3.10 Cultural Resources

Supplemental Environmental Impact Statement/

Overseas Environmental Impact Statement

Northwest Training and Testing

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3.10 Cultural Resources

This section of the NWTT Supplemental Environmental Impact Statement (SEIS)/Overseas Environmental Impact Statement (OEIS) (Supplemental) provides general background information on cultural resources present in the Northwest Training and Testing (NWTT) Study Area and provides the analysis of potential impacts on those cultural resources that may result from Navy training and testing activities. Section 3.10.1 (Affected Environment) provides an introduction to the cultural resources that may be present in the NWTT Study Area. The complete analysis and summary of potential impacts of the Proposed Action on cultural resources are found in Sections 3.10.2 (Environmental Consequences). For additional information, also see the 2015 NWTT Final EIS/OEIS, Section 3.10 (Cultural Resources) (U.S. Department of the Navy, 2015).

Substantively, there is little new information since 2015 presented in this Supplemental. The proposed action and its potential to impact cultural resources are largely the same. Therefore, the steps taken to identify cultural resources and analyze impacts on them mirror those described in the 2015 NWTT Final EIS/OEIS. However, based on a reexamination of the 2015 document, additional research, and evolving interests and increasing emphasis on traditional cultural resources by local consulting partners, particularly affected tribes, cultural resources in this section have been renamed and their definitions refined. Marine Archaeological Sites are renamed Pre-Contact Archaeological Sites; Known Wrecks, Obstructions, Occurrences, or Unknowns are renamed Shipwrecks and Submerged Aircraft Wreck Sites; and Traditional Cultural Properties are now presented separately.

The key change in the planning process requiring revisiting the analysis of cultural resources, and the reason for this chapter, relates to the National Historic Preservation Act (NHPA) of 1966, as amended, and Section 106 of its implementing regulations (36 CFR § 800) as conducted in Washington State. Specifically, in careful consideration of the proposed Section 106 undertaking, the Navy consulted with the Washington State Historic Preservation Officer, tribes, and additional consulting parties to define the area of potential effects (APE) in accordance with 36 C.F.R. § 800.4(a)(1). This is a difference from the 2015 NWTT Final EIS/OEIS, in which the Section 106 process used the broad National Environmental Policy Act (NEPA) Study Area as the APE.

The Study Area and APE remain the same in Alaska and the Section 106 undertaking comprises the same activities and potential to affect historic properties as reflected in the 2015 NWTT Final EIS/OEIS. Accordingly, the Navy informed the Alaska State Historic Preservation Officer and affected tribes it was not reinitiating Section 106 consultation.

In determining the APE in Washington for this Supplemental, the Navy considered all proposed activities and their potential effects, including physical damage from anchors, disturbance from the placement and use of seafloor devices, shockwaves and vibration from explosives, auditory effects from aircraft, and settling of military expended materials (MEM), among others. With regard to aircraft noise, the highest modeled noise exposure for NWTT activities, based on the most current noise analysis, would be less than 37 decibels (dB) Day Night Average Sound Level (DNL), well below the level with the potential to affect historic properties (65 dB DNL) and therefore not included in the APE. In consideration of comments received, and the scale and nature of the proposed undertaking, the Navy identified four types of activity with the potential to affect historic properties as part of the APE definition process. The resulting APE includes areas within existing range complexes and operating areas offshore and in inland waters of Washington where historic properties could be affected by these activities and is much smaller than the NEPA Study Area. The APE and the Study Area were the same geographical area in the 2015 NWTT Final EIS/OEIS. The Study Area in this Supplemental is the same as the Study Area in the 2015 NWTT Final EIS/OEIS. The Study Area and APE, however, are not the same in this Supplemental. This section continues to reflect the Study Area largely unchanged from that in the 2015 NWTT Final EIS/OEIS and primarily uses NEPA terms such as cultural resources, human environment, stressors, and impacts. NHPA terminology such as APE, historic properties, activities, and effects is reserved for separate paragraphs, when possible, in order to maintain distinction between NEPA and NHPA contexts. Per the NHPA, the Navy has determined that no historic properties are affected by the undertaking within the defined APE and, per NEPA, no cultural resources are impacted by stressors associated with the Proposed Action within the larger study area.

As stated in the 2015 NWTT Final EIS/OEIS, the United States is a party to The Convention Concerning the Protection of the World Cultural and Natural Heritage. Accordingly, the Department of Defense's (DoD's) cultural resources policy and environmental regulations require compliance with the terms of the Convention. The addendum (addendum section 402) to the NHPA (recodified at 54 United States Code part 307101[e], *Consideration of Undertaking on Property, International Federal Activities Affecting Historic Properties*) requires an assessment by federal agencies of project impacts on historic properties located outside the United States that are identified on the World Heritage List or on the applicable country's equivalent of the NRHP. The Olympic National Park in Washington is the only World Heritage Site in the affected environment.

3.10.1 Affected Environment

NEPA requires consideration of impacts on the "human environment" consisting of natural, built, and social environments and the relationship of people to them through culture. Compliance requirements for cultural resources are established by federal statutes (out to 12 nautical miles [NM] from shore), state law in specific circumstances, regulations, and executive orders that are presented in detail in the 2015 Northwest Training and Testing (NWTT) Final Environmental Impact Statement (EIS)/Overseas EIS (OEIS) (U.S. Department of the Navy, 2015).

Sociocultural elements, such as traditions, lifeways, religious practices, community values, spiritual wellbeing, 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. Considering the social consequences of a proposed action is challenging and arguably better addressed within the framework of a separate and holistic social impact assessment. This supplement, however, is organized using the 2015 NWTT Final EIS/OEIS, which sought 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 and Environmental Justice). 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. For the purposes of this section, discussions of impacts on cultural resources will primarily focus on physical cultural resources such as those defined in the National Historic Preservation Act (NHPA), the Archaeological Resources Protection Act, and other types described in the 2015 NWTT Final EIS/OEIS. Other resources considered by the tribes to be of cultural significance include air, water, and wildlife. These resources are discussed in Section 3.1 (Sediments and Water Quality), Section 3.2 (Air Quality), 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).

The Supplemental EIS/OEIS (Supplemental) must be read in conjunction with the 2015 NWTT Final EIS/OEIS and Record of Decision, which provide more detailed and in-depth information.

In this section, cultural resources are divided into three major categories:

- Pre-Contact Archaeological Sites: pre-Contact inundated sites and features
- Shipwrecks and Submerged Aircraft Wreck Sites
- Traditional Cultural Properties: historic properties associated with the cultural practices or beliefs of a living community that are rooted in that community's history and are important in maintaining the continuing cultural identity of the community.

The NWTT Study Area for this Supplemental is the same analyzed in the 2015 NWTT Final EIS/OIES (Section 2.1, Description of the Northwest Training and Testing Study Area). Within these areas, the Proposed Action is composed of Military activities in the Study Area occur (1) on the ocean surface, (2) beneath the ocean surface, and (3) in the air.

