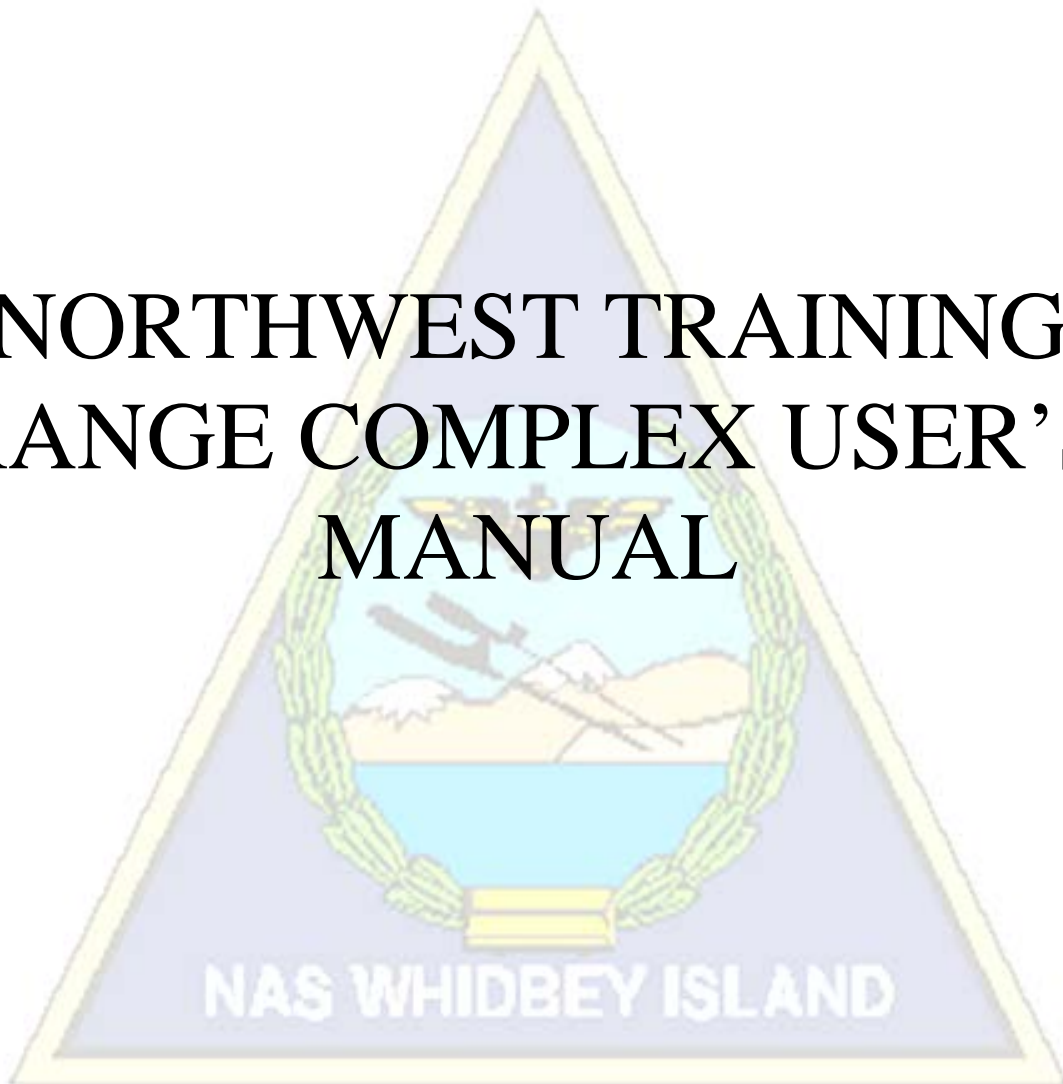


# NORTHWEST TRAINING RANGE COMPLEX USER'S MANUAL





DEPARTMENT OF THE NAVY  
NAVAL AIR STATION WHIDBEY ISLAND  
3730 NORTH CHARLES PORTER AVENUE  
OAK HARBOR, WASHINGTON 98278-5000

NASWHIDBEYINST 3770.1H  
N3  
30 Nov 16

NAS WHIDBEY ISLAND INSTRUCTION 3770.1H

From: Commanding Officer, Naval Air Station Whidbey Island

Subj: NORTHWEST TRAINING RANGE COMPLEX USER'S MANUAL

Ref: See appendix A

1. Purpose. To promulgate the Northwest Training Range Complex User's Manual (NWTRC User's Manual) that provides a detailed description of procedures and review of Naval Air Station (NAS) Whidbey Island's airspace, terrestrial and maritime training ranges. This manual incorporates guidance provided in references (a) through (ad) and outlines safety precautions and procedures for scheduling; describes Special Use Airspace (SUA) and surface facilities and establishes procedures for training within NAS Whidbey Island NWTRC Operations Areas (OPAREA).

2. Cancellation. NASWHIDBEYINST 3770.1G. This instruction is a complete revision and should be reviewed in its entirety. Specific changes to this revision incorporate the following information:

a. Special Use Airspace (SUA) / Air Traffic Control Assigned Airspace (ATCAA) / Military Assigned Responsibility Separation Airspace (MARSA) Procedures updated.

b. Restricted Area 5701 A, B, C, D, E; Restricted Area 5706 and Boardman Military Operating Area (MOA) airspace boundary coordinates were brought in line with Federal Aviation Administration (FAA) nationally recognized coordinates.

c. Naval Weapons System Training Facility (NWSTF) Boardman Main Bull's-eye has been noted as area for all approved types of practice munition use. Main Target Area changed to Main Target Area/Impact Area.

d. Changed Condon point from Initial Point (IP) to Control Point run-in. Initial Point Cecil added to support lineup with run-in line with center of the RCZ II/Condon Easement area per RAICUZ.

e. Added Pacific Northwest Electronic Warfare Range scheduling procedures and priorities.

f. Added Helo Gunnery Procedures for NWSTF Boardman.

g. Chapter nine modified and brought into line with NWTT EIS/OEIS and current NMFS LOA.

### 3. Policy and Guidance

a. The NWTRC OPAREA has air, surface and subsurface operating areas off the Washington coast and has air and surface operating areas in inland Oregon and Washington. It includes the area covered by W-237, R-6701, R-5701, R-5706, A-680, NWSTF Boardman, Boardman MOA/ATCAA, Okanogan MOA/ATCAA, Molson ATCAA, Roosevelt MOA/ATCAA, Republic ATCAA, Olympic MOA/ATCAA, Chinook MOA and various air and surface training areas as defined in this instruction. The OPAREA is used for various air, surface, subsurface, air to surface and surface to air exercises.

b. Per reference (a), Department of the Navy (DON) Airspace Procedures Manual, real time joint-use of SUA will be the goal and is the only reasonable manner to conduct training in peacetime. At those times when SUA is not activated or being used by the designated using agency, every reasonable attempt must be made to provide the airspace to other users. DON activities must ensure a mutual use doctrine that provides for timely turnover of airspace to the Federal Aviation Administration (FAA). Activities requiring exclusive-use airspace must be identified and must provide justification.

c. Per reference (a), Fleet Area Control and Surveillance Facility (FACSFAC), San Diego, California is designated as the DON Regional Airspace Coordinator (RAC) and is the focal point and central clearinghouse for all SUA matters that pertain to any DON airspace related activity within their regional area of responsibility. NAS Whidbey Island acts as a direct airspace liaison to the RAC and is responsible for the scheduling and management of all airspace matters that pertain to the NWTRC User's Manual OPAREA.

### 4. Recommended Changes. Forward recommended changes to:

Mail: Commanding Officer  
NAS Whidbey Island (N331)  
3730 N Charles Porter Ave  
Oak Harbor, WA 98278-5300

Message: NAS WHIDBEY ISLAND WA/N3/N33/N331//  
FAX: DSN 820-1942, COMM (360) 257-1942  
Telephone: DSN 820-2877, COMM (360) 257-2877  
E-mail: WHDB\_Range\_Schedules\_All\_Hands@navy.mil

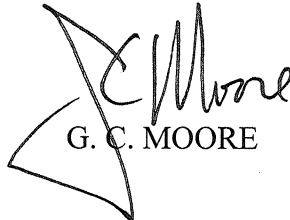
5. Records Management. Records created as a result of this instruction, regardless of media and format, will be managed per SECNAV M-5210.1 of January 2012.

6. Review and Effective Date. Per OPNAVINST 5215.17A, NAS Island Operations Department will review this instruction annually on the anniversary of the effective date to ensure applicability, currency, and consistency with Federal, Department of Defense, Secretary of the Navy and Navy policy and statutory authority using OPNAV 5215/40

30 Nov 16

Review of Instruction. This instruction will automatically expire 5 years after effective date unless reissued or canceled prior to the 5-year anniversary date, or an extension has been granted.

7. Forms. NAS Whidbey Island forms required by this instruction are available from the NAS Whidbey Island Range Schedules Division. Contact Range Schedules at (360) 257-2877 for information and assistance.



G. C. MOORE

Releasability and Distribution:

This instruction is cleared for public release and is available electronically only via Department of the Navy Issuances Web site,

<https://g2.cnid.navy.mil/NASWHIDBEYISLANDWA/SitePages/Home.aspx>



## TABLE OF CONTENTS

Chapter 1	GENERAL	
1.	General	1-1
2.	Noise Abatement Policy	1-1
3.	Definitions	1-1
4.	Warnings, Cautions, and Notes	1-2
5.	General Prudential Rules	1-2
6.	User Responsibilities	1-3
7.	NAS Whidbey Island, Range Schedules Responsibilities	1-3
8.	Safety Precautions	1-4
9.	Regulations Applicable To Both Air and Surface Units	1-4
10.	Additional Safety Precautions for Firing Exercises by Surface Units	1-5
11.	Surface Gunnery Exercises	1-6
12.	Anti-Aircraft (AA) Gunnery	1-6
13.	Anti-Submarine Warfare (ASW) Exercises	1-6
14.	Additional Safety Precautions/Range Regulations for Air Units	1-6
15.	Air-To-Air Gunnery Exercises	1-8
16.	Air-To-Surface Exercises	1-8
17.	Air-To-Air Missile Exercises	1-8
18.	Other Missile Exercises	1-9
19.	Depleted Uranium (DU) Ammunition	1-9
Chapter 2	SCHEDULING PROCEDURES	
1.	General	2-1
2.	Scheduling	2-1
3.	Changes and Cancellations	2-2
4.	Priorities	2-2
5.	Range Request Form	2-3
6.	Requests Via Message	2-3
7.	Electronic Warfare (EW) and Chaff Requests	2-4
8.	Training After Action Reports	2-4
Chapter 3	NWTRC SPECIAL USE AIRSPACE/AIR TRAFFIC CONTROL ASSIGNED AIRSPACE TERRESTRIAL RANGES AND OTHER OPAREA	
1.	General	3-1
2.	Okanogan MOA/ATCAA	3-3
3.	Roosevelt A MOA/ATCAA	3-4
	Exhibit 3-1 OKANOGAN/ROOSEVELT MOAs	3-6
	Exhibit 3-2 MOLSON AND REPUBLIC ATCAA	3-6
4.	Olympic A MOA/ATCAA	3-7
	Exhibit 3-3 OLYMPIC MOA AND ATCAA BOUNDARIES	3-7

5. MOA/ATCAA Filing Procedures	3-8
6. W-237 and the Olympic Coast National Marine Sanctuary	3-8
Exhibit 3-4    W-237, OCNMS AND OLYMPIC MOA	3-11
7. Use of Ordnance Within W-237	3-13
8. Notice to Mariners (NTM)	3-14
9. W-237 Preferential Drop Zones	3-14
Exhibit 3-5    DROP ZONE LOCATIONS	3-16
10. W-237 Preferential Routings	3-16
Exhibit 3-6    W-570 and W-93	3-17
11. SUA/ATCAA Real-Time Coordination	3-18
12. SUA/ATCAA Operating Procedures	3-18
Exhibit 3-7    OKANOGAN AND ROOSEVELT SAFE HAVEN	3-21
Exhibit 3-8    OLYMPIC SAFE HAVEN	3-22
Exhibit 3-9    W-237 SAFE HAVEN	3-22
13. Electronic Warfare (EW) Training	3-23
Exhibit 3-10   PNW EW RANGE AIRSPACE	3-24
14. Canadian Maritime Pacific (MARPA) Coordination	3-26
15. Flare Drops	3-26
16. Post Ship Overhauls Requirements and Navy 3 And Navy 7 Areas	3-26
Exhibit 3-11   NAVY 3 AND 7	3-26
Exhibit 3-12   NAVY 3 SURFACE OPERATIONS AREA	3-27
Exhibit 3-13   NAVY 7 SURFACE OPERATIONS AREA	3-27
17. Whidbey Island Survival Area	3-27
18. Crescent Harbor Naval Operations Area	3-28
19. Navy Exchange (NEX) LZ/DZ	3-28
Exhibit 3-14   NEX LZ, CRESCENT HARBOR AND SURVIVAL AREA	3-29
20. CHINOOK A and B MOAs	3-29
21. Restricted Area R-6701, Admiralty Inlet Boundaries	3-29
22. Alert Area A-680, OLF Coupeville Boundaries	3-30
Exhibit 3-15   CHINOOK MOA, R6701 AND A680	3-30

23. Lake Hancock Training Range	3-31
Exhibit 3-16 LAKE HANCOCK TRAINING RANGE	3-31
Chapter 4 NAVAL WEAPONS SYSTEM TRAINING FACILITY BOARDMAN, OREGON	
1. Description	4-1
Exhibit 4-1 NWSTF BOARDMAN AIRSPACE	4-1
Exhibit 4-2 NEW NWSTF BOARDMAN AIRSPACE	4-3
2. Air Operating Procedures	4-5
Exhibit 4-3 CP AND IP LINE UP WITH EASEMENTS	4-7
Exhibit 4-4 LOCATION AND RADIATION ANGLE	4-9
3. NWSTF Boardman Ground Operating Procedures	4-
11	
Exhibit 4-4 SMALL ARMS USE AREAS	4-12
4. NWSTF Boardman Range Priorities	4-12
5. Demolition Training Range	4-13
Chapter 5 UNMANNED AERIAL SYSTEM USE IN THE NWTRC	
1. UAS use in, R6701, W-237, R5701 and R5706	5-1
2. Loss Signal Requirement	5-1
Exhibit 5-1 LAKE HANCOCK TRAINING RANGE BOUNDARY	5-2
Exhibit 5-2 R6701 AND NAVY 7 OPARA BOUNDARIES	5-2
Exhibit 5-3 BOUNDARIES OF W237	5-3
Exhibit 5-4 NWSTF BOARDMAN LAND BOUNDARY	5-4
3. Joint UAS Agency use and De-Confliction Plan for Boardman Restricted Area 5701 and 5706	5-4
Exhibit 5-5 NWSTF UAS WEST/EAST SEPARATION BOUNDARY	5-5
4. Scheduling	5-6
Chapter 6 DARRINGTON OPERATING AREA	
1. General	6-1
2. Area Boundaries	6-1
Exhibit 6-1 DARRINGTON EAST AND WEST	6-2

3. Operating Procedures	6-2
Chapter 7      MILITARY TRAINING ROUTES AND AIR REFUELING ROUTES	
1. General	7-1
Exhibit 7-1      NWTRC MTRs	7-1
Chapter 8      CVN OPERATING PROCEDURES	
1. General	8-1
2. Coordination	8-1
3. Pre-Sail Coordination Messages	8-2
4. Flight Planning	8-3
5. At-Sea Coordination	8-4
6. Communications	8-4
7. Bingo/Diverts to Shore Facilities	8-5
8. Conduct of Flight	8-6
9. Strait of Juan De Fuca (SOJDF) Carrier Operations	8-6
Exhibit 8-1      CVN LOCAL OPERATIONS AREA	8-7
Chapter 9      NWTRC MITIGATION REQUIREMENTS FOR TRAINING AND TESTING	
1. Training Activities Covered	9-1
2. Policy and Protective Measures Assessment Protocol (PMAP)	9-1
3. Background and Compliance	9-1
4. Record Keeping	9-2
5. Active Sonar Systems	9-2
APPENDICES	
A      REFERENCES	A-1
B      FORMS	B-1
Exhibit B-1      NWTRC Range and Airspace Request Form for All Special Use Airspace NWSFT (NASW 3350/01)	B-2
Exhibit B-2      Northwest Training Range Complex Unmanned Aircraft System Information Request Form (NASW 3700/53)	B-4
C      LAKE HANCOCK TRAINING RANGE ACCESS BRIEF	C-1
D      NWSTF BOARDMAN TARGET CONSTRAINTS	D-1
E      LIST OF ABBREVIATIONS/ACRONYMS	E-1

CHAPTER 1  
GENERAL

1. General. Per reference (a), Naval Air Station (NAS) Whidbey Island is assigned scheduling responsibility to manage offshore and inland operating areas dedicated for military use by surface and air platforms. This manual contains a comprehensive listing of all Northwest Training Range Complex (NWTRC) Operations Areas (OPAREA). Chapters 2 through 7 include detailed descriptions of these areas. All military training (to the maximum extent possible) should be conducted within the established OPAREAs.
2. Noise Abatement Policy. It is Commanding Officer, NAS Whidbey Island policy to conduct required training and operational flights with a minimum impact on surrounding communities. The importance of maintaining continued good relations with the public and other federal agencies dictate strict compliance with the provisions contained in reference (d) and this instruction. Each aircrew will be familiar with the noise profiles of their aircraft and must be committed to minimizing noise impacts without compromising operational requirements and safety considerations.
3. Definitions
  - a. Air Combat Maneuvers (ACM). Flight of two or more aircraft involved in abrupt changes in flight path/altitude that is scheduled as an exclusive event.
  - b. Air Traffic Control Assigned Airspace (ATCAA). ATCAA of defined vertical/lateral limits are established by ATC for the purpose of separating military training activities from other IFR traffic. ATCAA is designed and established in controlled airspace normally above 18,000 feet Mean Sea Level (MSL) to accommodate daily training missions and planned exercises.
  - c. Basic Fighter Maneuvers (BFM). Flight of two or more aircraft involved in basic training involving abrupt changes in flight path/altitude that is scheduled as an exclusive event.
  - d. Exclusive Use. Scheduling term which indicates an area is reserved for the scheduling unit exclusively. Non-participants are prohibited from entering the area.
  - e. Co-Use/Concurrent Use. Scheduling terms which indicate an area maybe reserved/scheduled/activated for separate and segregated operations conducted simultaneously if approved by and briefed with the scheduling unit.
  - f. Cold Area. OPAREA wherein no hazardous operations are being conducted.
  - g. Hot Area. Air or surface OPAREA wherein ordnance/munitions are being fired/dropped or other operations are being conducted that presents a hazard to non-participants.
  - h. Notice to Airman (NOTAM). A broadcast or published flight advisory to disseminate information affecting safety of flight, issued on a temporary basis.

- i. Notice to Mariners (NTM). A broadcast or published navigation advisory to disseminate information affecting navigation within a limited geographic area.
  - j. Practice Bomb. Ordnance that normally has only a spotting charge to mark the location of where it landed. This is non-high explosive munitions.
  - k. Red Range. Is a cease fire/check fire call. Designated condition whereupon a situation, perceived or actual, exists that poses a hazard to personnel, equipment, property, or livestock.
  - l. Restricted Area. Regulated airspace that when activated restricts use to only participating aircraft. For non-participating aircraft entry may only be granted by the controlling authority.
  - m. Scheduling Authority. Exercises administrative control of OPAREA and coordinates and schedules the usage.
  - n. Special Use Airspace. Airspace wherein activities must be confined because of their nature, and/or wherein limitations are imposed on non-participating aircraft. Includes Military Operations Areas (MOA), Warning Areas, Alert Areas, and Restricted Areas.
  - o. Warning Area. A specified area over international waters where hazardous activities may occur.
  - p. Military Training Route (MTR). Designated airspace where military low altitude, high-speed navigation and tactics may be flown in excess of 250 KIAS below 10,000 feet MSL.
  - q. Military Operations Area (MOA). An airspace area designated for non-hazardous military activity to segregate non-participating Instrument Flight Rules (IFR) aircraft from participating military operations and to inform the Visual Flight Rules (VFR) pilot when such activity is being conducted.
4. Warnings, Cautions, and Notes. The following definitions apply to "WARNINGS," "CAUTIONS," and "NOTES" found throughout this manual.
- a. Warning. An operating procedure, practice or condition, etc., that may result in injury or death if not carefully observed or followed.
  - b. Caution. An operating procedure, practice or condition that may result in damage to equipment if not carefully observed or followed.
  - c. Note. An operating procedure, practice or condition that must be emphasized.

5. General Prudential Rules

- a. This manual has been prepared per references (a) and (d). It will not be construed as modifying or superseding directives issued by higher authority.

b. NWTRC OPAREA users will comply with this manual and are expected to exercise their best judgment when encountering conditions not covered.

6. User Responsibilities. The primary purposes of OPAREA are to support the needs of the user. To permit effective utilization of all areas, the user also has certain responsibilities.

a. Unless otherwise directed by higher authority, users must comply with procedures, weather minimums, and ordnance employment restrictions contained in this manual.

b. Schedule proposed activities within the NWTRC directly with NAS Whidbey Island, Range Schedules Division.

c. Provide a minimum of 60 days prior notice for large-scale (i.e., Fleet Exercise (FLEETEX), Readiness Exercise (READEX), Operational Readiness Inspection/Exercise, Advanced Tactical Assessment (ORI/ORE, ATA)) events.

7. NAS Whidbey Island Range Schedules Responsibilities

a. Facilitate the daily scheduling of NWTRC airspace and range-space as described in this manual. Act as the primary interface between tenant and transient customers and the various other jurisdictional or control entities.

b. Provide de-confliction and assign priority to airspace, range-space and surface use at NWSTF Boardman.

c. As required, provide briefings concerning scheduling and use of NAS Whidbey Island and/or NWTRC assets.

d. Coordinate services, assist User's and ensures procedures are understood for the issuance of NOTAMS/NTM, schedules, and prescribe additional regulations as necessary.

e. Submit usage reports per references (a), (e), and (f).

f. Schedule Fleet Carrier Landing Practice (FCLP), Carrier Controlled Approaches, CV-1 Tactical Air Control and Navigation (TACAN) Approaches, Night Vision Device (FCLP/CCA/CV1/NVD) periods at NAS Whidbey Island and FCLP at Outlying Field (OLF) Coupeville.

g. Schedule Hot Pit periods at NAS Whidbey Island.

h. Schedule all VFR Military Training Routes (VRs), IFR Military Training Routes (IRs), MOAs, and W-237 areas.

i. Schedule all surface events for NWSTF Boardman.



## 8. Safety Precautions

a. General. Safety precautions and range regulations must be observed to mitigate personnel injury or property damage resulting from training events within the NWTRC. These safety precautions and range regulations are not intended to conflict with, or to reduce, responsibilities assigned by competent authority. In any situation, the unit Commanding Officer or senior aviator in the flight must use proper discretion and implement control measures to ensure training events are conducted safely. The officer in charge or the non-commissioned officer in charge of surface events on NWSTF Boardman must use authoritative discretion and implement control measures to ensure training event safety.

b. Scope. This chapter sets forth the overall general safety precautions and range regulations applicable to NWTRC. Those safety precautions and range regulations, which apply only to specific operating areas or targets, are included in the appropriate chapter of this manual.

## 9. Regulations Applicable to Both Air and Surface Units

a. Clear Range. The operational commander conducting a training event must be satisfied that the range is clear prior to beginning the event. Procedures to ensure a clear range may be established based on visual and/or radar surveillance. The Officer Conducting Exercise (OCE) will take into consideration all applicable factors when arriving at the final decision, such as urgency of the mission, density of air and surface traffic, Marine Mammal Mitigation, local visibility, distance offshore, type and expected reliability of the ordnance and the availability, accuracy, reliability, and completeness of radar coverage. When surveillance of the range is conducted partially or solely by radar, surface and/or airborne, commanders must ensure that the radar is operated and monitored by qualified personnel. Regardless of what surveillance method is used, there must be assurance that the RANGE IS CLEAR before any expenditure of weapons. Live fire exercises will be suspended at any time visual or radar warning indicates the presence of an interloping marine mammal, vessel, personnel, livestock, and/or aircraft within the firing range or near the designated target.

b. Firing with Cloud Cover. No ordnance will be expended through overcast, broken or greater than 3/10 scattered cloud layers, unless the criteria established in reference (d) are met.

c. Firing Areas. Firing exercises are permitted only within the NWSTF Boardman/R-5701A and the offshore warning areas within W-237. Live-fire in the offshore warning areas must be per COMTHIRDFLTINST 3120.2B and in coordination with Commander, Naval Surface Force, U.S. Pacific Fleet (COMNAVSURFPAC), San Diego, CA and scheduled no less than two weeks prior to date of event. Exercises must be within the area/target assigned.

d. Firing Exercises near Commercial Shipping lanes.

(1) Units conducting live firing exercises within W237E, should be cognizant of and avoid as practicable the vessel shipping lanes; particularly the Tofino Traffic Area of Operations. This area is defined as north of 48N latitude and east of 127W longitude and within 50 Nautical Miles (NM) of Vancouver Island.

(2) Units intending live firing exercises within the Tofino Traffic Area of Operations must ensure communications are established and maintained with “Tofino Traffic” on Channel 74 VHF-FM. The following notifications must be made:

(a) Prior to the commencement of any live firing exercise, report position to Tofino Traffic to ensure a safe firing position.

(b) Provide Tofino Traffic with the danger radius, firing bearing (if known), expected commencement time, and anticipated duration of the exercise.

(c) Notify Tofino Traffic of completion of the exercise.

e. Red Range, Cease Fire. All firing will be secured when “Red Range or Cease Fire” orders are received from competent authority. Competent authority means the following: the unit’s Commanding Officer or senior aviator in the flight must use proper discretion and implement control measures to ensure training events are conducted safely; the officer in charge or the non-commissioned officer in charge of surface events on NWSTF Boardman must use authoritative discretion and implement control measures to ensure training event safety; and the Commanding Officer of each ship or unit conducting live-fire exercises assumes responsibility for “Range Control” and “Range Safety” and is responsible for compliance with and enforcement of safety precautions and range regulations. If any doubt exists as to the safety of continued firing or bombing, any member of a flight or surface event must call *“Red Range, Cease Fire”* and indicate the reason the range is foul. In the event of such a call, all firing or bombing must cease until the concern is remedied.

f. Green Range. “Green Range” call indicates the lane of fire and target area are clear of ships, small-craft, marine mammals or any other obstruction that may interfere with a safe weapons launch. During surface events the Commanding Officer of the ship will make the determination and call “Green Range.” During aircraft events, the flight lead will make the determination and call “Green Range.” For NWSTF Boardman events, the officer in charge of the live-fire event will determine “Green Range” and ensure the target area is clear of personnel, animals, and aircraft.

