 (Climate Change and Marine Water Quality) of the Draft Supplemental EIS/OEIS and includes information from scientific studies conducted since 2015. The Navy acknowledged in Section 3.1.3.3 (Climate Change and Sediments) that "metals tend to dissociate" in more acidic ocean conditions. The Navy added a reference back to these two sections in the sections analyzing the impacts of explosives (Section 3.1.4.1) and metals (Section 3.1.4.2). Note that corrosion can also act to insulate ordnance and other metal items from contact with seawater and sediments, slowing or even halting further corrosion and movement of metals into the adjacent sediments and water column. The effects of climate change on the ocean environment, particularly effects specific to a particular region like ocean waters in the Pacific Northwest, continue to be researched and to evolve and are not necessarily

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>plastics and other highly toxic compounds over the next 2 decades in the oceans where it conducts war games, This means the likelihood of increased acidification from warming oceans from toxins, due to dumped munitions/metals.</p> <p>Can the Navy possibly know the degree of harmful impacts of chemical changes from explosives, from ocean acidification and warming and its corrosive effects?</p> <p>What is the Navy's plan for waste management, pollution prevention and recycling all of which could affect the water quality in the ocean. (Dumping cannot be considered "waste management")</p> <p>Marine Behaviors, disruptions and injuries. Aside from being concerned of the health of our ecosystems, we are a community that can be well affected economically by testing. We have commercial and tourist fishing, and whale watching expeditions, and lodgings/restaurants that rely on visitors to the coast, many of whom visit to see wildlife; whale migrations, seals, sea birds and if the ocean continues to warm we may see bottlenose dolphins here on the north coast.</p>	<p>predictable. For example, as described in Section 3.1.3.6 (Climate Change and Marine Water Quality), increases in ocean acidity are believed to reduce the availability of carbonate in the water column, which is needed by organisms to generate calcium carbonate structures. However, increases in sea surface temperature associated with climate change appear to stimulate calcification at an even greater rate, essentially overriding the inhibiting effects of lower pH levels and leading to unexpected high abundance of cocolithophores (which build protective scales from calcium carbonate) in some ocean regions.</p>
Gertler-2	<p>The total impacts of sea sonar explosives, electromagnetic devices, underwater detonations. and explosive training over time are still unknown except for scientific documentation about the disruptive behaviors of sonar air guns, these behaviors include those needed for survival such as NAVIGATION/migration, breeding, nursing, hearing, feeding, and location of predators and prey.</p> <p>And as yet we do not know how the ingestion of chemicals and munitions have on sea mammal behavior. Evidence shows that whales will swim hundreds of miles, rapidly change their depths sometimes leading to bleeding from the eyes and ears and even beach themselves to get away from the sounds of sonar. Whales are capable of the "bends"; nitrogen has been found in their blood stream.</p> <p>Science studies have proven that sonar travels 300 miles under water. Even though the plan is to test 12 miles off shore, sound travels at 300 miles from the source. Sonar can be up to 140 decibels which is 100 times more intense than the level known to alter whale behavior, at 192 decibels the whale is deaf immediately, and a deaf whale is a dead whale.</p> <p>How will the navy guarantee they will not disrupt life sustaining behaviors of marine mammals and also Courts have clarified that a finding of "negligible impact" does not fully satisfy the Navy's obligation under the Marine Mammal Protection Act, and that the Navy is subject to an independent statutory requirement to ensure that mitigation measures are</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	sufficient. (Nat Resources Defense Council v. Pritzker, 823F.3d 1125, 1133 (9th cir. 2016 [sic])	
Giamberso-1	I am opposed to training over the Olympic National Park. There are other locations that would not have such a negative impact on the Park.	The Navy has considered other locations (see the NWTTC Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Giamberso-2	I'm concerned that the jets are not following their announced flight plan. It is my understanding that the jets would not fly over the green bank farm area. Our house is close to the farm, the address is 2752 Harbor Estates road and yesterday, 6/10/19, there were at least four flights in afternoon over my house. I left a complaint on the noise complaint line I am very disappointed that the Navy did not fully consider alternative sites to the OFL and choose one that does not affect the island so negatively. The least the Navy could do is honor its announcements about where the jets will fly. The noise is negatively impacting our quality of life and the property value of our house.	The activities proposed in the NWTTC Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Gianlorenzo-1	For the love of our whales, please stop this harmful testing.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Giannone-1	<p>Noise modeling in the NWTT EIS is used to estimate acoustic impacts, but the modeling studies pre-date the Navy's recently ordered F414-GE-400 Enhanced engines for the EA-18G Growler jets. Noise from flights over the MOA currently exceeds the projected dBA and percent time audible as outlined in Appendix J (Tables J-13, J-18, NWTT EIS, p. J-22, J-27). This is partly due to noise analysis that relies on standards for urban areas, as well as metrics that de-emphasize the low-frequency noise of the EA-18G Growler jets as heard from the ground. The inaccuracy can also be attributed to lack of current acoustic data. Further research in the MOA is required to provide accurate information about loudness for park visitors and residents and the impact on wildlife including ESA listed species. NWTT flight operations significantly impact the soundscape of the MOA and areas near the MOA (Lauren Kuehne, 2019). This EIS demonstrates the need for further research, with current conditions and information.</p> <p>Noise Analysis – Appendix J</p> <p>Lmax: The noise modeling (J.4.3) used to determine the Lmax for Training Operations (Tables J-13-16) relies on measurements done with a previous engine model. There is an enhanced engine model for the EA-18G Growler jets, which the Navy recently ordered, that has “up to 18% more thrust and twice the horsepower of its predecessor” (Defence Blog, 2018). Modeling with the F414 Enhanced Engine is needed.</p> <p>dBA: A-weighting is used along with the DNL noise measurement to “emphasize certain parts of the audio frequency spectrum” (J-4, NWTT Draft Supplemental EIS/OEIS 2019). This A-weighting filter “[adjusts] low and high frequencies to match the sensitivity of the ear.” A-weighting is common in the United States for noise assessment; however this weighting scale de-emphasizes low-frequency noise. A-weighting is also not standard for noise analysis internationally. While relevant to human hearing, it mischaracterizes the noise from the EA-18G Growler jets, because the predominant frequencies of those flights heard from the ground, are under 200Hz.</p> <p>Additionally, A-weighting, while relevant to human hearing, is not relevant to the large variety of frequency sensitivity in species populating the area, such as the ESA-listed Marbled Murrelet, many species of birds (see table 3.6-2 of the NWTT EIS Draft), small mammals, bats, and amphibians. More research is needed about the acoustic ecology of the MOA to project potential impact of aircraft noise in the low-frequency range especially.</p> <p>Table J-11: The baseline Ldnr in this chart ranges from less than 35 to 35.4 dBA. The proposed Ldnr for the 13.5 percent projected increase in sorties</p>	<p>The engines used for the noise model were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The GE F414-400 enhanced engine is currently only in a research phase for the Navy, and is not installed in any aircraft, nor are there plans to purchase or install it. If this engine were to be introduced to the fleet of F/A-18E/F and EA-18G aircraft, the Navy would measure the noise emissions from this new engine.</p> <p>A-weighting, which was used in the noise modeling described in Appendix J, best replicates human hearing and is the most appropriate for the assessment of annoyance from aircraft noise. A-weighted sound levels form the basis of the day-night average sound level (DNL) metric, which is the best available metric to relate aircraft noise to long-term annoyance. The Federal Interagency Committee on Noise found that “There are no new descriptors or metrics of sufficient scientific standing to substitute for the present DNL cumulative noise exposure metric.” The comment suggests that A-weighted measures may not be as accurate in determining the disturbing effects of noises with strong low-frequency components. However, the alternative measurement methodology using C-weighting increases the emphasis on lower frequencies when compared with A-weighting. C-weighting is most appropriate for impulsive or repetitive sounds, such as blast noise and machine gun fire, which contain significant low-frequency noise, as well as continuous noise sources such as pumps and compressors.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>over the current level ranges from less than 35dBA to 36 dBA. Because the modeling for these figures is done with the previous engine model and not the F414 enhanced engine (installation complete by Dec. 2020), it is not representative of current or proposed loudness (Defence Blog, 2018). These dBA measurements also are low compared to measured dB SPL in the MOA. In March 2019 flights over the Hoh River Trail exceeded 70 dB SPL using a calibrated Bruel & Kjaer Sound Pressure Level meter (meets IEC standards, ISO, ANSI and ECMA standards). There is not enough measurement of the noise from the ground with the current engine model and number of flights. The National Park Service study from 2010 is referenced in J.7 "Acoustics Monitoring Report;" the results from this report include that aircraft were audible 11.7% of the time and exceeded 52dBA less than 0.3 % of the time. This data is not relevant to current noise from aircraft. Current percentages range from 12-56% of daytime hours flights are audible in the MOA (Lauren Kuehne, 2019). The statement: "The data for this study were collected in 2010 but are considered relevant to current conditions related to Navy aircraft training" is inaccurate (J.27). Day-Night-Average: the majority of NWTT flights currently occur during daytime hours (Lauren Kuehne, 2019). Day-Night Averages Sound Level is considered standard criteria for consideration of noise in land-use planning, however it mis-represents the loudness and percent time audible. Averaging many loud daytime events with few nighttime events lessens the overall percent time audible and average dBA, even with "10dB adjustment for acoustical nighttime noise events" (J.4.1, J-4).</p>	
Giannone-2	<p>Public Comment on Draft Supplemental EIS This comment primarily addresses the acoustic impacts of the addition of 36 EA-18G Growlers to the fleet at Naval Air Station Whidbey Island (Record of Decision for Growler Environmental Impact Statement, March 13, 2019). The Northwest Training and Testing (NWTT) Draft Supplemental EIS/OEIS proposes an increase of approximately 300 flights annually over the Olympic Military Operations Area ("Alternative 1," NWTT Draft Supplemental EIS/OEIS Project Information sheet from Open House, 2019, p. 6). The noise analysis in the NWTT Draft Supplemental EIS, which is presented in Appendix J, includes relevant concepts but demonstrates the need for further analysis that accurately reflects the projected impact of increased training activities. Noise modeling in the NWTT EIS is used to estimate acoustic impacts, but the modeling studies pre-date the Navy's recently ordered F414-GE-400 Enhanced engines for the EA-18G Growler jets. Noise from flights over the</p>	<p>The engines used for the noise model were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The GE F414-400 enhanced engine is currently only in a research phase for the Navy, and is not installed in any aircraft, nor are there plans to purchase or install it. If this engine were to be introduced to the fleet of F/A-18E/F and EA-18G aircraft, the Navy would measure the noise emissions from this new engine.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>MOA currently exceeds the projected dBA and percent time audible as outlined in Appendix J (Tables J-13, J-18, NWTT EIS, p. J-22, J-27). This is partly due to noise analysis that relies on standards for urban areas, as well as metrics that de-emphasize the low-frequency noise of the EA-18G Growler jets as heard from the ground. The inaccuracy can also be attributed to lack of current acoustic data. Further research in the MOA is required to provide accurate information about loudness for park visitors and residents and the impact on wildlife including ESA listed species. NWTT flight operations significantly impact the soundscape of the MOA and areas near the MOA (Lauren Kuehne, 2019). Potential impacts of increased noise are largely unstudied so while the NWTT EIS includes noise analysis, it is not currently relevant and does not reflect the actual experience on the ground for people in the MOA. The document demonstrates the need for further research, with current conditions and information.</p> <p>*see attachment*</p> <p>Summary</p> <p>With current activity levels military aircraft are audible in the MOA (including at a location on the edge of the MOA which is in the Warning Zone, Figure J-4) from 12% to 56% of the time (Lauren Kuehne, 2019). At some locations in 2017, 80-100 flight events occurred in one day. The MOA includes part of Olympic National Park, which is internationally known for the naturally low SPL levels (One Square Inch, 2019). Measurements with calibrated Bruel & Kjaer SPL meter routinely read 22dB SPL. The quietness of the areas in the MOA when there are not flights contributes to lower Day-Night Averages; when there are not flights, it is very quiet. The proposed increase in activities, including flights over this area, would have a greater impact than is projected in this Draft Supplemental EIS. To represent and understand the potential impacts of the NWTT Electronic Warfare activities, further research is needed.</p> <p>The North Olympic Peninsula is a valuable resource, and Olympic National Park is a public resource. The NWTT activities can be conducted in a location that does not impact a sensitive, unique, and cherished wilderness area that is home to many people. 8 Tribal Nations, Olympic National Park, state forest land and marine sanctuaries are all located in the area impacted by the Northwest Training and Testing activities, especially flights. Many people live in the area. The North Olympic Peninsula draws millions of visitors annually from around the country and world who appreciate the opportunity to experience this diverse wilderness.</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Gibbs-1	I am 100% against your sonar testings, due to the harmful effects it has on surrounding wildlife.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gienger-1	I was only able to attend your workshop in Fort Bragg for a short period of time. I fully support the letter of May 3, 2019 from the 10 tribes of the InterTribal Sinkyone Wilderness Council, and the letter of May 13, 2019 from the Seventh Generation Fund. Traditional and natural values of the coast and oceans must be respected, protected, and restored, may these be manifested.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gilchrist-1	And first on the comment period, in previous years you've had the open-type like this and then the public comment period. And I like that format better than just the complete open period type. I prefer that. And my comment for the Navy is that we have dead zones in the Pacific Ocean, probably the other oceans too. And we don't need any more foreign materials dumped or shot into the ocean to further degrade the environment for the ocean animals -- life. So that's all. What part is our Coast Guard playing in putting anything into the ocean bombings or sounds? Anything? Are they dumping or are they testing or are they training with, say, projectiles that go into the ocean? I had heard that radio active materials were coming out here and that our Coast Guard	The Navy went to a great amount of effort to coordinate and organize the public meetings to meet the needs of all of the public. The format allowed for ample opportunity for valuable exchange of information between the public and Navy subject matter experts. The subject matter experts were available and answered questions throughout the entire meeting. The meetings also provided opportunity for individuals to comment in writing or orally privately to a stenographer. The Navy has received feedback from meeting attendees that the open-house format is more conducive to promoting public understanding and constructive dialogue. Open house meetings allow a greater number of individuals to directly engage and interact with Navy team

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	was doing something with them. I'm not sure what. So I just wonder what part our Coast Guard is playing with that.	members and ask questions about the Supplemental EIS/OEIS, as well as provide comments on the document. Coast Guard activities in the Pacific Ocean are not included as part of the proposed action in this NWTT Supplemental EIS/OEIS.