For the purposes of this NEPA analysis, the Affected Environment discussion considers potential direct impacts on and under water, and indirect impacts on water and land under the Olympic Military Operations Area (MOA) over the Olympic Peninsula. There is only one potential activity to occur on land, the use of a light truck to recover unmanned underwater vehicle "crawlers," from the surf zone at Pacific Beach, Washington. The truck would be limited to established vehicle routes on and off the beach. The use of vehicles on established roadways in Washington has previously been determined to have *de minimis* impacts and no potential to affect historic properties. Therefore, the Navy is not considering the truck route to be part of the cultural resources affected environment. The Navy performed its consultation requirements under the NHPA, and where applicable, these consultation requirements are noted below.

In accordance with the requirements of the NHPA and based on the nature and magnitude of the Section 106 undertaking, historic properties of the type considered in this chapter generally would be those on or imbedded in the seafloor. Accordingly, the Navy determined the APE to be limited to the seafloor in the Offshore Area, Inland Waters, and Western Behm Canal. Again, this represents a significant departure from the APE being identical to the Study Area in the 2015 NWTT Final EIS/OIES. In accordance with 36 Code of Federal Regulations Section 800.4(b)(1), the Navy's efforts to identify historic properties took into account past planning, research, and studies; the magnitude and nature of the undertaking; the degree of federal involvement; the nature and extent of the potential effects; and the likely nature and location of historic properties within the APE. The Navy obtained information from a variety of sources, including the following: (1) properties identified during previous planning for the ranges and associated areas within the current NWTT APE and consultations for prior NWTT undertakings; (2) the National Register of Historic Places (NRHP); (3) the Washington State Department of Archaeology and Historic Preservation Washington Information System for Architectural and Archaeological Records Data; (4) the National Oceanic and Atmospheric Administration Automated Wreck and Obstruction Information System; (5) the Bureau of Ocean Energy Management online index of shipwrecks by state; (6) Navy shipwreck and submerged aircraft documentation; (7) agencies, organizations, and individuals who expressed interest in participation in the Section 106 process; and (8) publicly available sources about tribal territories and resources, including tribal websites, and information solicited directly from the 26 consulting tribes to identify properties of traditional religious and cultural significance within the APE.

Underwater cultural resources that may be affected include pre-Contact inundated sites and historic sunken craft such as shipwrecks and submerged aircraft. Traditional cultural properties may include inundated archaeological sites, topographic features or landforms, and marine habitats (including associated plants and animals), that American Indians or other groups consider essential for the preservation of traditional culture.

Per 36 Code of Federal Regulations 800.4(a)(4) the Navy consulted with Indian tribes to identify properties of religious and cultural significance under NHPA. The Navy received this information in letters, through comments received in response to prior and current NEPA documents, and during recent meetings. In addition to soliciting information through the Section 106 process, the Navy expects to receive additional information from ongoing government-to-government consultation beyond this action/undertaking and will work with advisory and consulting parties to address challenges inherent to full consideration of these resources within the regulatory framework of NEPA, NHPA, and other applicable mandates, authorities, instructions, and guidance.

The 2015 NWTT Final EIS/OEIS analysis reflected the fact that there were no activities with the potential to directly impact cultural resources on land. For this Supplemental, the Navy conducted a Noise Study (see Appendix J, Airspace Noise Analysis for the Olympic Military Operations Area) for aircraft training activities conducted within special use airspace comprising the Olympic MOA, the Warning Area 237A (W-237A), and transit routes of flight to the MOA and back, which is a typical event. Impacts from aircraft noise on land below Navy's special use airspace are discussed in this section (see also Section 3.10.2.3, Acoustic). In this Supplemental the Affected Environment discussion is organized by resource type.

3.10.1.1 Pre-Contact Archaeological Sites: Pre-Contact Inundated Sites and Features

In the 2015 NWTT Final EIS/OEIS, as discussed in Section 3.10.2.1 (Marine Archaeological Sites), potential marine archaeological sites and features included prehistoric sites associated with early maritime migrations inundated during deglaciation and located on the continental shelf, and prehistoric and historic sites that were intentionally placed in or under water such as canoe runs; petroglyphs and pictographs; fish weirs and traps; reef net anchors; trash dumps; piers, wharves, docks, and bridges; dams; and marine railways (Stilson et al., 2003). In this Supplemental, information is presented for pre-Contact archaeology underwater within the Offshore Area, Inland Waters, and Western Behm Canal.

Coastal (i.e., those located between the low tide line to the high tide line) archaeological sites within the Offshore Area, Inland Waters, and Western Behm Canal have largely been recognized in two settings: shell middens in littoral areas and sites located in riverine areas. In general, shell middens occur just above the mean high tide line. The oldest dated coastal shell midden site in Washington is approximately 4,000 years old, but the majority are less than 3,000 years old as that is around the time when the current sea level stabilized. Shell middens may indicate sites such as villages, camp sites, or shellfish processing areas that contain organically rich dark soil with shell fragments or shells, artifacts, and fire-cracked rocks near saltwater shorelines (Stilson et al., 2003). Pre-Contact marine archaeological sites recognized by Stilson in Washington include canoe runs; petroglyphs and pictographs; fish weirs and traps; reef net anchors; and shell middens (Stilson et al., 2003).

3.10.1.1.1 Offshore Area

The Offshore Area only comes into contact with the shore at the Quinault Range Site, and there are no known terrestrial or inundated sites at this location. Based on the predictive model used in the 2015 NWTT Final EIS/OEIS (ICF International et al., 2013), the Offshore Area has an increased probability

for inundated prehistoric sites in the large embayments of Grays Harbor and Willapa Bay, which were produced as rising sea level drowned large incised river valleys of the paleolandscape. Elder et al. (2019) demonstrated terrestrial coastal sites are more likely to survive in environments subject to stable or depositional geomorphic processes. This study pointed out the rarity of these types of environments for the entire Washington coastline, particularly along the Pacific Coast. Stable or depositional geomorphic processes also would have been necessary for the preservation of now-inundated sites. No subsurface sampling of marine deposits has been conducted, and no inundated prehistoric sites have been identified. Based on data sources reviewed in the 2015 NWTT Final EIS/OEIS (Section 3.10.1.3.2, Data Sources), no pre-Contact archaeological features in or under water have been identified in the Offshore Area since the review of data sources from 2015.

Olympic Peninsula

The Study Area for this Supplemental includes the Olympic MOA, which is situated over areas of the Olympic Peninsula. Though the MOA overlays federal, tribal, state, municipal, and private lands, the cultural resources found within the Olympic National Park provide a representation of those found on the Olympic Peninsula. Interwoven throughout the Olympic National Park's diverse landscape is an array of cultural and historic sites that tell the human story of the park. More than 650 archeological sites document 12,000 years of human occupation of Olympic National Park lands. Historic sites reveal clues about the 200-year history of exploration, homesteading, and community development in the Pacific Northwest (U.S. Department of the Interior, 2016). There are two sites listed on the NRHP located within the Olympic National Park; Ozette Indian Village Archeological Site and Wedding Rock Petroglyphs.