#### 10. Additional Safety Precautions for Firing Exercises by Surface Units

a. Responsibility. The Commanding Officer of each ship or unit conducting live-fire exercises assumes responsibility for “Range Control” and “Range Safety” and is responsible for compliance with and enforcement of safety precautions and range regulations.

b. Lookouts. A sufficient number of qualified lookouts must be posted during all firing exercises.

c. Observers. A fully qualified check sight safety observer must be stationed at each firing turret or mount.

d. Sight Setters. Sights will be set continuously in elevation and deflection during all firing exercises.

e. Bravo Flag. The Bravo Flag must be displayed close-up during all firing exercises.

11. Surface Gunnery Exercises

a. Clear Range. The range must be clear to the extreme range of the gun.

b. Safety Bearings. The safety bearings established by FXP-3E must be observed.

c. Communications. During surface gunnery exercises involving a towed target, two-way communications must be maintained between the firing unit and the towing vessel.

12. Anti-Aircraft (AA) Gunnery

a. Restrictions. No heavy AA firing (3 inch or larger) will be conducted when the projectile would pass closer than 1,000 yards to the towing or controlling planes or other non-target aircraft.

b. Communications. AA firing exercises involving a towed target or a target aircraft may be conducted only while two-way communications between the firing unit and the towing or controlling aircraft are maintained.

13. Anti-Submarine Warfare (ASW) Exercises. ASW exercises with potential undetonated (UNDET) munitions must be conducted per reference (c). Additionally, no live depth charges or other live underwater ordnance will be dropped for exercise purposes except as authorized by COMNAVSURFPAC, San Diego, CA.

14. Additional Safety Precautions and Range Regulations for Air Units

a. Responsibility. The flight lead conducting live-fire exercises assumes responsibility for "Range Control" and "Range Safety" and is responsible for compliance with and enforcement of safety precautions and Range regulations.

b. Visual Inspection. Pilots must visually inspect ordnance equipment and armament loading prior to take-off.

c. Ordnance Jettison. Live ordnance may be jettisoned "*safe*" in the target area. The pilot is responsible for clearing the target area prior to any ordnance deliveries. Planned ordnance drops in offshore warning areas with UNDET munitions must be per reference (c) and coordinated with COMNAVSURFPAC, San Diego, CA, , and scheduled no less than two weeks prior to the event.

d. Hung Ordnance. Detailed instructions for hung ordnance at NAS Whidbey Island are contained in the Air Operations Manual, reference (g).

e. Air Separation. Users will be responsible for separation of their units from other air units, both military and civilian. VFR air traffic is not prohibited from entering Special Use Airspace (SUA) below FL180. Pilots are required to remain within the vertical and lateral confines of assigned airspace as specified in an ATC Clearance and to maintain a vigilant see-and-avoid lookout doctrine. The ATC Controlling Agency restricts non-participating IFR air traffic to at least 1,000' above/below SUA and Air Traffic Control Assigned Airspace (ATCAA), or 5 nm laterally of the outer boundary. Additionally, if MARSA has not been coordinated with aircraft operating within adjacent SUA /ATCAAs, pilots must maintain at least 2 ½ nm laterally from all interior subarea boundaries of SUA/ATCAAs.

**NOTE**

**SUA/ATCAA WITHIN THE NWTRC IS SCHEDULED FOR EXCLUSIVE USE UNLESS OTHERWISE REQUESTED BY THE USER.**

f. Target Identification. Positive identification of the target by each participating pilot must be attained by making an identification pass over the intended target prior to dropping or firing ordnance. The only exceptions to this will be supervised competitive exercises.

g. Simulated Attacks on Submarines. Aircraft simulated attacks on friendly submarines are prohibited unless pre-coordinated and specifically scheduled.

h. Clearance from Helicopters. Aircraft flying below 700 feet should maintain a minimum lateral clearance of at least one-half mile from all helicopters over water.

i. Disturbance of Wilderness Areas/Noise Sensitive Areas. When it is necessary to fly over known habitat or designated noise sensitive areas, an altitude of at least 3,000 feet must be maintained, conditions permitting except when in compliance with an approved:

(1) Traffic or approach pattern.

(2) VR or IR route.

(3) SUA.

(4) Noise Sensitive Areas: Breeding farms, resorts, beaches, and those areas designated by the U.S. Department of Interior as national parks, national monuments, and national recreational areas are examples of noise sensitive areas.

j. Reporting Danger to Life or Property. It is mandatory that a report be made as soon as possible to NAS Whidbey Island Operations Duty Officer, DSN 820-2681/2682 or COMM (360) 257-2681 by any pilot who:

(1) Expends ordnance, jettisons a drop tank, fires a gun, rocket, or any other missile outside the limits of a regularly scheduled impact area.

(2) Upon return from flight, discovers missing or unaccounted for ordnance.

(3) Considers that any ammunition expended or any flight maneuvers employed may have endangered the life or property of another person, or who considers that such other person may reasonably believe that their life or property had been endangered.

(4) Unintentional Electromagnetic Reconnaissance (EMR)/Electronic Attack (EA) event that would have the possibility of causing radar interference.

15. Air-To-Air Gunnery Exercises. Minimum firing range from the shoreline for air-to-air over water gunnery at any altitude must be 10 miles outbound and 15 miles inbound within the assigned air area.

a. Armament Switch. The master armament switch must be in the “SAFE” position except, after proper clearance, for a live (HOT) run.

b. Range Clear. The range must be clear before each firing run is started.

c. Target Safety Cone. No firing may be done within the 15-degree safety cone of the target or if the firing aircraft is below the level of the tow plane.

d. Break-aways. All break-aways must be up and over the target line of flight. On losing sight of target, a break-away must be executed immediately.

e. Visibility. Pilots must maintain visual contact with the target and other aircraft in the formation, and the flight path must permit safe break-away at all times during a run.

16. Air-To-Surface Exercises

a. Characteristics of Ordnance. Pilots will be fully cognizant of the safety precautions applicable to the ordnance carried including the installed fuses.

b. Populated Areas. Aircraft carrying service/target equipment or practice ordnance must avoid passing directly over ships or populated areas.

c. Armament Switch. The master armament switch must be in the "SAFE" position except, after proper clearance, for a live (HOT) run.

d. Direction of Runs. All runs must be made in the direction specified by the target observer, and no runs may be made at an angle of less than 30 degrees with the course of a towed surface target.

17. Air-To-Air Missile Exercises. Air-to-air missiles may be expended within the offshore operating areas. Because of the varying characteristics of missiles used, varying safety precautions and attack methods must be adhered to. Each mission must be specifically briefed and necessary safety precautions applied. The brief will be attended by the NWTRC Range Program Manager or designated representative. No missile will be fired when there is any possibility that it will not fall in a safe area within the assigned operating area. No missile will be fired when the possibility exists that it may be locked on anything other than the assigned target. When head-on runs are used, both the target and firing aircraft must be under the positive control of a qualified Air Intercept Controller.

18. Other Missile Exercises. Surface-to-Air, Air-to-Surface and Surface-to-Surface missiles may be expended within offshore OPAREA. Because of the varying characteristics of the missiles used by the Navy, specific safety precautions and attack methods germane to each missile type must be utilized. Each mission or exercise must be briefed and the necessary safety precautions applied. No missile must be fired when there is a chance it will not fall in a safe area within the OPAREA. A risk mitigation plan per reference (z) must be submitted to NWTRC Range Complex Coordinator prior to any live missile event.

19. Depleted Uranium (DU) Ammunition. Per reference (h), paragraph 5.4.9, Commanders will limit the use of munitions that contain submunitions or DU to uses required to support national security objectives. Per reference (i) PACFLT units are to no longer conduct routine deployments, training or non-combat operations with 20MM DU.

CHAPTER 2  
GENERAL SCHEDULING AND REPORTING PROCEDURES

1. General. To maximize the training opportunities for all NWTRC OPAREA users, when scheduling, request the minimum area, airspace, and time necessary to complete the mission.
2. Scheduling. The Data Collection and Scheduling Tool (DCAST) is an Official Use Only web-based scheduling protocol and can be accessed through the internet. DCAST is the required system for local user's to schedule SUA and local airfield events. Detailed procedures for use are outlined on the DCAST website under the Tutorial Link. To request access go to <https://dcast.csd.disa.mil/fork.php> and follow the on screen prompts.

a. NAS Whidbey Island Range Schedules Division. All users of the NWTRC must schedule their proposed activities with NAS Whidbey Island Range Schedules Division. Range Schedules is the sole scheduling authority for NWTRC. DCAST is the primary means to schedule events. Email is the secondary means to schedule events. If unable to schedule via DCAST or email events may be scheduled via the following medium:

Mail:           Commanding Officer  
                  NAS Whidbey Island  
                  3730 N. Charles Porter Ave  
                  Oak Harbor, WA 98278-5300

Message:       NAS WHIDBEY ISLAND  
                  WA//N3/N33/N331//

Telephone:     DSN: 820-1872  
                  COMM: (360) 257-1872  
                  or  
                  DSN: 820-2877  
                  COMM: (360) 257-2877

E-mail:         WHDB\_Range\_Schedules\_All\_Hands@navy.mil

b. Hours of Operations. Range Schedules Division hours of operation are 0700-1600 Pacific Time (PT), Monday through Friday except holidays. Schedulers are located in the NAS Whidbey Island Operations Building (Building 385).

c. Scheduling Times. Scheduling requests must be made no later than 1530 PT the day prior to desired usage and not later than 1530 PT on Friday for weekends/Mondays. In order to prevent scheduling conflicts, requests will be accepted from designated Scheduling Officers or the Operations Officer only.

d. Notice to Mariners (NTM). Requests for offshore Warning Areas requiring a NTM must be received at least one week in advance. The using agency is responsible for sending all NTM's.



e. Notices to Airman (NOTAM). When scheduling SUA, times must be requested a minimum of 2 1/2 hours (4 1/2 hrs for W-237H/J) prior to desire usage to allow Seattle Center time for issuance of necessary NOTAMs. Note: Boardman SUA is active Monday through Friday 1530-0759Z; all other times require six hour prior notice to allow Seattle Center time for issuance of necessary NOTAMs.

### 3. Changes and Cancellations

a. Times. Users of SUA/MTRs must notify Range Schedules Division of requested changes and/or cancellations as soon as they occur.

b. NOTAM and NTM. Change, including additions, to scheduled SUA times must be requested a minimum of 2 1/2 hours (4 and a 1/2 hrs for W-237H/J and 6 hrs for Boardman SUA) prior to desire usage to allow for issuance of necessary NOTAMs and flight information. Units are responsible for ensuring Coastguard District 13 is notified of any changes to NTMs. Ensure appropriate range clearance measures have been implemented including broadcast on VHF-CH 16. Additionally, if in US waters, broadcast intentions on VHF-CH 13 before commencing any hazardous training event.

c. Extensions. Flights must not extend beyond the scheduled period without approval from the controlling agency. Requests will normally be approved provided there is not a conflict with succeeding flights or release of airspace to the controlling agency. Aircraft must vacate the training area when instructed by the controlling agency or at the expiration of scheduled time.

d. Military Training Routes (MTRs). In the interest of flight safety, and to allow Flight Service Stations sufficient time to disseminate advisory information, MTR entry times are firm; slides are not authorized. MTR requests must be scheduled before 1530 the day prior. Same-day scheduling may be accomplished between 0700–1130 PT for entry times after 1400 PT. IR entry times must be within 5 minutes of scheduled time. VR entry times must be within 3 minutes of scheduled time. The standard speed on each route is 420 kts. Speeds can be adjusted and flown between 250-540 kts, but require de-confliction through range schedules.

4. Priorities. Range Schedules will attempt to schedule OPAREA and services as requested; however, the NWTRC gives priority to Navy centric training over other DOD requirements. Accordingly, the following priority system is established for initial scheduling. Per Commander Third Fleet OPOD 201 the priority list is not intended to be all-inclusive and is used for planning purposes only. Exceptions may be made in support of urgent mission requirements and Commander Third Fleet OPOD 201 may be use to resolve scheduling conflicts.

a. PRI 1: Major exercises or special circumstance. EODMU 11 Detachment Northwest has PRI 1 for the Demolition Training Range in NAS Whidbey Island Survival Area.

b. PRI 2: WADS, EAWS events.

c. PRI 3: VAQ-129 for all MTR, MOA (Except Roosevelt) and Boardman Complex until 1200 PT the day prior. After 1200 the day prior, accommodations may be made to support Navy

training needs provided the necessary coordination and de-confliction with applicable units has taken place.

- d. PRI 4: NAS Whidbey Island-based fleet squadrons in order of nearest deployment dates
- e. PRI 5: Other U.S. Navy units and other U.S. forces
- f. PRI 6: Foreign military forces
- g. PRI 7: All other authorized users

h. Conflict Resolution. When a scheduling conflict occurs, Range Schedules Division will determine priority of use and make every effort within operational guidelines to coordinate adjustments to areas, times, altitudes, etc., to resolve the conflict. Units that do not receive their requested times will be notified and offered other available airspace or time periods.

i. Scheduling. In order to prevent scheduling conflicts, requests will be accepted from designated Scheduling Officers or the Operations Officer only. Fleet Replacement Squadron (VAQ-129) has scheduling priority (per Paragraph 2.4.c) until 1200 PT the day prior for all MTRs, Olympic MOA, Okanogan MOA, the Boardman Complex and PNW EWR. After 1200 PT the day prior, these areas are scheduled on a first-come-first-served basis. All other areas including Roosevelt MOA and Warning Areas are reserved on a first-come-first-served basis. Airspace for special exercises or events should be reserved at minimum 14 days in advance to allow for coordination. All times will be submitted in Zulu. Emergent military requirements for NAS Whidbey Island squadrons will be taken into consideration for first-come-first-served areas.

5. Range Request Form. For scheduling access to Crescent Harbor OPAREA, Sea Plane Survival Area, NWSTF Boardman, and Lake Hancock Training Range, Appendix A must be filled out and returned to Range Schedules. The use of these surface areas must be reviewed by the NWTRC Program Manager to ensure that all safety and environmental concerns are addressed.

## 6. Requests Via Message

### a. Message Format

(1) Requests for OPAREA generally should be UNCLASSIFIED and must be in the following format (omit non-applicable items):

- (a) Requesting Unit (ship/unit or squadron name) and number of participants.
- (b) Type exercise.
- (c) Exclusive or co-usage (exclusive for hazardous operations).
- (d) Area or target requested, include desired altitudes.

- (e) Date and COMEX/FINEX of each period.
  - (f) Weapon information.
  - (g) Type of weapon or aircraft.
  - (h) Type of ordnance to be used.
  - (i) For ships: Max ordinate and range of weapon. For aircraft: Max operating altitudes or max ordnance altitude.
  - (j) Type target.
  - (k) Acceptable alternate area(s), date(s), or time(s) and amplifying remarks.
  - (l) TACP/TAC (A) requirements.
  - (m) Remarks and/or services requested to include a point of contact and phone number. CV operations request for discrete mode III codes from NAS Whidbey Island Air Traffic Control for operations within W-237 or CVOA.
- b. Requests for multiple exercises/areas should be submitted in the same message using the format described above.

#### 7. Electronic Warfare (EW) and Chaff Requests

a. EW Area. The Continental United States EW Area extends to the outer boundaries of the coastal Air Defense Identification Zone (ADIZ) or a perimeter 150 NM seaward from the coastal states, whichever is farther, except where this infringes on territorial limits of other nations/states. EW procedures can be found in reference (j), (Performing Electronic Attack in the United States and Canada for Tests, Training, and Exercises.)

b. EW Coordination. All EW activity (including chaff) must be coordinated by the unit planning the EW mission with the Navy Marine Corps Spectrum Office Puget Sound, WA (360) 396-7075 and the NAS Whidbey Island Frequency Manager (360) 257-2181. Reference (d) applies. In addition, use of chaff requires coordination with Western Air Defense Sector, DQM/AST; telephone DSN 382-4604.

8. Training After Action Reports (AAR). Per references (k) and (l) and in order to meet U.S. Fish and Wildlife and National Marines Fisheries Service letters of authorization requirements per reference (b) all units must track and report munitions expenditures in the NWTRC. AAR are required for all training activities that use munitions. Times should be recorded in Zulu. Messages can be sent via email or standard message format. Send emails to WHDB\_Range\_Schedules\_All\_Hands@navy.mil

- a. Unit (ship/unit or squadron name) and number of participants.

- b. Type exercise.
- c. Area.
- d. Date and COMEX/FINEX of each period.
- e. Type of weapon used.
- f. Type of ordnance expended.
- g. Amount of ordnance expended.
- h. Type target.
- i. Amplifying remarks.
- j. Point of contact and phone number.

h. Coordination required. Range Schedules will advise any ship/unit or squadron scheduling a training event involving live fire and/or use of munitions that a Training AAR is required. Upon receipt a Training AAR, Schedules should forward it to the Range Complex Sustainment Coordinator for required reporting.

CHAPTER 3  
NWTRC SPECIAL USE AIRSPACE/AIR TRAFFIC CONTROL ASSIGNED AIRSPACE  
TERRESTRIAL RANGES AND OTHER OPAREAs

1. General

a. Description. NWTRC SUA, in addition to W-237, includes the Okanogan, Roosevelt, Boardman, Chinook and Olympic MOAs, Alert Area 680, and Restricted Areas 6701, 5701 and 5706. NWTRC SUA is designated by the FAA for the purpose of supporting military training requirements, such as combat tactics, aerobatics, intercepts, instrument training, aerial refueling and formation flight training while providing the necessary separation to non-participating aircraft. In all areas avoid Class B, C, and D, airspace and Minimize disturbance to persons and property on the ground.

b. Operating Hours. All SUA except for Boardman MOA, Restricted Areas and Alert Area 680 are published "continuous by NOTAM" and are available 24 hours each day. 2 1/2 hours-prior notice is required to allow sufficient time to disseminate the NOTAMs (4½ hours for W-237H and W-237J). Boardman MOA/R5701/R5706 is active 1530-0759Z Monday-Friday; other times by NOTAM 6 hours in advance. Alert Area 680 April-October 1800-0930Z Monday - Friday; November-March 1800-0759Z Monday - Friday; other time by NOTAM.

c. Scheduling. Events involving multiple units/commands that extend 2 or more days must be coordinated at least 30 days in advance to comply with Range Schedules and Seattle ARTCC requirements. Refer to Chapter 2 paragraph 4.i for additional scheduling procedures. ATCAA is available above FL180 and may be requested with at least two and half hours prior notice.

d. Communications. Communications in SUA must be maintained with the designated controlling agency, additionally the Okanogan, Roosevelt, Boardman and Olympic SUA have assigned Range; UNICOM/M frequencies for military aircraft that all pilots must monitor while in the respective SUA (Table 1).

30 Nov 16

## AIR CONTROL/RANGE COMMUNICATIONS

AREA	AGENCY	CALL SIGN	FREQUENCY
Okanogan MOA	Seattle ARTCC	Seattle Center	291.6 MHZ
Roosevelt MOA	Seattle ARTCC	Seattle Center	291.6 MHZ
Olympic MOA	Seattle ARTCC	Seattle Center	291.6 MHZ
R6701, Alert Area 680 and Lake Hancock Training Range	NAS Whidbey Approach	Whidbey Approach	126.05 MHZ or 343.75 MHZ Verify Approach Control frequencies with Range Schedules prior to event.
W237 A-G	Seattle ARTCC	Seattle Center	319.2/125.1 MHZ (North) 269.0/128.3 MHZ (South)
W237 H and J	Oakland ARTCC	Oakland Center/ McClellan Airways	HF 8843 or 5574
Okanogan MOA	UNICOM/M (Military only)		252.5 MHZ
Roosevelt MOA	UNICOM/M (Military only)		258.5 MHZ
Olympic MOA	UNICOM/M (Military only)		234.55 MHZ
W237 A-G, H and J	UNICOM/M (Military only)		227.5 MHZ
NWSTF Boardman Range	RANGE;UNICOM/ M (Military only)	Boardman Range	326.875 MHZ or 126.2 MHZ FM (ground to ground) 140.450
Boardman MOA/Restricted Area	Seattle ARTCC	Seattle Center	269.35 MHZ
Darrington Operations Area	NAS Whidbey Approach Seattle ARTCC	Whidbey Approach Seattle Center	270.8 MHZ 270.3 MHZ
ADIZ and W-237	Western Air Defense Sector	Bigfoot	364.3 MHZ

Table 1

**NOTE**

Boardman MOA, R-5701, R-5706 and NWSTF Boardman are covered in more detail in Chapter 4.

30 Nov 16

2. Okanogan MOA/ATCAA (see Exhibit 3-1 OKANOGAN AND ROOSEVELT MOA)

a. Okanogan A Boundaries.

(1) Beginning at:

49° 00' 00"N 119° 45' 04"W to  
49° 00' 00"N 119° 20' 04"W to  
49° 00' 00"N 119° 00' 04"W to  
48° 03' 30"N 119° 00' 04"W to  
48° 05' 00"N 120° 20' 04"W to  
48° 06' 30"N 119° 45' 04"W to  
48° 08' 29"N 120° 27' 34"W to  
48° 54' 40"N 120° 03' 04"W to  
48° 54' 40"N 119° 45' 04"W to the point of beginning.

(2) Altitudes: 9,000 feet MSL to, but not including, FL180. ATCAA: FL180 to, but not including, FL240.

b. Okanogan B Boundaries.

(1) Beginning at:

48° 08' 29"N 120° 27' 34"W to  
48° 54' 40"N 120° 03' 04"W to  
48° 54' 40"N 119° 45' 04"W to  
48° 06' 30"N 119° 45' 04"W to the point of beginning.

(2) Altitudes: 300 feet AGL to, but not including, 9,000 feet MSL, excluding that airspace 1,500 feet and below within a 3NM radius of the following airports: Twisp Municipal Airport, WA and the Methow Valley State Airport, Winthrop, WA. (Underlies Western portion of Okanogan A.)

c. Okanogan C Boundaries.

(1) Beginning at:

48° 05' 00"N 119° 20' 04"W to  
49° 00' 00"N 119° 20' 04"W to  
49° 00' 00"N 119° 00' 04"W to  
48° 03' 30"N 119° 00' 04"W to the point of beginning.

(2) Altitudes: 300 feet AGL to, but not including, 9,000 feet MSL, excluding that airspace 1,500 feet and below within a 3NM radius of the Hart (Pvt) airport (Underlies eastern portion of Okanogan A.)

d. Molson ATCAA. (see Exhibit 3-2 MOLSON AND REPUBLIC ATCAA )

(1) MOLSON NORTH ATCAA Boundaries:

(a) Beginning at:



49°00'00"N/119°45'04"W to  
48°54'40"N/119°45'04"W to  
48°54'40"N/120°03'04"W to  
48°30'30"N/120°16'00"W to  
48°09'00"N/119°00'00"W to  
49°00'00"N/119°00'04"W to  
49°00'00"N/119°20'04"W to the point of beginning.

(b) Altitudes: FL240 to and including FL500.

(2) MOLSON South Low/High ATCAA.

(a) Beginning at:

48°30'30"N/120°16'00"W to  
48°08'29"N/120°27'34"W to  
48°03'30"N/119°00'04"W to  
48°06'30"N/118°51'30"W to  
48°09'00"N/119°00'00"W to the point of beginning.

(b) Altitudes:

MOLSON SOUTH LOW: FL240 to, but not including, FL290.

MOLSON SOUTH HIGH: FL290 to and including FL500. (5 days advance coordination required.)

**“WARNING”**

VFR civil traffic is authorized in this MOA. Military aircrew must be alert for non-participating traffic.

3. Roosevelt A MOA/ATCAA. (see Exhibit 3-1 OKANOGAN AND ROOSEVELT MOA)

a. Roosevelt A Boundaries

(1) Beginning at:

49° 00' 00"N 119° 00' 04"W to  
49° 00' 00"N 117° 23' 04"W to  
49° 00' 00"N 116° 48' 04"W to  
48° 22' 00"N 117° 28' 04"W to  
48° 22' 00"N 118° 06' 04"W to  
48° 19' 30"N 118° 14' 34"W to  
48° 03' 30"N 119° 00' 04"W to the point of beginning.

(2) MOA Altitudes: 9,000 feet MSL to, but not including, FL180.

(3) ATCAA: FL180 to, but not including, FL240.

b. Roosevelt B Boundaries

(1) Beginning at:

48° 03' 30"N 119° 00' 04"W to  
49° 00' 00"N 119° 00' 04"W to  
49° 00' 00"N 117° 23' 04"W then via a line parallel to and 2 NM west of the west  
bank of the Pend Oreille River, WA to  
48° 38' 00"N 117° 25' 04"W to  
48° 38' 00"N 118° 10' 34"W then via a line parallel to and 2 NM west of the west  
bank of the Columbia River, WA to  
48° 19' 30"N 118° 14' 34"W to the point of beginning.

(2) Altitudes: 300 feet AGL to, but not including, 9,000 feet MSL. Excluding the  
airspace 1,500 feet and below within a 3 NM radius of the Ferry County Airport, Republic, WA.  
(Underlies a portion of Roosevelt A.)

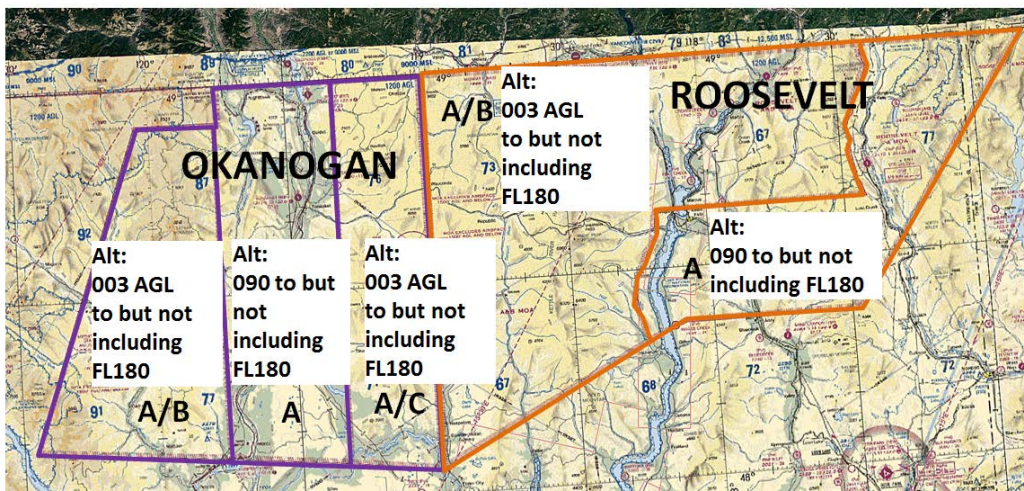
c. Republic ATCAA. (see Exhibit 3-2 MOLSON AND REPUBLIC ATCAA)

(1) REPUBLIC ATCAA

(a) Beginning at:

49°00'00"N/119°00'04"W to  
48°09'00"N/119°00'00"W to  
48°06'30"N/118°51'30"W to  
48°19'30"N/118°14'34"W to  
48°22'00"N/118°06'04"W to  
48°22'04"N/117°28'04"W to  
49°00'00"N/116°48'04"W to  
49°00'00"N/117°23'04"W to the point of beginning

(b) Altitudes: FL240 to and including FL500.