Gill-1	I stand with the InterTribal Sinkyoune Wilderness Council in strongly opposing the Navy's proposed increase in operations. The Navy predicts over 500,000 instances of disruption to marine mammal behavior over five years including 275,000 instances of temporary hearing loss and 600 instances of permanent hearing loss. This is absolutely unacceptable. The ecosystem is exceedingly fragile and to stress it further is exceedingly is irreverent and short sighted.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none">• The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/• The Discovery of Sound in the Sea website at: www.dosits.org• The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr• The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology• The Navy's project website at: www.NWTEIS.com
Gilmartin-1	The time has come to protect our oceans, the creatures that live there have been hunted, fished, poisoned, and driven to hunger, decimation and near extinction. It is time we i the civillised world took a stand and said NO MORE to further destruction. Please put an end to these plans for sonar testing, surely you have done enough damage to cetaceans - time promote their well being for a change. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gilmour-1	Certainly you have already heard and/or read all the substantive scientific evidence that clearly proves that military sonar and explosive testing is detrimental, and in too many cases lethal, to marine animals. Therefore, I am going to attempt to appeal to your moral integrity. Humans are here to be stewards of the earth. It is up to us to figure out how to live peacefully, respecting the amazing diversity of the planet, both human and animal. Please listen to your hearts, not only the wallets of the military industrial	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	complex, and do what you truly know is right: treat others, all others, as you would like to be treated. If that doesn't motivate you, then consider this: eventually what goes around comes around. There's only one amazingly complex and beautiful circle of life and it's all connected. Please shift from the "it's us against them" mentality from the past and realize, before it's too late, that we're ALL in this together.	the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Giolo-1	É cruel demais para os anjos do mar ! A Marinha Americana possui, certamente, tecnologia para resolver problemas assim, evitando condenar os animais!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Giordan-1	I am on the ground where the Growlers fly. Planes are too loud, sometimes too low happens all the time. My stress is profoundly affected by the roar and vibrations. I pity those of my neighbors that have PTSD. But you do not recognize that the planes have any effect outside of combat. Too many flights while we are at peace means those who live here never have peace.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Girvin-1	Given the recent what is called an "unusual mortality event" under the Marine Mammal Protection Act of large numbers of whales washing up dead on West Coast beaches NOAA, NMFS and the Navy, under Section 404 of this Act, are under a duty to develop a contingency plan "to minimize these deaths and provide appropriate care during an unusual mortality event ...and to determine the effects of the unusual mortality event on the size estimate of the population of marine mammals". The recent West Coast whale die offs are a problem that was neither known or considered by the drafters of the current Supplemental EIS. Given	The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>such critical new information, is it not appropriate if not mandatory, for another Supplemental EIS to be prepared by the Navy specifically addressing the potential adverse impact of its training activities on the now starving and severely threatened West Coast whales?</p> <p>I believe a Supplemental EIS should be prepared and the Navy should be directed by NOAA to (1) reconsider its sonar and explosive testing's impact on the migrating whales in their current severely weakened and dying state, (2) reevaluate its data and estimates contained in the draft EIS of the potential whale "takes" given the current die offs, 3) further adjust, if not curtail, its training and testing activities in the migratory passage areas of the threatened whales</p> <p>Until a Section 404 Marine Mammal Protection Act contingency plan is prepared by the Navy and NOAA NOAA should direct the Navy to immediately implement a moratorium of sonar and explosive testing in the coastal waters from CA to Alaska located in the migratory pathways of the West Coast whales</p> <p>Could you please respond on the manner in which the Navy and NOAA will implement their Marine Mammal Protection Act Section 404 responsibilities in regards to the current whale die off and how this process will impact the current Draft EIS.</p> <p>Could you also please respond with your position on why a Supplemental EIS should not be required from the Navy now specifically addressing the West Coast whale die off and the impact of the Navy war trainings on this currently and recently discovered threatened sea mammal population.</p> <p>Thank you for your consideration of these concerns.</p>	
Giulini-1	<p>I moved here from the busy and noisy SF Bay Area about 24 years ago. Originally from Germany I fell in love with the peaceful and luscious Olympic Peninsula - a welcoming green sanctuary of belonging.</p> <p>It was meant to be: I found a house and amazingly beautiful and loving partner, and together we build our lives as yoga teachers and artists.</p> <p>We invested time, energy, and money into our property, our community, our careers, and our lives in Port Townsend</p> <p>Now we have to escape the noise when the growlers start making their rounds!</p> <p>No more gardening at such times, apologizing to yoga students for the disturbance, having to cancel meditation classes, and building a bed on the couch at night with two pillows- one over the right, and one over the left ear.</p> <p>I feel extremely distressed. We are in our 60ties and 70ties, and we have to</p>	<p>The Navy's proposed activities will not result in chronic noise at sound levels that would result in the health effects described in this comment. The predicted noise levels can be found in Appendix J (Airspace Noise Analysis). The potential health effects of Growler and other activities on humans are discussed in Section 3.13 (Public Health and Safety).</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>give up our home. It has been taken away from us. We loose our beautiful gardens, our life-style, our health, our careers, our community,</p> <p>In my work as yoga therapist i focus on PTSD and the Nervous System's response to triggers such as incessant exposure to this kind of noise.</p> <p>Research in neuroscience has proven that it triggers an alarm- response in the sympathetic nervous system, which is in turn being highjacked by our bio- chemistry into a “flight/fight/freeze”response.</p> <p>This causes an increase of cortisol and adrenaline in the body, which takes days to normalize in the bloodstream.Long-term exposure to cortisol and other stress hormones can wreak havoc on almost all of your body’s processes, increasing your risk of many health issues, from heart disease and obesity to anxiety and depression.</p> <p>For instance:</p> <p>From : https://therevisionist.org/bio-hacking/hormone/cortisol/</p> <p>“High levels of chronic stress causes your brain to be unable to learn and to forget things. That’s because chronically elevated cortisol levels erode neurons. Note that this is not the same as a temporary boost of cortisol that the body experiences during exercise, which is beneficial.</p> <p>Chronic stress destroys the hippocampus overtime- over-pruning its dendrites, killing its neurons, and preventing neurogenesis. But at the same time the amygdala becomes a stronger structure in the brain because emotions activate or stimulate the amygdala.</p> <p>Another adverse effect of chronically elevated cortisol is that it lowers IGF-1 while maintaining high blood glucose levels in the blood. This results in a metabolic imbalance, which in the long run can lead to diabetes.</p> <p>Additionally, Chronically elevated Cortisol suppresses the Immune System for the worse.</p> <p>Another example is Cushing’s Syndrome, which is an endocrine dysfunction where the body is continually flooded with cortisol. This is called hypercortisolism. Its symptoms are similar to chronic stress, including weight gain around the midsection; breaking down muscle tissue to produce unnecessary glucose that turns into fat, insulin resistance that possibly leads to diabetes, panic attacks, anxiety, depression, and increased risk of heart disease. Know that the amount of hippocampus shrinkage and memory loss is directly proportional to the amount of chronically elevated Cortisol.”....</p> <p>Stress- causing exposure also impacts the Thyroid gland function, which is down-regulated during stressful conditions.T3 and T4 levels decrease with stress, causing the inhibition of the thyroid-stimulating hormone (TSH)</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>caused by glucocorticoids in the central nervous system.</p> <p>We can feel it in our lives: decreased sleep, decreased concentration, inability to focus and follow-through, irritability, anxiety and depression, less capacity do our work efficiently, less resilience....</p> <p>Having grown up in Germany in a household with my father having been a world war 2 veteran and my mother a red cross nurse during that time, where severe PTSD was the norm, i implore you to take our feed-back seriously.</p> <p>Show that you do care, that you act responsibly, that you are a good neighbor, and that you are here to protect and defend us against harm.</p>	
Gladstone D-1	<p>My wife and I are native Washingtonians and long-time residents (I am 74; she is 72) We have hiked a number of times in the Olympics in the last nearly 50 years. We now live on Camano Island and have to put up with constant noise and vibrations from Growler exercises. Enough already!! Leave the Olympics and their surrounding waters alone!</p> <p>You clearly have plenty of money to spend on fuel, etc. So take your toys and go play elsewhere, for example, Idaho or Montana where wide open spaces mask the noise. The Growler jet noise impact on wildlife and the quiet, peaceful experience in Olympic National Park is over-the-top and clearly inappropriate for this World Heritage Site.</p> <p>The Navy has choices, but there is only one Olympic National Park!</p>	<p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>
Gladstone J-1	<p>And I just want to -- I just want to comment that I'm very much against all this sonar and the noise in the ocean. And I'm concerned about the whales and the marine life. And that's really all I have to say. I say it every year.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Glaskey-1	<p>Please don't compromise this group of or as that are already struggling due to man's Actions. You can test anywhere - take it far out to sea. There are two new calves - a miracle - in this pod. Please.</p>	<p>The Navy is aware that the Southern Resident killer whale population is at risk.</p> <p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gleisner-1	<p>To Those Who Wish to Further Destroy Our World and Life in Our Oceans</p> <p>Your report seems to present objective information about the care you plan to take in mitigation zones, yet admits “pursuant to the MMPA, the “use of sonar and other transducers during training activities as described under Alternative 1 will result in the unintentional taking of short-finned pilot whales incidental to those activities.</p> <p>The report (Vol. 2, p. 29) acknowledges, “The quantity of explosives used during testing activities under Alternative 1 would generally increase (Table 3.0-7) compared to levels presented in the 2015 NWTT Final EIS/OEIS.” And under such increase, the damage to marine life will increase (p. 29), as the report states: “the impacts to marine invertebrates would be the same as those described in the 2015 NWTT Final EIS/OEIS. Both pelagic and benthic marine invertebrates could be impacted by explosive stressors. Explosions would likely kill or injure nearby marine invertebrates.”</p> <p>I vehemently disagree with using our coastal waters to test any and all devices that will have any negative impact whatsoever on our marine life—from sensitive coral and other seabed life, to minuscule fishes and other tiny sea creatures upon which other fish feed, to the largest of our sea mammals. There is no need for our Navy to practice killing anything. When the need arises, if it ever does, then that is the time to deploy those machines and technologies which will ultimately annihilate us all.</p> <p>A Story: My neighbor asked me what I thought of him buying his ten-year-old son a gun for Christmas. I said I had no problem with this as long as he adhered to one request. He said, “Sure.”</p> <p>I asked him that after he gave his son the gun, that he helped him load it and then shoot the family dog. He was horrified.</p> <p>I explained that until a child, or anyone, realizes that what he is doing is taking a life away from what is most precious to him, or to someone else, that child or person will not have any perspective of what killing means.</p> <p>We are in a time in our society when killing is rampant. Perhaps it is because of the distance that is maintained with the use of video killing games and/or drone technology. Setting off bombs underwater or using sonic sounds or laser instruments to destroy is no different than using a gun to kill. They all destroy life and must be recognized as weapons which</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>can kill that which sustains us.</p> <p>A family pet is no different than the whales, turtles, etc. - the lives in our oceans which are part of nature's cycle. Anything which has the side effect of stunning the navigational needs of underwater animals and making them unable to find food, stay within their family unit for protection, or even know where they are is unacceptable.</p> <p>No where in your massive report is there any recognition of the continuity of life needed on this earth. No where is there one sentence which speaks to understanding the effect your practicing will do to the natural underwater world which is already threatened by plastic waste, Fukushima radiation contamination, nutrient changes due to warming waters.</p> <p>Thank you for your time. I am a daughter of a retired Marine First Sergeant, wife of a first husband who is retired from the Army, widow of a Veteran, stepmother of a Naval Engineer deployed on a Nuclear Submarine. All saw action in various wars and conflicts around the world. All suffered from a variety of PTSD, alcoholism, drug abuse, and depression. All admitted that they believe in our country and that war is not the answer.</p> <p>Any killing of marine life due to war games or practice drills with lethal weapons is totally unacceptable to me. Practice if you will on the screens of your computers where war games are played. Do not practice in our oceans.</p>	
Glover-1	<p>Come on, folks. When all is said and done, you know that you are not only ruining the recreational and tourist use of so much of the Olympic Peninsula (the noise levels from the jets are staggering!), but you are having an extremely detrimental impact on the wildlife that our state forests are supposed to protect.</p> <p>It is disingenuous to say that you need MORE information about the harm that your training exercises and flights are having. Essentially you are ruining the experience of nature that our state and national forest systems were set up to protect. FOR GOD'S SAKE PLEASE STOP IT!!!!</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Glover-2	<p>I don't understand why you are underestimating the full impact of the Growler noise, using an average number of decibels per flight that doesn't at all reflect how hideously LOUD these planes can often be. Also the impact on such historical settings such as Ebey's Preserve have not been adequately acknowledged. For example, after several rather terrifying episodes when visitors I took to Ebey's Landing were frightened out of their wits by the Growlers (leading to us simply leaving the Preserve ASAP), how</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island or Ebey's Reserve. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>can you POSSIBLY say that the Growlers aren't having an extremely detrimental impact on the use of this Preserve, which is supposed to be PROTECTED??</p> <p>Please look at the reality here -- these Growlers are destroying the quality of life on Whidbey. Why can't you do these training flights in a less populated area, PLEASE???</p>	
Godfrey-1	<p>Please stop these damaging underwater tests. This is a cruel thing to do.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Goldie-1	<p>As regards the Draft Northwest Training and Testing supplemental EIS, in Section 5 Mitigation, there is no plan for preventing injury to birds, mammals, turtles or other sea life. Reporting injury is after-the-fact. Furthermore the proven effect of loud sounds on whales is not addressed. The damage to their brains and hearing isn't noticed until they beach themselves or have died.</p> <p>Appendix J (Airspace Noise) fails to consider specific alternatives that would greatly reduce Navy jet noise over Olympic National Park and that would reduce or completely eliminate Navy jet flyovers of the Park. The fact that such alternatives would not be as convenient for the Navy as what it currently does is not a valid reason for refusing to fully consider such alternatives. Flying over the Park, especially the parts of the park not directly on the west coast of the peninsula, is not a military necessity for training exercises. The Navy has many other airspaces it could fly in, but there is only one Olympic National Park.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Goldstein-1	<p>It is unacceptable that sonar is making large stretches of ocean uninhabitable for endangered killer whales.</p> <p>Whales have been observed leaving areas up 17 miles from the source of the sonar, with military grade devices having an even greater impact. Therefore, if out at sea, a minimum of 907 square miles surrounding each device (17 x 17 miles x 3.14) is potentially being made intolerable to whales.</p> <p>The noise is not just an annoyance - polluting their general environment - it interferes with their very being. Navigation, communication and subsequent feeding and mating are all adversely affected. Their primary prey - scarce salmon - involves a particularly targeted use of sonar to locate and catch them within a complex underwater terrain. In the long-term it can even destroy generational knowledge of safe feeding and breeding sites as vast areas start to be avoided (similar to that suffered by elephants and bison due to human encroachment and 'management'). Constant 'pings' can mentally impair them - much as a car alarm would do to us if we were forced to listen to it for long periods.</p> <p>In cases where naval sonar has been used in prime whale habitat, the whales have been located miles away in areas where they have not been seen in decades e.g. Haro Strait after sonar testing by the Canadian Naval frigate HMCS Ottawa made Victoria, B.C audibly uninhabitable.</p> <p>I fully agree with the scientists that have advised you that limits should be placed on mid-frequency sonar testing (2-10 kHz). Is it not enough that whales have to contend with ever-increasing ship noise and boat-strikes? (300,000 ferry sailings alone were made on the Salish Sea in 2018). Surely sonar knowledge is now advanced enough to avoid the damage we are doing to these beautiful animals? Sadly it would seem that it is not.</p> <p>Current whale detection and protection measures are quite frankly poor. Often the Navy are unable to detect whales within the distances in which noise mitigation is required (1000 yards in the U.S. & 4000 yards in Canada) due to the somewhat outdated passive acoustic listening and visual surveillance methods being relied upon to establish their whereabouts.</p> <p>When noise mitigation is applied, even Canada's more generous 4,000 yard limit is nowhere near enough distance to protect whales from being mentally and/or physically scarred.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Once again, unprecedented sightings of whales in Discovery Bay leads to the conclusion that they were present and distressed enough to leave San Juan Islands on Monday, Feb. 6, just 18 hours after a Canadian frigate, the HMCS Ottawa, transmitted loud pings throughout the area. This is unacceptable. Every deaf, soon-to-be dead whale is an avoidable tragedy. Please stop carrying out all sonar testing in the Salish Sea immediately until you have the technology to avoid all damage to these endangered animals. The Southern Resident Killer Whales are facing numerous threats but if they cannot hear, they cannot hunt and they cannot eat. Their recovery depends on you. I await your response with the utmost concern.	