3.10.1.1.2 Inland Waters

Based on the predictive model used in the 2015 NWTT Final EIS/OEIS (ICF International et al., 2013), the Inland Waters have a lower probability for inundated prehistoric sites because of the lack of paleolandscape features (e.g., estuaries and streams) associated with concentrated resource availability. No subsurface sampling of marine deposits has been conducted, and no inundated prehistoric sites have been identified. Based on data sources reviewed in the 2015 NWTT Final EIS/OEIS (Section 3.10.1.3.2, Data Sources), no prehistoric or historic sites that were intentionally placed in or under water have been identified in the Inland Waters.

3.10.1.1.3 Western Behm Canal, Alaska

As discussed in the 2015 NWTT Final EIS/OEIS, a predictive model developed by Monteleone (2013) did not identify specific paleolandscape settings of inundated prehistoric sites associated with early maritime migrations. Although underwater surveys were conducted to test the model, no areas in the Western Behm Canal were surveyed (Monteleone, 2013). No inundated prehistoric sites have been previously identified in the Western Behm Canal. The Western Behm Canal portion of the Study Area meets the shore in many places; however, to date, pre-Contact archaeological resources have not been identified within the Western Behm Canal. Therefore, this category is not discussed further for the Western Behm Canal.

3.10.1.2 Shipwrecks and Submerged Aircraft Wreck Sites

As discussed in the 2015 NWTT Final EIS/OEIS, Section 3.10.2.2 (Known Wrecks, Obstructions, Occurrences, or Unknowns), submerged resources in the region may include shipwrecks or aircraft wreck sites. After review of the National Register Information System, National Oceanic and Atmospheric Administration Automated Wreck and Obstruction Information System, and Bureau of Ocean Energy Management's Alaskan shipwreck inventory data regarding submerged cultural resources

in the region of influence (Bureau of Ocean Energy Management, 2011; National Oceanic and Atmospheric Administration, 2017; National Park Service, 2017), the information from the 2015 NWTT Final EIS/OEIS has been updated in the sections that follow and new shipwrecks or obstructions are depicted with red-orange dots in Figure 3.10-1, Figure 3.10-2, Figure 3.10-3, Figure 3.10-4, and Figure 3.10-5. Additional discoveries are made as survey methods become more sophisticated and new areas explored.

3.10.1.2.1 Offshore Area

As presented in the 2015 NWTT Final EIS/OEIS, the eastern boundary of the Offshore Area at Washington abuts the coastline and includes a 1-mile-wide surf zone of Quinault Range Site. The Offshore Area contains several Navy shipwrecks and submerged naval aircraft (Grant et al., 1996). Besides the Quinault Range Site, the Offshore Area contains wrecks such as *Prince Arthur* in 1903, the *P.J. Pirrie* in 1920, nine ships wrecked between Quillayute Rocks and Cape Alava, five at Destruction Island, and four near Hoh Head (National Oceanic and Atmospheric Administration, 1993). The documented submerged cultural resources in and near the Offshore Area are primarily associated with maritime trade, transport, and military activities, and include many shipwrecks. In particular, the Olympic coast of Washington is a ship graveyard as a result of the isolated, rocky shores; heavy ship traffic; and ferocious weather and wave action. As shown in Figure 3.10-1, more than a dozen wrecks have been documented in and near the Olympic Coast National Marine Sanctuary (Galasso, 2017).

In Oregon and Northern California, the Offshore Area boundary is 12 NM off the coastline. Cultural resources discovered in the international waters of the Offshore Area would not be listed in either the state registers or the NRHP. However, it is Navy policy to treat shipwrecks and other unclassified, potentially cultural, obstructions within U.S. territorial waters as though they are eligible for the NRHP within U.S. territorial waters. Known shipwrecks and obstructions off the coast of Oregon and Northern California are shown in Figure 3.10-1.

3.10.1.2.1.1 Olympic Peninsula

There are 34 sites listed on the NRHP that are located within the Olympic National Park or under the Olympic MOA on the Olympic Peninsula, including historic districts, stations, and other architectural resources. Additionally, under the MOA there are three sites (Huelsdonk Homestead, Adam House Copeland, and Smith-Mansfield House) listed in the Washington Heritage Register and three other sites (Wesseler Barn, Barn and the Fletcher, Fred Barn) listed in the Washington Heritage Barn Register.

3.10.1.2.2 Inland Waters

As presented in the 2015 NWTT Final EIS/OEIS, the Inland Waters contain an extensive collection of wrecks and submerged aircraft as shown in Figure 3.10-2, Figure 3.10-3, and Figure 3.10-4. Updated data or newly discovered shipwrecks and obstructions since the publishing of the 2015 NWTT Final EIS/OEIS are shown in red on the figures. Six known shipwrecks lie within 2 miles of the shoreline boundary of Naval Base Kitsap Bangor (Figure 3.10-4). Four shipwrecks are within or near the Naval Undersea Warfare Center Division, Keyport Range Complex, including the *Laurel*, the *Elk*, the *A.R. Robinson*, and the *R.M. Hasty*. Other shipwrecks near the Naval Undersea Warfare Center Division, Keyport Range Company *No. 4*, the *Union*, the *Curlew*, the *Nokomis*, and an unnamed vessel, among others, as shown in Figure 3.10-4 (U.S. Department of the Navy, 2010, 2015).



Figure 3.10-1: Known Shipwrecks and Obstructions in the Offshore Area



Figure 3.10-2: Known Shipwrecks and Obstructions in the Northern Part of the Inland Waters



Figure 3.10-3: Known Shipwrecks and Obstructions in the Central Part of the Inland Waters



Figure 3.10-4: Known Shipwrecks and Obstructions in the Southern Part of the Inland Waters

3.10.1.2.3 Western Behm Canal, Alaska

As presented in the 2015 NWTT Final EIS/OEIS, the Western Behm Canal contains shipwrecks such as steamers, a skiff, a ferry, a salmon troller, and numerous gas screws; these shipwrecks may be eligible for the NRHP. The databases that were queried have been updated since publication of the 2015 NWTT Final EIS/OEIS, and results of the search indicate that there are no new shipwrecks or obstructions within or on the border of the Western Behm Canal (Figure 3.10-5). New or newly found shipwrecks and obstructions occur outside of the Southeast Alaska Acoustic Measurement Facility. Islands shown on Figure 3.10-5 are depicted differently than they were in the 2015 NWTT Final EIS/OEIS. The figure shown in the 2015 NWTT Final EIS/OEIS was incorrect in its depiction of these islands; that depiction has been corrected in this Supplemental.

3.10.1.3 Traditional Cultural Properties

The Navy recognizes the importance of identifying properties of traditional, religious and cultural significance to living communities, the Navy requested input from both tribal and non-tribal communities regarding resources to which they ascribe traditional, religious, or cultural significance within the Study Area. Tribes possess special expertise in assessing the eligibility of resources of traditional, religious, and cultural significance to their communities. Accordingly, consistent with 36 C.F.R. § 800.4(a)(4), Navy requested input from federally recognized Washington tribes regarding properties to which they ascribe traditional, religious and cultural significance within the APE. Some tribes chose to submit comments pertaining to cultural resources, historic properties, and/or their expectations for the NEPA and NHPA processes within the NEPA public scoping period, during the draft Supplemental Environmental Impact Statement (EIS)/Overseas EIS review period, and/or during government-to-government (GtG) consultation meetings about the undertaking. In general, the Navy received input from tribes about traditional activities associated with the Pacific Coast and Salish Sea, including the sacred nature of marine life and associated habitats.