Okanogan and Roosevelt MOAs  
ATCAAs are from FL180 to but not including FL240

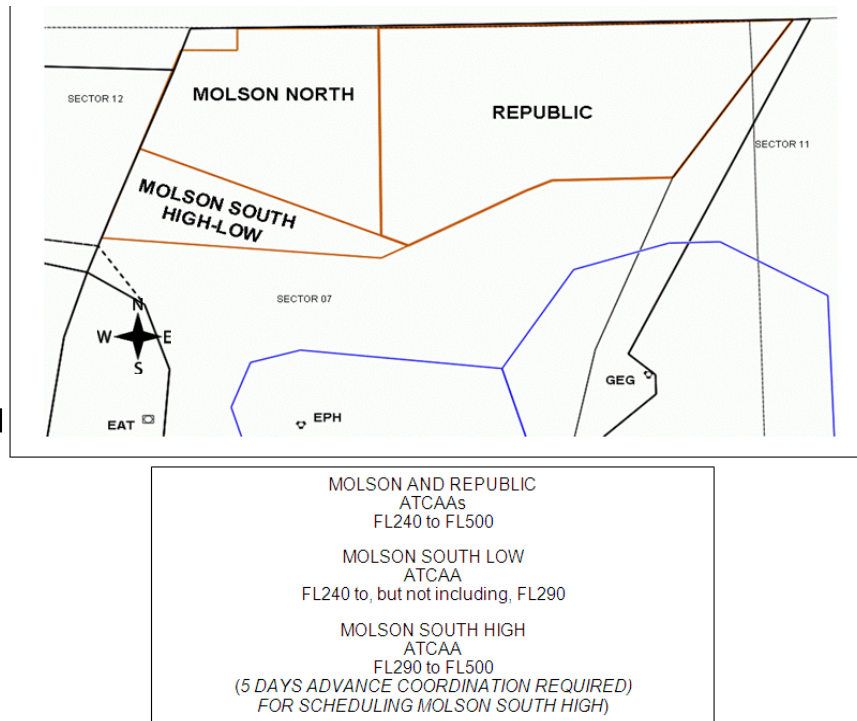


30 Nov 16

**Exhibit 3-1 OKANOGAN AND ROOSEVELT MOA**

**“WARNING”**

VFR civil traffic is authorized in all MOAs. Military aircrew must be alert for non-participating traffic



**Exhibit 3-2 MOLSON AND REPUBLIC ATCAA**

**4. Olympic A MOA/ATCAA. (see Exhibit 3-3 OLYMPIC MOA AND ATCAA BOUNDARIES)**

**a. Olympic A Boundaries**

**(1) Beginning at:**

47° 41' 29"N 124° 33' 05"W to  
 47° 41' 29"N 123° 43' 35"W to  
 47° 37' 59"N 123° 40' 05"W to  
 47° 14' 59"N 123° 40' 05"W to  
 47° 05' 59"N 124° 14' 53"W then northbound 3 miles parallel to the shoreline, to the point of beginning.

(2) Altitudes: 6,000 feet MSL to, but not including, FL180, excluding that airspace below 1,200 feet AGL.

(3) ATCAA: FL180 up to and including FL350.

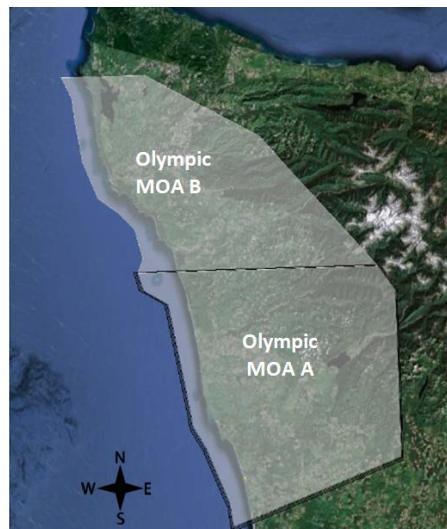
b. Olympic B Boundaries

(1) Beginning at:

48° 08' 59"N 124° 48' 05"W to  
48° 08' 59"N 124° 30' 35"W to  
47° 59' 59"N 124° 07' 05"W to  
47° 41' 29"N 123° 43' 35"W to  
47° 41' 29"N 124° 33' 05"W then northbound 3 miles parallel to the shoreline to  
the point of beginning.

(2) Altitudes: 6,000 feet MSL to, but not including, FL180, excluding that airspace below 1,200 feet AGL.

(3) ATCAA: FL180 up to and including FL350.



**Exhibit 3-3 OLYMPIC MOA AND ATCAA BOUNDARIES**

**“WARNING”**

VFR civil traffic is authorized in this MOA. Military aircrew must be alert for non-participating traffic.

National Weather Service releases Weather balloons in vicinity of Quillayute Airport (UIL). Lat/Long: 47-56-11.7000N / 124-33-45.4810W

Launches take place daily approximately at 0400 and 1600.

5. MOA/ATCAA Filing Procedures. For Okanogan MOA/ATCAA file via FAIROPS (Whidbey Island-based units) or to EPH 320/055 and indicate MOA delay time.

a. For Roosevelt MOA/ATCAA file via FAIROPS (Whidbey Island-base units) or to EPH 005/060 and indicate MOA delay.

b. For Olympic A MOA/ATCAA file via FAIROPS (Whidbey Island-based units) or to HQM 327/033 and indicate MOA delay.

c. For Olympic B MOA/ATCAA file via FAIROPS (Whidbey Island-based units) or HQM 335/066 and indicate MOA delay.

d. For aerial refueling operations, receiver aircraft flight plans must include, in the remarks section, the call sign(s) of tanker aircraft and a statement that MARSA will be applied.

6. W-237 and the Olympic Coast National Marine Sanctuary

a. W-237 Description. W-237 is divided into sectors and includes Warning Areas W-237A through W-237H and W-237J. This offshore area is used for joint air/surface training operations such as electronic attack, electronic support, missile firings, air-to-surface bombing, air-to-air firing, combat tactics, intercepts, aerial refueling, instrument training, aerobatics, and formation flight training. The W-237 is also a designated Anti-Submarine Warfare (ASW) range for coordinated ASW operations, sonobuoys, practice depth charges, and smoke markers.

b. W-237 Operating Hours. W-237 areas are published intermittently by NOTAM, and are available 24 hours a day. For areas A through G, a minimum of 2 1/2 hours prior notice is required to allow sufficient time to disseminate NOTAMs. A minimum of 4 1/2 hours prior notice is required if areas H or J are scheduled.

c. W-237 Scheduling. Missions or exercises involving multiple units/commands (i.e., Advanced Training Assessment (ATA), Operational Readiness Inspections/Evaluations (ORI/ORE), etc.) that extend two or more days must be coordinated at least 60 days in advance. Refer to Chapter 2, paragraph 4.i for additional scheduling procedures.

d. W-237 Communications

(1) Seattle ARTCC

Radio: Refer to Table 1

Telephone: DSN 891-1241

COMM (253) 351-3523

(2) Western Air Defense Sector (Bigfoot)

Radio: Refer to Table 1

Telephone: DSN 382-4352

COMM (253) 984-4604

(3) Canadian Air Defense Sector (Sidecar)

Radio: 364.2 MHZ

Telephone: DSN 319-628-6701

COMM (705) 494-2011

(ID Section)

DSN 382-4604

DSN 319-628-6419 (MCC)

(4) SAFE HAVEN UNICOM/M: Refer to Table 1

e. W-237 Airspace Boundaries

(1) Warning Area W-237A Low/High

(a) Beginning at:

47° 31' 59"N 125° 41' 05"W to  
47° 41' 29"N 124° 33' 05"W then southbound 3 NM parallel to the shoreline  
ending at  
47° 05' 59"N 124° 14' 53"W to  
47° 00' 29"N 124° 30' 05"W to  
46° 49' 59"N 125° 24' 05"W to the point of beginning.

(b) Altitudes:

1. W-237A Low - Surface to, but not including, FL230.
2. W-237A High - FL230 to, but not including, FL500.

(2) Warning Area W-237B Low/High

(a) Beginning at:

48° 08' 59"N 125° 56' 05"W to  
48° 08' 59"N 124° 48' 05"W then southbound 3 NM parallel to the shoreline  
ending at  
47° 41' 29"N 124° 33' 05"W to  
47° 31' 59"N 125° 41' 05"W to the point of beginning.

(b) Altitudes:

1. W-237B Low - Surface to, but not including, FL230.
2. W-237B High - FL230 up to, but not including, FL500.

(3) Warning Area W-237C

(a) Beginning at:

48° 08' 59"N 125° 56' 05"W to  
47° 00' 00"N 125° 28' 03"W to  
47° 00' 00"N 126° 15' 00"W to  
48° 08' 59"N 126° 15' 00"W to the point of beginning.

(b) Altitudes: Surface to unlimited

(4) Warning Area W-237D

(a) Beginning at:

47° 00' 00"N 125° 28' 03"W to  
46° 49' 59"N 125° 24' 05"W to  
46° 53' 24"N 125° 06' 47"W to

46° 32' 00"N 125° 18' 00"W to  
46° 06' 00"N 126° 15' 00"W to  
47° 00' 00"N 126° 15' 00"W to the point of beginning.

(b) Altitudes: Surface to unlimited

(5) Warning Area W-237E

(a) Beginning at:

48° 29' 37"N 125° 09' 01"W to  
48° 08' 59"N 125° 05' 00"W to  
48° 08' 59"N 127° 54' 44"W to  
48° 20' 00"N 128° 00' 00"W to the point of beginning.

(b) Altitudes: Surface to FL270.

(6) Warning Area W-237F

(a) Beginning at:

48° 08' 59"N 126° 15' 00"W to  
47° 00' 00"N 126° 15' 00"W to  
47° 00' 00"N 127° 22' 26"W to  
48° 08' 59"N 127° 54' 44"W to the point of beginning.

(b) Altitudes: Surface to unlimited

(7) Warning Area W-237G

(a) Beginning at:

47° 00' 00"N 126° 15' 00"W to  
46° 06' 00"N 126° 15' 00"W to  
45° 48' 35"N 126° 50' 49"W to  
47° 00' 00"N 127° 22' 26"W to the point of beginning.

(b) Altitudes: Surface to unlimited

(8) Warning Area W-237H

(a) Beginning at:

48° 20' 00"N 128° 00' 00"W to  
47° 00' 00"N 127° 22' 26"W to  
47° 00' 00"N 129° 00' 00"W to  
48° 21' 02"N 130° 00' 00"W to the point of beginning.

(b) Altitudes: Surface to FL270

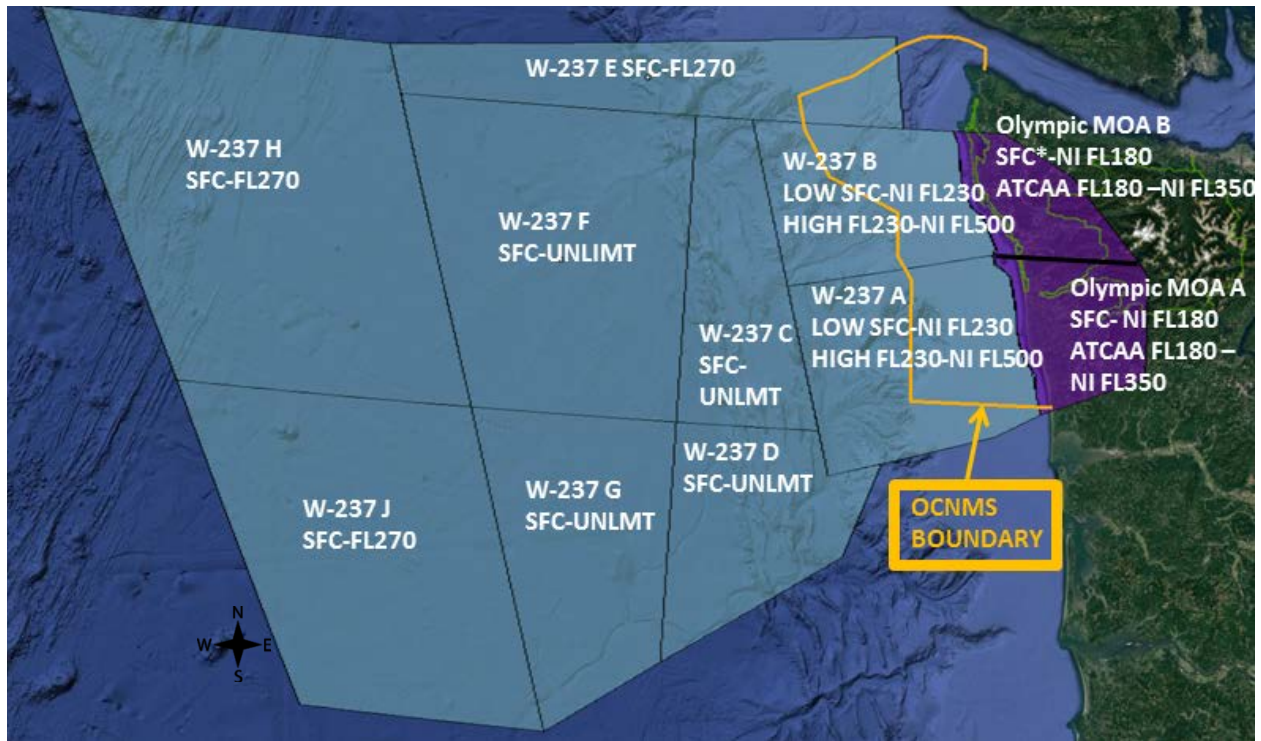
(9) Warning Area W-237J

(a) Beginning at:



47° 00' 00"N 127° 22' 26"W to  
45° 48' 35"N 126° 50' 49"W to  
45° 50' 00"N 128° 10' 00"W to  
47° 00' 00"N 129° 00' 00"W to the point of beginning.

(b) Altitudes: Surface to FL270



**EXHIBIT 3-4 W-237, OCNMS AND OLYMPIC MOA**

**\*-NI = to but not including**

30 Nov 16

**“WARNING”**

VFR civil traffic is authorized in the Warning Areas. Military aircrews must be alert for non-participating traffic.

f. Olympic Coast National Marine Sanctuary (OCNMS) (see Exhibit 3-4 W-237, OCNMS AND OLYMPIC MOA). The OCNMS was established off the coast of Washington in 1994 as part of the Marine Mammal Protection Act. The OCNMS underlies the western portion of the OLYMPIC A&B MOA and the eastern parts of W-237 A&B. Bombing is prohibited; HE munitions are prohibited within the OCNMS boundaries. Live firing of guns, missiles, torpedoes, and chaff (chaff use must meet requirements per 13.d.) and ASW operations are permitted (Per reference (m) paragraphs (d)(1)(i)(B) and (D)). All Department of Defense military activities must be carried out in a manner that avoids, to the maximum extent practicable, any adverse impacts on Sanctuary resources and qualities (Per reference (m) paragraph(d)(1)). OCNMS Rules (Per reference (m) Subpart O) do not apply to non-U.S. military activities in international waters and airspace (beyond the 3 NM national boundary limit).

(1) OCNMS Boundaries. The following coordinates define the sanctuary:

(a) Beginning at:

47° 07' 45"N 124° 11' 02"W to  
47° 07' 45"N 124° 58' 12"W to  
47° 35' 05"N 125° 05' 00"W to  
47° 40' 05"N 125° 09' 44"W to  
47° 50' 01"N 125° 09' 42"W to  
47° 57' 13"N 125° 29' 13"W to  
48° 07' 33"N 125° 38' 20"W to  
48° 15' 00"N 125° 40' 54"W to  
48° 18' 21"N 125° 30' 02"W to  
48° 20' 15"N 125° 22' 52"W to  
48° 29' 59"N 125° 04' 13"W to  
48° 26' 46"N 125° 09' 16"W to  
48° 27' 09"N 125° 08' 29"W to  
48° 28' 08"N 125° 05' 52"W to  
48° 29' 43"N 125° 00' 11"W to  
48° 29' 56"N 125° 59' 19"W to  
48° 30' 13"N 124° 54' 57"W to  
48° 30' 21"N 124° 50' 26"W to  
48° 30' 10"N 124° 47' 18"W to  
48° 29' 36"N 124° 43' 38"W to  
48° 28' 08"N 124° 38' 13"W to  
48° 23' 17"N 124° 38' 13"W

(2) OCNMS Authorized Activities. The following activities are authorized within the listed boundaries of the OCNMS:

(a) Live firing of guns, missiles, and chaff. (Practice Munitions only; no HE)

30 Nov 16

(b) ASW operations, including inert torpedoes, ASW targets, sonobuoys, markers, inert mines, and SUS.

(c) Activities associated with the Quinault Range including in water testing of non-explosive torpedoes.

(d) Hull integrity tests and other deep-water tests.

(3) OCNMS Restrictions

(a) No use of HE ordnance/munitions.

(b) No air to surface bombing

(c) No flight less than 2,000 feet MSL within 1 NM of the Flattery Rocks, Quillayute Needles, or Copalis National Wildlife Refuge.

(d) No flight less than 2,000 feet MSL within 1 NM of the coastal boundary.

7. Use of Ordnance Within W-237

a. Authorized Ordnance/Dropped Subsurface Targets

(1) Conventional or Training/Practice ordnance, flares, and photo flash cartridges may be used except as noted under OCNMS, paragraphs 6.b. and 6.c. Gunnery must not be conducted within 12 NM of the coastline. The Navy must conduct BOMBEX (high explosive munitions) greater than 50 nm from shore. The Navy must conduct BOMBEX (non-explosive practice munitions) events at least 20 nm from shore and must not conduct BOMBEX events within the Olympic Coast National Marine Sanctuary.

(2) Use of chaff requires compliance with applicable instructions and coordination with Navy Marine Corps Spectrum Office Puget Sound and Western Air Defense Sector.

b. Ordnance Scheduling Procedures

(1) All training events involving use of ordnance or air-dropped subsurface targets (e.g. EMATTs) must be approved by NAS Whidbey Island Range Schedules Division with concurrence from COMSUBPAC, Pearl Harbor, HI (CTG 34.3), Commercial (COMM) (808) 473-3811 or (808) 473-2517. CTG 34.3 plans water events two weeks prior and issues area assignments the week prior to becoming effective. Area requests should incorporate a point of contact and be transmitted with sufficient lead-time to be factored into water management planning. CTG 34.3 prefers drops in W-237A due to shipping and land restrictions. Drop Zones 4 or 6 have also been used with great success due to their size and location.

(2) Area requests, which involve use of HE ordnance, must be submitted via message using the format in Chapter 2 paragraph 6.a. Remarks must include the weight of each weapon and depth of weapon detonation. Additionally, use of UNDET type ordnance must follow procedures per references (c) and (aa). Message addressees should be as follows:

To: NAS WHIDBEY ISLAND WA//N3/N331//  
Info: CTG 34.3  
CCGD THIRTEEN SEATTLE WA//JJJ//

8. Notice To Mariners (NTM)

a. Appropriate NTM must be transmitted to warn of hazardous activity or ordnance use. Scheduling activities must send a message at least 1 week prior to anticipated event to arrange for a NTM:

To: CCGD THIRTEEN SEATTLE WA//OLE/O/OAN//  
Info: COGARD AIRSTA ASTORIA OR//OPS//  
COMSUBPAC PEARL HARBOR HI//JJJ//  
COMSUBTRAGRU PACNORWEST BANGOR WA//N3//  
NAS WHIDBEY ISLAND WA//N3/N331//  
FAA SEATTLE ARTCC AUBURN SEATTLE WA//1MOS//  
WESTERN AIR DEF SX MCCHORD AFB WA//DO/DOO/SD/ICS//  
(any other addressees(s) deemed appropriate by user activity)

b. Example of message narrative as follows:

SUBJ: REQ ISSUANCE OF A NOTICE TO MARINERS TO WARN OF (i.e. GUNNERY EXERCISE/ HAZARDOUS FLT ACTIVITY/ETC)

A. [Include applicable ref]

1. UNIT CONDUCTING EXERCISE (i.e. USCGC xxxx, USS xxxx)
2. AREA TO BE USED (i.e. W237-E)
3. TYPE OF ORDNANCE: M-240B (7.62MM), M16 (5.56MM)/SURFIREX.
4. PRIMARY DATES: COMEX AT 000000Z JAN 15 and FINEX AT 000000 JAN.
5. POC: LT/LTJG/ENS xxxxx OPS CELL (xxx) xxx-xxxx  
COMM (xxx) xxx-xxxx  
EMAIL: xxxxx
6. COMMUNICATIONS (as applicable):
  - (1) PRIMARY: 16A VHF-FM.
  - (2) SECONDARY: 13A VHF-FM.
  - (3) TERTIARY: MCTS TOFINO CH-74 VHF-FM.
7. USCGC xxxx, USS xxxx WILL BE CONDUCTING A LIVE FIRE EXERCISE IN APPROXIMATE POSITION xx-xx.xx N xx-xx.xx W. DANGER AREA WILL BE PLUS OR MINUS 15 DEGREES OF THE FIRING BEARING OUT TO A RANGE OF xxxx YARDS.
8. PRIOR TO COMMENCING EXERCISE UNIT WILL MAKE A SECURITY BROADCAST VIA VHF-FM CH 16 AND NOTIFY TOFINO MCTS VIA VHF-FM CH-74 OF EXERCISE LOCATION, FIRING BEARING AND DANGER RANGE (as applicable).
9. UPON COMPLETION OF EXERCISE UNIT WILL NOTIFY TOFINO MCTS THAT LIVE FIRE EXERCISE IS COMPLETE (as applicable).
10. FOR CCGD13 SEATTLE WA: REQ BROADCAST NOTICE TO MARINERS.

9. W-237 Preferential Drop Zones (see Figure 3-5 DROP ZONE LOCATIONS). Six drop zones have been established to expedite and simplify drop coordination efforts. These zones are

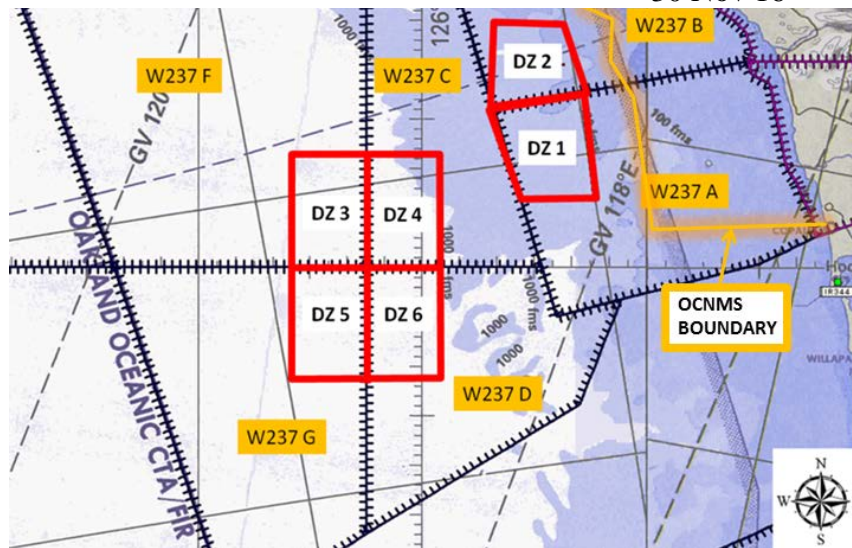
30 Nov 16

located outside of the OCNMS and have been pre-coordinated with COMSUBPAC as preferential areas.

- a. DZ 1. Beginning at:  
 47° 32' N, 125° 40' W to  
 47° 35' N, 125° 16' W to  
 47° 17' N, 125° 16' W to  
 47° 17' N, 125° 35' W to beginning
- b. DZ 2. Beginning at:  
 47° 49' N, 125° 40.9' W to  
 47° 49' N, 125° 22.5' W to  
 47° 35' N, 125° 16.0' W to  
 47° 32' N, 125° 42.0' W to beginning
- c. DZ 3. Beginning at:  
 47° 22'50 N, 126° 35' W to  
 47° 22'50 N, 126° 15' W to  
 47° 00'00 N, 126° 15' W to  
 47° 00'00 N, 126° 35' W to beginning
- d. DZ 4. Beginning at:  
 47° 22'50 N, 125° 55' W to  
 47° 22'50 N, 126° 15' W to  
 47° 00'00 N, 126° 15' W to  
 47° 00'00 N, 125° 55' W to beginning
- e. DZ 5. Beginning at:  
 47° 00'00 N, 126° 35' W to  
 47° 00'00 N, 126° 15' W to  
 46° 37'00 N, 126° 15' W to  
 46° 37'50 N, 126° 35' W to beginning
- f. DZ 6. Beginning at:  
 47° 00'00 N, 126° 15' W to  
 47° 00'00 N, 125° 55' W to  
 46° 37'50 N, 125° 55' W to  
 46° 37'50 N, 126° 15' W to beginning

g. W-237 DZ Identification. These drop zones may be identified as "DZ 1," "DZ 2," "DZ 3," etc., in applicable message traffic. DZ 3 through DZ 6 when scheduled together comprises a grid area of approximately 25 NM by 35 NM.

30 Nov 16

**Exhibit 3-5 DROP ZONE LOCATIONS****“NOTE”**

Scheduling activities may request any drop area outside of the OCNMS; however, use of preferential drop zones is strongly recommended.