Gomez-1	Hello, my concern is for the whales, dolphins, turtles and any sea life that uses their hearing to exist underwater. They will be impacted tremendously and severely with the NAVY testing/training. I am not a scholar or scientist. But I do know that species will be maimed, injured, tortured and killed (beaching themselves) with the NAVY OPERATIONS. I BESEECH AND EVEN BEG that these operations are shelved in that the natural environment of sea life will suffer and that is something we cannot afford. The Southern Resident Orca population currently is imperiled and will be extinct at any time! The food source they require is disappearing and their feeding areas are becoming poisoned with pesticides and ships that dump into their waters. Adding this program could be the death knell to mothers, calves, matriarchs and fathers. THEY NEED TO SURVIVE!! Please...spare our sea life ..this is their home and WE MUST PROTECT THEM AT ANY COST. "If THE OCEAN DIES, WE DIE"...Capt. Paul Wilson - Sea Shepherd...WE OWE FUTURE GENERATIONS A HEALTHY, CLEAN OCEAN!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gonzalez L-1	What's the purpose of basically killing all kinds of animals? You're a disgrace to flag and country.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Gonzalez M-1	Igual we know this Can harm dolphins and whales wich are very important to environment test with sonar shouldnt be legal its time humans understand that part of being rational and have a conciuous its for using it, our job is protect animals and mother nature and find a way to live this way	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Good-1	We go to the islands and the Olympic Peninsula to find peace and quiet. We oppose military expansion in these areas not just for people, but for the wildlife.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Gopalakrishnan-1	Please save the orcas and stop the insensitive testing.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gordan A-1	<p>Although i appreciate testing equipment, I have to speak up regarding testing equipment when endangered species are at risk, as well as testing among populated areas. When studying the navy's intended places, it appears the Tacoma commencement Bay area which is surrounded by millions of people. The proposal states : The Navy also plans for more training than it typically needs.</p> <p>In addition, use of the 'rail' gun using' both ' explosive and non explosives,, is disruptive to not only sea mammals, but again in populated areas, to the people. The effect of Populated areas such as commencement bay, needs more analysis, that is: what happens to people when sudden 'explosive'</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	sounds happen, or growlers over head? The term 'electronic war games' and secretive activities, again in populated areas has not sufficiently been analyzed regarding the impacts on the health of human being. The proposed hearing loss damage, and potential dead of marine life needs reconsideration.	
Gordon C-1	I am strongly opposed to any additional noise that affects the orcas. Please stop the sonic testing and training in their habitat. Thank you	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Goretski-1	Please do not conduct tests in orca waters we are about to lose this iconic and essential species. These are endangered animal and as such you would be harming the protection of orcas which is illegal. Instead of having lawsuits thrown at you cease and desist this harmful practice so money and time can be invested into solutions not lawsuits.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gorman-1	I do not agree with this. You are helping kill our wildlife and it makes me sick	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Gould-1	I do not intend to argue legalese here, so much as implore you not to continue to maim and kill ocean animals with your tests. Where is your humanity? While the ocean's fish and whale populations are dramatically declining, it is disastrous, callous, short-sighted and counter to human survival to continue to wreak havoc with ear-drum destroying noise pollution and toxins. What is it our military plans to defend if there is no life left here?	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gouveia-1	I am completely against the proposed sonar testing by the US Navy in the Salish Sea. Such testing is very harmful to the endangered resident orcas.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Grabee-1	Please no growler flights over the olympic national park, wilderness areas, or protected seashores as they interfere with peaceful human recreation and natural activities of protected species in these areas. Fund studies to address the true impact of this noise pollution before proceeding	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTTE Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Graber-1	Please do not conduct these flights over and near the olympic national park, forest, wilderness and seashore areas. The noise pollution produced is disruptive and detrimental to human recreation in these protected areas as well as protected wildlife, including marine life. Unless valid studies can prove the noise pollution is not harmful to the wilderness, animal and marine life, such activities would be reckless.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTTE Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Gracia-1	What you guys are doing is wrong. You are killing our oceans!! As if the global climate situation and mass extinction wasn't bad enough. PLEASE STOP!!!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Grad-1	Growler jets flying within the boundaries of Olympic National Park is unacceptable. The disruption caused by the noise detracts from the natural experience and defeats the purpose of setting these areas aside. The Navy can conduct operations over populated areas where the noise levels are already intolerable. Leave Olympic National Parks as a place of refuge.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Graham A-1	Please end the sonar testing in our seas. Please consider the threat to the Washington state, J-Pod, endangered Orcas and the brand new baby born a few short weeks ago. This is so sad. Seeing thousands of these beautiful creatures being killed in the oceans around the world because of sonar testing. It's their home the sea not ours to destroy.!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Graham G-1	NO TESTING IN THE PNW!! this is cruel torture to our ocean residents, mainly the southern resident orcas. this is an unnecessary act and must not be implemented.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Graham J-1	Please stop sonar testing, its the right and decent thing, thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Graham M-1	<p>For years the Navy has been using the same trick. To avoid accountability, public scrutiny and opposition to its plans to unnecessarily bomb, destroy and kill marine life and its habitat the Navy has been holding public meetings in small cities far away from population centers. For example the ONLY two scheduled open house public meetings in Northern California on the post card that you sent me are tonight (May 2, 2019) in Eureka and tomorrow night in Fort Bragg. These are both small cities far away from population centers.</p> <p>The Navy's proposal will affect a resource that belongs to all Americans, not just those living in Eureka and Fort Bragg and a couple of small cities in Washington, Oregon, and Southeastern Alaska. There are millions of Americans living in San Francisco and in the San Francisco Bay Area and the peninsula. The Navy ought to hold at least one open house public meeting in San Francisco and at least one in the Bay Area or the peninsula. That way your meetings would be accessible to a far greater number of Americans, including a far greater number who are interested in your proposals.</p> <p>Besides shutting out the public the Navy effectively limits its own ability to learn from members of the community who might attend its meetings. Of course anyone can file comments on line but obviously there is some value in a public meeting that does not come from filing comments on line. Such as the ability of community members to hear from and learn from each other and the ability to have an interactive conversation with the Navy's representative (or your consultant whom you have hired). These are not possible when filing comments on line. Obviously even the Navy recognizes that there are advantages to attending a public meeting and this is shown in the Navy's decision to hold public meetings.</p> <p>As far as content the Navy needs to re-evaluate the actual necessity of doing more and more testing, whether the same amount or more of it, whether in the same already enormous NWTT area or an expansion of it. Is it really necessary?! All the Navy has submitted in support of the argument that all this "testing" is really necessary is its allegation that it is. That is not proof or evidence.</p>	<p>Because of the large size of the NWTT Study Area for this Supplemental EIS/OEIS, it is not feasible to hold a public meeting in every location where there may be public interest. Generally, the Navy has tried to locate public meetings in locations central to training or testing areas and potentially affected communities. Meeting locations were also identified based partially on suggestions received from the public, feedback from elected officials and other stakeholders, attendance levels of previous public meetings for similar projects, and the number of public comments received during the scoping phase.</p> <p>Previous Navy experience with other Northwest projects is that meetings held in larger population centers are often poorly attended. The Navy held one public meeting for this project in a large population center (Everett, Washington, near Seattle), and that meeting was one of the two least attended of the seven public meetings held in Washington, Oregon, and California. In addition to the meeting venues, the public could download and review the document, and make comments to it, on the website, which is available throughout the world.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>The Navy should consider an alternative to do only one half (1/2) of the proposed amount of testing (better known as bombing, destroying habitat and killing marine life) and another alternative to do only 1/4 of what is proposed.</p> <p>Also, the Navy has already done this testing year after year not only in the NWTT but in other areas on the coast of the United States, for several decades. By now you should know that your equipment works and your employees are capable of operating it. You are wasting all the experience and knowledge that you get each year from more and more rounds of "testing."</p> <p>Please reply with your substantive replies to this message.</p>	
Graney-1	See attached file	See responses below.