3.10.1.3.1 Offshore Area

Local communities are closely and directly linked to the Olympic Peninsula and the ocean (Offshore Area) in culture, heritage, and tradition. They also provide important historical information and give meaning to the Offshore Area's landscape and waterscape. To date, federally recognized tribes have expressed concerns regarding the adequacy of the Navy's consideration of the tribes' natural, cultural, and social resources and potential impacts on those resources by Navy activities. Additionally, in comments provided by multiple tribes during the scoping and comment periods for the NWTT Supplemental, the tribes requested that the Navy take further steps to inform both the NEPA and NHPA processes and associated Navy responsibilities to identify impacts on the broad human-environment relationship resulting from project activities. Within the Olympic Peninsula, the Olympic National Park's outstanding attributes have also led to international recognition. In 1976, the park was designated as an International Biosphere Reserve in the Man and the Biosphere Program by United Nations Educational, Scientific, and Cultural Organization. In 1981, the park was declared a World Heritage Site by the World Heritage Convention, joining it to a system of natural and cultural properties that are considered irreplaceable treasures of outstanding universal value (U.S. Department of the Interior, 2016). The Olympic National Park was analyzed in detail in the 2015 NWTT Final EIS/OEIS, specifically in Appendix K (World Heritage Site Analysis), and this analysis remains valid for this Supplemental. Six federally recognized tribes of the Olympic Peninsula—the Hoh, Makah, Quinault, Quileute, Lower Elwha Klallam, and Jamestown S'Klallam—have lived in this area since time immemorial and continue to maintain strong relationships to the lands and waters.



Figure 3.10-5: Known Shipwrecks and Obstructions in the Western Behm Canal, Alaska

Consultation with the Hoh Tribe began in November 2014 during prior NWTT environmental reviews. Through ongoing consultation, the Hoh Tribe noted that the tribe considers natural resources to be cultural resources. They requested that the Navy consider the tribe's worldview, values, and belief system particularly as they apply to the lands, waters, and resources of their traditional area. They also requested that the Navy conduct a traditional cultural landscape study to understand impacts on the tribe, including environmental justice concerns, as well as to inform the NEPA and NHPA processes. The Navy has made multiple but has been unsuccessful in efforts to meet with the tribe to learn more.

The Makah Indian Tribe of the Makah Reservation expressed interest in participating in the Section 106 process on June 25, 2018 and requested a GtG meeting in a letter on June 12, 2019. Multiple attempts to schedule meetings have continued. The Navy reached out to the tribe's cultural resources staff on July 3, 2019 to solicit any questions the tribe had about the APE. The Navy also requested information regarding the tribe's knowledge and concerns about properties of traditional religious and cultural significance to them in the APE on November 27, 2019 with a follow up e-mail to the cultural resources staff on January 7, 2020. The Navy did not receive any information regarding properties of traditional, religious, and cultural significance from the tribe and will continue GtG relations.

3.10.1.3.2 Inland Waters

Local communities are closely and directly linked to the Puget Sound (Inland Waters) in culture, heritage, and tradition. They also provide important historical information and give meaning to the Inland Waters' landscape. During the 2015 NWTT EIS/OEIS consultation, the Port Gamble S'Klallam Tribe notified the Navy that the northern Hood Canal represents a network of marine resource locations and other site types within the context of a traditional cultural landscape. The tribe believes that this network of sites is likely to be considered eligible for the NRHP as a traditional cultural property. At the time, there was insufficient information to delineate the portion of the northern Hood Canal wherein the traditional properties and networks were located, and specific historic properties could not be evaluated. During the current consultation, the Navy provided the Port Gamble S'Klallam Tribe with all key Section 106 correspondence, and a staff level discussion regarding NWTT occurred at the 20th Annual National Tribal Historic Preservation Conference, September 1-14, 2018. The Navy has not received additional comments or information regarding properties of traditional, religious and cultural significance to the Port Gamble S'Klallam.

In March 2018, the Lummi Nation resolved the Salish Sea is eligible for listing on the NRHP as a National Historic Landmark and inclusion in the World Heritage List "for its association with the culture, traditions, and history of the Lummi people." The Lummi Nation and the Navy met for GtG consultation on October 29, 2019 to discuss the NWTT proposed action. During the meeting and in a follow-up e-mail, the Lummi Nation made a series of specific requests pertaining to NHPA: (1) Treat Sk'aliCh'elh (Southern Resident killer whales) (que'ihol'mechen "our relatives under the water") as a traditional cultural district eligible for the NRHP, noting that it is already considered eligible for the Lummi Cultural Register; (2) Treat Xw'ullemy (the Salish Sea) as a traditional cultural district eligible for the NRHP, noting that it is already considered eligible for the National Register, noting that it is already considered eligible for the Lummi Cultural Register, noting that it is already considered eligible for the Lummi Cultural Register, 10) Conduct a rigorous and vigorous Section 106 process regarding Sk'aliCh'elh and Xw'ullemy based on the principle of meaningful consultation: full, prior and informed consent, consistent with the Associated Tribes of Northwest Indians Resolution on the Salish Sea. The Navy provided responses on December 27, 2019 from the Commander, U.S. Pacific Fleet and January 24, 2020 and June 26, 2020 from the Commanding Officer of Naval Air Station Whidbey Island.

With regard to Southern Resident killer whales, the Navy understands that while resources such as (1) clean air and water, (2) plants and animals, (3) and intangible cultural values, relationships, or lifeways can be closely related to historic properties, they are not themselves eligible for listing in the NRHP (36 C.F.R. § 800.16(I)(1)). Since living animals are not a property type eligible for the NRHP, the Navy is unable to evaluate them as historic properties. Other environmental laws, however, require the Navy to carefully address potential impacts on Southern Resident killer whales, including the Endangered Species Act and Marine Mammal Protection Act. Analyses of the potential impacts of the proposed action on these resources are presented in the Supplemental EIS/OEIS. The Navy is committed to balancing its mission requirements with its environmental stewardship responsibilities, and this includes best practices and mitigation of potential impacts on the Southern Resident killer whale.

With regard to the Xw'ullemy (the Salish Sea), the Navy does not have sufficient information at this time to adequately delineate, document, and evaluate the physical resource(s) that would constitute a traditional cultural district. While we recognize and respect the tribes' views, we find that an adequate assessment of potential eligibility of Xw'ullemy (the Salish Sea) as a historic property would require study and consultation that significantly exceeds the reasonable and good faith identification efforts commensurate with the nature and magnitude of the proposed undertaking. In reaching this determination, the Navy carefully considered the types and locations of testing and training activities, and their overall consistency with longstanding Navy activities. Furthermore, we believe questions related to the traditional cultural significance of the Salish Sea must be addressed in partnership with affiliated tribes, accountable Federal and State agencies, and other interested parties, as appropriate, and we look forward to working together on them.