**10. W-237 Preferential Routings**

a. From NUW to W-237A: NUW 228020 ELMAA HQM HQM291019. Altitude FL190. (BOAT5)

b. From NUW to W-237B: NUW NUW228020 NUW227035 TOU TOU200020. Altitude FL190. (BOAT3)

c. From W-237A or W-237G/J to NUW: W-XXXX HQM291019 HQM HQM046017 NUW200030 NUW. Altitude FL200. (BOAT6)

d. From W-237B to NUW: W-237B TOU200020 TOU NUW200030 NUW. Altitude FL200. (BOAT4)

e. From W-237 to:

(1) NLC: W-XXXX HQM UBG LKV J5 TIOGA FRA NLC140040 NLC. (Request NLC237)

(2) NKX: W-XXXX HQM UBG LKV J5 LAX OCN (IAF) NKX. (Request NKX237)

(3) NZY: W-XXXX HQM UBG LKV J5 LAX J1 MZB (IAF) NZY. (Request NZY237)



**Exhibit 3-6 W-570 and W-93**

f. Preferential Routings W-570 and W-93. Although not part of the NWTRC (see FLIP AP/1A for scheduling), W-570 & W-93 are within the Pacific Northwest Surface Subsurface Operations Area and available for use:

(1) From W-570 to:

(a) NUW: W-570 HQM NUW200030 NUW. (Request NUW570)

(b) NLC: W-570 ONP OED RBL J65 EHF J5 TIOGA FRA NLC140040 NLC. (Request NLC570)

(c) NKX: W-570 ONP OED RBL J65 EHF J5 LAX OCN (IAF) NKX. (Request NKX570)

(d) NZY: W-570 ONP OED RBL J65 EHF J5 LAX J1 MZB (IAF) NZY. (Request NZY570)

(2) From W-93 to:

(a) NUW: W-93 ONP HQM NUW200030 NUW. (Request NUW93)

(b) NLC: W-93 OTH RBL J65 EHF J5 TIOGA FRA NLC 140040 NLC. (Request NLC93)

(c) NKX: W-93 OTH RBL J65 EHF J5 LAX OCN (IAF) NKX. (Request NKX93)

(d) NZY: W-93 OTH RBL J65 EHF J5 LAX J1 MZB (IAF) NZY. (Request NZY93)

**“NOTE”**

If (IAF) is not applicable, route filed will be from last fix direct destination airport. For additional preferred routing information see reference (n) NASWHIDBEYINST 3722.3C Fleet Air Operational Training Flight (FAIROPS) manual.

**“CAUTION”**

PADRA (Pass to Air Defense Radar) must appear in the remarks section of the flight plan.

11. SUA/ATCAA Real-Time Coordination. Seattle ARTCC releases SUA on a real-time basis and requires a 30-minute prior notice to entering SUA or ATCAA in order to clear the area of IFR traffic. Flight Leads must ensure Whidbey Clearance Delivery or Seattle ARTCC is notified at least 30 minutes prior to intended SUA or ATCAA entry time.

12. SUA/ATCAA MARSAs Procedures. MARSAs is a condition, which applies to those aircraft operating within the MOAs/ATCAAs/W-237/Restricted Areas and Alert Area. MARSAs must be



30 Nov 16

briefed prior to launch and mutually agreed upon by all units/participants. The proper use of MARSA rests solely on the Commanding Officers of units involved. For COMVAQWINGPAC units only, MARSA may be conducted under the procedures promulgated in COMVAQWINGPACINST 3700.2A.

a. Letter of Agreement. Military Operations within the SUA are subject to a Letter of Agreement between NAS Whidbey Island and Seattle ARTCC. The Controlling Agency is Seattle ARTCC and Using/Scheduling Agency is NAS Whidbey Island. Military operations within SUA require prior scheduling and approval.

b. Entry Time. Aircrews must not expect to enter SUA/ATCAAs before their scheduled entry time. Seattle ARTCC will not issue entry clearance for early arrivals if the SUA/ATCAA is in use.

c. Communications, Navigation, and Identification. All aircraft must have operable communications, navigation, and identification (CNI) equipment on all flights. A malfunction on CNI equipment is cause to cancel/abort missions.

d. Call Sign and Event Number. Upon check-in with Seattle ARTCC, provide call sign and event number of aircraft to operate in SUA/ATCAA (include each aircraft within a formation), area(s) scheduled and altitudes required.

e. Frequency. Aircraft must monitor Seattle ARTCC frequency while operating within the SUA/ATCAA unless otherwise approved. If switching to tactical/MOA Universal Integrated Communication Military (UNICOM/M) frequency (See Table 1) is authorized, monitor Guard (243.0 MHz).

f. Vertical and Lateral Confines. Pilots cleared to operate within a SUA/ATCAA are responsible for remaining within the vertical and lateral confines of that SUA/ATCAA as specified in the ATC clearance.

g. Gunnery Restriction. Gunnery or live-fire exercises must not be conducted within 12 NM of the coastline. No HE must be used inside the OCNMS.

h. Clear Surface Area. Aircrew is responsible for ensuring that target areas are clear prior to expending weapons.

i. WADS Coordination. Aircraft operating within W-237 must file for ADIZ penetration unless operating under positive control of Bigfoot or Seattle ARTCC. Communications with Bigfoot within the western segment of W-237 can be marginal. High Frequency (HF) communications are available from McClellan Airways (See Table 1).

j. Exiting the Warning Area. Unless safety of flight dictates, no aircraft must depart assigned Warning Area until an ATC clearance is received from Seattle ARTCC. Under normal circumstances, aircraft should provide Seattle ARTCC at least five minutes advance notice of intent to depart assigned warning area. This provides time for flight data processing and coordination when required.

**“WARNING”**

During coordinated surface-air events in W-237, movements and/or location of surface units is not justification for air unit "SPILL-OUT" of assigned OPAREA(S).

**“NOTE”**

Seattle ARTCC is equipped with error detection software to ascertain when spill-outs occur and may file Pilot deviation reports if detected.

k. Departing the SUA Clearance. Clearance to operate in the SUA/ATCAA must be considered similar to holding instructions and is not a cancellation of IFR. Further clearance is required prior to departing the SUA/ATCAA.

l. Local Altimeter Use. Aircraft operations/maneuvers which transit FL180 must use the local altimeter setting as authorized in FAR Exemption 2861A. Per reference (d) this exemption allows the use of the local altimeter setting when conducting high-speed tactical maneuvers that include reoccurring transits of Flight Level 180.

m. Modes and Codes. Aircraft operating within any SUA must squawk the Mode 3 code assigned by Air Traffic Control. Aircraft not previously assigned a Mode III discrete code must squawk 4000. Aircraft operating in Warning Areas and ATCAAs must squawk Modes II and IV, as directed by higher authority, and must squawk the Mode III discrete code as assigned by ATC. If aircraft do not have Mode IV capability, advise Bigfoot prior to launch and activation of SUA scheduled time. Airborne Mode IV checks are available from Bigfoot (See Table 1). Carrier operations that involve aircraft flight operations within W-237 must obtain Mode III discrete codes from NAS Whidbey Island Air Traffic Control. Requests for a block of Mode III discrete codes must be made via message and formatted per paragraph 2.5.1.

n. Supersonic Flight. Supersonic flights are not authorized in the NWTRC except when greater than 30 nautical miles off shore of the Pacific Coast and clear of ship traffic and personnel. Supersonic operations must be conducted per General NATOPS reference (d) and applicable Air Force Regulations.

o. Lost Communications. Lost communications must be as outlined in DOD FLIP.

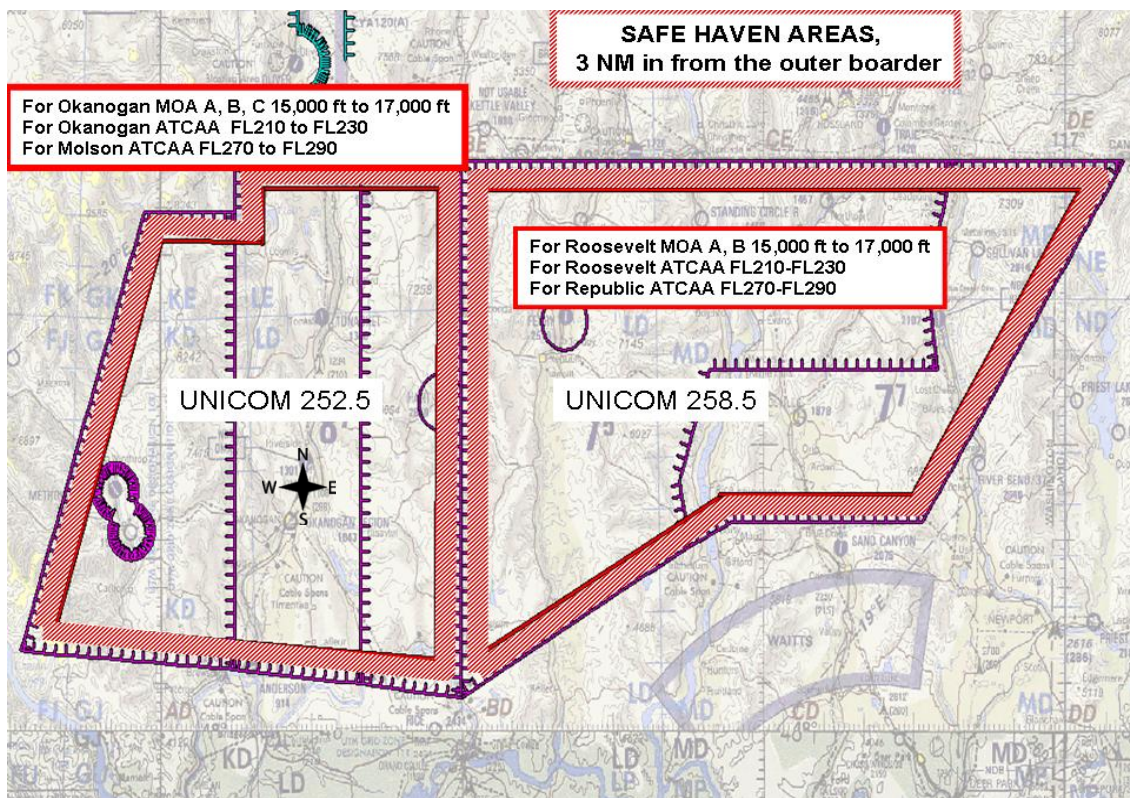
p. UNICOM/M/Safe Haven Procedures.

(1) All aircraft entering W-237, a MOA and/or ATCAA must contact Seattle ARTCC on appropriate frequency (see Table 1) and provide entry time, call sign and appropriate event number. Events using R6701 and Alert Area 680 must contact NAS Whidbey Approach. Event numbers will be assigned on the daily schedule by Range Schedules. If multiple aircraft are scheduled for co-use of an area and communication cannot be established, aircraft must proceed to SAFE HAVEN which is described by a lateral area extending from the border of the W-237/MOA/ATCAA to 3 NM into the W-237/MOA/ATCAA. Altitudes and boundaries for each SAFE HAVEN area are described in Exhibits 3-7, 3-8 and 3-9. Once established in the SAFE HAVEN area, aircraft will continue to attempt contact with playmates or co-use aircraft and, if no communication can be established, coordinate exiting the W-237/MOA/ATCAA with Seattle ARTCC.

**“NOTE”**

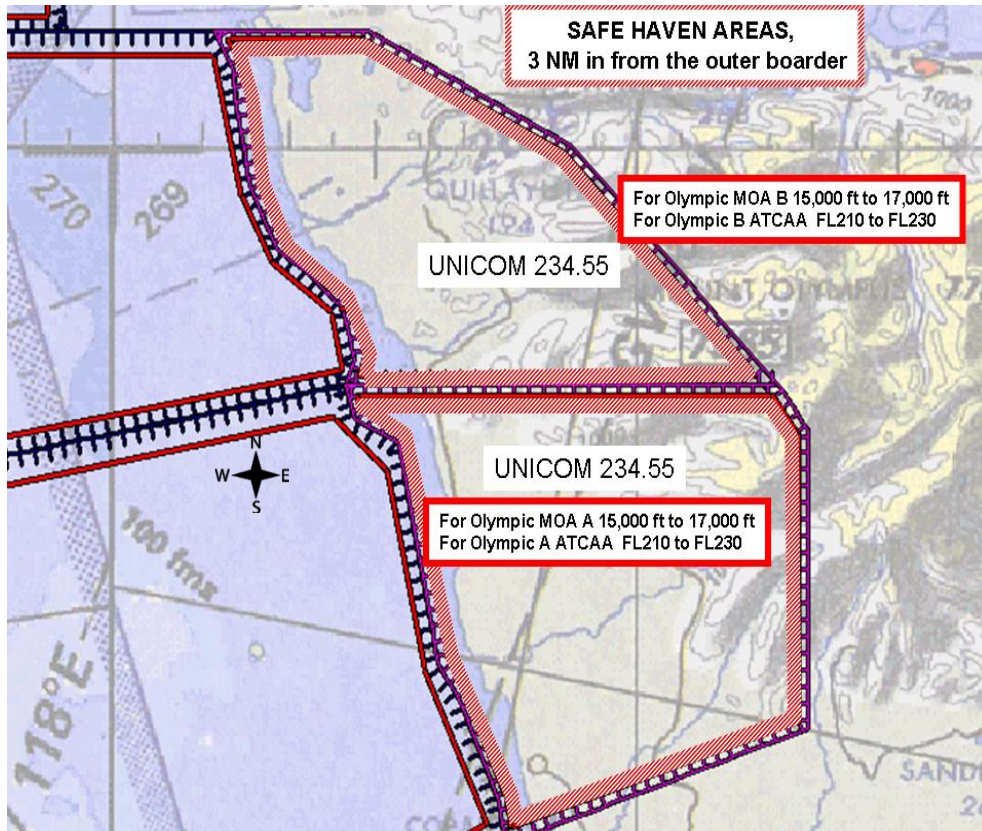
Safe Haven does not apply to R6701, R5701, R5706, A680 and the Boardman MOA/ATCAA due to limited airspace available.

(2) When ready to exit the W-237/MOA/ATCAA, aircraft must coordinate with Seattle ARTCC on appropriate frequency (see Table 1) prior to leaving the assigned W-237/MOA/ATCAA area. If multiple aircraft for the same event are in the W-237/MOA/ATCAA, the last aircraft departing the area must advise Seattle ARTCC (i.e. “SEATTLE CENTER PUGET52 EVENT 30001 LAST AIRCRAFT OUT.”) Upon reporting last aircraft out, Seattle ARTCC will close the event number and the airspace will be deactivated.

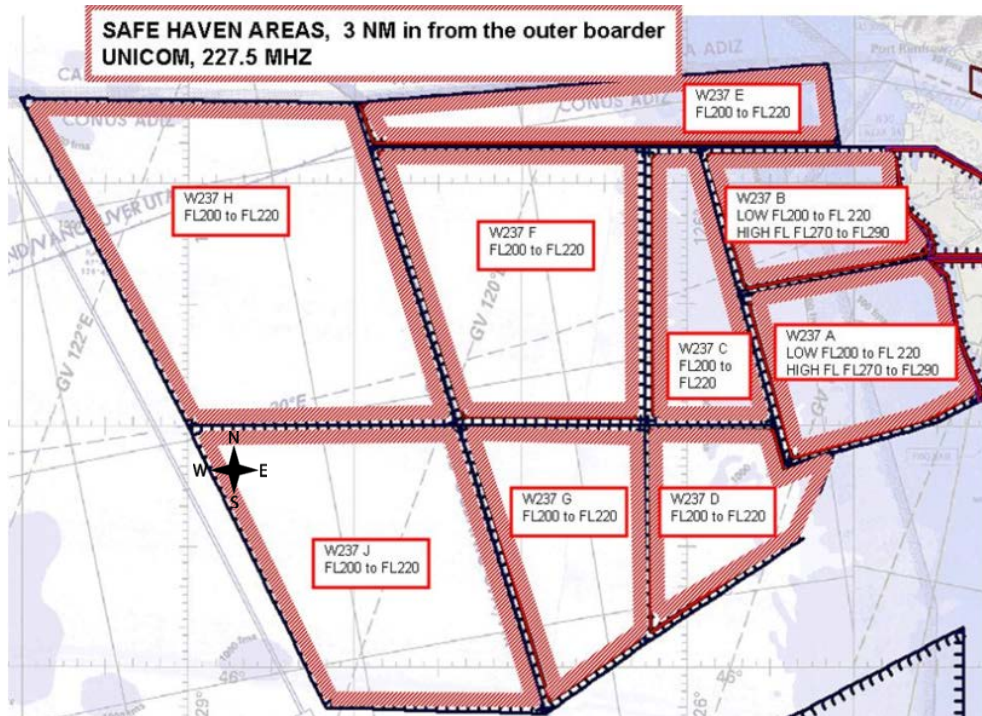


**Exhibit 3-7 OKANOGAN AND ROOSEVELT SAFE HAVEN**





**Exhibit 3-8 OLYMPIC SAFE HAVEN**



30 Nov 16

**Exhibit 3-9 W-237 SAFE HAVEN****13. Electronic Warfare (EW) Training**

a. Area. The Continental United States EW Area extends to the outer boundaries of the coastal ADIZ or a perimeter 200 NM seaward from the coastal states, whichever is farther out, except where this infringes on territorial limits of other nations/states. Per references (j) and (y) unrestricted use of all airborne and surface Electronic Attack (EA) training is authorized outside of 200 NM perimeters of the Canadian and U.S. West Coast. Any unit desiring to employ EA in the NWTRC must submit a Small Scale or Large Scale EA Request message. Message format, action addrees and specific parameters may be found in reference (j) (Performing Electronic Attack in the U.S. and Canada for Tests, Training and Exercises).

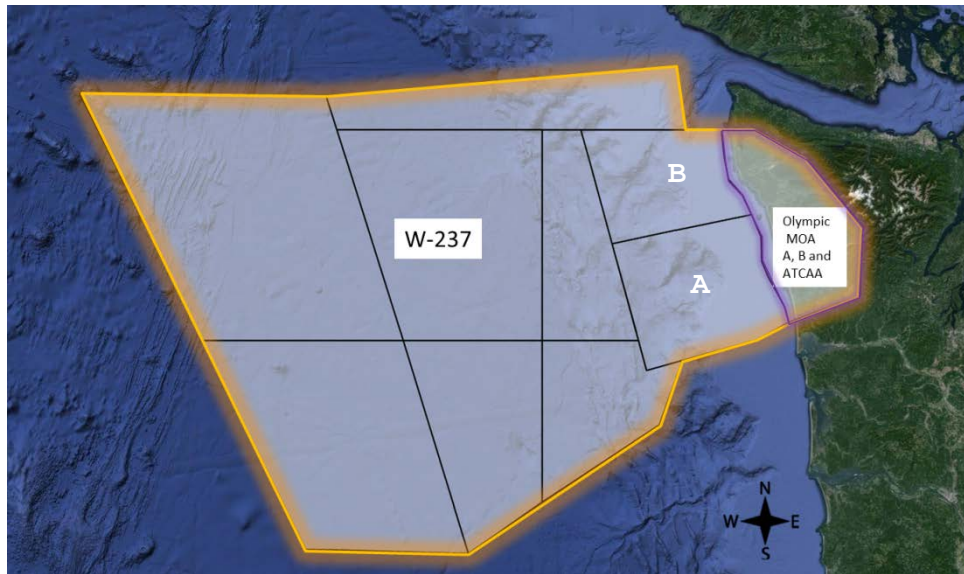
b. Request Procedure. Procedures for conducting EW, including method of request and required limitations, are set forth in reference (j), and applicable COMVAQWINGPAC instructions.

c. Pacific Northwest EW Range

(1) Description. Pacific Northwest EW Range (PNW EWR) is located on the western side of the Olympic Mountains on the Olympic Peninsula. The PNW EWR supports basic EW training primarily for the EA-18G Fleet Replacement Squadron stationed on NAS Whidbey Island. The EWR has one fixed emitter located on Naval Station Everett Annex Pacific Beach and three mobile emitters that may locate to multiple sites on the Olympic Peninsula. PNW EWR airspace will normally use the Olympic MOA A and B, Olympic ATCAA and W-237. PNW EWR primarily uses W-237 A and B.

(2) Operating Hours. Monday through Friday, 0800 – 1600. Fixed emitter and mobile emitter events will normally be scheduled 48 hours in advance during these hours. All other EW training events needed outside these times will be coordinated by the PNW EWR Site Lead via VAQ-129 schedules at least three working days in advance. The PNW EWR operates only 40 working hours a week so accurate scheduling and use of available time is a must. The PNW EWR may be able to flex the 40 hour work week to meet customers' requirements; however PNW EWR over time is not normally authorized.

(3) W-237 and Olympic MOA A, B and ATCAA Boundaries. Boundary coordinates may be found in Chapter 3 paragraphs 4.b. and 6.e. This airspace encompasses approximately 26,800 square NM W-237 starts at surface with varying altitude ceilings up to unlimited see 6.e. Olympic MOA A and B start at 6,000 feet up to but not including FL180. Olympic ATCAA starts at FL180 to FL350.



**Exhibit 3-10 PNW EW RANGE AIRSPACE**

**(4) Air Operating Procedures**

(a) General. The PNW EWR airspace controlling agency is Seattle Center. All aircraft must be on an IFR clearance into and out of the airspace. If departing VFR from the airspace, aircraft should cancel their IFR clearance with Seattle Center prior to leaving the airspace. To avoid delays, it is recommended that a 5-minute prior notification to Seattle Center be given in order to facilitate activation of the IFR flight plan when departing the airspace.

(b) Entering PNW EWR Airspace. Aircraft will be directed to enter the area from Seattle Center. MARSA procedures apply once crossing into the PNW EWR Airspace. Radar services will be terminated; however, IFR Clearance will still be in effect. Pilot must cancel IFR if VFR flight is desired. Note: VFR is not authorized in Class A airspace.

Range Call Sign: "MCCOOL BASE"

UHF: 341.925 MHz  
354.25 MHz  
361.1 MHz  
371.4 MHz

(c) Departing PNW EWR Airspace. For IFR flight, aircraft will obtain IFR clearance directly from Seattle ARTCC:

Call Sign: SEATTLE CENTER

UHF: See chapter 2, Table 1

Telephone: DSN 891-1241 or COMM: (206) 351-3593

**“CAUTION”**

EXIT PROCEDURES FROM PNW EWR AIRSPACE. Unless safety of flight dictates, aircraft intending IFR flight must not depart the PNW EWR airspace until receiving clearance from Seattle ARTCC. Under normal circumstances, aircraft should provide Seattle ARTCC at least 5 minute advance notice of intent to depart. This provides needed time for flight data processing and coordination when required.

(d) PNW EW Range Scheduling and Priorities. All users of the PNW EWR shall schedule their proposed events with the PNW EWR Mission Coordinator office. The Mission Coordinator office is the sole scheduling authority for events on the PNW EWR and will approve or deny requests and inform users of their request status. PNW EWR events may be scheduled via the following medium: E-mail: WHDB\_PNW\_EWR\_MC.fct@navy.mil, Telephone: Commercial (360) 257-2473/2474, DSN: 820-2473/2474. Other Military and Navy units, not stationed at NAS Whidbey Island, must coordinate scheduling through COMVAQWINGPAC Operations: COM 360-257-3630 or DSN 820-3630.

The PNW EWR Mission Coordinators are responsible for conducting and coordinating the PNW EWR events and should be contacted prior to scheduling events for assistance in determining mission scenario and scheduling requirements. The Mission Coordinators can provide users with all necessary information to accomplish the desired missions and develop a complete mission package. The PNW EWR Mission Coordinators do not schedule any airspace. The PNW EWR Mission Coordinators Office is located at NAS Whidbey Island, Building 2593, and may be contacted by phone at (360) 257-2473 or 2474, or by email at donald.bowker.ctr@navy.mil

(e) Specific PNW EWR priorities for aircraft and surface events are as follows:

1. PRI 1: Major exercises with 2 months prior notice
2. PRI 2: VAQ-129 FRS training sorties
3. PRI 3: EAWS EWARP events
4. PRI 4: COMVAWINGPAC Fleet ACTC events
5. PRI 5: HAVOC events
6. PRI 6: COMVAWINGPAC Fleet ULT
7. PRI 7: CPRW-10
8. PRI 8: All other Fleet units and other military.

**“NOTE”**



Refer to chapter 2 for overall NWTRC SUA scheduling priority.

d. Chaff Use. Per references (j) and (y) Air dispensed chaff must not travel any closer than 50 NM and surface chaff any closer than 30 NM, to any land mass, including offshore islands. In addition, use of chaff requires coordination with Navy Marine Corps Spectrum Office Puget Sound (360) 396-7075 and Western Air Defense Sector DQM/AST; telephone DSN 382-4342; COMM (253) 982-4342.

14. Canadian Maritime Pacific (MARPAAC) Coordination

a. Coordination with Canadian MARPAAC Headquarters at Esquimalt Naval Base, Victoria, B.C., is recommended for any operations within the Canadian ADIZ.

b. PLAD: MARPACHQ ESQUIMALT CAN

c. Telephone: DSN 319-255-2415/2715; COMM (250) 363-2425/2715.

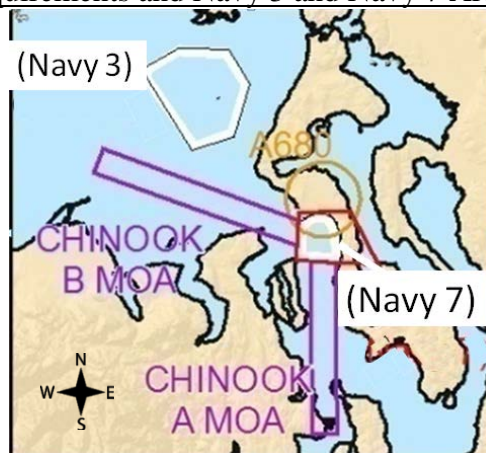
15. Flare Drops. The dispensing of self-protection flares is authorized in all MOA with the following limitations:

a. Planned use must be coordinated with NAS Whidbey Island Range Schedules.

b. Minimum altitude for dispensing is 500' AGL for fixed wing and 700' AGL for helicopters.

c. Use of illumination flares is not authorized.

16. Post Ship Overhauls Requirements and Navy 3 and Navy 7 Areas.

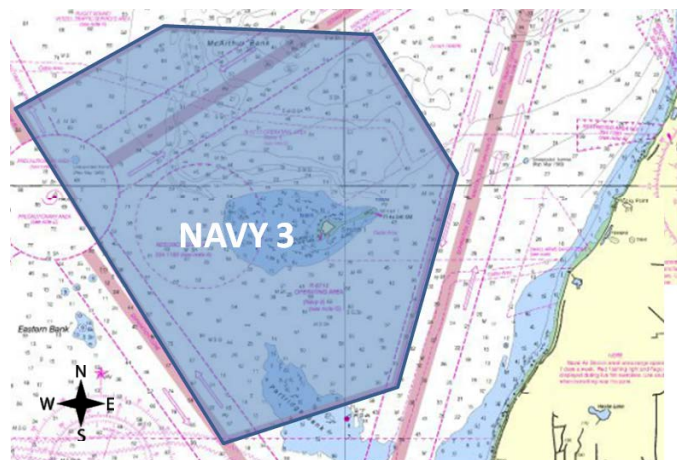


**Exhibit 3-11 NAVY 3 AND 7**

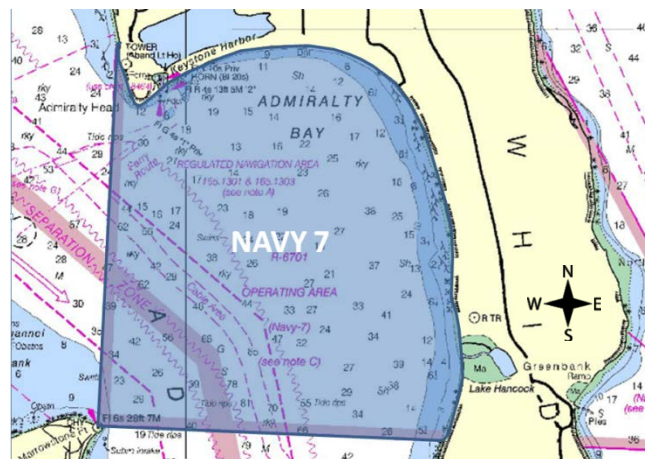
Surface units completing an availability/overhaul at Puget Sound Naval Shipyard (PSNS) must coordinate airspace and water space requirements/aircraft services with the PSNS Combat Systems Branch (Code 377) at DSN 439-1359, COMM (360) 476-1359 for aircraft tracking, CIWS tracking and Link 4/11 testing events.