Graney-2	<p>Thank you for the opportunity to comment on draft supplement to the 2015 Northwest Training and Testing Final EIS/OEIS to reassess the potential environmental impacts associated with conducting proposed ongoing and future military readiness activities within the Northwest Training and Testing Study Area. I think public input should be a key element in the Navy's decision-making, especially given the large scope of the Navy's activities in the Northwest and the impact of those activities to the people and wildlife that live here.</p> <p>While I have looked at the entire document, I have chosen to focus my comments on issues specifically related to the impacts of the growing number of EA-18G Growlers and associated number of sorties for EW training, primarily over the Olympic MOAs. I have organized my comments by Supplemental EIS/OEIS section.</p> <p>Section 1.5 Overview and Strategic Importance of Existing Range Complexes and Testing Ranges</p> <p>My comments in this section relate specifically to EA-18G Growler EW training in the Northwest Training Area.</p> <p>"Importantly, we will need to be even more joint — advancing interdependence and integrating new capabilities." Gen. Martin E. Dempsey, 18th Chairman of the Joint Chiefs of Staff, Chairman's Strategic Direction to the Joint Force, 6 February 2012</p> <p>CJCSI 3500.01H of 25 April 2014 outlines the Joint training policy for the Armed Forces of the United States. In it, the criticality of training as we fight is emphasized and Collective Joint Training and Joint Functional Training being some of the critical means for that to occur. Under the Navy's "organize, train, and equip" responsibilities, they must ensure that deploying forces "are trained and ready for employment as joint capable</p>	<p>The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. For this reason training complexes in Nevada are not reasonable. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>forces and prepared to meet the theater entry and operational requirements of the supported JZFC.” Specifically as relates to Electronic Warfare (EW) training and exercise, DoDD 3222.04, Electronic Warfare Policy, there is a policy statement to “Incorporate EW capabilities, tactics, techniques, and procedures into joint exercises and training regimes to the maximum extent possible.</p> <p>As effectively the only Service with an airborne EW capability, it behooves the Navy to conduct airborne EW training, not only as a single Service, but also Joint training and exercise. In past years, each active NAS Whidbey Squadron has conducted training and certification in the Owyhee and Jarbridge MOAs at Mountain Home AFB in Idaho, working with their Air Force counterparts. Similarly, the Navy has supported AF fighter squadrons at Joint Base Elmendorf- Richardson in Alaska, providing key adversarial EW support that provides as close to realworld conditions as possible for them to hone their tactics. Now the intent seems to be to consolidate EW training over the Olympic EW range (perhaps with growth in the Okanogan and Roosevelt MOAs), thus potentially shrinking the instances of joint training and exercise — at a time when the EW (and cyber) threat to US Forces is growing.</p> <p>Section 1.5 (Overview and Strategic Importance of Existing Range Complexes and Testing Ranges) of the Supplemental correctly points out that “Fuel is saved and equipment is exposed to less wear and tear when ranges are near where the platforms are based.” It also makes the case that Sailors and Marines “do not need to spend unnecessary time away from their families during the training cycle.” For most naval warfare categories, this is obviously true — navies train and fight at sea and staying relatively close to homeport provide cost and morale benefits. But this is not necessarily so for aircraft. The Navy has stated that they will save the government and taxpayers \$5 million each year, as well as reducing fuel emissions, aircraft wear-and-tear, etc. by consolidating training closer to where they are based. Relative to the overall O&M budget, \$5 million is a very small percent and, at the cost of diminished joint training opportunities, money poorly saved.</p> <p>Section 2 Description of Proposed Action and Alternatives My comments in this section relate specifically to EA-18G Growler EW training in the Northwest Training Area.</p> <p>2.2.3 Electronic Warfare Clearly, there is an imperative to conduct training, test, and exercise of the Navy’s EW capabilities by platform, and across platforms. EW training as</p>	

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>currently envisioned would appear to meet all Service-specific EW training requirements. However, as effectively the only Service with an airborne EW capability, the question is whether this mission statement is sufficient to address the Navy's role in Joint EW Training. Given the Navy's decision to consolidate all VAQ squadrons at Whidbey Island NAS and the further decision to consolidate the bulk of EA-18G Growler EW training in the Olympic MOAs (perhaps with growth in the Okanogan and Roosevelt MOAs), it would seem that the amount of joint training and exercise is actually declining. Since we fight jointly, it would seem that we would want to increase joint EW test, training, and exercise evolutions. Previous use of the MOAs at Mountain Home AFB provided some opportunities for joint engagement in addition to the annually scheduled exercises (e.g., Red Flag). Similarly, consolidation places an undue burden on the Olympic Peninsula (including the Olympic National Park), placing further stress on the residents and wildlife that live there — as well as tourists who visit this UNESCO World Heritage Site.</p> <p>2.4.1.1 Alternative Training and Testing Locations</p> <p>The consolidation of Navy Airborne EW Training and exercise in the Olympic MOA effectively ignores other extant training areas that don't negatively impact highly populated areas or pristine wilderness areas to the same extent as those in the Northwest Training area. Once again, to use a Growler jet noise example, EW training could be expanded at Mountain Home AFB beyond the intermediate- level EW training for certification that has traditionally occurred there. In the Pacific Northwest EW Range EA, it was stated (Section 2.2.2.1) that the alternative location of the Fallon Training Range Complex was eliminated because "it failed to meet several of the selection criteria." But the Navy didn't create an alternative that called for expansion of training at Mountain Home AFB, where (as stated in the EA No Action Alternative [section 2.2.3.1]), the Navy has done intermediate-level EW training for certification. In addition, Mountain Home AFB is a full 1/3 shorter distance from Whidbey Island than the Fallon Training Range Complex (530 versus 800 miles). Based on the stated desire for "reduction of costs, and reduction of fossil fuel consumption," it would seem that considering Mountain Home AFB (that the Navy has already used for training) would be a reasonable alternative to be considered. And to that point, what sort of cost/benefit analysis was performed on the fuel and cost savings against the negative impacts of noise on the local economy (e.g., degraded visitor experience, potential</p>	

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	reduction in tourism). In considering these decisions, it is easy to get lost in the data and miss the bigger picture impacts.	
Graney-3	<p>Appendix J Airspace Noise Analysis for the Military Operations Areas My comments in this section relate specifically to EA-18G Growler EW training in the Northwest Training Area. 3.0.3 Identification of Stressors for Analysis 3.0.3.1 Acoustic Stressors, 3.0.3.1.3 Aircraft Noise Appendix J Airspace Noise Analysis for the Military Operations Areas 3.4.1.7.4 Noise This section correctly identifies aircraft noise as an acoustic stressor within the Components of Stress for Physical Resources and then promptly dismisses it when putting together its source classification bins. There is then a depiction of “representative” sound pressure levels (both inwater and airborne) that were calculated using models to assess the impact on the Olympic MOAs. These data are then further expanded in Appendix J under a variety of aircraft operational scenarios, altitudes, etc. In addition, the results of a 2016 National Park Service Study are presented — all of which concludes that for most visitors, aircraft noise will be tolerable, and certainly not much worse than has traditionally been there. In addition, the NPS study was conducted before the increase in aircraft and sorties that have taken place since the time period of the study. Recent real world studies (Impact of military flights on Olympic Peninsula Landscapes, Initial Summary of Findings, June 4, 2019; Lauren Kuehne, University of Washington’s College of the Environment) have added significant new data based on collection at multiple locations across (and beyond) the MOAs that appears to present a less positive view of the noise impacts. More importantly, the author has proposed a real world monitoring and mitigation approach that should be pursued. The Supplemental should not be completed or approved before there is reconciliation between the Navy’s model-driven data and recent real world studies/ measurements. Additionally, while mentioning in-water acoustic stressors, there are no further measurements other than presented in Table 3.0-4 and no assessment.</p>	<p>The Draft Supplemental EIS/OEIS was released to the public before the Kuehne report was made available. The Navy has considered this report in the Final Supplemental EIS/OEIS (see Section 3.12 and Appendix J). The Navy will continue to use the best available science in its analyses of impacts.</p> <p>DoD’s position is to utilize modeling over monitoring for activities in a MOA. Additionally, the noise model used, MR_NMap is approved by the FAA for these types of analyses¹. The following text² states DoD’s position regarding the preference for modeling:</p> <p>5.2. Noise Model Use. Operational/environmental noise scientists employ noise modeling to predict noise levels near an installation in a cost-effective, accurate manner. Noise modeling allows the prediction of noise levels at many locations for a given set of conditions, including current and proposed conditions. Noise modeling allows accurate prediction of noise levels through careful collection of data on noise source operations, robust and accurate databases of noise-source sound levels, and validated acoustic propagation prediction methods.</p> <p>In addition, the Air Force Handbook also states the following overview of noise monitoring for noise assessment:</p> <p>6.1.1. [C]omputer modeling is the preferred and most common method of analyzing the military noise environment. Monitoring is at best a sampling of activity. Computer modeling accurately predicts the noise environment for all military operations because the Services collect source data under strictly controlled conditions. For example, each measured sound level is associated with a specific operating condition, such as power, distance, and, if a moving source, speed. In addition, noise models can account for widely varying environmental conditions. The models also can predict noise exposure from existing and proposed operations over vast geographical areas.</p> <p>¹ FAA 1050.1F Desk Reference, Section 11. Noise and Noise-Compatible Land Use, July 2015. ² Air Force Handbook 32-7067, Planning in the Noise Environment – DRAFT, June 2019.</p>
Graney-4	<p>Section 3.4.1.7.4 Noise As noted, in Table 3.0-4 there was a recognition of aircraft-produced in-water stressors, but no further discussion of impacts, or any analysis similar</p>	<p>The analysis of impacts from noise was contained in Section 3.4.2 (Environmental Consequences) of the Draft Supplemental EIS/OEIS. Impacts</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>to Appendix J for in-water noise effects. Instead, in this section there is an extensive discussion on noise impacts on marine mammals — largely focused on the noise caused by shipping. In fact, there is even mention of the Washington State Governor’s Southern Resident Orca Task Force and the efforts they are undertaking to save the critically stressed Southern Resident Killer Whales (SRKW) in our area. Having said that, there is no further discussion of aircraft noise on marine mammals — in particular, the impact of the Growlers on our SRKWs. There is precedent for including such analyses as part of EAs/EISs (e.g., the Eglin Gulf Test and Training Range EA http://www.nmfs.noaa.gov/pr/pdfs/permits/egttr_ea-draft.pdf). In addition, studies have shown aircraft noise can result in an acoustic signature at depth (e.g., https://scripps.ucsd.edu/labs/buckingham/wp-content/uploads/sites/60/2015/04/aircraft2002.pdf). It appears that a new study will soon be starting that will measure this acoustic signature at a variety of depths associated with Growler takeoffs and landings at Whidbey Island NAS. This data, when combined with previous study results on the effects of vessel noise on killer whale behavior, energetics, communications, and foraging should provide some useful insights. The Navy should include results of this impending study (and extrapolations thereof), as well as other relevant studies that have looked at the impacts of aircraft noise as “best available science” in determining future sortie rates for the Growlers over the Olympic MOAs.</p> <p>Section 3.12.3.2 Airborne Acoustics</p> <p>As noted earlier, recent real world studies (Impact of military flights on Olympic Peninsula Landscapes, Initial Summary of Findings, June 4, 2019; Lauren Kuehne, University of Washington’s College of the Environment) have added significant new data based on collection at multiple locations across (and beyond) the MOAs that appears to present a less positive view of the noise impacts. In addition, the noise impacts on tourists extend beyond the borders of the Olympic MOAs. In fact, data received by the National Parks Conservation Association’s Growler Tracker app that has been downloaded by several tourists visiting the Olympic National Park and environs tend to correlate quite closely to the data in Lauren Kuehne’s study. The impacts within Olympic National Park are particularly egregious because of what visitors are expecting when they visit it — a UNESCO World Heritage Site and world-class wilderness area that includes what heretofore had been recognized as one of the three quietest places in the country, including Gordon Hempton’s “One Square Inch of Silence.” Many visitors come for the quiet — it is a place for therapy and spiritualism. As</p>	<p>from aircraft noise is specically analyzed in Section 3.4.2.1.4 (Impacts from Aircraft Noise).</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	been reported recently, several servicemen suffering PTSD have used the park in this manner and have been negatively impacted by the growing number of Growler flights. The Supplemental should not be completed or approved before there is reconciliation between the Navy's model-driven noise data and recent real world studies/measurements. In addition, if additional training sites could be re-introduced (e.g., Mountain Home AFB), it would behoove the Navy to work with the National Park Service and local community leaders to analyze peak visitation periods and try to optimize training deployments to minimize the impacts on tourism.	
Gray A-1	Your sonar tests are putting the already critically endangered Southern Residents at great risk. They are dying off and this practice is part of the problem. Please stop doing this in their habitat, you are fully aware of the damage these tests do to marine life.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gray D-1	I am opposed to the Navy's plans to test sonar and other devices of war in the ocean generally, and specifically off the coast of Mendocino. Dead and compromised marine life on the shores of Mendocino county's beaches is bad for business, and an affront to life. My personal feelings are we should have a department of peace if we also have a department of war. But as business and land owner, my interests are in keeping tourism robust on our coast. The pristine beauty of our beaches will most certainly be compromised by beached and dead marine life washing ashore. Dead whales are bad for business. Please don't test your war machines. But if you must, do it elsewhere.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit: <ul style="list-style-type: none">• The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/• The Discovery of Sound in the Sea website at: www.dosits.org• The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr• The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology• The Navy's project website at: www.NWTTEIS.com
Gray S-1	I can understand the necessity of training and testing in the actual ocean and in the real environments in which you may have to operate during a conflict. My biggest concern is for the marine life and the stress placed on	The Draft and Final Supplemental EIS/OEIS documents, as well as other supporting information, can be found on the project website at: http://nwtteis.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	it. The Pacific Ocean is already under a lot of stress from rising levels of acidity and warming, which might have wiped out all the sunflower sea stars along the California coastline or might have created the perfect environment for their wasting disease, and reduced the amount of bull kelp (also due to the unchecked population growth of the purple urchin). Nonetheless, I'd like you to send me a report on the impact that your testing will have had.	