As a result of these consultations and careful consideration of information provided, the Navy has awareness that the Hoh Indian Tribe, Lummi Nation, and Port Gamble S'Klallam Tribe all identify resources of traditional, religious, and cultural significance within the APE. Some of those resources, such as the Sk'aliCh'elh (Southern Resident killer whale), are not a property type eligible for the NRHP, and the Navy is unable to directly address them under the Section 106 consultation process. For the Xw'ullemy (the Salish Sea) and potential traditional cultural landscape in the Hood Canal, we find that an adequate assessment of potential eligibility of either of these resources as historic properties would require study and consultation that significantly exceeds the reasonable and good faith identification efforts commensurate with the nature and magnitude of the proposed undertaking. The Navy recognizes that Federal statutory and regulatory processes may not respond fully to tribal concerns. We acknowledge that these laws, including NHPA, may constrain the consideration of the complex, interconnected relationships of traditional resources and represent a continuing challenge to agencies and tribes. The Navy is committed to good faith consultation in the context of GtG relationships, which endure above and beyond consultations limited to a specific law, project, action, or undertaking.

3.10.1.3.3 Western Behm Canal, Alaska

After literary and academic research into this area and in consultation with affected tribes, the Navy found that there were no cultural resources eligible for or listed in the NRHP or as traditional cultural properties identified in the Western Behm Canal.

3.10.1.4 Current Requirements and Practices

As stated in the 2015 NWTT Final EIS/OEIS, the Navy has established standard operating procedures (SOPs) to reduce potential impacts on cultural resources from training and testing activities. Such procedures include using inert ordnance; avoiding known shipwreck sites; not conducting precision

anchoring; explosive mine countermeasure and neutralization activities; or explosive mine neutralization activities involving Navy divers within a certain distance of shipwrecks. See Appendix K (Geographic Mitigation Assessment) of this Supplemental for mitigation measures.

3.10.1.4.1 Avoidance of Obstructions

As stated in the 2015 NWTT Final EIS/OEIS, the military routinely avoids locations of known obstructions, including submerged cultural resources (Appendix K, Geographic Mitigation Assessment), such as shipwrecks. Known obstructions are avoided to prevent injury to crew and damage to sensitive equipment and vessels, and to ensure the accuracy of training and testing activities.

3.10.2 Environmental Consequences

The 2015 NWTT Final EIS/OEIS considered training and testing activities that were proposed to occur in the Offshore Area, Inland Waters, and Western Behm Canal which may have the potential to impact cultural resources in the greater Study Area (including areas subjected to aircraft noise) and historic properties in the more narrowly defined APE. The stressors applicable to cultural resources in the Study Area are:

- Explosive (in-water explosives)
- Physical disturbance, strike, visual intrusions (anchors, settling of military expended materials)
- Acoustic (aircraft noise)
- **Cultural** (limiting access/temporary change of use)
- Visual and atmospheric

This section evaluates how and to what degree potential impacts on cultural resources from stressors described in Section 3.0 (Introduction) may have changed since the analysis presented in the 2015 NWTT Final EIS/OEIS was completed. Table 2.5-1, Table 2.5-2, and Table 2.5-3 in Chapter 2 (Description of Proposed Action and Alternatives) list the proposed training and testing activities and include the number of times each activity would be conducted annually and the locations within the Study Area where the activity would typically occur under each alternative. The tables also present the same information for activities presented in the 2015 NWTT Final EIS/OEIS so that the proposed levels of training and testing under this Supplemental can be easily compared.

The Navy conducted a review of federal regulations and standards relevant to the treatment of cultural resources and reviewed literature published since 2015 for new information on cultural resources that could adjust the analysis presented in the 2015 NWTT Final EIS/OEIS. The analysis presented in this section also considers SOPs discussed in Section 2.3.3 (Standard Operating Procedures) and mitigation measures that are presented in Chapter 5 (Mitigation) and Appendix K (Geographic Mitigation Assessment). The Navy would implement these measures to avoid potential impacts on cultural resources from stressors associated with the proposed training and testing activities and effects on historic properties within the APE.

3.10.2.1 Explosive Stressors

3.10.2.1.1 Impacts from Explosives

Explosive stressors that have the potential to impact cultural resources are shock (pressure) waves and vibrations from explosions (such as explosive torpedoes, missiles, bombs, and projectiles) and cratering created by underwater explosions. While the number of training and testing activities would change under this supplement, the locations of activities presented in the 2015 NWTT Final EIS/OEIS,

Section 3.10.3.1.1 (Impacts from Explosive Shock [Pressure] Waves from Underwater Explosions) remain the same.

No training activities with underwater detonations on or near the ocean bottom are proposed in the Offshore Area or Western Behm Canal under any alternative, and no testing activities with underwater detonations on or near the ocean bottom are proposed in the Western Behm Canal portion of the Study Area under any alternative; therefore, only training activities in the Inland Waters portion of the Study Area and testing activities in the Offshore Area and Inland Waters are analyzed for impacts from underwater explosives shock (pressure) waves and cratering.

3.10.2.1.1.1 Impacts from Explosives Under Alternative 1 Impacts from Explosives Under Alternative 1 for Training Activities

Under Alternative 1, there is no change to the level, type of training, or locations for training using explosives (see Table 3.0-7 in Section 3.0 of this Supplemental) in the Inland Waters; therefore, the analysis in the 2015 NWTT Final EIS/OEIS remains applicable. Training activities with an explosive stressor remain the same and the Navy routinely avoids locations of known obstructions, which includes submerged cultural resources as discussed in the 2015 NWTT Final EIS/OEIS, Section 3.10.3.1.1 (Impacts from Explosive Shock [Pressure] Waves from Underwater Explosions). These events would occur in designated and well-established Explosive Ordnance Disposal (EOD) Training Ranges where no cultural resources, including historic properties, have been identified.

In summary, given that the training activities would be conducted in the same areas as described in the 2015 NWTT Final EIS/OEIS, the amount of shock (pressure) waves, vibrations, or cratering from explosives would not appreciably change the conclusions. Therefore, the conclusion from the 2015 NWTT Final EIS/OEIS, that no impacts on cultural resources from shock waves created by underwater detonations at depth are expected, remains valid. Explosive stressors resulting from underwater explosions creating shock (pressure) waves, vibrations, and cratering of the seafloor would not impact submerged cultural resources within the Study Area or affect historic properties within the APE under Alternative 1 because known submerged cultural resources would be avoided during training exercises.

Impacts from Explosives Under Alternative 1 for Testing Activities

Under Alternative 1, mine countermeasure and neutralization testing and torpedo explosive testing activities are proposed in the Offshore Area. Mine countermeasure and neutralization testing is a new activity as compared to the 2015 NWTT Final EIS/OEIS (see Table 2.5-2). Although mine countermeasure and neutralization testing could occur on the sea floor, explosives would only be used in the water column.