For events that require only maritime surface areas close to port there are two areas available: Navy 3 in Strait of Juan De Fuca (Exhibit 3-12); and, Navy 7 in Admiralty Inlet (Exhibit 3-13). Both areas are depicted on NOAA Soundings and Fathoms charts 18441 and 18421. These areas are small in overall water space and limited in their utility; however, they have the advantage of being close to Navy installations. Navy 3 and Navy 7 are open for training/use. Use of these areas for other than availability/overhaul requires NTM review and posting and is the responsibility of the user. NAS Whidbey Island Range Schedules does not schedule Navy 3 or Navy 7 but would like visibility on activities in these areas to the greatest extent possible for the mutual benefit of NWTRC users. Recommend courtesy call to Range Schedules and coordination with PSNS Combat Systems Branch (Code 377) prior to use.



**Exhibit 3-12 NAVY 3 SURFACE OPERATIONS AREA**



**Exhibit 3-13 NAVY 7 SURFACE OPERATIONS AREA**

17. Whidbey Island Seaplane Base Survival Area (see Exhibit 3-12 NAVY 7 SURFACE OPERATIONS AREA)

- a. Beginning at:  
48° 17' 56.47"N 122° 35' 30.00" W to

48° 18' 06.91"N 122° 35' 31.00" W to  
48° 18' 26.00"N 122° 34' 50.60" W to  
48° 18' 25.80"N 122° 33' 21.15" W to  
48° 16' 50.50"N 122° 33' 21.20" W to  
48° 16' 44.50"N 122° 33' 33.00" W to  
48° 16' 45.90"N 122° 33' 35.75" W then north along shoreline to point of origin.

b. This area can be used for, but is not limited to, EODMU 11 DET NW Demolition Training Range, sea to shore landings, helicopter training, small unit training (under 2000 people), ground training and survival training.

c. Point of Contact/Scheduling. Scheduling will be done through NAS Whidbey Island Range Schedules at (360) 257-2877. EODMU 11 DET NW has Priority for scheduling this area for use of the DTR. Deconfliction of the surface danger zone may be available with prior coordination.

d. Altitude Assignment. Altitudes are not specifically defined; however, Whidbey Approach Control may assign a maximum altitude.

**“NOTE”**

This area underlies NAS Whidbey Class C Airspace. Review all Aeronautical Charts and procedures before operating aircraft in this area. Concerns must be directed to (360) 257-2681, the NAS Whidbey Island Operations Duty Officer.

18. Crescent Harbor Naval Operations Area (see Exhibit 3-14 NAVY 7 SURFACE OPERATIONS AREA). Located in Crescent Harbor, Saratoga Passage, and Oak Harbor, WA. The site is in waters adjacent to the NAS Whidbey Island Seaplane Base. The area is drawn from the Polnell Point Light (48° 16' 22"N 122° 33' 30 W) west-southwest to a point in central Crescent Harbor (48° 16' 00"N 122° 36' 00 W) and then due north to a point along Crescent Harbor's shoreline on Whidbey Island (48° 17' 55"N 122° 36' 00 W.)

a. Exercises may only occur when all non-participating vessels and persons are clear of the area.

b. Effective times are by NOTAM/NTM and available 24 hours a day.

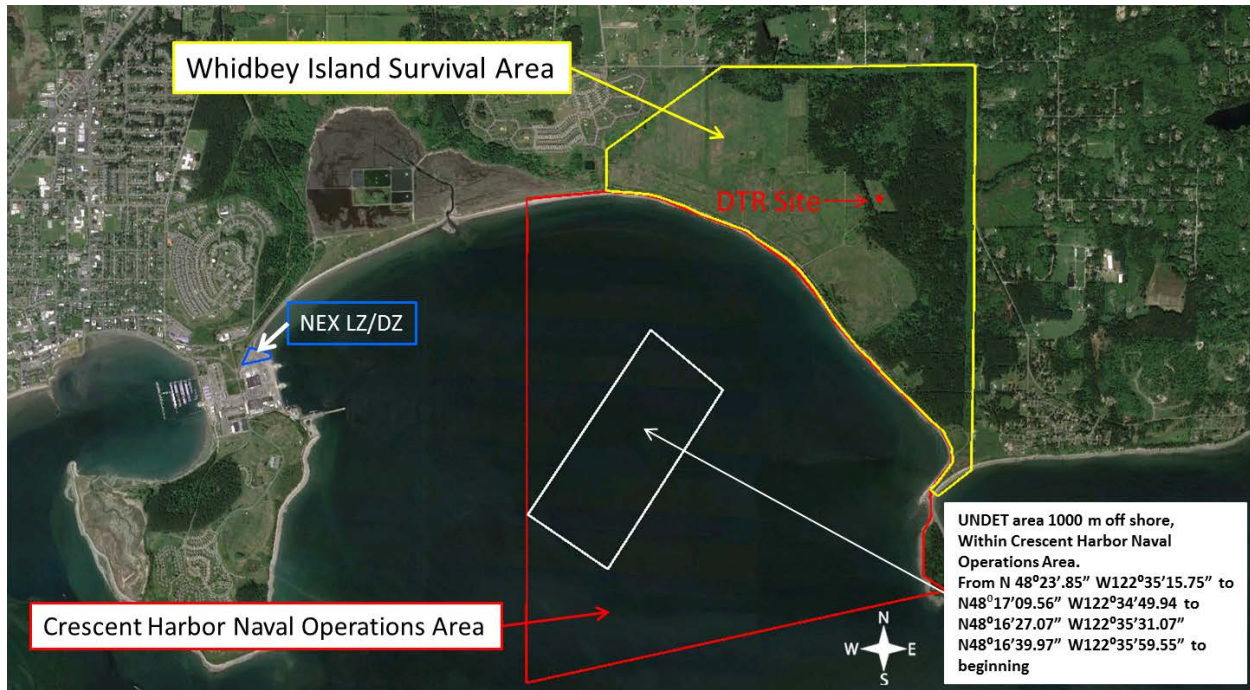
c. Point of Contact/Scheduling. Scheduling will be done through NAS Whidbey Island Range Schedules at (360) 257-2877.

d. Procedures for Ordnance Use. Procedures for ordnance use can be found in references (c) and (ab) (Under Water Detonation Procedures the Third Fleet Area of Responsibility).

19. Navy Exchange (NEX) LZ/DZ (see Exhibit 3-12 NAVY 7 SURFACE OPERATIONS AREA). Located on the NAS Whidbey Island Seaplane Base. The LZ encompasses all of the parking area north of the NEX. Units using this LZ will be required to provide their own physical security, as well as fire/rescue requirements and comply with all federal laws, state laws, local laws, and air traffic control procedures.

30 Nov 16

a. Point of Contact/Scheduling. Coordination must be made at least 30 days in advance to use this LZ/DZ (except local tenant units.) Scheduling will be done through NAS Whidbey Island Range Schedules at (360) 257-2877. For use of this area Range Schedules will coordinate with NWTRC Range Program Manager at (360) 257-3315. NWTRC Range Program Manager will assist in the coordination with a multitude of agencies for use of this area. The NAS Whidbey Island Range Schedules will schedule this only after prior coordination with all parties involved has been accomplished.



**Exhibit 3-14 NEX LZ, CRESCENT HARBOR AND SURVIVAL AREA**

**NOTE**

This area underlies NAS Whidbey Island Class C Airspace. Review all Aeronautical Charts and procedures before operating aircraft in this area. Concerns must be directed to (360) 257-2681, the NAS Whidbey Island Operations Duty Officer.

**20. Chinook A and B MOAs (see Exhibit 3-14 NEX LZ, CRESCENT HARBOR AND SURVIVAL AREA)**

a. Chinook A Boundaries. A north/south corridor 2 NM wide, 1 NM either side of a line beginning at the hood canal Bridge, port Gamble, WA (lat 47° 52' 14"N., long. 122° 38' 05"W.), extending on a bearing of 000 T to Restricted Area R-6701.

b. Altitudes: 300 feet MSL to 5000 feet MSL.

30 Nov 16

c. Chinook B Boundaries. An east/west corridor 2 NM wide, 1 NM either side of the line beginning at lat. 48° 13' 59"N., long. 123° 04' 35"W., extending on a bearing of 110 T until reaching R-6701.

d. Altitudes: 300 feet MSL to 5000 feet MSL.

21. Restricted Area R-6701, Admiralty Inlet Boundaries (see Exhibit 3-12 NAVY 7 SURFACE OPERATIONS AREA)

a. Beginning at:

48° 09' 59"N 122° 34' 53"W to

48° 05' 44"N 122° 31' 35"W to

48° 06' 05"N 122° 41' 17"W to

48° 09' 59"N 122° 41' 01"W to the point of beginning.

b. Altitudes: Surface to 5,000 feet MSL.

22. Alert Area A-680, OLF Coupeville Boundaries (see Exhibit 3-15 CHINOOK MOA, R6701 AND A680).

a. 3 NM radius of 48° 10' 59"N 122° 38' 05"W.

b. Altitudes: Surface to and including 3,000 feet MSL.



**Exhibit 3-15 CHINOOK MOA, R6701 AND A680**



23. Lake Hancock Training Range



**Exhibit 3-16 LAKE HANCOCK TRAINING RANGE**

a. Description. The Lake Hancock Training Range (LHTR) occupies roughly 423 acres approximately 20 miles south of Ault field and 1 mile north of Greenbank, Washington. The site includes a saltwater lagoon (Lake Hancock) surrounded by a salt marsh. To the east, the site is bordered by a horseshoe-shaped ridge. A 50-foot-wide channel connects Lake Hancock to Admiralty Inlet.

b. Training Use and Restrictions. After receiving authorization, LHTR may be used for UAS launch and recovery within Restricted Area 6701. See chapter 10 for more detail on UAS activities. All UAS must take off and recover within the physical boundaries of Navy property or Navy 7 water-space and remain within R-6701 airspace. Additionally, this range can be used for land maneuver training. The Air to Ground portion of the range is closed and the Target area is off limits to non-DOD personnel. (see Exhibit 3-16).

c. Sheduling. Schedule LHTR area per chapter 2 procedures.

d. Access to LHTR Area. Units and personnel requesting access to LHTR must read and sign the access brief (Appendix C) and submit a range request (Appendix B) via the NWTRC Program Manager for approval. The Range Program Manager is located in building 385 RM 127 (phone 360-257-3315). The approved form must then be presented to Security to attain the keys for access. Access keys are controlled through NAS Whidbey Island Security located in building 994 (phone 360-257-3127) off of Charles Porter Avenue onboard NAS Whidbey Island.

30 Nov 16

There are no records indicating the use of HE ordnance at the LHTR site and previous site investigations and searches have not revealed any evidence of HE ordnance. However, it is still possible that ordnance (e.g., unexpended rocket motors and cartridges) capable of causing harm to human and ecological receptors, depending upon the type of spotting charge, could be encountered.

There is the potential for Munitions and Explosives of Concern/Munitions Presenting Potential Explosive Hazard (MEC/MPPEH) to be present at the site as a result of former bombing activities. To date, munitions-related items and debris have been located primarily near the target area, but munitions debris have been observed scattered throughout the site and rocket motors have been found in the waters off the beach out into Admiralty Inlet.

There is a human health hazard associated with potential munitions-related items present at this site because spotting charges and unburned propellants may remain within munitions items and cause injuries if detonated. It is important to note that exposure to MEC does not mean that an incident or injury will occur, since a receptor would have to disturb the MEC item (e.g., apply heat, friction, or shock to the item) in order to be exposed to actual explosive hazards.

**“WARNING”**

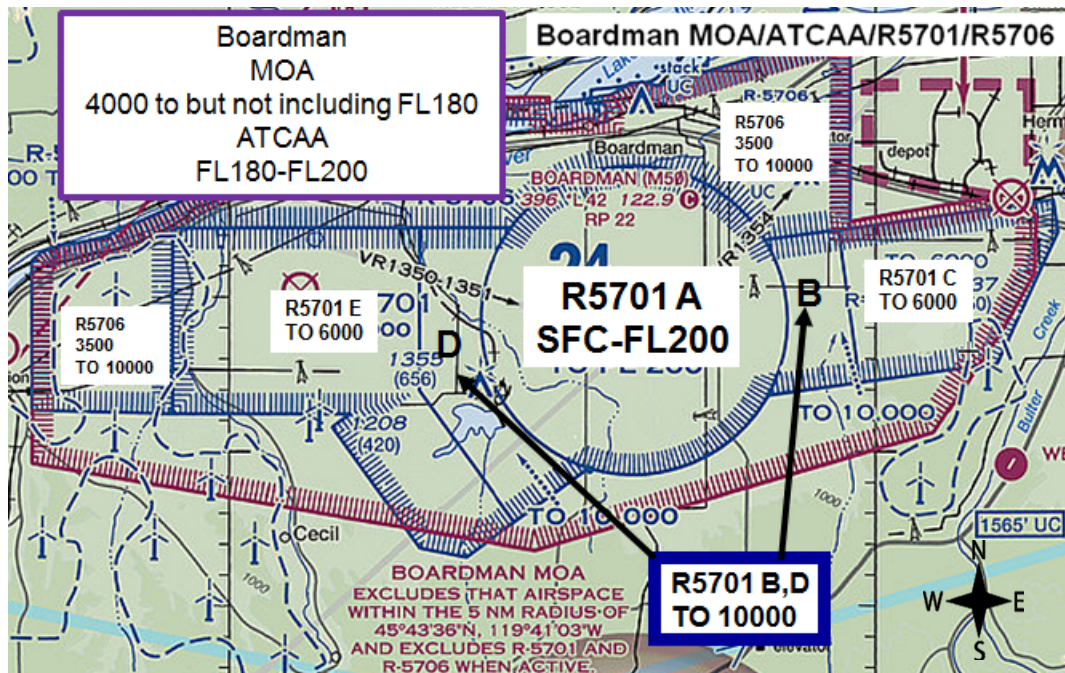
Do not disturb any potential munitions-related items on the range.

e. UAS Area See Exhibit 3-15. To reduce the chance of UXO exposure, all land-based UAS launch and recovery operations must be made from the area noted on Exhibit 3-16

CHAPTER 4  
NAVAL WEAPONS SYSTEMS TRAINING FACILITY BOARDMAN, OREGON

1. Description. (see Exhibit 4-1 Current NWSTF BOARDMAN AIRSPACE). The Boardman NWSTF complex consists of Navy property (impact area), R-5701, R-5706, Boardman MOA, and ATCAA. This complex is used for basic air maneuvering, Low Altitude Training, Unmanned Aerial Systems (UAS), electronic threat simulations, air-to-ground weapons delivery, small arms, and various ground training exercises. Services provided by NWSTF are very limited. There are currently no Range Control/Safety personnel, moving targets, or any type of scoring systems available. Additional airspace (See Exhibit 4-2) for the Boardman MOA and new airspace the Boardman LOW MOA will be officially established once depicted on FAA Charts. Next Seattle Sectional update is scheduled for 8 December 2016.

a. Range Administration Operating Hours. Monday through Friday, 0730 – 1600. Air-to-Ground, ground events or mobile emitter events (see paragraph 2.k. for mobile emitter hours of operation) will normally be scheduled during these hours. All ground training events should be coordinated via the NWTRC Program Manager (360) 257-3315 at least 72 hours in advance.



**Exhibit 4-1 CURRENT NWSTF BOARDMAN AIRSPACE**

b. (CURRENT) Boardman MOA and ATCAA Boundaries

(1) Boundaries:

Beginning at:

45 52'59N/119 31'04W to  
45 46'49N/119 31'04W to  
45 47'44N/119 23'29W to  
45 46'59N/119 22'29W to  
45 45'09N/119 22'34W to

45 43'29N/119 23'54W to  
45 42'14N/119 25'04W to  
45 39'59N/119 27'14W to  
45 36'09N/119 45'44W to  
45 38'59N/120 09'04W to  
45 45'29N/120 09'04W proceed along the south shore of the Columbia river to  
45 50'49N/119 48/44W to  
45 50'49N/119 45'04W to  
45 50'19N/119 45'04W to  
45 50'19N/119 42/34W to  
45 50'59N/119 42'34W then along the south shore of the Columbia River to 45  
51'09N/119 40'04W to the point of beginning, excluding that airspace  
within R5701 and R5706 when active.

(2) MOA 4,000 feet MSL to, but not including, FL180.

(3) ATCAA: FL180 to, and including, FL200.

c. (NEW) Boardman Low MOA (see exhibit 4-2)

(1) Boundaries:

Beginning at:

45°50'04"N 119°37'27"W to

45°51'57"N 119°30'28"W to

45°52'04"N 119°22'23"W to

45°47'26"N 119°22'29"W to

45°46'32"N 119°31'37"W to

45°46'12"N 119°35'02"W to

45°47'52"N 119°37'35"W to the point of beginning excluding that airspace of R5701  
and 5706 when active

(2) Altitude: 500 feet AGL to but not including 4,000 feet MSL.

(3) Times of use: 0730-2359 Monday-Friday; other times by NOTAM 6 hours in  
advance.

**“WARNING”**

Do not use until depicted on FAA charts.

Boardman Low MOA is approved however it will not be  
officially activated or available until updated and established  
on Seattle Sectional Chart. Next Chart update is 8 December  
2016.

d. (NEW) Boardman MOA and ATCAA Boundaries (see exhibit 4-2)

(1) Boundaries:

Beginning at:

45°52'59"N/119°31'04"W to

45°51'47"N/119°31'04"W to

45°51'57"N/119°30'28"W to

45°52'04"N/119°22'23"W to

45°46'59"N/119°22'29"W to



45°45'09"N/119°22'34"W to  
45°43'29"N/119°23'54"W to  
45°42'14"N/119°25'04"W to  
45°39'59"N/119°27'14"W to  
45°36'09"N/119°45'44"W to  
45°38'59"N/120°09'04"W to  
45°45'29"N/120°09'04"W proceed along the south shore of the Columbia River to  
45°50'49"N/119°48'44"W to  
45°50'49"N/119°45'04"W to  
45°50'19"N/119°45'04"W to  
45 50'19"N/119 42'34"W to  
45 50'42N"/119 42'33"W to  
thence along the south shore of the Columbia river to  
45°51'09"N/119°40'04"W to the point of beginning, excluding that airspace within  
R5701 and R5706 when activated.

(2) Altitudes 4,000 feet MSL to, but not including, FL180.

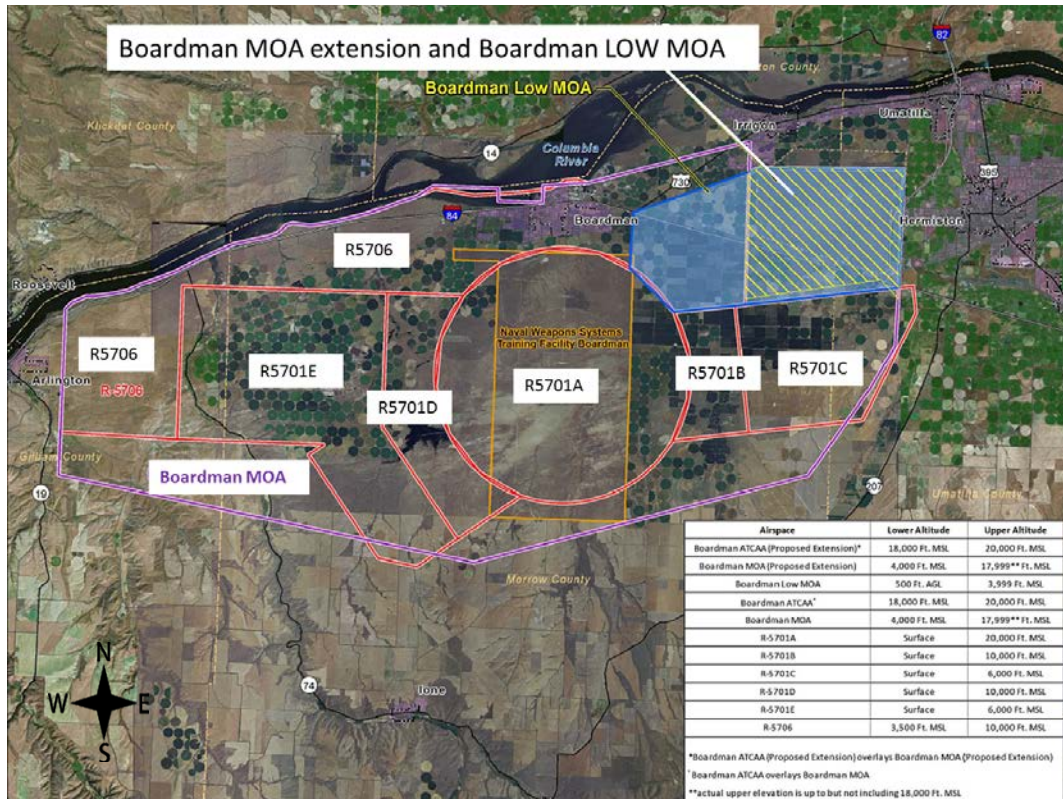
(3) ATCAA: FL180 to, and including, FL200.

(4) Times of use: 0730-2359 Monday-Friday; other times by NOTAM 6 hours in advance.

**“WARNING”**

Do not use until depicted on FAA charts.

Boardman MOA north east extension change is approved however it will not be officially activated or available until updated and established on Seattle Sectional Chart. Next Chart update is 8 December 2016.



**Exhibit 4-2 NEW NWSTF BOARDMAN AIRSPACE**

- c. Boardman Restricted Area 5701 area (A).  
BOARDMAN, OR to FL200  
Cir rad 5 NM cntr on N45°43'35.00" W119°41'07.00  
Description as per the AP/1A
- d. Boardman Restricted Area 5701 area (B).  
BOARDMAN, OR to 10000 feet MSL  
N45°46'19.00" W119°35'09.00" to  
N45°47'00.00" W119°31'30.00" to  
N45°42'00.00" W119°30'45.00" to  
N45°41'28.00" W119°34'39.00" then  
CCW along the arc of a cir rad 5 NM cntr on N45°43'35.00" W119°41'07.00" to  
beginning. Description as per the AP/1A
- e. Boardman Restricted Area 5701 area (C).  
BOARDMAN, OR to 6000 feet MSL  
N45°47'00.00" W119°31'30.00" to  
N45°47'30.00" W119°21'30.00" to  
N45°45'45.00" W119°21'30.00" 1 NM W of and parallel to  
Butter Creek to  
N45°42'08.29" W119°24'53.65" to  
N45°42'00.00" W119°30'45.00" to beginning.
- f. Boardman Restricted Area 5701 area (D).

BOARDMAN, OR to 10000 feet MSL  
N45°46'47.00" W119°46'37.00" then  
CCW along the arc of a cir rad 5 NM cntr on N45°43'35.00" W119°41'07.00" to  
N45°38'53.00" W119°43'34.00" to  
N45°37'15.00" W119°46'45.00" to  
N45°41'30.00" W119°51'00.00" to  
N45°47'00.00" W119°51'00.00" to beginning. Description as per the AP/1A

g. Boardman Restricted Area 5701 area (E).

BOARDMAN, OR to 6000 feet MSL  
N45°47'00.00" W119°51'00.00" to  
N45°41'30.00" W119°51'00.00" to  
N45°37'15.00" W119°46'45.00" to  
N45°36'15.00" W119°49'00.00" to  
N45°36'30.00" W119°51'00.00" to  
N45°40'15.00" W119°55'00.00" to  
N45°41'00.00" W119°54'30.00" to  
N45°41'00.00" W120°02'30.00" to  
N45°47'00.00" W120°02'30.00" to beginning. Description as per the AP/1A

h. Boardman Restricted Area 5706

Boundaries. Beginning at lat. 45°40'33"N., long. 120°02'32"W.; to lat. 45°40'39"N., long. 120°09'04"W.; to lat. 45°45'29"N., long. 120°09'04"W.; thence east along the south shore of the Columbia River to lat. 45°51'09"N., long. 119°40'04"W.; to lat. 45°52'59"N., long. 119°31'04"W.; to lat. 45°46'34"N., long. 119°31'04"W.; to lat. 45°46'12"N., long. 119°35'02"W.; thence counterclockwise along the arc of a 5-nautical-mile radius circle centered at lat. 45°43'35"N., long. 119°41'07"W.; to lat. 45°46'35"N., long. 119°46'50"W.; to lat. 45°46'33"N., long. 120°02'32"W.; to the point of beginning. Description per reference (ab).  
Designated altitudes. 3,500 feet MSL to 10,000 feet MSL.

2. Air Operating Procedures

a. General. NWSTF Boardman is currently an uncontrolled range. The following standard operating procedures will be adhered to unless other arrangements are made in writing with the NWTRC Program Manager (i.e., scheduling unit is responsible for providing qualified range safety officers or controllers, etc.).

b. Crop Dusting Activity. Extensive crop dusting occurs in the agricultural lands of the Columbia River Basin. Aircrew using MTRs originating or terminating in the Boardman Range Complex should be aware that crop dusting activity occurs in non-Navy land areas that lie beneath R-5701/5706. Uncharted airfields in the vicinity of the Boardman Range from which crop dusters originate include:

(1) Taggares Farms Airport, OR approximately 10NM west of the Boardman Bull at 45°45.1'N/119°36.4'W.