Green-1	For the public record I have grave concerns about the impact of the proposed level of sonar testing on the marine mammals of Puget Sound and the other Washington State coastal areas that are part of the proposed testing zones. I think this level of testing is very irresponsible given the fragile state of the Puget Sound resident Orca whale population. This testing is projected to have even more damaging effects on the harbor porpoise residents as well as many other species who live there. We are so fortunate to live in an extremely beautiful and unique environment that is ours to care for in good stewardship. If this kind of testing "needs" to be done I think it should be at levels far below those proposed and done well outside of Washington state waters. These beautiful places belong to us all and it is not okay for one group to impact the marine species of Puget Sound so severely that it could cause this level of potential damage. Please think ahead about how your actions are going to affect all of these species and please act responsibly.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Greenbaum-1	This damages and hurts marine animals.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Greene-1	Stay away from the entire west coast! Your war games are a killing machine affecting our precious sea life! Now that the glaciers are melting take it up or down there.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Greenleaf-1	<p>Using studies conducted as far back as 1984 as source material for your EIS/OEIS draft is wholly unacceptable. So far this year, 70 gray whales washed ashore on the west coast, five times the average rate. NOAA has declared a wildlife emergency. The SEIS at 3.4.282 states that "military expended materials will sink to the ocean floor". At 3.4.302 the SEIS states that "for the most part," this material will be ingested by bottom feeders, Gray whales are bottom feeders. The SEIS needs to take into account the already stressed gray whale population. Scientific studies have shown that explosives and SONAR are detrimental to marine animals. For whales and dolphins, listening is the way they see and communicate and is integral to their survival. Under these circumstances, will the Navy provide updated studies in the OEIS reflecting the current crisis? Until NOAA's study on the die-off on the Gray Whales is complete, shouldn't any disruption of the ocean by sonar and explosive activity be halted?</p> <p>https://www.cbc.ca/news/canada/british-columbia/gray-whales-stranded-west-coast-1.5119056</p> <p>https://royalsocietypublishing.org/doi/10.1098/rspb.2018.2533</p> <p>The economic considerations are well-stated in the letter of opposition to sonar testing off the coast of Mendocino County by the Mendocino County Board of Supervisors in their letter to you dated April 21, 2019. To paraphrase: sonar and explosive testing off the Mendocino coast is detrimental to the fragile oceanic ecosystem on which we rely. The wide</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy uses the most current marine mammal population data available from the National Marine Fisheries Service. The 2008 and 2010 references cited in the comment were not used by the Navy to determine current populations.</p> <p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>variety of sea life is a key economic source for our county and must not be damaged in any way.</p> <p>Will you please slow down this process to allow enough time for current scientific data to be added to your SEIS? This is the path the whales follow twice a year. We must protect it and keep it safe for them.</p>	
Grennan-1	<p>Orca are getting lost through sonar sounds. It makes them confused as they use sonar to communicate. Please do not use this method. They end up miles from there home and fishing territories ending in death and starvation.</p> <p>Rethink the testing and please take note of our pleas. The ocean is precious and everything that swims in it.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Gretz-1	<p>While I am very well aware of the need to keep our naval forces up-to-date, this enormous amount of training/practicing in the sensitive habitats of so many marine mammals, of which many species are endangered, is way over the top. It is well known that the sonar and blasting harms and kills marine mammals. You cannot possible know that none are nearby, and you do know that those very loud sounds travel great distances, so marine mammals certainly could be well within the range and suffer without your explicit knowledge.</p> <p>You need to come up with plans that are reasonable but take much better account for the lives of marine mammals.</p> <p>If another Southern Resident Killer Whale is found dead from blast trauma (like L112 some years ago), the Navy will be held responsible for contributing to this unique and precious population's demise. If even one is not found, we can be sure that the Navy contributed to their overall problems, one of which is excessive noise in their habitat.</p> <p>Please be very very cautious, and use the precautionary principle as your guide. Thank you.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. The National Marine Fisheries Service investigated the stranding of Southern Resident killer whale L-112 (NOAA Technical Memorandum NMFS-NWFSC-133). No U.S. Navy training activities involving sonar or explosives were conducted between February 1 and 11, 2012, in the Northwest Training Range Complex (which includes Washington, Oregon, and northern California). Other anthropogenic activity, including other U.S. military, Royal Canadian Navy, fishing, or construction activities, were also ruled out as potential causes of the observed injuries.</p>
Grice-1	<p>The distressing scene of a grieving mother Orca carrying her dead baby for 21 days in the straits of Georgia should be a turning point on how humans interact with the Salish sea and surrounding water ways. The underlying causes of the ongoing demise of the Southern Resident Orcas may be Mult Faceted but one human action stands out as a telling sign of a major contributor to this deepened worrying likelihood of extinction is the NAVY</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>SONAR Testing and its detrimental side effects to these Orcas and other ocean mammals. Should we as an advanced human race not embrace our progress and step away from these repeated acts of inflicting suffering to the inhabitants of the waters when evidence has shown the destruction of our actions? We oppose this Sonar Testing in the Salish seas and surrounding waters so the endangered Orcas can have a chance to overcome the many other challenges which they face with a hope of survival!</p> <p>Navy Technology should improve like in other industry to reduce and eliminate the detrimental impacts to our Sea Mammals in general! So end this Sonar testing now!</p>	<p>populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Griffin-1	<p>I am very concerned about the impact on wildlife and on the environment in the ocean and Puget Sound. My reading about the proposed testing indicates that the potential for this to have a deleterious effect on whales and dolphins and other marine life is significant. While I understand the need to protect our country and use our Naval resources in order to do so, I do not understand why this can not be done in a way that serves to protect our wildlife as well, in particular our endangered southern resident orcas. Please look for less impactful ways to test and train.</p> <p>Thank you</p>	<p>The Navy has conducted training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Grinnell-1	<p>Any testing of sonar results in destruction to sea life, human life and earth's fragile ecosystem. Just as early chemotherapy destroyed the body, you are destroying a vast amount of the ocean body. Your testing is unnecessary, irresponsible and proves nothing that will promote global harmony. Do you have children? Grandchildren? How can you as guardians, continue to ignore the destruction you cause?</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Griswold-1	<p>These training exercises are not necessary. And certainly not necessary along the coast. They must be reduced immediately for the sake of all communities.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Gronseth-1	My husband and I fully support the Growler's training area in the Forks and surrounding areas ! I have lived in the Forks area for over 45 years. My husband grew up in Forks with his parents owning Ruby Beach Resort in the late 1940's. We both worked in the Seattle area but moved to Forks in 1974 to return to when he grew up. The people who are opposing this are grossly over reacting to the somewhat "noise" they make and the effects that it has to our "peacefulness". They make it sound like it is a "constant and irritating" noise. IT IS NOT ! It is NOT daily; it is NOT for extended periods o time; it is NOT destroying habitat, animals, or oneself. They DO NOT represent the majority of the citizens of this area... they are just the vocal ones.... the ones that are part of Folks For Change...whereas they either have come from other areas and want to impose and change everything in Forks that has been the history of Forks. WE LOVE THE GROWLERS !!! We LOVE the sound of the jets and respect the men who are flying them to gain the training in order to protect America, our "peaceful" coastline, and to give us the chance to look up and know that U.S. Naval Air Station Whidbey Island is there for us ! In this unstable political situation, that is a comforting feeling. We thoroughly support our military and Armed Forces ! Thank you, and KEEP ON FLYING the Olympic Peninsula !	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Grosinger-1	Based on reports of the impacts both to human health, as well as wildlife, I strongly oppose the increase in growler training flights.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Grouci-1	A 100% contre les tests sonars en mer il s agit encore une fois une forme de cruautés envers les animaux aquatiques baleines orques dauphins requins etc...	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Grundhoefer-1	SAVE THE WHALES	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gua-1	Sonar testing by the Navy generate rolling sound waves that can top at 235 decibels. A rock band at its loudest can produce 130 decibels. This sonar testing can affect whales like orcas, changing rapidly their routes to avoid sonar and even beach themselves. Please stop sonar testing in areas where there is rich marine life like in the Pacific Northwest. We need to save the orcas as they are endangered.	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Guastavino-1	<p>I am worried the Navy did not adequately analyze the impact of its activities on marine wildlife.</p> <p>In order to protect marine wildlife, The Navy should stop its Northwest Training and Testing EIS.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Guerin-1	I do not agree with the US navy using sonar in the Salish sea or in any waters as the sonar has a devastating impact on whales and dolphins and I'm sure many other marine mammals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Guerlac-1	I oppose naval sonar on our coast as research indicates its role in killing and beaching whales. Autopsies of beached whales indicate a stress response to the excruciating sound of the sonar. The force of this research is confirmed by the 2004 decision to place a moratorium on use of MFAS around the Canary Islands. We need to be protecting marine life and all life on this planet. Please respect local comments and responses - we life on this coast.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Guerra-1	I'm completely 100% gainst underwater sonar testing	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gulick-1	I am writing to urge you to select the No Action Alternative: no Navy training and testing activities at sea or in the airspace associated with the proposed action within the study area. The impacts are too great and too damaging for both people and wildlife. Specifically: 1) Noise pollution: current Navy activities in the area are already causing	All of the issues raised in the comment are addressed in the NWTTE Supplemental EIS/OEIS in Chapter 3 (Affected Environment and Environmental Consequences) and Chapter 4 (Cumulative Impacts).

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>great human suffering. The new Growler jets are unbearably loud, with measured decibel levels exceeding those deemed safe for human health. Disruptions to daily activities caused by the Growler jet noise and frequency have proven to have detrimental impacts to human health. Sleep disruption, concentration loss, increased stress levels, and hearing loss have already occurred where Navy training takes place.</p> <p>2) Impacts to wildlife: the studies conducted are insufficient. What impacts will noise, air, and ground pollution as a result of Navy activities have on wild salmon populations?</p> <p>3) Cumulative impacts of increased carbon emissions: this has not been properly analyzed and must be. How will the increased carbon emissions from Navy activities affect global climate change? The Navy claims to be very concerned about the impacts of climate change as it relates to national security, so why would the Navy conduct activities that could exacerbate climate change?</p> <p>4) Economic loss: the economies of communities in the proposed area for Navy activities rely on tourism to a large extent. Visitors come to the area to experience its quiet natural surroundings. Current Navy activities are already disrupting the quiet natural surroundings that visitors expect to experience. An increase in activities will only serve to drive more visitors away, thus contributing to economic loss.</p> <p>Please select the No Action Alternative, and keep the proposed study area free of additional noise, air, ground, and light pollution. There are few places left in the world where people can go to experience quiet natural beauty. Let's not destroy what little remains.</p>	
Gulsen-1	<p>Hello,</p> <p>Please stop sonar testing. By research it has been proven to harm marine mammals and it is even banned by governments and in some specific areas. Please stop this!</p> <p>Thank you</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Gunderman-1	<p>I understand the importance of military testing in order to keep our citizens safe in case of turmoil. However we must question how vital it is when water sonar tests are harming not only an endangered population, but countless marine mammal species. The studies have been done, and the</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	damaging impacts of noise pollution have been proven. While making sure we stay prepared for a conflict that could happen, the southern resident killer whales are dying NOW, currently, and need immediate attention. The world does not belong to humans, and what are we if we can't even take a dying species into consideration over military growth? Thank you for your time.	EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Gunduz-1	Orcas are already in great danger. Ocean life is facing a big extinction. This is unacceptable. Please stop harming ocean animals. Orcas and all.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/specops/navfac.navy.mil/lmr • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Gupta G-1	Please let the orcas and other sea animals be in their natural habitat that is the the ocean and not captured in small tanks for the purpose of human entertainment. They live a life of suffocation in these places such as the sea world and in the process they also get separated from their family members. It's really unfair on our part to abuse animals so ruthlessly just for entertainment. They're not here to serve that purpose. Please realize this and set them free. Let them live the life they deserve.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/specops/navfac.navy.mil/lmr • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Gupta G-2	Please don't carry on with this, have mercy on the sea animals	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ The Discovery of Sound in the Sea website at: www.dosits.org The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Gupta S-1	<p>Please spare the sea animals, all of them deserve the kind of life they have been born to live.</p> <p>Please be considerate enough towards beings of a different species</p> <p>After all, we need to address the humanity aspect of human nature</p> <p>We can't be ignorant towards the needs and rights of the voiceless.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ The Discovery of Sound in the Sea website at: www.dosits.org The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Gurney-1	<p>The Navy has requested the public to provide “public review and substantive comments” on its continuing use of the Northeast Pacific Ocean for training and testing of modern naval warfare, and the effects these activities will have on the mammals, birds, fish and invertebrates that inhabit these waters. In an effort to justify these activities, the Navy has funded scientific institutions and public relations firms to the tune of tens of millions of dollars per year to produce a lengthy EIS in 2015, revised this year, contending that military activity will have little or no effect on the marine environment. Further, in its PR campaign, the Navy has through its promotional materials, contended that the Navy is somehow a “steward” of the marine environment that is “protecting the seas through science.” The Navy has emphasized that it will respond only to substantive comments, yet the essence and substance of the Navy’s EIS campaign is to gain permits to allow these activities, by the use of willful disinformation. It is therefore difficult to provide substantive comments, when the substance of what you’re commenting on is genuine, unmitigated <i>[expletive deleted]</i>. By now it is common knowledge and accepted science that military sonar causes mass strandings of marine mammals. These creatures have no defense against the lethal and debilitating effects from major underwater blasts of active sonar and explosives, and no amount of corrupt, paid-off “scientific data” will alter this fact. In 2015, the Navy cynically asserted in its EIS that their activities will have zero mortality effects on marine mammals. The current EIS reasserts these claims, with minor changes. The proponents of these claims should be in court, facing charges of fraud. The closest the Navy comes to admitting harm, in all its efforts to whitewash the truth, is to admit on page 14 of its “Marine Species Monitoring Program” brochure, signed by the Commander of the U.S. Pacific Fleet, saying that “some stranding incidents have been coincident to naval training with sonar and explosives, which is of great concern to the Navy.” I cannot blame the U.S. Navy for trying to protect the American people from foreign adversaries. Of course, it is not the role of the military to turn the tide of humanity away from competitive nationalism, mutual distrust, and war. But the Navy could have a primary role in enforcing an international treaty to ban submarine warfare, and by extension, nuclear weapons. The Navy could also take an active role in combating climate change, and doing something about the large quantities of plastic that are choking the life from our oceans. In my opinion, this is what needs to be done if humanity is going to survive, much less the marine species that are the inevitable “collateral damage” of mankind’s never-ending quest for</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>military superiority.</p> <p>I believe the Navy needs to reverse course 180 degrees, and fight for the survival of humans and the ocean in the face of these challenges – with international cooperation instead of antagonism. Whether or not our political leaders worldwide will have the wisdom to provide this direction to their navies remains to be seen. As for now, my recommendation is the No Action Alternative, to deny the U.S. Navy permission to conduct warfare training and testing activities off the Northwest Coast of the United States.</p>	
Gustafson-1	<p>Noise from the Growler jets is destroying the quality of life in the Northwest, an area known and cherished for its pristine natural environments from the mountains to the sea. Much of our economy depends on preserviing this state of being. Even in the Edmonds-Lynnwood area, the jets have flown over 2 times in the past couple of weeks, and when they pass, all else has to stop. One cannot even carry on a conversation. I was pushed out of Ft Ebey campground a couple of years ago due to the horrible noise that continued even after midnight. The experience disturbed my peace of mind when I was looking for peace and quiet to destress. I can't imagine how this is effecting the wildlife. I believe that our National Parks and Wildlife refuges should be exempt from this type of intrusion. They are far from being just 'wastelands' that are not being 'used'...these lands are essential ecosystems critical to the well-being of all of us...I believe far more important than some man-made 'protection'...we need to protect our natural environment from all intruders. Thank you for your attention and consideration.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Gustavsson-1	<p>What you are doing is unacceptable. I have no words.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
H		
Haas-1	<p>I live in Port Townsend and travel around the Peninsula for work. I travel up through Whidbey Island to visit family in Bellingham. Recently, I stopped at Deception Pass to take a nature walk but was significantly disrupted by the very loud, directly overhead growler planes</p> <p>As a pediatric occupational therapist I have studied the sensory systems and their impact the nervous system and development. Unexpected and/or sustained loud noise causes stress which has a negative impact on the</p>	<p>The potential health effects of Growler and other activities on humans are discussed in the 2015 NWTT Final EIS/OEIS Section 3.13 (Public Health and Safety). In this section the Navy found, in part, that “The aggregate impact on public health and safety would not observably differ.” Thus, based on the analysis done by the Navy, the increase in Navy activities proposed in this Supplemental EIS/OEIS is not expected to have any noticeable effects on public health and safety.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	whole body. When the stress response is activated humans become irritated, emotionally reactive and less able to access the higher/executive functions of the brain for focused attention, reasoning, problem solving and language. I was very dismayed when I learned that the planes were being flown over the heads of children at their school and over residential areas. The noise I heard was deafening and that level of noise will definitely have a significant impact on people's quality of life and I am also concerned about the impact on wildlife. Although not as loud here in Port Townsend or Forks it is certainly not pleasant to have your evening disrupted by the droning of growlers. In addition, I am a hiker and lover of nature. I spend time in nature for my own well being and as part of my spirituality. I am upset to have the natural beauty and nature's orchestra on the Olympic Peninsula and National Parks be disrupted by aircraft. I am also concerned about the additional pollution and impact on the environment. I urge the Navy to be a good neighbor and NOT increase the number of flights.	The Navy is not proposing a significant increase in Growler activity. A minor increase in training flights in the Olympic MOA is projected over the next several years; increasing by approximately 300 total flights per year by 2023; approximately 1 additional flight per day.