Torpedo explosive testing would also occur in the water column, as described in the 2015 NWTT Final EIS/OEIS (see Table 2.5-2); although tempo would increase, the military routinely avoids locations of known obstructions, which includes submerged cultural resources as discussed in the 2015 NWTT Final EIS/OEIS, Section 3.10.3.1.1 (Impacts from Explosive Shock [Pressure] Waves from Underwater Explosions). Explosives would only be used in the water column at least 75 feet above the seafloor, and the Seafloor Resource Mitigation Area (see Table 5.4-1) creates a 350-yard radius around shipwrecks in which the Navy will not conduct explosive mine countermeasure and neutralization activites. Additionally, the Navy will not place mine shapes, anchors, or mooring devices on the seafloor except in designated ranges where no cultural resources have been identified. Therefore, no impacts on cultural resources or effects on historic properties from shock waves created by underwater detonations are expected.

3.10.2.1.1.2 Impacts from Explosives Under Alternative 2 Impacts from Explosives Under Alternative 2 for Training Activities

Under Alternative 2, the number of proposed training activities that would involve the use of underwater explosives in the Inland Waters would stay the same compared to the number of activities proposed in the 2015 NWTT Final EIS/OEIS (see Table 2.5-1) and would be the same compared to Alternative 1. These events would occur in designated and well-established EOD Training Ranges where no cultural resources, including historic properties, have been identified. Regardless, it is unlikely that these resources could be disturbed by the use of explosives.

In summary, given that the training activities would be conducted in the same areas as described in the 2015 NWTT Final EIS/OEIS, the amount of shock (pressure) waves, vibrations, or cratering from explosives would not appreciably change the conclusions. Therefore, the conclusion from the 2015 NWTT Final EIS/OEIS, that no impacts on cultural resources from shock waves created by underwater detonations at depth are expected, would remain valid. Therefore, the analysis presented in the 2015 NWTT Final EIS/OEIS, Section 3.10.3.1.1 (Impacts from Explosive Shock [Pressure] Waves from Underwater Explosions) and Section 3.10.3.1.2 (Impacts from Explosives – Cratering) remains valid. Explosive stressors resulting from underwater explosions creating shock (pressure) waves, vibrations, and cratering of the seafloor would not impact submerged cultural resources within U.S. territorial waters under Alternative 2 because known submerged cultural resources and obstructions, which may include historic properties, are avoided during training exercises.

Impacts from Explosives Under Alternative 2 for Testing Activities

Under Alternative 2, the number of proposed testing activities that would involve the use of underwater explosives in the Offshore Area would stay the same compared to the number of activities proposed in under Alternative 1. Therefore, underwater explosions under Alternative 2 would not impact cultural resources, including historic properties, as described under Alternative 1.

3.10.2.1.1.3 Impacts from Explosives Under the No Action Alternative

Under the No Action Alternative, the proposed training and testing activities would not occur. Explosive stressors as listed above would not be introduced into the marine environment. Therefore, existing environmental conditions would either remain unchanged or would improve slightly after cessation of ongoing training and testing activities.

Discontinuing the training and testing activities would result in fewer explosive stressors within the marine environment where training and testing activities have historically been conducted. Therefore, discontinuing training and testing activities under the No Action Alternative would not impact cultural resources, including historic properties.

3.10.2.2 Physical Disturbance and Strike Stressors

3.10.2.2.1 Impacts from In-Water Devices

The physical disturbance and strike stressors that may impact cultural resources include military expended materials and seafloor devices.

3.10.2.2.1.1 Impacts from In-Water Devices Under Alternative 1

Impacts from In-Water Devices Under Alternative 1 for Training Activities

Under Alternative 1, there is an overall increase in the use of in-water devices (Table 3.0-13 in Chapter 3.0 of this Supplemental EIS/OEIS), all of which are associated with small, slow-moving unmanned

underwater vehicles. The proposed increase of over 100 in-water devices between both the Offshore Area and the Inland Waters would not change the conclusion presented in the 2015 NWTT Final EIS/OEIS.

As stated in the 2015 NWTT Final EIS/OEIS, the impact of physical disturbance and strike stressors on cultural resources would be insignificant for in-water devices because (1) the types of activities associated with towed systems are conducted in areas where the sea floor is deeper than the length of the tow lines; and (2) devices are operated within the water column and do not contact the seafloor. Activities involving towed and other in-water devices are not expected to impact submerged cultural resources. In-water devices such as crawlers would not disturb the bottom enough to disturb buried or imbedded archaeological resources. Similarly, anchors placed by divers on the seafloor or deployed in a controlled manner by vessels would not dig or plow along the bottom and disturb cultural resources. Therefore, as stated in the 2015 NWTT Final EIS/OEIS, no impacts on cultural resources, including historic properties, are expected from training activities using in-water devices.

Impacts from In-Water Devices Under Alternative 1 for Testing Activities

Under Alternative 1, the number of proposed testing activities involving the use of in-water devices would increase compared to those proposed in the 2015 NWTT Final EIS/OEIS (Table 3.0-13). As described in the 2015 NWTT Final EIS/OEIS, the testing activities in the Offshore Area would include activities where in-water devices would contact bottom substrates, such as with certain types of unmanned underwater vehicles in the Quinault Range Site at Pacific Beach in the tidal zone. This portion of the Study Area is a high-energy environment with sandy bottom/beach where intact cultural resources are unlikely to exist, and known cultural resources would be avoided. Testing activities in the Inland Waters portion of the Study Area would also include activities using in-water devices that contact bottom substrates. For the same reasons as listed for training activities, impacts on cultural resources or historic properties from in-water devices are not anticipated.

Testing activities would occur in the same locations and in a similar manner as were analyzed previously. In spite of these increases, and as described in the 2015 NWTT Final EIS/OEIS, these in-water device activities remain unlikely to impact cultural resources. For the same reasons as listed under the analysis for training activities, testing activities using in-water devices, in the Study Area would not impact cultural resources. For the same reasons as listed under the analysis for training activities, testing activities using in-water devices, in the Study Area would not impact cultural resources, including historic properties.

3.10.2.2.1.2 Impacts from In-Water Devices Under Alternative 2 Impacts from In-Water Devices Under Alternative 2 for Training Activities

Under Alternative 2, training activities with in-water devices would not increase significantly in the Offshore Area or Inland Waters compared to Alternative 1. Therefore, the analysis for Alternative 2 would be the same as under Alternative 1.

Impacts from In-Water Devices Under Alternative 2 for Testing Activities

Testing activities under Alternative 2 that include in-water devices in the Study Area would not increase significantly in the Offshore Area or Inland Waters compared to Alternative 1. Therefore, impacts on cultural resources from testing activities under Alternative 2 would be the same as described under Alternative 1.

3.10.2.2.1.3 Impacts from In-Water Devices Under the No Action Alternative

Under the No Action Alternative, the proposed training and testing activities would not occur. Physical disturbance and strike stressors from in-water devices associated with the Proposed Action would not

be introduced into the marine environment. Therefore, existing environmental conditions would either remain unchanged or would improve slightly after cessation of ongoing training and testing activities.

Discontinuing the training and testing activities would result in fewer physical disturbance and strike stressors within the marine environment where training and testing activities have historically been conducted. Discontinuing training and testing activities under the No Action Alternative would not impact cultural resources, including historic properties.