(2) Eastern Oregon Farms Airport, at 45°41.4'N/118°50.3'W

(3) Patterson Airport, WA at 45°57.4'N/119°37.2'W

c. Wild Land Fire Concerns Tracer rounds are authorized between 1 October and 31 May or at other times upon written approval of the NAS Whidbey Island Operations Officer (approval outside of these dates will normally require scheduling unit to provide supplemental wildfire suppression personnel and equipment). Notify "Boardman Range" of "possible wildfire" immediately if a brush fire is observed.

d. Entering Boardman Range. Aircraft will broadcast on Boardman UNICOM in the blind, intentions, commencing operations, and completing operations. A reply from Boardman personnel is not required in order to commence operations, as this is an uncontrolled range. Visual inspection of the range by the aircraft commander is required to ensure the range is clear prior to ordnance expenditure.

Call Sign: "BOARDMAN RANGE"

UHF: Military only UNICOM 326.875 MHz OR Secondary 243.0 MHZ Guard

VHF: Military only UNICOM 126.2 MHZ OR Secondary 121.5 MHZ Guard

Aircraft that are dropping inert munitions or strafing must make "INBOUND" or "IN TARGET HOT" and "OFF SAFE" transmissions in the blind.

Telephone: COMM (541) 481-2565

e. Departing Boardman Range. For IFR flight, aircraft will obtain IFR clearance directly from Seattle ARTCC:

Call Sign: SEATTLE CENTER

UHF: 269.35 MHZ

VHF: 132.6 MHZ

Telephone: DSN 891-1241 or COMM: (206) 351-3593

For VR Routes, aircraft will enter at scheduled entry time/point and contact Flight Service:

Call Sign: SEATTLE RADIO or MCMINNVILLE RADIO 255.4 MHZ

f. Patterns and Use of the Impact Area. Flight profiles will normally adhere to a left hand pattern or as directed by the flight lead. When more than one flight is scheduled in the range at the same time, flight leads must have completed a face-to-face brief to include, altitude, patterns, and lost sight/abort procedures.

(1) Entry Procedures for Use of the Main Target Area/Impact Area

(a) In order to line up on run in lines into the Target Area/Impact Area, authorized entry points are from Arlington IP (090T run-in) and Condon CP 048TM heading to Cecil IP).

The Arlington IP is defined as the LTJ 063/46 (45° 43.5'N / 120° 12.2'W); the Condon CP is defined as the LTJ 118/39 (45° 13.8'N – 120°29.6'W); the Cecil IP is established to support lineup with the Condon run-in along the air navigation easement and is defined from LTJ 080/52 (45° 37.43'N 119° 52.40'W). Aircraft entering from Cecil IP have priority over all other aircraft on the first run. For aircraft entering the Boardman Complex on IFR flight plans/IR routes, IFR clearance terminates upon entering the confines of the Boardman complex.

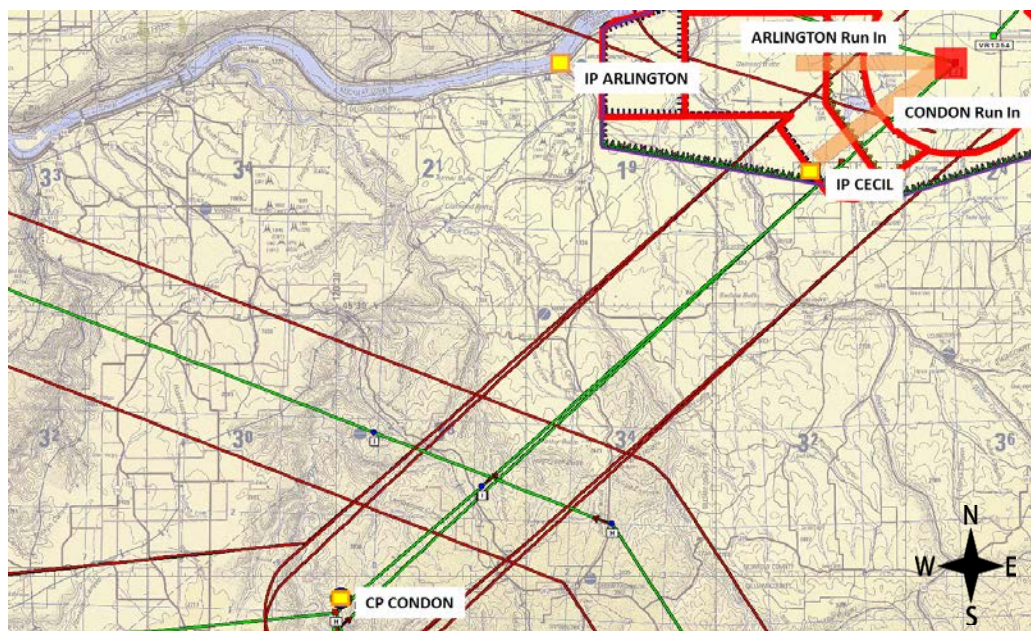
(b) When VMC exist aircraft will enter restricted area along selected run-in.

(c) When the ceiling is above 1,500 feet in the range complex but a VMC entry is not possible, the following procedures apply:

1. Upon reaching the Arlington IP, aircraft must turn and proceed inbound to the main bull on the PDT 252 radial.

2. Once established, inbound aircraft using MARSA will commence a descent from 5000 feet MSL to 2100 feet MSL (1500 feet AGL) to VMC prior to 12 NM from the main bull. If not VMC by 12 NM from the main bull, aircraft will remain within Boardman MOA and contact Seattle ARTCC for IFR Clearance.

(d) When the ceiling is below 1500 feet AGL, no weapons release or use of the impact area is authorized.



**Exhibit 4-3 CP AND IP LINE UP WITH RUN IN LINES**

(2) Patterns for Use of the Main Target Area/Impact Area

(a) Unless specifically briefed, a left hand pattern must be utilized for weapons deliveries.



(b) Aircraft entering the pattern via Condon CP (048T to Cecil IP) have priority over those entering from the Arlington IP (090T run-in).

(c) No more than four aircraft are allowed at a time in either the normal system pattern or visual dive pattern.

(d) Aircraft using the visual dive pattern will take interval on those using the normal system pattern. If doubt exists as to the interval, the aircraft in the visual dive pattern will IMMEDIATELY abort the run and will make the radio transmission "Call sign, aborting."

(e) The downwind leg of the left traffic pattern to the north will be flown at or above 3500 feet MSL to coincide with the minimum altitude for R-5706 and preclude inadvertent airspace spill-out.

(3) Exit Procedures. Unless safety of flight dictates, aircraft intending IFR flight must obtain clearance from Seattle ARTCC prior to departing the Boardman Complex. Under normal circumstances, aircraft should provide Seattle ARTCC at least 5 minute advance notice of intent to depart. This provides needed time for flight data processing, and coordination when required.

g. Main Target Area/Impact Area. Usable targets are listed in Appendix D with photographs of Targets for reference.

h. Navigation Check Point. Carty Coal Plant, 45 41.608N/119 48.430W, 1352 feet MSL (top of stacks).

i. Strafing Pit.

(1) Located south-southwest of the Main Bull at 45 42.545N/119 41.939W. Strafing procedures are:

(2) Upon entering Restricted Area R-5701 make a radio call in the blind to "BOARDMAN RANGE" stating: aircraft call sign, position relative to intended target (e.g., "entering R-5701, 8 NM Southwest of Strafe Pit"), altitude (e.g. "Angels X"), number and type weapons to be released (e.g. "900 Rounds PGU-27 TP & TP-t") and number of passes on target including initial clearing pass and direction of turns for multiple runs (e.g. "5 passes, left turns").

(3) High and low angle strafing is approved.

(4) A "GUNS COLD" initial clearing pass over the strafe pit will be accomplished to ensure a clear range and target identification before commencing strafing runs.

(5) A "BOARDMAN RANGE, [call sign], strafe pit, hot guns" call will be made in the blind each pass.

(6) The "Foul Line" is 2000 feet short of the strafe pit target.

(7) Cease firing any time “[Call Sign], BOARDMAN RANGE, RED RANGE CEASE FIRE, CEASE FIRE, CEASE FIRE” is called over Boardman Range frequency or on UHF Guard.

(8) Runaway guns procedure is to fly strafe run-in heading (028° Magnetic) until ammunition is expended then notify “BOARDMAN RANGE” with call sign and state “RUNAWAY GUNS.”

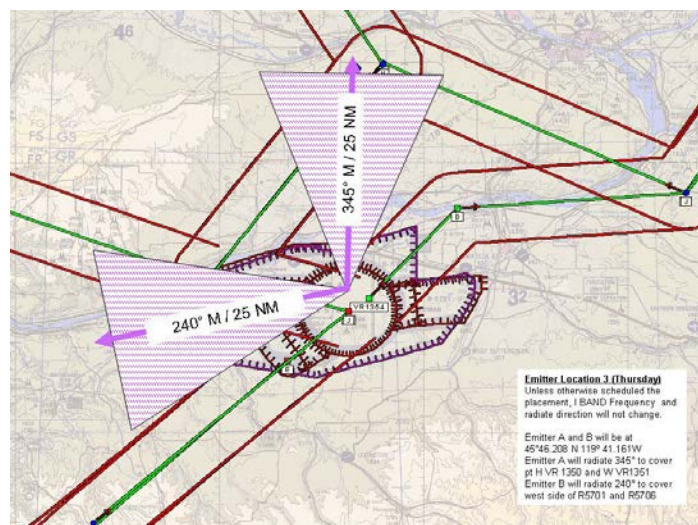
(9) After the last pass on target call in the blind to “BOARDMAN RANGE” stating “[call sign], off-target, GUNS COLD, number and type munitions expended.”

(10) Runs will be made from Southwest to Northeast only (028° magnetic). Runs from the North are not authorized.

(11) Any questions, please call the NWTRC Program Manager at (360) 257-3315.

j. Type Exercise/Ordinance. Air-to-ground high, intermediate and low altitude bombing, loft bombing and rockets. MK-76, BDU-48, LGTRs or other inert ordnance (not to exceed 25 pounds) may be used on all targets (with exception of #2 and #3 radar reflectors and Helo Gunnery see 4.2.12). Inert 2.75 FFAR Rockets are authorized on any metal tactical target. Five-inch practice Zuni rockets or inert ordnance up to 1000 pounds may be expended on the LGB and offset bull. Flares or other incendiary devices are specifically prohibited. Scheduling units are responsible to report type and quantity of ordnance expended on the range.

k. AN/UPQ-8 (V) Threat Emitters. Two AN/UPQ-8 (V) Threat Emitters are available in NWSTF Boardman. They are designated Emitter Alpha and Emitter Bravo. These two Emitters radiate in the I BAND frequency spectrum. They are for basic level training; however, schedule and frequencies can be modified for more advanced training needs. Operation of these units is Tuesday through Thursday 0800 to 1600. Any other time or special training needs will require coordination a minimum of 48 hours, prior to the training event, scheduling. Per Exhibit 4-3, unless otherwise scheduled, the Emitters will radiate from the location depicted in the established directions.



**Exhibit 4-4 LOCATION AND RADIATION ANGLE**

**“CAUTION”**

EXIT PROCEDURES FROM NWSTF BOARDMAN AIRSPACE. Unless safety of flight dictates, aircraft intending IFR flight must obtain clearance from Seattle ARTCC prior to departing the Boardman Complex. Under normal circumstances, aircraft should provide Seattle ARTCC at least 5 minute advance notice of intent to depart. This provides needed time for flight data processing and coordination when required.

(1) Helo Gunnery Procedures:

(a) Communications and ammunition/tracer use will be consistent with established procedures in this manual. Units desiring to conduct aerial gunnery on NWSTF Boardman must comply with procedures in this manual and any service/unit related regulations. Helos must be equipped with shell-casing and belt-link collection systems. See Chapter 1 paragraphs 5 and 6 of this manual for general rules and user responsibilities.

(2) WX constraints:

- (a) Live-fire authorized during Day, VMC only
- (b) Minimums are ceiling of 1000' and visibility of 3nm

**“CAUTION”**

Operations will cease immediately when conditions drop below established minimums.

(3) Target constraints (see Appendix D):

- (a) Targets 4 through 7 are approved with a direction of fire to the South only.
- (b) Targets 8 through 11 are approved with a direction of fire to the Southeast only.
- (c) Targets 14 through 17 and 19 through 24 are approved with a direction of fire to the East & Southeast only.

(4) Firing position constraints: Aerial/Door gunnery weapons danger zones only account for standard hover and traverse firing within the below parameters and at the specified targets. As depicted in WDZ graphics weapons release points are as follows:

- TGTs 4,5,6,7 HOVER 119°41'34.101"W, 45°44'7.404"N
- TGTs 4,5,6,7 TRAVERSE to and from 119°41'34.101"W, 45°44'7.404"N and 119°40'30.053"W, 45°44'7.676"N

**“CAUTION”**

In consideration of other range users, all Helo strafing requires use of a case collection system to prevent expenditure of casings and links off aircraft (e.g. the M24E2 case collection system.)

- TGTs 8,9,10,11 HOVER 119°41'58.383"W, 45°44'10.685"N



- TGTs 8,9,10,11 TRAVERSE to and from 119°41'58.383"W, 45°44'10.685"N and 119°41'53.987"W, 45°43'41.842"N
- TGTs 14,15,16,17,19,20,21,22,23,24 HOVER 119°41'31.435"W, 45°43'26.059"N
- TGTs 14,15,16,17,19,20,21,22,23,24 TRAVERSE to and from 119°41'31.435"W, 45°43'26.059"N and 119°41'42.761"W, 45°42'55.968"N

(5) Operational constraints:

(a) All live-fire events will be conducted in accordance with the most restrictive applicable unit, wing or service procedures.

(b) Radio communications will be established with Range Admin (see chapter 3 table 1 for NWSTF Boardman Range frequencies). Flight lead assumes responsibility for Range Control, Range Safety, & Exercise Control.

(c) Flight Lead must provide an expenditure report to NWSTF Boardman Staff before departing airspace.

(d) Immediately cease fire in the event of any range fires, mishaps or unusual events and report these events to Boardman Range staff.

3. NWSTF Boardman Ground Operating Procedures

a. NWSTF Boardman Access. Access procedures to NWSTF Boardman range are per reference (o) "Ground Entry/Access to Naval Weapons Systems Training Facility Boardman." Prior to conducting any training on NWSTF, all personnel must receive UXO awareness training. UXO training is provided on the range by certified range staff personnel and is an annual requirement.

b. Scheduling. Units desiring use of ground areas on NWSTF Boardman must coordinate and schedule with NAS Whidbey Island Schedules per chapter 2. In addition to chapter 2 procedures, all live-fire ground events must complete NASW 3550/1 located in Appendix B. This form will be used for verifying range safety procedures and obtaining Commanding Officer NAS Whidbey Island's approval for the event.

c. Wild Land Fire Concerns. Tracer rounds are normally authorized between 16 October and 31 May this availability time maybe more restricted depending on conditions. At other times upon written approval of the NAS Whidbey Island Operations Officer (approval outside of these dates will normally require scheduling unit to provide supplemental wildfire suppression personnel and equipment). Notify "Boardman Range" of "possible wildfire" immediately if any brush fire is observed. Pyrotechnic devices, such as smoke grenades are to be used in metal containers during high fire risk periods.

d. Dismounted/Ground Maneuver Training. This type of training may be supported at NWSTF, but should be coordinated with the NWTRC Program Manager well ahead of time to ensure the Concept of Operations (CONOP) is acceptable, supportable and within environmental constraints.

e. Ground Live-Fire Range Events.

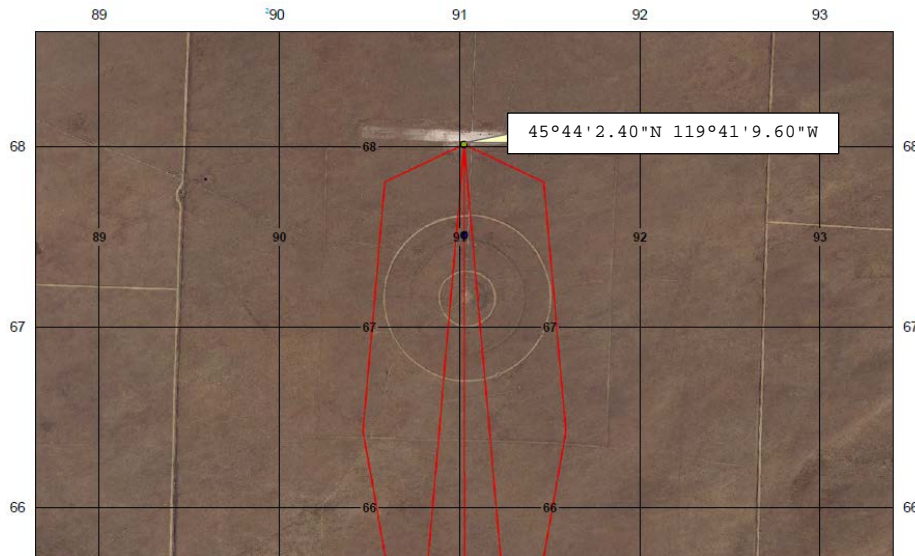
(1) These include situational or scenario-based training operations that include small arms live-fire training up to .50 Cal ball and including 40 mm grenade launchers Training Practice (TP) non-dud producing munitions. It is important to note that “live-fire” refers to the act of firing a projectile. NWSTF Boardman supports inert projectile training and practice munitions only (i.e. no HE projectile is allowed). Additionally, NWSTF Boardman is a non-controlled range, so each unit must provide range safety observers and range control officers to support the desired event. Units conducting live-fire training must verify Surface Danger Zones (SDZ) per Army Regulation 385–63/MCO 3570.1C and that the foot print does not extend beyond NWSTF Boardman property boundaries. Scheduling units should submit detailed operations (CONOPS) plans and range safety procedures using a Range Request Form (NASW 3350/1) for NWTRC Range Program Manager review prior to scheduling.

(2) Small Arms use is authorized in the designated Small Arms Use Areas only (Exhibit 4-4). The Site is just south of the old AMTI Track area at a center position using direction of fire are to the south. SDZs have been completed from this site the fire angle south for the following Weapon Caliber:

- 7.62mm: 4 Ball/1 Tracer- DODIC A131
- 7.62mm: Spec Ball M118- DODIC A136
- 7.62mm: Spec Ball M118- DODIC A136
- 7.62mm: MK248 MOD 0- DODIC A191
- 7.62mm: MK248 Mod 1 DODIC:AB43
- .300 Win Mag Match: MK 248 MOD 1 – DODIC AB43
- 9mm: Ball M882 - DODIC A363
- .50 Cal: 4 Ball/1 Tracer- DODIC: A556
- 5.56mm: Enhanced Performance Round Ball M855A1 Clip- DODIC AB57
- 40mm MK19 Mod 3: M385A1 TP- DODIC B576 and generally, do not require the above described CONOPS, planning and review process.

**“NOTE”**

CPF Environmental completed an Environmental Impact Statement for NWSTF Boardman in March 2016 that provides a designated Small Arms Training Area and necessary environmental coverage.



**Exhibit 4-5 SMALL ARMS USE AREA**

4. NWSTF Boardman Range Priorities. NWSTF Boardman is a Navy centric range. Specific range priority for aircraft and ground events are as follows:

- a. PRI 1: COMVAQWINGPAC LATT and SACT
- b. PRI 2: COMVAQWINGPAC/CPRW-10 aircraft
- c. PRI 3: Other Navy aircraft and UAS
- d. PRI 4: Other military aircraft and Other Military UAS
- e. PRI 5: Scheduled windows available for other-than-Navy forces/Ground events.

**“NOTE”**

Refer to Chapter 2 for overall NWTRC scheduling priority

5. Demolition Training Range (DTR). NWSTF Boardman DTR is located in the Main Target Area (See Figure 4-5). The DTR may be utilized up to 50 times annually and supports a Net Explosive Weight of 200 lb. (90.7 kg), though only two detonations per year will be at that explosive weight. Munitions used yearly at the NWSTF Boardman DTR includes two 200 lb. (90.7 kg) shots, five 100 lb. (45.4 kg) shots, ten 50 lb. (22.7 kg) shots, twenty 25 lb. (11.3 kg) shots, and thirteen shots under 25 lb. (11.3 kg). DTR activities typically take place between 10:00 a.m. and 4:00 p.m., but may occasionally fall outside these hours to meet training requirements. DTR activities will not take place after dark. Explosive demolition training is not normally planned to occur in the June to September time frame to help mitigate wildland fire potential, though seasonal conditions training times may vary.

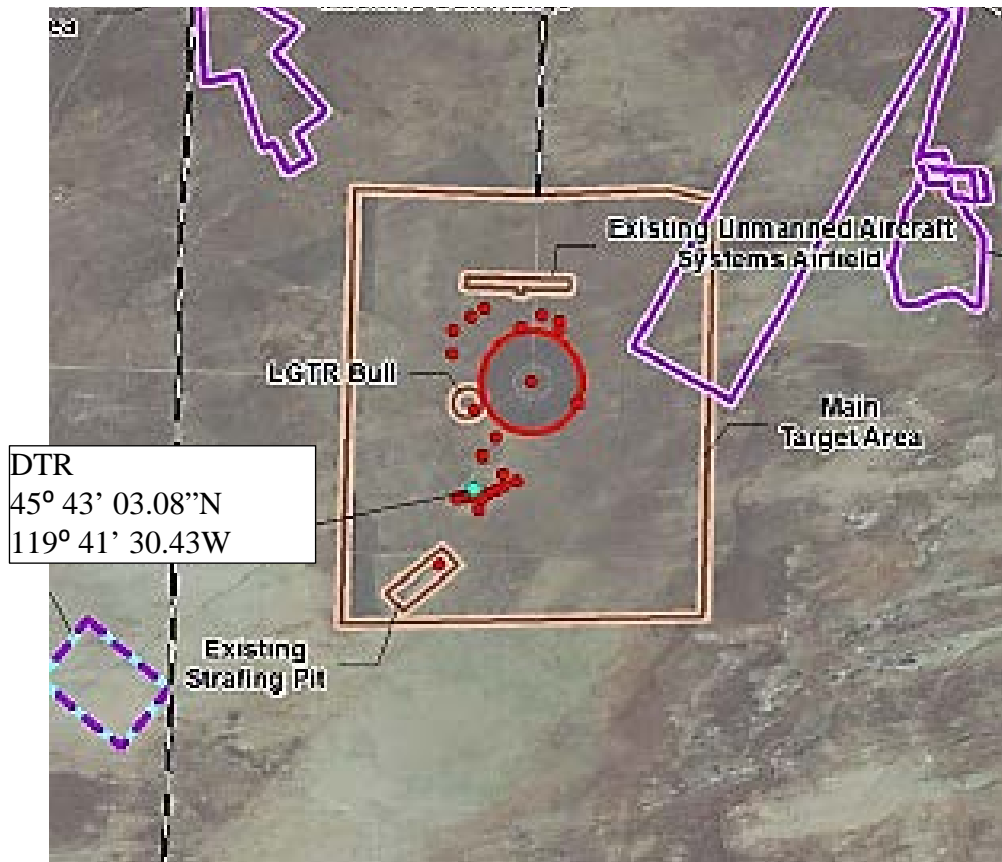


Exhibit 4-6 DTR location in the Main Target Area

CHAPTER 5  
UNMANNED AIRCRAFT SYSTEMS USE IN THE NWTRC

1. UAS Use In, R-6701, W-237, R-5701 and R-5706. The NWTRC airspace and range properties may only be scheduled and utilized by Department of Defense (DowD), and or DoD contractor personnel. No other UAS utilization within the NWTRC is authorized. All proposed UAS operations require submission and approval of NASW 3700/53 located in Appendix B. Documents will be reviewed for completeness and a determination will be made as to whether specific UAS operations meet requirements and warrant scheduling of airspace or range space.

a. General Precautions. Per reference (p), UAS must be operated to avoid overflight of personnel and property to the greatest extent possible. UAS must remain within R-6701, W-237, R-5701 or R-5706 at all times. Operators of the UAS must maintain line-of-sight with the UAS and be able to execute see and avoid procedures. Units using LHTR must establish communications with NAS Whidbey Approach Control via cell phone to the Facility Watch Supervisor's number at 360-257-2887. If unable to contact NAS Whidbey Approach Control then contact the NAS Whidbey Island Operations Duty Officer at 360-257-2681. All units using NWSTF Boardman must maintain communication with Seattle Center and monitor Range admin frequency. All Navy and Marine UAS must comply with reference (p), Flight Clearance Policy for Air Vehicles and Aircraft Systems. All others must meet requirements established in NASW 3700/53.

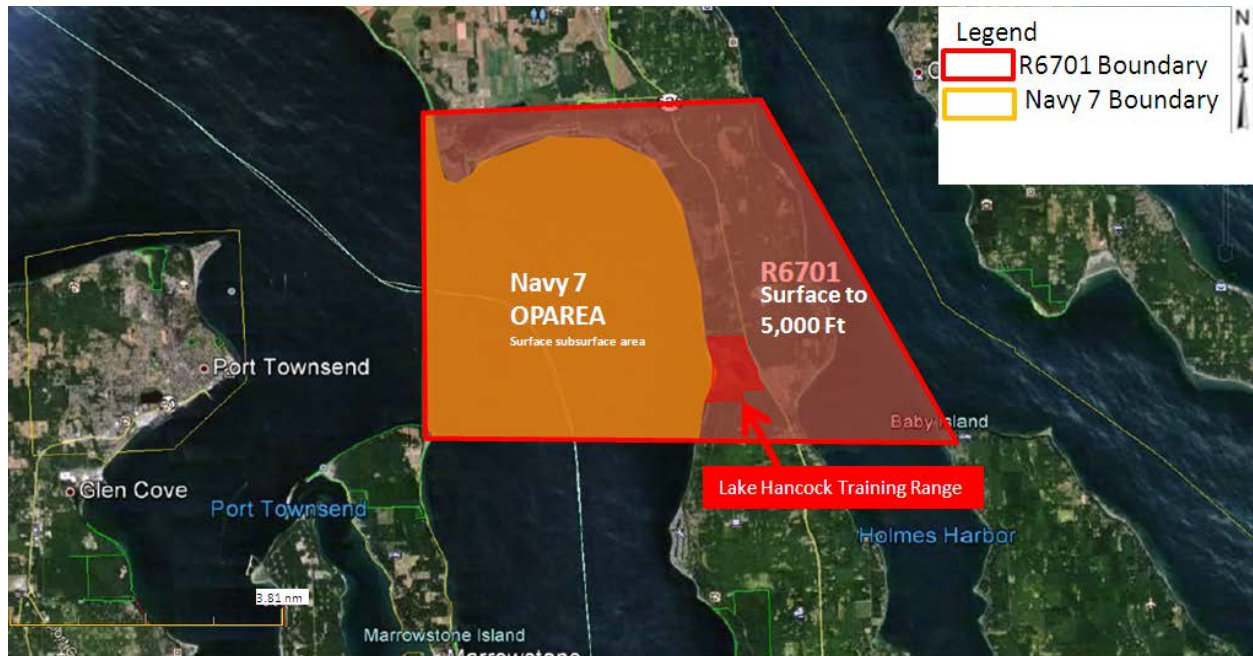
2. Loss Signal Requirement

a. R-6701 and Lake Hancock Training Range. All UAS operating in R-6701 must have loss link procedures capable of maintaining the UAS within LHTR boundaries and Navy 7 Operations Area footprint. Navy 7 Operations Area is the Admiralty Bay water area on the west side of Whidbey Island under and within the boundaries of R-6701. Exhibit 5-1 shows the boundaries of LHTR and Exhibit 5-2 shows the boundaries of R-6701 and Navy 7 Operations Area.