Habbouche-1	Stop sonar testing.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Hagerty, Jett	Are there concerns on biological resources concerning Porpoises and if so is there mitigation that the Navy will do for this damage?	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Haglund-1	Please stop the navy sonar testing immediately it hurts whales and dolphins!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Halager-1	I'm writing this letter to inform the Navy that I'm against sonar testing in the oceans. They have proven to killing mammals, reptiles and some fish. There are many critically endangered animals that live in the ocean and it is our job to protect them. Extinction is forever, remember that! Sea turtles, orca whales, right whales, vanquita, sharks and many more are on the verge of extinction! We can and must do better to ensure our children and their children don't have to just read about these animals! Sonar testing is not necessary and extremely harmful! Please don't do it! Thank you!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hale-1	At what point is the well being of our ecosystem, livelihoods and general health of ocean, marine life and humankind more important than Navy testing? I oppose this testing. As someone who's family is and has been in our military and Navy, I think this is above and beyond what is needed for our security. I realize we have bombed everywhere else, and this is our own front yard, but we dont need more bombs, sonar testing, etc. We need to start investing in life, and sustaining it on the bone planet we call home. NO	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>TESTING OFF OUR COAST. our local economy depends on fishing, whale watching tours, charter boats. This is the main economic driver for the coastal communities. FERC WOULD NOT ALLOW WAVE ENERGY, because of this ruling our economy. Why would we destroy what we have left when we are among the poorest counties in the state. This can never be mitigated.</p>	<p>activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Hall-Ricciardi-1	<p>Researchers Have Identified How Naval Sonar Is Killing And Beaching Whales</p> <p>We have known for a long time that naval sonar has devastating effects on marine life but just exactly how it leads to sickness and death was a mystery till now. In new research published in the Proceedings of the Royal Society B, they discovered that the sound emitted by sonar is so intense that marine mammals will swim hundreds of miles, dive deep into the abyss or even beach themselves to flee from the sounds that are literally unbearable to them.</p> <p>In particular, beaked whales are one of the marine mammals that are often found beached due to sonar testing. Prior to the 1960s, beaked whale strandings were extremely rare. But once the 60s rolled around, the Navy started to use mid-frequency active sonar (MFAS) to detect submarines. And from the 60s onwards, whales washing up on beachings became a very common occurrence. The paper recently published is a summary of what was discussed at a 2017 meeting of beaked whale experts in the Canary Islands and revealed that sonar distresses beaked whales so much that the marine mammals ends up with nitrogen bubbles in their blood very similar to what divers would call decompression sickness or the bends. The nitrogen can cause hemorrhaging and damage to whales vital organs. The big question that was brought up was how an animal that lives in the ocean and is adapted to perform deep water dives for hours at a time can obtain decompression sickness? Well simply, the sonar is so powerful, the animals dive deep too quickly causing the sickness.</p> <p>"In the presence of sonar they are stressed and swim vigorously away from the sound source, changing their diving pattern," lead author Yara Bernaldo de Quiros told AFP.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>Regarding previous strandings, see Section 3.4.3.1.8 (Stranding) of the 2015 NWTT Final EIS/OEIS, and the "Marine Mammal Strandings Associated with U.S. Navy Sonar Activities (June 2017)" (https://www.nwtteis.com/Documents/2019-Northwest-Training-and-Testing-Supplemental-EIS-OEIS-Documents/2019-Supplemental-EIS-OEIS-Supporting-Technical-Documents).</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>“The stress response, in other words, overrides the diving response, which makes the animals accumulate nitrogen. It’s like an adrenalin shot.”</p> <p>The conclusions are drawn from autopsies of dead whales, although a handful of animals were killed by other threats inflicted by humans, such as collisions with ships or entanglement in fishing nets, as well as disease. The authors note that to mitigate the impacts of sonar on beaked whales, we must ban its use in areas where they’re found. A moratorium on the use of MFAS around the Canary Islands in 2004 shows just how well this works – no atypical strandings have been seen since. The researchers urge other countries where sonar is deployed, such as the US, Greece, Italy, and Japan, to follow suit.</p>	
Hamilton L-1	<p>Land and marine mammals utilize vocalizations and vibrations to communicate within their species. Many species depend on auditory and/or vibrational cues in hunting for prey or protecting themselves from predators. While there are many natural disruptions that occur to confuse these animals, those caused by human activities have been increasingly impactful. The level of noise and vibration caused by the FA-18 jets is higher than most natural or human caused events. Jet pilots wear ear protection; land and marine animals do not.</p> <p>The regular flights of the FA - 18 jets over the Olympic Peninsula and Puget Sound region are disruptive to the peaceful lives of both humans and animals. The proposed increase in the number of flights over the region will affect many species by affecting their senses, increasing stress, and limiting their abilities to cope with danger and normal hunting patterns, both on the land and on and under the sea.</p> <p>Humans must steward land and seas with care to all species. The training in warfare techniques that is occurring in the Pacific Northwest must be not be continued ; the number of jet flights must not be increased, they must be reduced and/or eliminated.</p>	<p>All of the issues raised in the comment are addressed in the NWTT Supplemental EIS/OEIS in Chapter 3 (Affected Environment and Environmental Consequences).</p>
Hamilton S-1	<p>First I want to say I support the Military and want you to have the finest training grounds and equipment. I signed a noise document when I purchased my house in ~1996 which at that time the sounds were not a problem and I assumed the impact on my ears would continue at that level. Then the “planes” became Growlers and started coming over my house. I reported that and showed you the flight pattern from the EIS which did not have planes going over my house. I believe that has been addressed and I no longer see them over my house. I thank you for that.</p> <p>I used to walk my dog on Driftwood beach almost everyday. Now I have to check the flight schedule because one day I was out there and had to run</p>	<p>The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>back to the Jeep it was so loud.</p> <p>This has had a great impact on our community. I'm the lead for Nextdoor.com and encourage civil communication, but it's a challenge. Just the mention of "Jet noise" incites emotions either for or against the military. People ask me to please remove "jet noise" conversations because it's upsetting to hear. (I can't of course unless someone goes against the Nextdoor communication guidelines). People are selling their homes because they feel they are in harms way living near OLF. It's just sad as there is a cost to moving and I haven't heard 1 military person who suggested they "just move" say they will at least help them pack.</p> <p>Today I received an Island County property assessment change for 2020. My house value increased. I believe it increased in preparation for a decrease as more Growlers come to Coupeville.</p> <p>I'm sorry I wasn't able to be more substantive as it's hard to document how loud the Growlers are. It's just a sad situation and I'm not seeing that covered in the EIS.</p>	
Hamilton S-2	<p>My 2nd comment.</p> <p>Growler Engine Changed post EIS.</p> <p>Has there been a new noise level assessment since the engine changed?</p> <p>Source: https://www.defensenews.com/air/2017/03/30/us-navy-awards-114m-order-for-new-hornet-engines/ WASHINGTON –The U.S. Navy has awarded General Electric a \$114.8 million contract to install new turbofan jet engines on the branch's F/A-18 and EA-18G Hornet aircraft, according to the Department of Defense. Naval Air Systems Command of Patuxent River, Maryland, is overseeing the project, which is expected to be completed in February 2019."</p>	<p>The engines used for the noise model were the F414-GE-400 engines, which are the current engines installed in the F/A-18E/F and EA-18G aircraft. Appendix J has been revised to include the engine type modeled for the EA-18G aircraft. The GE F414-400 enhanced engine is currently only in a research phase for the Navy, and is not installed in any aircraft, nor are there plans to purchase or install it. If this engine were to be introduced to the fleet of F/A-18E/F and EA-18G aircraft, the Navy would measure the noise emissions from this new engine.</p>
Hand-1	<p>Please stop this testing that is harmful to Orcas and dolphins and causes them to not be able to communicate.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Hanks-1	Sonar is harmful to orcas. The endangered SRW have a new calf, the first since 2016. Please do not conduct sonar testing when the whales are present. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hanley-1	I travelled to the Hoh Rainforest to experience this World Heritage Site for its quiet beauty. There are many places you might do this testing where it will not impact the tourism that brings so many people to this state. These are sacred places of refuge and the noise is incompatible with them.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Hansen R-1	A National Park is a place set aside for all living creatures within to live free of exploitation. I see the Park also as a place for people to visit, to live briefly and learn and listen in the silence of these sacred places and then to leave it as we found it. It occurs to me that the Navy behavior is very disrespectful of the Park and all creatures and life forms within and of the people from all over the US and the world who come to enjoy the solitude and incredible beauty and silence of this Park. That means your Growler jets which fly over the park and and do training along the coast.. Please stop this insanity. Would you please listen from your hearts rather than your "rational heads". National Parks and Navy jet training overhead do not make a lick of sense. Please stop this harassment of the people and living critters and creatures with your war games. Please stop this now.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces, have conducted since the MOA's designation in 1977. Aircraft flights over the Olympic Peninsula are not new. The Navy, as well as other U.S. military forces have trained over and off the Olympic Peninsula since World War II. While the increase in the level of activities was reflected in the Draft Supplemental EIS/OEIS, the Navy has made revisions to clarify that the increase results in approximately 300 additional aircraft flights per year. When looking at the proposed increase in EA-18G Growler flights in the Olympic Military Operations Area (MOA), it is important to consider this increase in the proper context: 1. Based on an analysis that included weekdays and weekends, the FAA determined that over the Olympic National Park, Navy aircraft account for only 25 percent of all flights below 35,000 ft. altitude and 38 percent of all flights below 18,000 ft. altitude. 2. Most Navy flights in the Olympic MOA occur on weekdays, and during daylight hours (approximately 6 percent of flights occur at night). The military averages about 2,300 flights per year over the Olympic MOA; approximately 8.8 flights per day if averaged over weekdays only (6.3 flights per day

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<p>averaged over a 365-day year).</p> <p>3. The proposed increase of 300 total flights per year averages to just over one additional flight per day.</p> <p>4. In the past, when the Navy had over 200 tactical aircraft assigned to NAS Whidbey Island, it conducted up to three times as many flight operations compared to today, including projections with the increase to 118 Growlers. Far more training events then involved low-level maneuvers due to the type of aircraft involved.</p>
Hansen S-1	Please stop sonar testing as it's harming the southern resident orcas and they don't need to be exposed to this at all	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Hansen S-2	No sonar testing at all	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.mil/speciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTEIS.com
Hanson L-1	I strongly oppose the plan to dump heavy metals and nuclear waste in Puget Sound. Our resident orca population has been in decline for several years due to a variety of reasons including pollution. Our human population, especially the indigenous people, eats seafood that comes from	<p>The Navy does not propose to "dump heavy metals and nuclear waste in Puget Sound." Best management practices include measures that regulate operations to ensure compliance with pollution emission requirements and general resource conservation goals. Navy policies and procedures identified</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	Puget Sound. Please find a less environmentally destructive method to handle this waste.	<p>in Navy instructions such as the Environmental Readiness Program Manual, include directives regarding waste management, pollution prevention, and recycling, all of which benefit sediments and water quality in the ocean. Any procedures or practices that benefit ocean sediments and water quality in turn benefit all marine life in the ocean, from plants and invertebrates, to fish and marine mammals.</p> <p>The analysis of impacts of the Navy's activities on water quality can be found in Section 3.1 (Sediments and Water Quality) of the NWTT Supplemental EIS/OEIS.</p>
Hanson T-1	I would ask that there be absolutely no US Navy testing in the Salish Sea. The critically endangered Southern Resident Orcas and all Salish Sea marine inhabitants are in harm's way from these dangerous and harmful sonar practices. It is time to protect sea life, not add more danger to their existence. The sea is their home. Please respect their needs for survival.	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Harasimowitz -1	Support and save the orcas!	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navymarinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Hardy-1	There are enough problems in the environment for these animals to deal with let alone stressing them with sound as well. Stop please. What is the point of these tests around animals.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Hare-1	Please stop sonar testing in the Salish Sea. You are harming the orcas which are a treasure. The ocean is not yours; it belongs to us all. You've done so much harm to these animals already, despite warning from the experts. Please don't persist.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Harper C-1	<p>I am opposed to the Navy's plan to increase Growler flights and Electromagnetic Warfare Training on the North Olympic Peninsula. Olympic National Park and Olympic National Forest are priceless ecological treasures that would be seriously jeopardized by increased Electromagnetic Warfare Training. Olympic National Park is home to twenty-four plant and animal species that are found nowhere else on Earth. This region is home to several endangered species, including the Marbled Murrelet. It is crucial that one of "last best places on Earth" be protected to the fullest extent possible.</p> <p>In addition to the sanctity of Olympic National Park and Olympic National Forest, the local economies are dependent upon the tourists and hikers who visit this region. Outdoor recreation brings in an estimated \$21 billion</p>	The Navy has considered other locations (see the NWTTE Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	dollars and is responsible for creating approximately 199,000 jobs. I strongly request that the Navy either reduce the Growler flights and/or move their training operations to other areas where they have already trained, e.g. central Washington or Mountain Home, Idaho. Future generations are counting on us to save this priceless environment. Thank you for considering this comment.	The alternatives carried forward meet the Navy's purpose and need to ensure that it can fulfill its obligation under U.S.C. Title 10. As explained in Section 2.5 (Alternatives Development) of the EIS/OEIS, the range of alternatives considered by the Navy must be reasonable alternatives. To be reasonable, an alternative must meet the stated purpose of and need for the Proposed Action. A curtailment or reduction in the number of training and testing activities would not meet the stated purpose of and need for the Proposed Action, and would therefore be unreasonable.