3.10.2.2.2 Impacts from Military Expended Materials

Military expended materials from activities occurring outside 50 NM from land that could impact cultural resources include heavy inert practice munitions (Table 3.0-14 in Chapter 3.0 of this Supplemental EIS/OEIS), other military materials (Table 3.0-15 in Chapter 3.0 of this Supplemental EIS/OEIS), explosive munitions that may result in fragments (Table 3.0-16 in Chapter 3.0 of this Supplemental EIS/OEIS), and targets (Table 3.0-17 in Chapter 3.0 of this Supplemental EIS/OEIS), that could strike or settle on shipwrecks, submerged aircraft, or other cultural resources.

3.10.2.2.2.1 Impacts from Military Expended Materials Under Alternative 1 Impacts from Military Expended Materials Under Alternative 1 for Training Activities

Under Alternative 1, the number of military materials that would be expended during training activities is generally consistent with the number proposed for use in the 2015 NWTT Final EIS/OEIS. The activities that expend military materials would occur in the same locations and in a similar manner as were analyzed previously. The majority of military training items would be expended in the open ocean, where the settling of military expended materials would occur and where shipwrecks and other cultural resources would less commonly be found. Areas in the Inland Waters where military expended materials would settle to the seafloor are areas with known cultural resources, but for the reasons below military expended materials would not affect them.

There would be no impact of military expended materials on cultural resources under Alternative 1 because: (1) most anticipated expended munitions would be small objects and fragments that would slowly drift to the seafloor after striking the ocean surface, (2) expended materials would not alter the archaeological or cultural characteristics of the submerged cultural resource if they should sink on the resource itself or in the vicinity, and (3) it is unlikely these materials would come into contact with or remain on submerged cultural resource. Therefore, activities involving military expended materials are not expected to impact submerged cultural resources or affect historic properties.

Impacts from Military Expended Materials Under Alternative 1 for Testing Activities

Under Alternative 1, the number of military materials that would be expended during testing activities is generally consistent with the number proposed for use in the 2015 NWTT Final EIS/OEIS. The activities that expend military materials would occur in the same locations and in a similar manner as were analyzed previously. As described under training activities for military expended materials, the majority would be expended in open ocean where shipwrecks and other cultural resources are less commonly found and where the likelihood these materials permanently come to rest on or near these resources is low. For the same reasons as stated in the analysis for military expended materials and impacts on cultural resources under training activities, there would be no impact on submerged cultural resources or effects on historic properties as a result of Alternative 1.

3.10.2.2.2.2 Impacts from Military Expended Materials Under Alternative 2 Impacts from Military Expended Materials Under Alternative 2 for Training Activities

Under Alternative 2, the number of military materials that would be expended during training activities is generally consistent with the number proposed for use in the 2015 NWTT Final EIS/OEIS. The activities that expend military materials would occur in the same locations and in a similar manner as were analyzed previously and do not contain known cultural resources. Therefore, the impacts on cultural resources would be the same as described under training activities for Alternative 1, and activities involving military expended materials would have no impact on submerged cultural resources, including historic properties.

Impacts from Military Expended Materials Under Alternative 2 for Testing Activities

Under Alternative 2, the number of military materials that would be expended during testing activities is generally consistent with the number proposed for use in the 2015 NWTT Final EIS/OEIS. Compared to the 2015 NWTT Final EIS/OEIS numbers, the single category of stationary sub-surface targets is proposed to increase from 5,422 to 7,317 in the Inland Waters and from 7 to 3,335 in the Offshore Area (Table 3.0-17). These targets are typically recovered and, while they are appropriately included in the military expended materials category, pose limited risk of physical disturbance and strike to cultural resources, as known cultural resources are avoided during testing activities. There is an increase in all of the other military expended materials except for mine shapes (non-explosive and recovered) in the Inland Waters, which decrease from 12,982 to 5,266. For the same reasons as stated in the analysis for military expended materials and impacts on cultural resources under training activities, testing activities would not impact submerged cultural resources, including historic properties, as a result of Alternative 2.

3.10.2.2.2.3 Impacts from Military Expended Materials Under the No Action Alternative

Under the No Action Alternative, the proposed testing and training activities would not occur. Physical disturbance and strike stressors from military expended materials associated with the Proposed Action would not be introduced into the marine environment. Therefore, existing environmental conditions would either remain unchanged or would improve slightly after cessation of ongoing training and testing activities.

Discontinuing the training and testing activities would result in fewer physical disturbance and strike stressors within the marine environment where training and testing activities have historically been conducted. Therefore, discontinuing training and testing activities under the No Action Alternative would not impact cultural resources or affect historic properties.

3.10.2.2.3 Impacts from Seafloor Devices

Several training and testing activities include the use of seafloor devices—items that may contact the ocean bottom temporarily. The activities and the specific seafloor devices are (1) precision anchoring training, where ship anchors are lowered to the seafloor and recovered; (2) EOD mine countermeasures training exercises, where some mine targets may be moored to the seafloor; and (3) various testing activities where anchors are placed on the seafloor to hold instrumentation in place.

3.10.2.2.3.1 Impacts from Seafloor Devices Under Alternative 1

Impacts from Seafloor Devices Under Alternative 1 for Training Activities

No training activities with seafloor devices are proposed in the Offshore Area under Alternative 1 (see Table 3.0-18), therefore having no impact on cultural resources in the Offshore Area. Under

Alternative 1, the number of training activities that include the use of ship anchors (as seafloor devices) would increase from 10 to 40, in the Inland Waters as part of the Precision Anchoring exercise. The activity consists of a vessel navigating to a precise, pre-determined location and releasing the ship's anchor to the bottom (see Figure 3.10-2). The ship anchor is later recovered and the activity is complete. These training events should not impact cultural resources because SOPs include avoidance of shipwrecks and obstructions. As stated in the 2015 NWTT Final EIS/OEIS, the impact of seafloor devices such as heavy ship anchors on cultural resources could be damaging; however, impacts are unlikely because seafloor devices are stationary or move slowly across the bottom (in the case of crawlers), and have a selection criterion for precision anchoring to purposefully avoid shipwrecks, obstructions, and other cultural resources. Mine Neutralization EOD Training activities would remain at the same location and event amount (13) under Alternative 1 as discussed in the 2015 NWTT Final EIS/OEIS. These events would occur in designated and well-established EOD Training Ranges where no cultural resources have been identified. It is unlikely that these resources could be disturbed by the use of seafloor devices. Therefore, activities involving seafloor devices are not expected to impact submerged cultural resources or affect historic properties.