**Exhibit 5-1 LAKE HANCOCK TRAINING RANGE BOUNDARY**





**Exhibit 5-2 R6701 AND NAVY 7 OPARA BOUNDARIES**

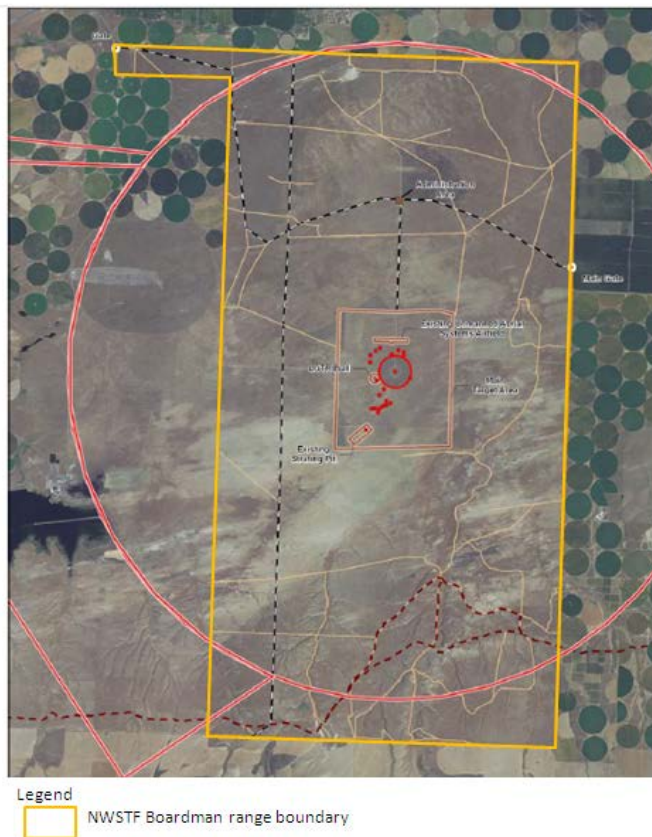
- b. R6701 Boundary coordinates are:  
 N48°09'59.00" W122°34'53.00" to  
 N48°05'44.00" W122°31'35.00" to  
 N48°06'05.00" W122°41'17.00" to  
 N48°09'59.00" W122°41'01.00" to beginning

c. W-237. UAS that use W-237 must have loss link capability to maintain the UAS within W-237 range boundaries. Exhibit 5-3 shows the boundaries of W-237. Coordinates can be found in chapter 3.



**Exhibit 5-3 BOUNDARIES OF W237**

d. R-5701, R-5706 and NWSTF Boardman. UAS that use R-5701 and R-5706 must have loss link procedures capable of maintaining the UAS within restricted airspace or NWSTF Boardman property boundaries (as required). Exhibit 5-4 shows the boundaries.



**Exhibit 5-4 NWSTF BOARDMAN LAND BOUNDARY**

e. NWSTF Boardman Boundary Coordinates are:

N45°48'21.96" W119°47'25.40"to  
N45°48'21.89" W119°37'21.29"to  
N45°37'54.44" W119°37'21.68"to  
N45°37'56.57" W119°44'53.27"to  
N45°47'56.04" W119°44'53.66"to  
N45°47'55.75" W119°47'25.91"to origin

3. Joint UAS Agency Use and De-Confliction Plan for Boardman Restricted Area 5701 and 5706



30 Nov 16



**Exhibit 5-5 NWSTF UAS WEST/EAST SEPARATION BOUNDARY**

In support of increasing NWSTF Boardman military training activities, the following is a Joint Agency UAS de-confliction plan to accommodate concurrent UAS agency use of restricted airspace R-5701 and R-5706. Utilization of this de-confliction plan assumes agency access to Navy property and restricted airspace has been authorized per Section 5.3, a Certificate of Authority (COA) has been obtained from a nearby airport and/or permission has been obtained to operate from the Boeing Facility on Three Mile Canyon Farm. Dividing the NWSTF Boardman airspace via current structure (R-5701 A, B, C, D, and E and R-5706) is not practical for concurrent use. This de-confliction plan provides enhanced safety mitigations for UAS Operations and is supplemental to procedures contained in appropriate FAA Joint Orders, DoD Flight Information Publications.

a. UAS Geographical/Lateral Airspace Division:

(1) Airspace division boundary as depicted on Exhibit 5-5. Longitude W119 45.0 will define the division point of restricted airspace R-5701/5706. Area west of the longitude W119 45.0 will be referred to as “West Boardman.” Area east of the longitude W119 45 will be referred to as “East Boardman.”

(2) Under this option, one UAS Agency will launch/recover or enter the area west of longitude W119 45.0 and a second UAS Agency will launch/recover or enter the area east of longitude W119 45.0. All agencies will remain in their assigned airspace east or west of W119 45.0.

(3) Published airspace altitude and lateral limits apply.

(4) Once scheduled with Seattle Center, real-time coordination between cooperating units must be accomplished on published Boardman Range UNICOM or pre-briefed direct communication. Additionally, units must obtain airspace clearance and monitor appropriate Seattle Center frequency prior to launch and during flight operations.

b. Altitude/Vertical Separation Option.

(1) Airspace altitude block will be assigned via the Scheduling Authority (NAS Whidbey Island Range Schedules).

(2) Under this option, one UAS agency will launch/recover west of longitude W119 45.0 within R-5701 or enter/exit with a COA into/out of R-5706 west of longitude W119 45.0. The second UAS Agency will launch east of longitude W119 45.0 within R-5701 or enter/exit with a COA into/out of R-5706 east of longitude W119 45.0. Once both agencies have mutually confirmed vertical separation is achieved, the horizontal (W119 45.0) restriction may be crossed.

(3) Published airspace altitude and lateral limits apply as assigned.

(4) Real-time coordination between cooperating agencies must be accomplished on published Boardman Range UNICOM or other briefed communication means. The UAS Agency assigned the lower altitude block must not launch/recover from within R-5701 until positive confirmation that vertical separation has been achieved. Achieving and maintaining vertical separation is the responsibility of the scheduled UAS agencies. Additionally, UAS Agencies must obtain airspace clearance on and monitor appropriate Seattle Center frequency prior to launch and during flight operations.

4. Scheduling. UAS activity must be scheduled through NAS Whidbey Island Range Schedules per chapter 2. In addition to chapter 2 procedures, NASW 3700/53 must be provided by the scheduling unit or the contracting agency. The NWTRC Range Program Manager will review all UAS request forms and has approval authority on UAS activity.

CHAPTER 6  
DARRINGTON OPERATING AREA

1. General

a. Description. The Darrington Area is a block of airspace established by Letter of Agreement with Seattle ARTCC for EW and functional check flight missions. This area is not a designated MOA and is for use by NAS Whidbey Island-based units only. See Exhibit 6-1.

b. Scheduling. Scheduling is controlled through Seattle ARTCC on a "first-come-first-served" basis. The route to Darrington is defined by the NUW-Darrington FAIOPS route in reference (n).

c. Communications

(1) Whidbey Approach: 270.8 MHZ

(2) Seattle ARTCC: 270.3 MHZ

2. Area Boundaries (see Exhibit 6-1 DARRINGTON WEST AND EAST)

a. Darrington West Boundaries.

Beginning at:

48° 46' 00"N 122° 09' 00"W to

48° 45' 55"N 122° 00' 45"W to

48° 38' 30"N 121° 58' 00"W to

48° 15' 11"N 121° 58' 00"W to

48° 15' 00"N 122° 33' 00"W to

48° 21' 00"N 122° 44' 00"W to

48° 38' 00"N 122° 15' 00"W to the point of beginning.

b. Altitudes: Not specifically defined, however minimum altitude assignment by Seattle ARTCC will not be lower than 10,000 feet MSL.

c. Darrington East Boundaries

Beginning at:

48° 45' 55"N 122° 00' 45"W to

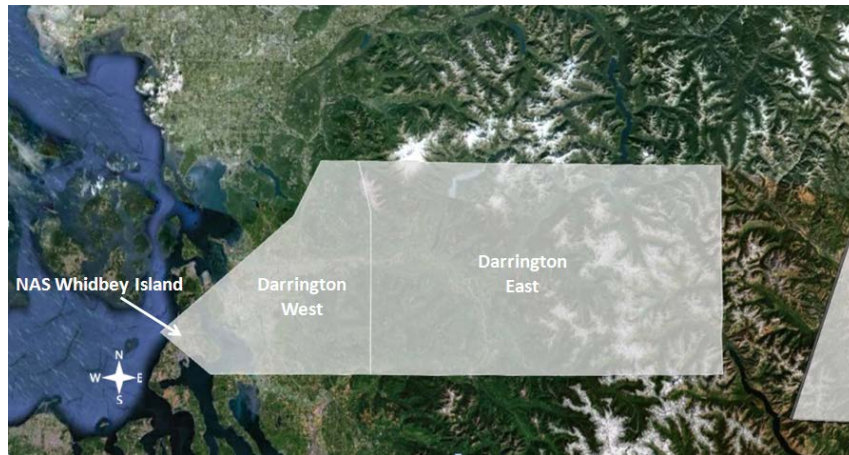
48° 45' 00"N 120° 42' 00"W to

48° 15' 00"N 120° 42' 00"W to

48° 15' 11"N 121° 58' 00"W to

48° 38' 30"N 121° 58' 00"W to point of beginning.

d. Altitudes: Not specifically defined, however altitude assignments by Seattle ARTCC will not be lower than 13,000 feet MSL.



**Exhibit 6-1 DARRINGTON WEST AND EAST**

**“CAUTION”**

The Darrington Area is not special use airspace. Military aircrew must be alert for non-participating traffic.

**3. Operating Procedures**

- a. EW training flights and EA18G/P3/EP3/P8A functional check flights (FCFs) only.
- b. VFR on-top operations, aerobatics, ACM/DACM/BFM, and aerial refueling/practice plugs are not authorized.
- c. Seattle ARTCC reserves the right to limit the number of aircraft that can operate in the area at any given time.
- d. Maximum number of aircraft in formation flight is two. Aircrew must ensure that each aircraft has filed an IFR flight plan for individual flight in the Darrington Area if flight break-up is planned.
- e. IFR procedures are mandatory. Aircraft must remain on Seattle ARTCC frequency when operating in the area, unless otherwise coordinated.
- f. Aircraft cleared to operate in Darrington Area must remain within the lateral and vertical limits of the area as assigned by Seattle ARTCC.
- g. Lost communications must be as outlined in DOD FLIP.

**“NOTE”**

Supersonic flight is NOT authorized in the Darrington Operating Area.



Military Training Routes and Air Refueling Routes

VR-1350	IR-341
VR-1351	IR-342
VR-1352	IR-343
VR-1353	IR-344
VR-1354	IR-346
VR-1355	IR-348
AR-626	AR-717A

Table 2

**“NOTE”**

AR-626 and AR-717A refueling routes are contained within existing SUA. Refer to FLIP AP-1 for coordinates. Except for IR-348 all routes are scheduled concurrently with associated SUA.

**“NOTE”**

Units may schedule IR-348 without concurrently scheduling the Okanogan and Roosevelt MOAs. Altitude restrictions apply and approval is required from NAS Whidbey Island Range Schedules Division.

c. Routes must not be used unless scheduled with NAS Whidbey Island Range Schedules Division. VRs are scheduled at 10-minute intervals (H + 00, H + 10, H + 20, H + 30, H + 40, H + 50); and IRs are scheduled at 20-minute intervals (H + 00, H + 20, H + 40). If alternate entry/exit points are desired, they must be scheduled. Refer to Chapter 2 for additional scheduling procedures.

d. All routes are one way. Flight operations conducted along these routes or segments of these routes must conform to the direction of traffic flow indicated in the route description.

e. FAIROPS Stereo Flight Plans have been developed for NAS Whidbey Island-based units to incorporate IR/VR routes into the local flight plan system. Refer to reference (n).

f. Preflight Planning. Low-level flying requires extensive preflight planning to ensure flight safety and maximum training from each sortie. Familiarity with FLIP AP/1B, Change Update Manual (CHUM), NOTAMs, TFRs and other route advisories is advised.

g. Operating Procedures.

(1) Unless otherwise delineated in an MTR special operating procedure, aircrew must avoid charted, uncontrolled airports by 3 nm or 1,500 feet.

(2) Avoid Class B, C, and D, airspace and Minimize disturbance to persons and property on the ground.

(3) All "IR" operations must be conducted on IFR flight plans.

(4) Flight Plan requirements for VR route use:

(a) Pilots departing on IFR clearances to fly VRs are required to file to the fix/radial/distance of their entry/alternate entry point of the route.

(b) Pilots transitioning to IFR upon exiting the VR are required to have an IFR flight plan on file with the appropriate fix/radial/distance of their exit point.

**“NOTE”**

FAIROPS Stereo type flight plans provide routing for NAS Whidbey Island units.

(5) Operations on VR routes must be flown only when the ceiling is at or above 3,000 feet AGL and Flight visibility is 5 statute miles or greater.

(6) Route entry must be at published entry/alternate entry points only. Specific entry times for MTRs are required to provide safe separation from other Whidbey Island-scheduled routes. MTR schedules are provided to general/agriculture aviation interests and are predicated on adherence to scheduled entry times. Aircraft must not enter these routes at any time other than those obtained from NAS Whidbey Island Range Schedules Division. Entry times will be adhered to within plus or minus 3 minutes for VRs and plus or minus 5 minutes for IRs.



CHAPTER 8  
CVN OPERATING PROCEDURES

1. General. To standardize procedures for NWTRC CVN air and surface operations, this chapter outlines procedures that must be utilized when conducting flight operations within W-237, CYA102, CYR109 and Strait of Juan De Fuca. The following procedures have been coordinated with the FAA and are designed to reduce the disruption of CVN training while providing a safe flying environment for both military and civil air traffic. CVN operations, which involve flights to/from shore stations, are to be conducted per appropriate air traffic control directives and procedures outlined herein to preclude air traffic control problems with the FAA, military ATC Facilities and the WADS. Adherence to these procedures will alleviate many potential problem areas, enhance training, and provide the following:

a. Standardization of flight information messages for relay of flight plan information, ADIZ penetration coordination, Altitude Reservation Airspace (ALTRV) usage, and ATCAA/warning area/ restricted area scheduling and usage.

b. Communications with shore facilities, surface/air platforms, WADS and FAA Seattle ARTCC.

c. Adequate lead-times for altitude/airspace reservations.

d. Timely clearance for aircraft entering the National Airspace System, Class A, B and C airspace, warning areas, ATCAA, or ALTRV.

2. Coordination

a. Planning Conference. Prior to any underway period involving flight operations within the NWTRC, a face-to-face meeting should be held at least three working days in advance to discuss operations. Air Operations, Strike Operations, and air wing personnel will meet with NAS Whidbey Island Operations Department to coordinate the following items:

(1) Planned NWTRC exercises and flight operations.

(2) OPAREA/airspace requirements and scheduling.

(3) OPAREA reservations, obtain ALTRV/MOAs/ATCAAs as required.

(4) Use of Canadian airspace.

(5) IFF assignments.

(6) Operations penetrating the National Airspace System/Flight Planning.

(7) Flight operations in the Strait of Juan De Fuca.

(8) Communications/coordination.

(9) Unusual hours of operation.



(10) Other items of interest.

b. ATC briefs/liaison ship riders. Upon request, NAS Whidbey Island will furnish orientation briefs to AIROPS/CATCC/AIRWING personnel on OPAREA and National Airspace System procedures. In addition, ATC personnel may be available to serve as onboard liaison during at-sea periods. Requests for orientation briefs/ship riders can be arranged by contacting ATC (Code N332) at DSN 820-2132, COMM (360) 257-2132. EMAIL: WHDB\_Range\_Schedules\_All\_Hands@navy.mil

3. Pre-Sail Coordination Messages

a. Summary of Operations. No less than 48 hours prior to commencement of AIROPS, the carrier must send a summary of intended air operations by message to NAS Whidbey Island, concerned FAA facilities, WADS, Canadian military/ATC and other appropriate facilities. Anticipated AIROPS for the entire period must be listed. This message does not rescind or supersede airspace request procedures found in other sections of this manual, or replace divert alert/Notice of Intent/IFF messages as required by higher authority.

The following example is provided:

FM: (CVN)  
TO: NAS WHIDBEY ISLAND WA/N3/N33/N331//  
FAA SEATTLE ARTCC AUBURN SEATTLE WA/MOS//  
WESTERN AIR DEF SX MCCHORD AFB WA/IS/SOCC/DOOS//  
MOC ESQUIMALT//N36-1//  
WOC COMOX//  
INFO: (Other addressees as required)  
(UNCLAS/CONFIDENTIAL)//N03120//  
SUBJ: SUMMARY OF INTENDED AIR OPERATION  
MSGID: GENADMIN/ (ORIGINATOR)//

RMKS: 1. Read in four (4) columns:

DATE	TIME	EVENT	OPAREA
21 FEB	1830-2100Z	CYCLIC OPS	W-237 A, B
22 FEB	2000-2200Z	CQ	SOJDF
24 FEB	1900-2100Z	HELO OPS	CYA-102

b. Divert Alerts. Divert Alert requests must be submitted prior to any flight operations. NAS Whidbey Island is a 24-hour airfield; however, additional personnel are required to support CVN divert/bingo operations. Accuracy of divert alert periods is essential to ensure support of CVN contingencies.

c. OPAREA Requests. Users must submit NWTRC requirements to NAS Whidbey Island Range Schedules Division per chapter 2 of this manual. Due to rapidly changing sea conditions, short fuse requests or changes can be accepted by phone/e-mail or airborne relay.

d. ALTRV Requests. CVNs must submit ALTRV requirements for domestic airspace to FAA CARF Washington DC, info FAA SEATTLE ARTCC AUBURN WA/MOS// and WESTERN AIR DEF SX MCCHORD AFB WA//IS/SOCC/DOOS//. Requests must be made per Special Military Operations per references (e) and (q) no less than six days prior to COMEX of flight OPS to ensure approval and NOTAM promulgation to users of SUA.

e. IFF Requests. A request for IFF code assignment must be received no later than three days prior to at-sea period. In lieu of message, IFF codes may be assigned at the pre-sail conference.

#### 4. Flight Planning

a. OPAREA Modifications. To ensure airspace availability, users must submit OPAREA modification requests no later than 1500L the day prior. Submit ALTRV/ATCAA modification requests as soon as practicable to ensure ARTCC ability to coordinate requested modification. Verification of receipt of critical messages (i.e. short notice OPAREA modifications, change of flight operations, incident, mishaps, etc.) by phone communications, when practical, is recommended.

b. Daily Air Plan. To permit NAS Whidbey Island and other appropriate agencies to prepare for upcoming flight operations, the CVN must include NAS Whidbey Island and other appropriate agencies as an addressee on the daily Air Plan.

c. Flight Information Messages. In order to recognize and identify naval aircraft operating in the Pacific Coast ADIZ, CADIZ, flight information (flight advisories, launch advisories, flight plans) must be passed to WADS/NORAD (WESTERN AIR DEF SX MCCHORD AFB WA), NAS Whidbey Island, FAA Seattle ARTCC and cognizant area commanders as info addressees via message.

d. Flight Plans. Navy and FAA facilities must be kept informed of all aircraft that will enter the National Airspace System. To ensure timely filing, flight plans should be sent to NAS Whidbey Island listing all action addressees above. Every effort should be made to use Stereo Routes contained in reference (n).

(1) A minimum lead-time of two hours is required if filing Stereo Routes, and four hours for non-stereo routes. With ample notification via phone relay or relay from airborne platform, unscheduled flights will be handled on a case-by-case basis.

(2) Once filed, flight plans are valid for 30 minutes prior to and two hours after proposed launch time.

(3) Aircraft may enter the National Airspace System as singles or multi-ship, but individual call signs/squawks (although in standby) are required for each aircraft in the event of emergencies, IMC, or separation of the flight. Filed call signs will be retained throughout the flight. Use of other than filed call signs for the mission can cause confusion with ATC agencies and possibly result in a delay in obtaining clearance or assistance, use of tactical call signs is permitted.

(4) NAS Whidbey Island Base Operations will file all CVN flight plans.

e. Overhead Messages. To ensure aircrews receive CVN overhead times, include NAS WHIDBEY ISLAND WA/N3/N33/N331// as an addressee on all overhead messages. A copy will be retained at the NAS Whidbey Island Operations Duty Officer desk for reference.

5. At-Sea Coordination. Pre-sail coordination is the best method to articulate user requirements. However, it is understood that various events can and will effect planned evolutions. At-sea, to ensure receipt of special requests, airspace coordination, or flight plans, message traffic with proper lead times is the preferred method of communication. When time precludes use of message traffic, phone conversation or airborne relay is an acceptable substitute. Use of e-mail (ODO.NASWI@navy.mil) messages is encouraged; however, e-mail notification cannot be considered complete unless response e-mail is received from NAS Whidbey Island confirming the action or responding to a request. Some examples of at-sea coordination:

- a. Notification of secured flight operations (cold deck notification required).
- b. Short fused flight plans.
- c. Warning area airspace changes.
- d. Coordination to move to Strait of Juan De Fuca due to W-237 weather/sea states.
- e. Extensions of divert alert periods.

#### 6. Communications

##### a. Landline Communications

(1) When required for immediate coordination, NAS Whidbey Island phone numbers listed in Table 3 must be used:

NAS WHIDBEY POCs		
Agency	Number	Operating Hours
ATC Facility	(360) 257-2887	24 Hours
Range Schedules	(360) 257-2877	0700-1600
Range Schedules	(360) 257-1872	
OPS Duty Officer	(360) 257-2681	24 Hours
Flight Planning	(360) 257-1601	24 hours
NAS OPS	(360) 257-2120	0730-1600

Table 3  
(Phone numbers are COMM and DSN prefix is 820)

(2) Should a need arise to contact FAA Seattle ARTCC; the phone numbers in Table 4 should be used.

FAA SEATTLE ARTCC POCs

Agency	Number	Operating Hours
Military Ops	(253) 351-3523	0700-2300
TRFC Mgmt	(253) 351-3520	24 hours
Area Sup	(253) 351-3505	24 hours

Table 4

b. Ship-to-Shore Communications. Ship-to-shore radio communications may be intermittent when the CVN is in local waters/Strait of Juan De Fuca and within 15/20 miles of NAS Whidbey Island. There are no ship-to-shore communications in the W-237 complex. Radio frequencies are contained in Table 5.

NAS WHIDBEY ISLAND RADIO FREQUENCIES

AGENCY	FREQ (UHF/VHF)
Approach CTL (CVN Sector)	266.8 or L/L
Approach Control	285.65/118.2
Control Tower	340.2/127.9
Base OPS/ODO	350.0

Table 5

c. Air-to-Ground Communications. Aircraft operating within 100 miles of NAS Whidbey Island can expect positive air-ground communications with NAS Whidbey Island ATC on the frequencies listed in Table 5. Aircraft operating in W-237 should be able to maintain adequate communications with FAA SEATTLE ARTCC (319.2/125.1), except at lower altitudes. Flight leader or communications relay aircraft must contact SEATTLE ARTCC at least 5 minutes prior to obtain clearances and to alleviate any enroute delays. This will also permit flight participants to continue with their mission while the clearance is being obtained. All aircraft operating within the W-237 complex are required to contact Seattle Center for entry/exit approval. This may be accomplished by individual aircraft commanders or through the designated communications aircraft.

## 7. Bingo/Diverts to Shore Facilities

a. Bingo. A bingo aircraft inbound to a shore facility is an emergency and will be assimilated into the National Airspace System as expeditiously as possible. FAA publications do not define the term bingo as an emergency. To ensure priority handling, aircrew must declare an emergency, stating the nature of the emergency, i.e., “EMERGENCY LOW FUEL,” “PORT ENGINE OUT,” etc. Once an emergency has been declared, if not already selected, IFF transponder should be set to the appropriate emergency code. Remain on that code until directed by ATC.

### “WARNING”

Aircraft unable to contact ATC must not enter Positive Controlled Airspace unless squawking the appropriate emergency code.

b. Diverts

(1) An aircraft inbound to a shore facility without an emergency is simply called a "divert." No special handling should be expected by the divert aircraft. If fuel state becomes a concern, aircrew must notify the ATC facility when the aircraft reaches minimum fuel state as defined by NATOPS.

(2) When diversits involve multiple aircraft, provide as much advance notice to the controlling agency as possible to assist ATC and reduce aircraft delays. At a minimum, the number of aircraft inbounds and destination should be provided.

8. Conduct of Flight

a. W-237 Operations. All flights operating within W-237 are required to maintain "due regard" status per reference (q) until radar contact is established by the proper FAA Air Route Traffic Control Center.

b. Strait of Juan de Fuca/Puget Sound Operations. The Strait of Juan de Fuca and the Puget Sound are not SUA, and as such, Federal Air Regulations and standard air traffic control procedures are applicable. "Due Regard" is not authorized within the Puget Sound/Strait of Juan de Fuca. All aircraft, not on an IFR flight plan, must follow standard VFR procedures. Specific procedures for operating within this airspace are contained in paragraph 9.

9. Strait Of Juan De Fuca (SOJDF) Carrier Operations

a. General SUA. A warning area is SUA designated for potentially hazardous military air and surface activity. The SOJDF, however, is not SUA, so extra precautions must be exercised to ensure flight safety. Local procedures have been developed to permit CVNs to conduct limited flight operations in close proximity to civilian users.

b. CVN use of SOJDF. CVNs are strongly encouraged to use W-237 for flight operations. When missions or W-237 weather/sea conditions restrict use of the Warning Areas, the SOJDF may be used for limited flight operations. Scheduling and use of SOJDF is controlled and must be pre-coordinated at a pre-sail conference. The following restrictions apply:

- (1) Day time, Case 1 only.
- (2) Limit six aircraft in CVN pattern.
- (3) All aircraft must monitor Whidbey Approach Control Frequency in addition to CVN L/L.
- (4) All aircraft must be on discrete beacon codes.
- (5) Minimum of 2 1/2 hour lead-time is required for NOTAM broadcast.
- (6) When able, a radio or phone communication link must be maintained between CVN CATCC and Whidbey Approach.