Harper T-1	I am opposed to the Navy's plan to increase Growler flights and Electromagnetic Warfare Training on the North Olympic Peninsula. Olympic National Park and Olympic National Forest are priceless ecological treasures that can not be jeopardized by increased Electromagnetic Warfare Training. Olympic National Park is home to twenty-four plant and animal species that are found nowhere else on Earth. This region is home to several endangered species, including the Marbled Murrelet. In addition to the sanctity of Olympic National Park and Olympic National Forest, the local economies are dependent upon the tourists and hikers who visit this region. Outdoor recreation brings in an estimated \$21 billion dollars and is responsible for creating approximately 199,000 jobs. I strongly request that the Navy will either reduce the Growler flights and/or move their training operations to other areas where they have already trained, e.g. central Washington or Mountain Home, Idaho. Thank you for your consideration.	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The training complex in Idaho is controlled by the Air Force and does not have the capacity for both Air Force and Navy operations. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness. The alternatives carried forward meet the Navy's purpose and need to ensure that it can fulfill its obligation under U.S.C. Title 10. As explained in Section 2.5 (Alternatives Development) of the EIS/OEIS, the range of alternatives considered by the Navy must be reasonable alternatives. To be reasonable, an alternative must meet the stated purpose of and need for the Proposed Action. A curtailment or reduction in the number of training and testing activities would not meet the stated purpose of and need for the Proposed Action, and would therefore be unreasonable.
Harrington-1	I am a Navy Seabee Vet who has tinnitus, and listening to the sonar on the hydrophone made me jump out of my skin, I wanted to rip my ears off my head. This is unreasonable and harmful to all sea mammals to use echolocation to communicate and hunt, not to mention drives them crazy. Please come up with better technologies and policies with these mammals in mind!!! One team, one fight, this includes everything in the ocean and seas that we are honored to protect!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Harris-1	I am writing to ask that the Navy stops use of active sonar and explosives in our ocean. I ask this because research indicates that it causes considerable harm to wildlife. Many marine animals rely on sound to communicate, locate food, avoid predators and navigate. Exposure to sound at these decibels could change their behavior, cause hearing damage and death. There has already been much research done by the navy and these animals already stressed. The Navy should have the protection of our natural heritage at the forefront of their activities.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Harrison J-1	thank you for this window to comment. the first time I was driving from the south end of Whidbey island to oak harbor and had 'an encounter' with the jets flying over the highway, I almost ran off of the road. it was so loud, it made me jump in my car seat. I thought something like an earthquake was happening. and another time, I had visiting relatives and we were walking ebey's landing.....it was so loud and obnoxious when the jets flew over, it just ruined the whole experience of being in such a beautiful area. I have experienced it many times now and it continues to scare me as i'm driving and I now consider not even taking friends and visitors to the mid and north end of the island anymore....basically I feel tourism is being greatly effected, let alone the reasons we love it here, the beauty, the quiet, the animal life have all been ruined for us. I have had this conversation with so many community members. it is sad. I will never camp or picnic again on north Whidbey island. I am not the only one saying this.	The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Harrison K-1	I 100% do not support the Navy's sonar testing given its confirmed negative impact on the resident and transient orca whale populations.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hart-1	The sonar testing in the Salish Sea is totally unacceptable, critically damaging/lethal to the creatures which live in it and totally unacceptable to the land and inhabitants around it. I am asking you - as a concerned	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	person for the welfare of these dwindling species of the oceans and for the people in the areas - to cease this damaging testing. For the inhabitants living around this sea/area there is ultimately a very real danger for their health and the health of the land. Why are any of the above being subjected to this threat and damage...? If you deem it to be so safe (and it is not) then test it in your own backyard. Do not make guinea pigs out of the environment, the people and animals - regardless of where they live. Stop this deadly action NOW.....	Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hartley-1	It is important to curtail testing, at least during peacetime, or at the very least ramp up testing gradually to give marine wildlife a better chance to flee affected areas. So many scholarly peer reviewed published articles the document the deadly impact of sonar on marine wildlife. Even at low levels sonar and sonar testing causes harm by changing animal behavior. Environmental laws should apply to the all branches of the government and military including the Navy and Navy contractors.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species. In Section 5.5.1 (Active Sonar) of the NWTT Supplemental EIS/OEIS, the Navy considered ramp-up procedures as described in the comment. As described in that section, research found that active sonar ramp-up was not an effective method for reducing impacts to some species. The Navy determined that ramp-up would be an ineffective mitigation measure for the active sonar activities analyzed in this Draft Supplemental EIS/OEIS.
Hartman-1	It has been proven that your underwater sonar experiments are harmful to sea life - whales, porpoises, etc. why on earth would you or anyone else consider staying on that path?! Please stop the use of this sonar testing. I'm sure if you put your mind to it you will find other, non-destructive, ways to accomplish your goals. Thank you.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hartwig-1	It has been proven that underwater sonar practices are incredibly harmful especially for marine mammals who rely on sound for their survival. The endangered Southern Resident killer whales are already struggling to find enough food to survive. Hearing loss resulting from the Navy's practices	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	would further interfere with their ability to forage, likely ensuring that this population never recovers. Sonar practices by the Navy in or near the Salish Sea will be absolutely devastating to the Southern Residents- and they are just one of many species within the fragile ecosystem of our Salish Sea to suffer from severe impacts. This is unacceptable- I am 100 percent against underwater sonar testing.	EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Harveson-1	I fully support the training needs of the US Navy. My backyard looks directly at the New Dungeness Lighthouse and then directly at Victoria BC. Therefore I look over the Strait of Juan de Fuca and hear/see Navy operations. You used to transfer personnel from the largest Navy subs to the sub tender right behind our house. Now unfortunately you moved the operations west to Port Angeles so we do not get to see Navy operations here anymore. We love the "Sounds of Freedom" as you train WHEREVER!! We fully support the US Navy's training requirements wherever you need. The Draft EIS is fine as written. Thank you for your service.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.
Harvey-1	Underwater sonar testing has been proven to be harmful to marine animals and can result in severe injuries or death to whales, dolphins, and many other species who are already endangered. We are opposed to the U.S. Navy's use of underwater sonar testing and/or use of underwater sonar weapons and ask that the Navy find other ways to defend our nation without harming animals that are facing extinction.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Haschak Ja-1	I guess I'll just rephrase what I was saying. My question to the Navy was I understand that their purpose is to protect the citizens of our country, and I would like to know what country poses a greater threat than the destruction of our planet. And that was it. Thank you.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Haschak Jo-1	I'm on the board of supervisors, John Haschak, and this is what the Board of Supervisors of Mendocino County approved unanimously. I just want that letter to get into the record. (Letter submitted with no additional public comment.)	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Hasko-Young C-1	I oppose the Navy's sonar testing because it interferes with marine animals' echolocation. The endangered orcas in the Salish Sea are already starving because of a lack of Chinook salmon, and the noise emitted by sonar interferes with their way of locating prey. Other dolphin and whale species that use echolocation will also be negatively affected, which may disrupt the ecosystems in the Pacific Northwest.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hasse-1	Dear Naval Facilities Engineering Command Northwest, I am writing to urge you not to extend the permit for Growler training over our Olympic National Forest and Park. Training missions that broadcast the frighteningly loud, low frequency vibrations of the F-18 Growlers threaten the health and well being of all life on the coast, and they ruin the quiet, peaceful refuge of the unspoiled natural environment of the Olympic Peninsula. Overflights up to 16 hours a day, 260 days a year, destroy what's essential and elemental to living on or visiting the Olympic Peninsula and adversely affect our way of life and our economy. Please move Growler training to an area designated for warfare training.	The Olympic Military Operations Area (MOA), a portion of which overlies the Olympic National Park was designated for precisely the type of training that the Navy, as well as other U.S. military forces have conducted since the MOA's designation in 1977. Prior to the MOA's designation, military aircraft have trained over and off the Olympic Peninsula since World War II. The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Hastings A-1	STOP IT	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Hastings M-1	The Navy reneged on its original agreement about the number of Growler flights annually. This four fold increase is untenable. This is damaging to public relations: the Navy comes off as a bully. If it is important to quadruple the number of flights, why not fly to an unpopulated area? At	The Navy is not proposing to increase Growler activity by 400 percent.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	the speed of those jets, it would take 20 mins to reach an area where the noise levels are not damaging humans. This truly is an egregious breach of public relations.	
Haupka-1	Wtf is wrong with you, that it is still not understood? Horrible people.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Haviland-1	<p>I am a native Washingtonian, and have a great love for the environment of my birth state. I oppose your plan and the only alternative in the EIS acceptable to me is the NO ACTION Alternative. Alternates 1 & 2 would cause deplorable damage to the Olympic National Park, and the Olympic Coast National Marine Sanctuary. I oppose the EIS that will establish and electronic warfare training area on the Olympic Peninsula because I want to preserve the birds and wildlife on the peninsula. I also want to protect the sea life and mammals in the Olympic Coast National Marine Sanctuary. These unique and to date protected areas should not be warfare training ground.</p> <p>There is plenty of research to support the damage inflicted on human and wildlife by the noise that would be generated, along with the environmental pollutants.</p> <p>There is nothing positive for the environment or the human landscape in regard to the proposed plan.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTTEIS.com
Hawa-1	I think that it will harm orcas which is not worth it. Please consider doing these tests in an area that will not affect precious wildlife.	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p> <ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy-marinespeciesmonitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology The Navy's project website at: www.NWTTEIS.com
Hawn-1	<p>These harmful military practices are unacceptable.</p> <p>A 2016 study published in the Canadian Journal of Zoology estimated that 11,233 harbor porpoises live in inland Puget Sound waters, not including the critically endangered 76 Southern Resident Orcas.</p> <p>"For marine mammals that utilize sound extensively, limiting their ability to recognize these frequencies in sound is going to limit their survival," Calambokidis said.</p> <p>Over 7 years, harbor porpoises in inland Washington waters would likely experience temporary hearing loss at some frequencies at least 95,943 times from sonar, according to the Navy's calculations.</p> <p>Sonar would cause the porpoises permanent hearing loss at 1,033 times and a "behavioral reaction" (anything from a distraction to prolonged fleeing from sound) at 101,377 times.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>
Haye-1	<p>I oppose the U.S. Navy's plans to expand war-training exercises in Northern CA near the path of the annual Gray Whale migration including sonar, explosions and the release of chemicals into the ocean. Gray Whales will travel through this environment two times a year. Therefore, we would like a 100-mile wide test-free corridor along the Pacific coast to be considered at a minimum to reduce the impacts on the animals who call this area home, as we do.</p>	<p>The Navy's mitigation involves numerous distance-from-shore restrictions for active sonar, explosive, and non-explosive training and testing activities. For example, the Navy will not conduct explosive training or explosive testing (except explosive Mine Countermeasure and Neutralization Testing) 50 NM from shore in the Marine Species Coastal Mitigation Area. For the Final Supplemental EIS/OEIS, the Navy developed several new mitigation measures, including development a new mitigation area known as the Juan de Fuca Eddy Marine Species Mitigation Area. It would not be practical for the Navy to prohibit all training or testing activities within 100 miles from shore for the reasons described in Chapter 2 (Description of Proposed Action and Alternatives), Chapter 5 (Mitigation), and Appendix K (Geographic Mitigation Assessment) of the Final Supplemental EIS/OEIS.</p>
Hayes-1	<p>There is very little left here for people to make a living from now that forestry has been shut down. Go somewhere else and leave the fisheries alone.</p>	<p>Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities. To learn more about marine species, sonar, and sound in the water, and the Navy's ocean stewardship programs, visit:</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
		<ul style="list-style-type: none"> • The Navy's Marine Species Monitoring webpage at: www.navy.marin-species-monitoring.us/ • The Discovery of Sound in the Sea website at: www.dosits.org • The Living Marine Resources Program at: https://www.navfac.navy.mil/lmr • The Office of Naval Research's Science and Technology programs at: https://www.onr.navy.mil/Science-Technology/Departments/Code-32/all-programs/marine-mammals-biology • The Navy's project website at: www.NWTEIS.com
Hays G-1	Navy sonar testing is a severe hazard to the Southern Resident Orca Pod. This pod is endangered and at risk of extinction. The pod just added a new baby Orca, to allow Sonar testing in the Puget Sound is disregarding the United States which includes Orcas you are sworn to protect. Our environment is quintessential for the sustainable future of our children. With advancements in technology this testing is not needed and the idea of proceeding displays a horrendous disregard for our nation.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hays L-1	<p>NOISE ... EXTREMELY EXTRAORDINARILY LOUD BEYOND BELIEVING LOUD NOISE.</p> <p>In no way appropriate for environments with a human population, certainly not schools, hospitals & old age homes, not to mention just plain families. These planes need to be moved from this island & until they leave our airspace in the Salish Sea, they need to be grounded.</p> <p>Those of us living with this sound know about the loudness. apparently the Navy has grown deaf over time & cannot hear it themselves.</p> <p>The Navy needs to do what it's main mission is: protect the citizens of this country. That does not mean to torture the humans & animals living under this air traffic.</p> <p>We are losing income on this island, our inhabitants are moving away from farms generations old, tourists are staying away or running in fear when they have 'the experience' of these flights overhead.</p> <p>PLEASE SHOW YOUR HUMANITY</p> <p>PLEASE SHOW YOUR CONCERN</p> <p>PLEASE STOP THESE FLIGHTS & RELOCATE THE GROWLERS!</p>	The activities proposed in the NWTT Supplemental EIS/OEIS do not include activities described in the comment in the vicinity of Whidbey Island. Please see Chapter 2 (Description of Proposed Action and Alternatives) for a description of the location of these activities. Also, see Section 3.12 (Socioeconomic Resources) for an analysis of the Navy's proposed activities on tourism and other socioeconomic resources. Please refer to the EA-18G Growler Airfield Operations Final EIS located at http://www.whidbeyeis.com/CurrentEISDocuments.aspx for a comprehensive look at Growler activities and impacts in your area.