Impacts from Seafloor Devices Under Alternative 1 for Testing Activities

Under Alternative 1, the number of testing activities that include the use of seafloor devices would decrease by approximately 20 percent in the Offshore Area for anchors to secure mine shapes, and increase in the Inland Waters from 433 to 512 for anchors (as shown in Table 3.0-18). The majority of the activities involve the temporary placement of anchors on the seafloor. When the test is completed, the anchors are recovered, again at a slow speed. The testing activities in the Western Behm Canal would include activities where seafloor devices would contact bottom substrates. Heavy ship anchors could still damage resources; however, these testing events should not impact cultural resources because the military routinely avoids locations of known obstructions, especially when anchoring ships. As stated in the 2015 NWTT Final EIS/OEIS, the impact of seafloor devices on cultural resources would be unlikely because (1) seafloor devices are either stationary or move slowly along the bottom, causing little or no disturbance of seafloor sediments which may have the potential to contain cultural resources; and (2) the military routinely avoids locations of known obstructions, which include submerged cultural resources. Mine shapes should not impact cultural resources for the same reasons as discussed under training: that the military routinely avoids locations of known obstructions, and that mine activities would only occur in designated and well-established EOD Training Ranges where no cultural resources have been identified. Activities involving seafloor devices are not expected to impact submerged cultural resources, which include historic properties.

3.10.2.2.3.2 Impacts from Seafloor Devices Under Alternative 2 Impacts from Seafloor Devices Under Alternative 2 for Training Activities

Under Alternative 2, the number of training activities that include the use of seafloor devices would be the same as described under Alternative 1 for Precision Anchoring in the Inland Waters. However, mine shape use would increase from 13 to 21 under Alternative 2. For the same reasons as stated under training activities under Alternative 1, activities involving seafloor devices are not expected to impact submerged cultural resources because (1) seafloor devices are either stationary or move very slowly along the bottom, causing little or no disturbance of seafloor sediments which may have the potential to contain cultural resources; and (2) the military routinely avoids locations of known obstructions which include submerged cultural resources. Mine shapes would not impact cultural resources for the same reasons as discussed under training: that the military routinely avoids locations of known obstructions,

and that mine activities would only occur in designated and well-established EOD Training Ranges where no cultural resources have been identified. Therefore, training activities involving seafloor devices are not expected to impact submerged cultural resources or affect historic properties.

Impacts from Seafloor Devices Under Alternative 2 for Testing Activities

Under Alternative 2, the number of testing activities that include the use of seafloor devices would be greater than the number described under Alternative 1. Anchoring would be at 536 activities compared to 512 in the Inland Waters, and 71 rather than 70 in the Offshore Area under Alternative 2. Mine use would increase from 54 to 55 activities in the Offshore Area, from 454 to 478 activities in the Inland Waters, and remain the same in the Western Behm Canal. The majority of the activities involve the temporary placement of anchors on the seafloor. Although these anchors could be descending slowly, reducing risk to cultural resources, heavy anchors could still damage resources. Mine shapes should not impact cultural resources for the same reasons as discussed under training: that the military routinely avoids locations of known obstructions, and that mine activities would only occur in designated and well-established EOD Training Ranges where no cultural resources have been identified. Therefore, testing activities involving seafloor devices are not expected to impact submerged cultural resources, including historic properties.

3.10.2.2.3.3 Impacts from Seafloor Devices Under the No Action Alternative

Under the No Action Alternative, the proposed training and testing activities would not occur. Physical disturbance and strike stressors from seafloor devices associated with the Proposed Action would not be introduced into the marine environment. Therefore, existing environmental conditions would either remain unchanged or would improve slightly after cessation of ongoing training and testing activities.

Discontinuing the training and testing activities would result in fewer physical disturbance and strike stressors within the marine environment where training and testing activities have historically been conducted. Therefore, discontinuing training and testing activities under the No Action Alternative would not impact cultural resources in the Study Area or affect historic properties in the APE.

3.10.2.3 Acoustic

The public and American Indians have expressed the belief that cultural properties, ceremonies on the Olympic Peninsula, and traditional cultural locations would be impacted significantly by noise caused by the implementation of the Proposed Action. The Navy modeled the noise from aircraft while conducting training activities within the Olympic MOA and W-237A, and while transiting to and from the Olympic MOA and W-237A, in order to provide a discussion of the potential impacts on these resources (see Appendix J, Airspace Noise Analysis for the Olympic Military Operations Area). The Noise Study concluded that the noise exposure within the Olympic MOA and W-237A is within the DoD's Noise Zone 1, with Day Night Average Sound Levels below 65 A-weighted decibels (dBA) for the entire area studied. For the cumulative noise metrics (Day-Night Average Sound Level [DNL]), the noise modeling results show that the area underneath the Olympic MOA would experience a cumulative noise exposure of less than 37 dBA for both the reference (current) activities and the proposed activities. The slightly higher noise levels for the proposed activities are a reflection of the 13.5 percent projected increase in sorties over the current level of activities (an increase from approximately 2,300 to 2,600). For the lower ground elevations, the computed noise levels are correspondingly lower, as the distance would increase between the airborne source and the receptor on the ground (see Figure J-2 and Table J-11 in Appendix J, Airspace Noise Analysis for the Olympic Military Operations Area). For comparison, 35 dBA would be considered the natural ambient noise level of a wilderness area, and 39 dBA the level of a rural residential area.

The noise exposure within the Olympic MOA and W-237A is within the DoD's Noise Zone 1 (the frequency and intensity of sound events does not exceed 65 dB DNL). Therefore, there would be no significant impact on cultural resources from jet noise in the Olympic MOA. With the highest modeled noise exposure for NWTT activities less than 37 dB DNL, well below a level with the potential to affect historic properties, the areas subject to aircraft noise are not included in the APE. Accordingly, aircraft noise would not affect historic properties.

3.10.2.4 Limiting Access/Temporary Change of Use

Limits to access and temporary changes of use in the Study Area are discussed in Section 3.11 (American Indian and Alaska Native Traditional Resources); please see Section 3.11.2 (Environmental Consequences) for the analysis and conclusions.

3.10.2.5 Visual and Atmospheric

Visual and atmospheric stressors should result from observation of aircraft, their lights, and condensation trails (aka contrails), which are a visual representation of atmospheric changes. Continuing aircraft flights within the altitude restrictions of established air space, however, may result in minimal and temporary changes to a visual setting on the ground but unlikely to result in more-than-de-minimis visual intrusions or unwanted aesthetic impacts. This limits the extent to which a visual impact from the observation of aircraft would be experienced at a cultural resource location. Contrails may readily evaporate but do mark the temporary presence of aircraft, albeit nonintrusive due to altitude and distance, especially when the presence of contrails from private and commercial aircraft are taken into consideration. Due to the altitude of the aircraft, only minimal and temporary impacts would occur as a result of visual and atmospheric stressors to cultural resources, and no historic properties would be affected.

3.10.2.6 Impacts on Cultural Resources and Effects on Historic Properties

NEPA requires consideration of the impacts on cultural resources within the human environment, represented by the NWTT Study Area in this Supplemental. Accordingly, the Navy considered potential impacts on cultural resources, including areas over which aircraft operate, and no cultural resources would be impacted by stressors associated with the Proposed Action. As detailed in the 2015 NWTT Final EIS/OEIS, historic properties are a subset of cultural resources and fall within the purview of the NHPA. The NHPA APE is a subarea of the NEPA Study Area. The Navy has found that no historic properties would be affected by activities associated with the proposed undertaking within the defined APE.

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