Hayward-1	<p>It is unacceptable that sonar is making large stretches of ocean uninhabitable for endangered killer whales.</p> <p>Whales have been observed leaving areas up 17 miles from the source of</p>	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>the sonar, with military grade devices having an even greater impact. Therefore, if out at sea, a minimum of 907 square miles surrounding each device (17 x 17 miles x 3.14) is potentially being made intolerable to whales.</p> <p>The noise is not just an annoyance - polluting their general environment - it interferes with their very being. Navigation, communication and subsequent feeding and mating are all adversely affected. Their primary prey - scarce salmon - involves a particularly targeted use of sonar to locate and catch them within a complex underwater terrain. In the long-term it can even destroy generational knowledge of safe feeding and breeding sites as vast areas start to be avoided (similar to that suffered by elephants and bison due to human encroachment and 'management'). Constant 'pings' can mentally impair them - much as a car alarm would do to us if we were forced to listen to it for long periods.</p> <p>In cases where naval sonar has been used in prime whale habitat, the whales have been located miles away in areas where they have not been seen in decades e.g. Haro Strait after sonar testing by the Canadian Naval frigate HMCS Ottawa made Victoria, B.C audibly uninhabitable.</p> <p>I fully agree with the scientists that have advised you that limits should be placed on mid-frequency sonar testing (2-10 kHz). Is it not enough that whales have to contend with ever-increasing ship noise and boat-strikes? (300,000 ferry sailings alone were made on the Salish Sea in 2018). Surely sonar knowledge is now advanced enough to avoid the damage we are doing to these beautiful animals? Sadly it would seem that it is not.</p> <p>Current whale detection and protection measures are quite frankly poor. Often the Navy are unable to detect whales within the distances in which noise mitigation is required (1000 yards in the U.S. & 4000 yards in Canada) due to the somewhat outdated passive acoustic listening and visual surveillance methods being relied upon to establish their whereabouts.</p> <p>When noise mitigation is applied, even Canada's more generous 4,000 yard limit is nowhere near enough distance to protect whales from being mentally and/or physically scarred.</p> <p>Once again, unprecedented sightings of whales in Discovery Bay leads to the conclusion that they were present and distressed enough to leave San Juan Islands on Monday, Feb. 6, just 18 hours after a Canadian frigate, the HMCS Ottawa, transmitted loud pings throughout the area.</p> <p>This is unacceptable. Every deaf, soon-to-be dead whale is an avoidable tragedy. Please stop carrying out all sonar testing in the Salish Sea immediately until you have the technology to avoid all damage to these</p>	<p>Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p>

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	endangered animals. The Southern Resident Killer Whales are facing numerous threats but if they cannot hear, they cannot hunt and they cannot eat. Their recovery depends on you. I await your response with the utmost concern.	
Heagney-1	This is an unacceptable abuse of marine life!!!! Halt all sonar activity at once or prepare to tell your children why all the whales are extinct. Unbelievable animal abuse!!!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Healion-1	Sonar testing can I have serious long lasting affects and the marine Mammals living in those waters. We have caused enough damage to our plant already. Their lives matter too.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Heath-1	Our state constitution provides that the military comply with the needs of Washingtonians. Please leave our state. If the health effects on citizens u r sworn to protect isn't enough for you, then u must know you are killing our vital tourism and real estate industries. Why would anyone want to live on an island where u cant even hear urself scream when talking? Try it. Sleep is also important. I am wakened more nights than not even living in north beach. We do not want your jungle warfare in our Olympic national forest. Find somewhere not pristine to ruin. Better yet, go to Fallon Nevada, a base and community that actually want you. Welcome to WA, please leave now. Thank you.	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. For this reason training complexes in Nevada are not reasonable. The Olympic Military Operations Area (MOA) is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
Heiermann-1	In the name of the ocean animals, please stop the seismographic actions	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Heinith-1	Comments on Northwest Training and Testing Supplemental Environmental Impacts Statement/Overseas Environmental Impacts Statement March 2019 Draft ES.5.2 Alternative 1 (Preferred Alternative) As this commenter and others have stated before in the EIS comments on this proposed action on the Olympic Peninsula and environs, the Navy has other potential sites to increase military training other than the proposed action area that 1) are not located in the vicinity of a World Biosphere Park and 2) lack considerable human populations settlement. The Navy must consider the likely future growth of their own military needs that would be better placed in a more remote area now instead of later.	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Heinith-2	Section 3.13 Public Health and Safety The amount of additional aircraft, sonar, explosives vessels and underwater discharges is not quantified/analyzed for either No Action or Alternative 1. The Supplemental EIS (SEIS) is seriously flawed and fails to meet the requirements of NEPA without this quantification because the comparative impacts on public health, safety and climate change between these alternatives is not analyzed/estimated. For example, how many more Growler flights will occur under these alternatives, when will they occur and what geographic areas for the proposed action will they affect? The quantification of effects and impacts from the no-action and preferred alternative 1 did not but must include: Air and water pollution from increased Growler activities over the proposed action area (i.e. metric tons of additional inputs). Greatly increased noise affects the health and well-being of residents in the proposed action area. As a resident of the Discovery Bay area, my family and neighbors have suffered from recent increased noise of Growler that occurs in all hours of the day and night. We have already experienced under the no-action alternative, Growlers flying almost at tree height right	The number and location of activities proposed under Alternative 1 and Alternative 2, as well as the baseline of activities conducted can be found in Chapter 2 of the Supplemental EIS/OEIS. The impacts of these activities is analyzed in Chapter 3.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	over our residence, which is within the two mile radius of Port Townsend airport.	
Heinith-3	<p>ES.7.2 Mitigation There is no mitigation offered for the additional noise, human health impacts, pollution and socioeconomic losses to the non-Navy human population in the proposed action area for either Alternatives 1 or 2. The SEIS fails to account for increases in proposed project area non-military human population growth occurring now and in the future that Navy actions in Alternative 1 will highly impact. Loss of socio-economic opportunities from alternative 1 implementation in the proposed action area (loss of tourism, commercial activities in dollars/yr). and estimates of increased carbon/greenhouse gases from increased Growler flights and other proposed actions. These impacts are truly “irreversible” but are not addressed in the SEIS. The National Climate Assessment details the many negative, irreversible impacts of climate change if business as usual (RCP 8.5) projections continue to occur over the next decade. The preferred alternative will contribute to these impacts. No offsets to the impacts that would be caused by the preferred alternative have been offered as mitigation.</p> <p>ES.7.5 There is no indication in the SEIS that the Navy has adequately consulted with area county officials, city of Port Townsend officials, the Washington Departments of Ecology or Fish and Wildlife on impacts that would affect local residents, fish and wildlife and other resources in the proposed action site. The Navy makes a unilateral decision that Alternative 1 “...would not be expected (i.e. by the Navy) to result in any impacts that would reduce environmental productivity, permanently narrow the range of beneficial uses of the environment or pose long term risks to health safety or the general welfare of the public”. Yet as noted above, the Navy has failed to quantify these impacts among the alternatives proposed, and has chosen an alternative that has not been adequately examined as required by NEPA. As mentioned above, the SEIS failed to estimate the impact of increased Growler and other proposed Navy activities that will increase air and water pollution and accelerate climate change.</p> <p>The SEIS fails to fulfill the intent/requirements of NEPA by failing to produce and analyze the above mentioned quantitative, comparable estimates of impacts between the no-action alternative and the preferred alternative. The Navy either disregards these profound impacts or merely states that under the preferred alternative they will not or have little to no</p>	The analysis of the potential impacts described in the comment can be found in Chapter 3 of the Supplemental EIS/OEIS.

Table H-6: Responses to Comments from Individual Members of the Public (continued)

<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	<p>impact, without a reasonable analysis. Further, the SEIS has not included any additional information on meaningful consultations between the Navy and local and state authorities regarding impacts from the preferred alternative.</p> <p>In order to fulfil the NEPA requirements, the Navy must construct an SEIS that addresses these serious shortcomings, in full consultation with the public and state and local authorities.</p>	
Hekkers-1	<p>Do not use active sonar and explosives in known marine mammal areas like Behm Canal. It's disruptive to their hearing and comes at a time when humpback whale numbers in southeast Alaska are down. Other species like salmon are also down in southeast Alaska.</p>	<p>Neither explosives nor hull-mounted mid-frequency active sonar are proposed to be used in the Behm Canal.</p>
Helenchild-1	<p>Dear Project Manager,</p> <p>So far this year, 70 gray whales have washed ashore on the west coast, five times the average rate. NOAA has declared a wildlife emergency. The SEIS at 3.4.282 states that "military expended materials will sink to the ocean floor".</p> <p>At 3.4.302 the SEIS states that "for the most part," this material will be ingested by bottom feeders, such as Gray whales. The SEIS fails to take into account the already stressed gray whale population. Scientific studies have shown that explosives and SONAR harm marine animals. Whales and dolphins "see" and communicate aurally. Their survival depends on their ability to hear.</p> <p>Using studies conducted as far back as 1984 as source material for your EIS/OEIS draft is wholly unacceptable. Under these circumstances, The Navy must provide updated studies in the OEIS to address the current crisis. Until NOAA's study on the die-off on the Gray Whales is complete, it would be irresponsible for the Navy to continue the disruption of the ocean by sonar and explosive activity.</p> <p>https://www.cbc.ca/news/canada/british-columbia/gray-whales-stranded-west-coast-1.5119056</p> <p>https://royalsocietypublishing.org/doi/10.1098/rspb.2018.2533</p> <p>The economic considerations are addressed in the letter of opposition to sonar testing off the coast of Mendocino County by the Mendocino County Board of Supervisors in their letter to you dated April 21, 2019. To paraphrase: sonar and explosive testing off the Mendocino coast is detrimental to the fragile oceanic ecosystem on which we rely. The wide variety of sea life is a key economic source for our county and must not be damaged in any way.</p>	<p>The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.</p> <p>The Navy uses the most current marine mammal population data available from the National Marine Fisheries Service. The 2008 and 2010 references cited in the comment were not used by the Navy to determine current populations.</p> <p>The Navy is aware of the recent gray whale deaths. In the 2019 NOAA Report which officially declared the Gray Whale Unusual Mortality Event, full or partial necropsy examinations were conducted on a subset of the whales. Preliminary findings in several of the whales have shown evidence of emaciation. These findings are not consistent across all of the whales examined, so more research is needed. With this in mind, there are no indications that any of the deaths are caused/related to naval activities.</p>

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<i>Commenter</i>	<i>Comment</i>	<i>Navy Response</i>
	I urge you to slow down this process to allow enough time for current scientific data to be added to your SEIS.	
Hellot-1	I am fully against underwater sonar testing in the Salish Sea. It has been proven to cause harm to marine mammals that utilize sound extensively. Limiting their ability to recognize these frequencies in sound is going to limit their survival. The critically endangered Southern Resident Orcas and all Salish Sea marine inhabitants are in harm's way from these dangerous & harmful sonar practices.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Henderson B-1	Please stop sonar and any other noise, testing, and any other activities that harm marine animals.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Henderson S-1	I don't understand why we continue to use government money to fund the destruction of our environment so that we can then attempt to repair the damage with more tax payer dollars. Please stop this.	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.
Henry D-1	1. I find fault with the claim on page 9 of the EIS Pamphlet I picked up at the Navy's visit to the Elks Club in Port Angeles, WA. It averages out the noise levels over a 24 hour period. But that does nothing to protect my ears from the ear & hair damaging bursts of noise by the Navy's operations in the Olympic National Park. I base my opinion on info about NIHL from the website, www.hih.gov . 2. I go to the ONP to de-stress. The growler noise only raises my stress levels. I believe I am not alone in that reaction. Please stop flying over Olympic National Park!	Thank you for your participation in the National Environmental Policy Act process. Your comment is part of the official project record. The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.

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Henry T-1	The damage that will be done to precious and endangered marine life (i.e. the Pacific northwest resident orcas) by this training plan is horrifying! Those orcas are already struggling and starving...we must put their needs FIRST this time! Please find a less precarious place to do your training!	The Navy has considered other locations (see the NWTT Supplemental EIS/OEIS, Section 2.4.1.1, Alternative Training and Testing Locations); however, the Navy needs access to training complexes within proximity to where the aircraft are based as stated in Section 2.5.1.1 (Alternative Locations) of the Supplemental EIS/OEIS. The Olympic MOA is necessary for Naval training and testing activities due to its proximity to multiple testing and training range complexes, homeports of Navy Region Northwest commands, shore-based facilities and infrastructure that maximize the training realism and testing effectiveness.
Hensley-1	I am against under water sonar testing which has been proven to cause harm to marine animals. We are killing our planet.....it's so heartbreaking....	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Hernandez-1	Please stop with the sound tests at sea, you are hurting the Orcas and marine animals. Think if it would hurt you to have such a sharp permanent sound in your ears ... surely they would turn it off because it would be unbearable. stop please!	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.
Herrera B-1	Under water sonar practices need to stop. It is hurting our marine life. Please care for our what is remaining of our beautiful orcas, whales and marine life we have left.	The Navy has conducted active sonar training and testing activities in the Study Area for decades, and there is no evidence that routine Navy training and testing has negatively impacted marine mammal populations in the Study Area. Based on the best available science summarized in the Supplemental EIS/OEIS Section 3.4.3.4 (Summary of Monitoring and Observations During Navy Activities Since 2015), long-term consequences for marine mammal populations are unlikely to result from Navy training and testing activities in the Study Area. As discussed in Chapter 5 (Mitigation) of the Supplemental EIS/OEIS, the Navy will implement mitigation to avoid or reduce potential impacts from the Proposed Action on marine species.