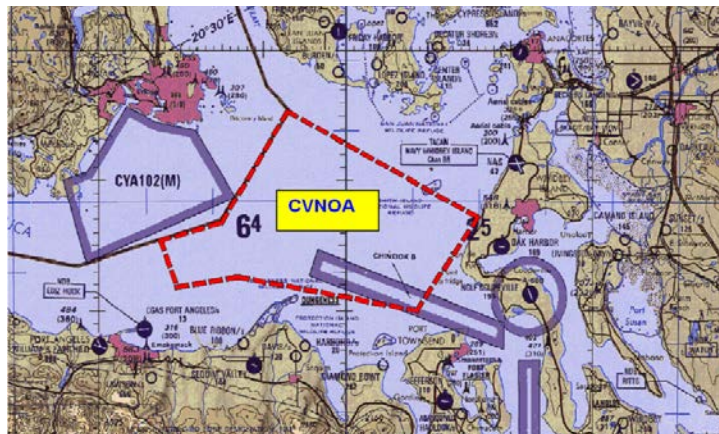
(7) CVN Operations is responsible for scheduling Canadian OPAREAS.

(8) Participating aircrew must receive a brief on SOJDF operations.

c. SOJDF Airspace for CVN Use

(1) A portion of airspace within the SOJDF has been locally designated for CVN flight operations (Exhibit 8-1). This airspace is of sufficient size for both aircraft operations and surface navigation purposes and should be used by CVNs to the maximum extent practical due to added safety benefits, specifically, ship-to-shore/air-to-ground communications and ATC RADAR coverage. In this designated area, all CVN aircraft will be provided RADAR traffic advisories by NAS Whidbey Approach Control on a discrete frequency or on the CVN land launch button.

(2) Aircraft operations in the Strait of Juan De Fuca involve many different types of aircraft. A high mid-air collision potential exists. Additionally, many of the commercial aircraft that transit the SOJDF each day are equipped with TCAS equipment. A TCAS incident can be avoided when both military and civil aircraft are receiving traffic advisories from a controlling agency. Use of the designated CVNOA and compliance with local operating procedures are critical to de-conflicting civil and military traffic that operate within the SOJDF.



**Exhibit 8-1 CVN LOCAL OPERATIONS AREA**

**“CAUTION”**

High volume of civil and non-participating military VFR/IFR traffic may be encountered in the Puget Sound and Strait of Juan de Fuca. Military aircrew must be alert for both participating and non-participating aircraft.

(3) Strait Of Juan De Fuca CVN OPAREA

48° 17'.3N/122° 43'.7W  
48° 10'.0N/122° 51'.7W  
48° 12'.6N/123° 14'.5W  
48° 12'.0N/123° 20'.0W  
48° 20'.0N/123° 22'.0W  
48° 25'.5N/123° 07'.0W  
48° 22'.4N/122° 46'.6W

30 Nov 16

CHAPTER 9  
MARINE MAMMAL MITIGATION REQUIREMENTS FOR TRAINING AND TESTING  
THAT OCCURS WITHIN THE NWTRC

1. Training Activities Covered. A wide variety of training and testing activities occur in the NWTRC, including, but not limited to, the use of active sonar systems and various ordnance deliveries. Testing activities covered are generally limited to Research, Development, Test and Evaluation (RDT&E). Mid-Frequency Active Sonar (MFAS) and High-Frequency Active Sonar (HFAS) activities are not authorized for training activities or in-transit maintenance and testing when within Puget Sound or the Strait of Juan de Fuca. This prohibition does not apply to approved activities conducted on the Nanoose or Dabob bay ranges. The use of active sonar for pier side maintenance and testing in the Puget Sound is authorized upon approval by COMPACFLT and must be conducted in accordance with protective measures assessment protocol for ship and submarine active sonar use to include the use of lookouts.

2. Policy and Protective Measures Assessment Protocol. Reference (s) outlines mitigation procedures in the NWTRC and is to be used in conjunction with PMAP. Reference (t) is the NMFS Letter of Approval and notes the Navy's compliance requirements along with required mitigation measures. References (t) and (s) are merged into PMAP and are important for sustaining training opportunities in the NWTRC. Commanding Officers of units conducting training, to include unit level training, must ensure full compliance with PMAP and review the most current COMPACFLT message reference (s) for environmental requirements for training and testing in the NWTRC reference (s). Both PMAP and reference (s) can be accessed at the following URL:

<https://eims3.sscno.nmci.navy.mil/pmap/>

Reference (s) may be updated as part of the Navy's environmental compliance strategy, CPF will regularly assess the effectiveness of the mitigation measures and the ability of Navy commanders to understand and implement them. If there is a conflict with the most current reference (s) and PMAP the more restrictive mitigation measure applies.

3. Background and Compliance

a. Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). Over the last several years, CPF prepared an EIS/OEIS in accordance with U.S. laws and executive orders. It was completed in April 2016 and is available for review at the following URL:

<http://nwtteis.com/DocumentsandReferences/NWTTDocuments/FinalEISOEIS.aspx>

b. Compliance. PMAP applies to all marine mammals, which includes seals, sea lions, whales, dolphins and sea otters. U.S. forces are required to comply with the measures in this range manual and reference(s) when conducting training, to include unit level training, and testing events in NWTRC. Additionally per reference (cc) U.S. forces are to use PMAP (see Paragraph 9.2 above for URL)

30 Nov 16

c. **NON-U.S. Forces Requested Compliance.** NON-U.S. forces involved in training and testing events within the territorial seas of the U.S. (less than 12 nm off-shore) and inside NWTRC OPAREAs are requested to comply with these measures to the extent these measures do not conflict with provisions of applicable status of forces agreements. NON-U.S. forces involved in events within NWTRC OPAREAs but beyond U.S. territorial seas (more than 12 nm off-shore) are encouraged to comply with these mitigation measures if it is reasonable and practicable to do so, and to the extent that complying with these measures will not impair training, operations, or operational capabilities of the foreign vessels and aircraft.

#### 4. Record Keeping

a. **Data Collection and Record Keeping.** Active sonar record keeping requirements. All U.S. MFAS and HFAS capable Units, including airborne assets, must maintain detailed logs of all active sonar use (start and stop time, start and stop location, sonar system settings to include mode and transmit attenuation, and all mode changes) during all ASW training and testing events. U.S. units with MFAS and HFAS must submit SPORTS reports per references (v) and (w). Accurate and timely reports are critical to compliance with environmental laws.

b. **Non-U.S. Requested Record Keeping.** Non-U.S. MFAS and HFAS capable units are encouraged to maintain detailed logs of sonar use as described above.

5. Active Sonar Systems. Per references (b) and (t) authorized annual allowances for use of active sonar systems in the NWTRC are as follows:

AN/SQS-53 (MF1) - an average of 166 hours

AN/BQQ-10 (MF3) - an average of 70 hours

AN/AQS-22 (MF4) - an average of 4 hours

AN/SSQ-62 (MF5) - an average of 896 buoys

AN/SQS-53 CAS Mode (MF11) - an average of 16 hours

AN/BQQ-10 (HF1) - an average of 48 hours

AN/AQS-20 (HF4) - an average of 384 hours

AN/SSQ-125 (ASW2) - an average of 720 buoys

AN/SLQ-25 (ASW3) - an average of 78 hours

a. **Applicability.** These requirements apply to the use of MFAS and HFAS systems used during at-sea training and testing for the purpose of searching for and tracking submarines, underwater targets, and mines. MFAS and HFAS are not authorized for training activities or in-transit maintenance or testing in Puget Sound or the Strait of Juan de Fuca. This prohibition does not apply to COMPACFLT approved activities or those activities conducted on the Nanoose or Dabob bay ranges.

b. **Non-Applicability.** These requirements do not apply to:

(1) Operational use, including force protection and Safety of navigation;

(2) Underwater communication systems and fathometers.



30 Nov 16

c. Additional Measures are not Authorized. Additional measures or overly conservative application of mitigation measures are not authorized as they may further degrade training realism and negatively impact war fighting capability. Contact COMPACFLT N7 prior to applying additional or more restrictive measures.

APPENDIX A  
REFERENCES

- (a) OPNAVINST 3770.2L
- (b) NWTTEIS/OEIS OCT 2015
- (c) COMTHIRDFLTINST 3120.2B
- (d) OPNAVINST 3710.7U
- (e) FAA Order JO7400.2K
- (f) FAA Order JO7610.4S
- (g) NASWHIDBEYINST 3710.1Z
- (h) DODD 4715.11
- (i) MSG COMPACFLT PEARL HARBOR HI 270202ZFEB09
- (j) CJCSM 3212.02B
- (k) OPNAVINST 8020.14A
- (l) OPNAVINST 3571.4
- (m) 15CFR §922.152
- (n) NASWHIDBEYINST 3722.3E
- (o) NASWHIDBEYINST 8020.8
- (p) NAVAIRINST 13034.1D
- (q) DODI 4540.01
- (r) OPNAVINST 3722.33D
- (s) MSG COMPACFLT PEARL HARBOR HI 111723Z FEB16
- (t) NMFS' Biological letter and Letters of Authorization are valid 9 Nov 2015 through 8 Nov 2020
- (u) NAVEDTRA 12968-D
- (v) MSG COMUSFLTFORCOM NORFOLK VA 231614ZMAY06
- (w) MSG USFF 271238ZSEP13
- (x) OPNAVINST 3100.6J
- (y) FACS FACSDINST 3120.1J
- (z) OPNAVINST 3500.39C
- (aa) CNRNW 8027.2A
- (ab) FAA Order 7400.8Y
- (ac) MSG COMPACFLT PEARL HARBOR HI 230143Z APR16
- (ad) MSG COMPACFLT PEARL HARBOR HI 132210Z APR12

## APPENDIX B FORMS

30 Nov 16

NWTRC RANGE AND AIRSPACE REQUEST FORM  
FOR  
ALL SPECIAL USE AIRSPACE SUA  
NAVAL WEAPONS SYSTEM TRAINING FACILITY (NWSTF) BOARDMAN  
LAKE HANCOCK TRAINING RANGE  
CRESCENT HARBOR OPAREA AND SEA PLANE BASE SURVIVAL AREA  
NWSTF BOARDMAN COM: (541) 481-2565 FAX: (541) 481-2567  
NAS WHIDBEY ISLAND SCHEDULING (360) 257-1872/2877

**\*ENSURE NOTES ARE READ AND UNDERSTOOD PRIOR TO SCHEDULING\***

REQUESTING UNIT: (UNIT/SQUADRON NAME AND NUMBER OF PARTICIPANTS)

TYPE OF EXERCISE: (DESCRIBE IN DETAIL THE PROPOSED TRAINING)

EXCLUSIVE OR CO-USAGE: ☐ EXCLUSIVE ☐ CO-USAGE

AREA AND SUA: (RANGE AND ACRES/METERS/GRIDS REQUESTED) (INCLUDE DESIRED ALTITUDES. FOR NWSTF BOARDMAN REFERENCE USE TOPOGRAPHICAL MAP, 2075II V792 EDITION 1 DMA, 1:50,000, STRAWBERRY CANYON, OREGON OR MOST CURRENT VERSION)

STAGING AREA FOR EQUIPMENT AND PERSONNEL AS APPLICABLE: (GIVE LOCATION AND SIZE)

DATES AND TIME OF COMEX/FINEX OR PERIOD DESIRED:

WEAPON INFORMATION:

TYPE OF WEAPON:

TYPE OF ORDNANCE TO BE USED:

MAXIMUM OPERATING ALTITUDES OR MAXIMUM ORDNANCE ALTITUDE, AS APPLICABLE:

30 Nov 16

TYPE(S) AND NUMBER OF TARGET(S), AS APPLICABLE:

TYPES AND NUMBER OF VEHICLES, AS APPLICABLE:

SUPPORT FACILITIES TO BE USED TO ACCOMMODATE PERSONNEL: (POTABLE WATER IS NOT AVAILABLE AT NWSTF BOARDMAN)

USE OF HAZARDOUS MATERIALS (FUELS/OILS) IN SUPPORT OF EXERCISE: (TYPE AND QUANTITY AS APPLICABLE)

SUPPORT REQUESTED FROM NWSTF PERSONNEL:

POINT OF CONTACT AND PHONE NUMBER(S):

**NOTES:**

1. Requesting Ground Unit(s) must provide Medical Support staff, a Range Safety Officer, Safety Observer's, a HAZMAT Coordinator, and ensure proper use of current radio frequencies.
2. Range times must be accurate in accordance with proposed scheduled times, any modifications must be routed through the NAS Whidbey Island Schedules Office 48 hours prior to range usage.
3. From the 1st of May through the 31st of October, Tracer Rounds are NOT authorized for usage at NWSTF Boardman without permission from the Operations Officer, NAS Whidbey Island (360) 257-2120.
4. If you have any questions or concerns please contact Range Program Manager (N00RM) Northwest Training Range Complex (360) 257-3315 or DSN 820-3315.

**NWSTF BOARDMAN CURRENT RADIO FREQUENCIES:**

UHF (ground to air) 326.875 MHZ

VHF (ground to air) 126.200 MHZ

FM (ground to ground) 140.450

**LAKE HANCOCK TRAINING RANGE RADIO FREQUENCIES:**

UHF 343.75 MHZ

VHF 126.05 MHZ or

Check with Range Schedules due to approach control needs these frequencies may change.

**CRESCENT HARBOR OPAREA AND SEA PLANE BASE SURVIVAL AREA RADIO FREQUENCIES:**

Coordinate frequency needs with Range Program Manager.

30 Nov 16



## NORTHWEST TRAINING RANGE COMPLEX UNMANNED AIRCRAFT SYSTEM Information Request

Date:	
-------	--

### Contact Information

Primary POC/phone/email	
Alternate POC/phone/email	
Program/DOD POC/ phone/email	
Company Name	
Street Address	
City, ST, ZIP Code	

### Airspace Requested

- |                                                       |                                                                 |
|-------------------------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> R-5701/5706 (Boardman Range) | <input type="checkbox"/> Navy property access required?         |
| <input type="checkbox"/> R-6701 (Admiralty Bay)       | <input type="checkbox"/> Lake Hancock property access required? |
| <input type="checkbox"/> W-237 (Off-shore)            | <input type="checkbox"/> NWSTF Boardman access required?        |

### Required Documents

Please complete this form and attach the following documents and send to/email:

NWTRC Program Manager  
3730 N. Charles Porter Ave.  
Oak Harbor, WA 98278-5300  
(360) 257-3315  
kent.mathes@navy.mil

- ☐ UAS Type, Description and Launch/Recovery method
- ☐ DOD Contract/Contract Data Requirement (CDR)/Program of Record sponsorship for each flight evolution requiring SUA or Navy property.
- ☐ Airworthiness Certificate/Flight Clearance Message (US Navy/USMC)/Air Worthiness Release (U.S. Army) for each UAS configuration where flight evolution is planned using SUA or Navy property.
- ☐ Proof of Liability Insurance (\$1M minimum) (Submitted annually, at policy renewal or in the event of limit changes.)
- ☐ RF Spectrum Allocation/JF-12 License #/DD-1494 for each UAS configuration where flight evolution is planned using SUA or Navy property.
- ☐ Lost Link Procedures for each type/model UAS. (Include Flight Termination System (FTS) specifications if installed.)
- ☐ Communications Plan & Radio Capabilities for each flight evolution requiring SUA or Navy property.
- ☐ Emergency Procedures for each type/model UAS.

### Pilot Qualifications

Summarize Pilot & Observer training, certificates, ratings, FAA medical (class & date) and currency.

--

### Flight Parameters/Ground Support

Summarize flight parameters (altitudes, day/night, duration, performance, etc), operational, weather requirements/restrictions and ground support requirements.

--

### UAS Equipment

Check all that apply. More information may be required based on items checked.

<input type="checkbox"/> Collision avoidance system	<input type="checkbox"/> Laser Illuminator	<input type="checkbox"/> Mode C
<input type="checkbox"/> Flight data recorder	<input type="checkbox"/> Laser Designator	<input type="checkbox"/> IR Lighting
<input type="checkbox"/> SatCom	<input type="checkbox"/> Ordnance capability	<input type="checkbox"/> Other (describe)
<input type="checkbox"/> Video TX/record	<input type="checkbox"/> ES capability	
<input type="checkbox"/> GPS jam/re-rad	<input type="checkbox"/> EA capability	

### Agreement and Signature

By submitting this request, I affirm that the facts set forth in its contents and attachments are true and complete.

Name (printed)	
Signature	
Date	

### NWTRC Review

Range Complex Commander	
Range Management	
Operations Officer	
Boardman NCOIC	
Range Schedules	



## APPENDIX C LAKE HANCOCK TRAINING RANGE ACCESS BRIEF



### Site Description

The Lake Hancock Training Range (LHTR) occupies roughly 423 acres approximately 20 miles south of Ault field and 1 mile north of Greenbank, Washington. The site includes a saltwater lagoon (Lake Hancock) surrounded by a salt marsh. To the east, the site is bordered by a horseshoe-shaped ridge. A 50-foot-wide channel connects Lake Hancock to Admiralty Inlet, which creates a tidal influence to Lake Hancock. The range was formerly used as a commercial cranberry bog and fish trap by the Native American Coast Salish Tribe during the early 1900s. In the early 1900s, the entire area surrounding the lake was largely isolated from Admiralty Inlet and contained freshwater wetlands. However, the area now exists as a saltwater marsh, as a result of a large storm in 1914 that breached the land along the beach.

30 Nov 16

**History**

The site was obtained by the DoD circa 1943. LHTR was used for aerial bombing training between 1943 and 1971, and a portion of the site is currently used to monitor training in Admiralty Bay and other Navy and Marine training exercises that do not include military ordnance. During World War II, practice bombs used in training altered the marsh surface. The range was damaged by fire in 1951 and remained inactive until 1953, after which time it was re-activated. It was reportedly heavily used in 1957.

The LHTR was listed as closed in 2002; the site is no longer used for aerial bombing target practice. This area is still underneath restricted air space, and a portion of the site is currently being used by the military to monitor training in Admiralty Bay and for other military training exercises. The Navy uses the area just off shore of LHTR which is known as operating area Navy 7. However, when this operating area is not activated, access to the public from the water is not restricted.

**Operations**

Activity in the LHTR requires advanced coordination with NAS Whidbey Island Range Schedules (360) 257-2877 by 1200 the day prior and submission of NASW 3350/1 (for ground access) and NASW 3350/1 (for UAS operations) as required. OLF Coupeville operations are a priority. Once scheduled, keys to LHTR gate are checked-out from the Security Duty Office located at Bldg. 994 onboard NAS Whidbey Island (Ault Field) and at (360) 257-3893.

Prior to commencing activities requiring Restricted Area airspace (R-6701), units must call the NAS Whidbey Island Facility Watch Supervisor (FWS) at (360) 257-2887 to relay activity commencement. Call again when activity is complete. A cell phone number must be provided to the FWS for two-way communications. For ground events only make the same calls only call the NAS Whidbey Island Operations Duty Officer with commencement time and completion time of event and leave your cell phone number with the Operations Duty Officer in the event they need to contact you.

UAS flight operations inside of R-6701 require line-of-sight and see-and-avoid procedures due to the possibility of VFR interlopers. Although NAS Whidbey Island provides approach control services to the areas surrounding R6701, General Aviation aircraft may be operating VFR and not monitoring radios. Although the restricted area is activated and non-participating aircraft are to avoid the area, UAS operators must be prepared for aircraft to fly into the airspace and have an avoidance plan. NAS Whidbey Island approach control will provide separation from the restricted airspace but not the participating UAS. The area around the Restricted Area is class E and G airspace and often civil VFR aircraft do not communicate with NAS Whidbey Approach and do not review NOTAMS prior to flight.

For questions or to report any unsafe air activity call the FWS immediately. For any observed unsafe ground activity call the NAS Whidbey Island Operations Duty Officer (360) 257-2681.

The air to ground portion of the range is closed and the target area is off limits to non-DOD personnel.

**Cultural Resources**

Archaeological sites have been identified within LHTR. Should human burials, cultural resources, or historic properties, be discovered and may be affected by the activity, users must

immediately stop any activity, protect the immediate area of the discovery and notify the NAS Whidbey Island Operations Duty Officer who will contact the NAS Whidbey Island Cultural Resources Manager. The Government retains ownership and control over historical and archaeological resources. If in doubt contact the NAS Whidbey Island Operations Duty Officer or NWTRC Range Program Manager (360) 257-3315 and report what has been discovered.

### **Natural Resources**

The presence of the unique coastal lagoon system led to the area being placed on the Washington Register of Natural Areas in 1992 under an agreement between the Navy and The Nature Conservancy. These communities have also been recognized by The Nature Conservancy and the Washington State Department of Natural Resources as unique and valuable natural resources as identified under the Natural Heritage Program. Only use the amount of area that is needed on the range to complete the training and/or testing activity event.

Several sensitive bird species are known to occur within the LHTR, including the great blue heron, common loon, and red-necked grebe. Lake Hancock may have been a past nesting site for the bald eagle, and the birds may use Lake Hancock as their home range. Although bald eagles are no longer a listed species, they are protected under the Bald and Golden Eagle Act. The threatened Marbled Murrelet has been documented off shore at the site; however, suitable nesting habitat is not present at Lake Hancock.

Marine mammal strandings have been known to occur on Whidbey Island. While most stranded animals are found dead, some strand alive. Other mammals, such as harbor seal pups may look abandoned, but are not. Should you see a marine mammal that appears to be stranded or abandoned, leave it alone and contact the Northwest Region Marine Mammal Stranding Network at 1-800-853-1964.

### **Wetlands**

A saltwater lagoon, salt marsh, and freshwater wetland system occupy approximately 200 acres of the LHTR site. The lagoon is connected to Admiralty Inlet by a saltwater slough and the hydrology in the marsh system is tidally driven. Wetlands comprise roughly 55 percent of the area at the Lake Hancock site. Fill material, even if temporary in nature, should not be placed on the LHTR without approval from the NAS Whidbey Island Environmental Planner.

### **Security**

The LHTR is currently fenced on the north, east, and south sides with locked gates, but is accessible from the beach. Access to the beach and lake by the general public is restricted by the Navy; however, there are no physical barriers to prevent access to the beach or lake. Future land use is consistent with current land use (military installation). No future residential uses are planned for this site. If a trespasser is encountered on range call the NAS Whidbey Island Security and report the incident. Halt all activity until the trespasser has left the area of the event.

### **Previous Munitions Removal Actions**

In 1972 and 1973, three separate surface clearances were conducted by military personnel to support potential land transfer options. During these three clearances, more than 15 tons of ordnance-related scrap (ORS) was removed from the site. During the three surface clearances, the following ordnance items were found and identified:

30 Nov 16

- MK 23, 43, 76 and 89 practice bombs.
- 2.25-inch sub-caliber rockets (SCARs).
- 5-inch high velocity air rockets (HVARs).
- 100-, 250-, and 500-pound water sand filled bombs.
- MK 6, 25, and 58 smoke bombs.

**Hydrology and Hydrogeology**

The Lake Hancock lagoon is a mustow, permanent pond that covers approximately 37 acres. Two sand spits separate the Lake Hancock lagoon system from the open salt water of Admiralty Inlet. The lagoon system is connected to the marine waters of Admiralty Inlet by a single tidal channel. Surface water directions in the lowland area vary according to the tidal cycle, toward the lake during the flood cycle and toward the Admiralty Inlet during the ebb cycle. Surface water from the bluff faces and beach drain directly into Admiralty Inlet.

**Nature and Extent of Potential Contamination**

There are no elevated levels of chemical contaminants present in the soil, sediment, or surface water of LHTR.

**Safety**

There are no records indicating the use of HE ordnance at the LHTR site, and previous site investigations and searches did not reveal any evidence of live ordnance. However, it is still possible that ordnance capable of causing harm to human and ecological receptors, (e.g., unexpended rocket motors and cartridges) depending upon the type of spotting charge, could be encountered.

Explosive Ordnance Disposal Technology conducted aerial and ground-based geophysical surveys identified strong signals that had the potential for being unexploded ordnance and/or inert ordnance and related scrap.

There is the potential for Munitions and Explosives of Concern/Material Presenting Potential Explosive Hazard (MEC/MPPEH) to be present at the site as a result of former bombing activities. To date, munitions-related items and debris have been located primarily near the target area. However, munitions debris have been observed scattered throughout the site and rocket motors have been found in the waters off the beach out into Admiralty Inlet.

There is a human health hazard associated with potential munitions-related items present at this site because spotting charges and unburned propellants may remain within munitions items and cause injuries if detonated. It is important to note that exposure to MEC does not mean that an incident or injury will occur, since a receptor would have to disturb the MEC item (e.g., apply heat, friction, or shock to the item) in order to be exposed to actual explosive hazards.

**Naval Ordnance Safety and Security Activity (NOSSA)**

An Explosive Safety Submission (ESS) may be required and the potential user of the range needs to review this section to see if the testing and or training activity meets or does not meet the requirement. The NOSSA/SEA-00VW is a team of highly technical and talented personnel who manage all aspects of the Navy and Marine Corps explosives safety and ordnance environmental programs.

An Explosives Safety Submission (ESS) is required when:

- Placement of explosives on a site
- Intentional physical contact with MEC or MPPEH, including the decontamination and demolition of buildings and installed equipment potentially contaminated with residual MEC
- Conduct of ground-disturbing or other intrusive activities, including dredging, in areas known or suspected to contain MEC or MPPEH

An ESS is not required when:

- Explosives or munitions emergency responses
- Maintenance and clearance activities on operational ranges
- Construction or non-munitions response activities, including dredging, in an area not known or suspected to contain MEC or MPPEH
- Demolition of magazines where there is no evidence of residual MEC contamination or historical record of explosives spills
- Operation, maintenance, or cleanup of ammunition and explosives operating buildings in an active, standby, or layaway status

An ESS may not be required when

- Operations taking place in areas known or suspected to contain MEC or MPPEH when the preponderance of evidence indicates the likelihood of encountering the MEC or MPPEH is low:
  - On-call construction support and, when included as a conservative measure, on-site construction support
  - Ground disturbing activities on former ranges used exclusively for testing or training with small arms ammunition
  - Anomaly avoidance employed during vegetation removal, cultural/natural resources survey, PA site reconnaissance or SI, and sign or fence installation, etc.
  - Demolition of magazines where there is evidence or an historical record of a spill or other residual MEC, but where the spill or contamination was removed
  - Demolition of operating buildings where operations exclusively involved all-up rounds (no exposed explosives) and did not generate explosive residues

Any questions regarding when an ESS may or may not be needed should be annotated on the range request form NASW 3550/1 and addressed to the NWTRC Range Program Manager (360)257-3315 who will assist coordinating the decision. By signing the form below you are certifying that you have read and will comply with the directives contained herein.

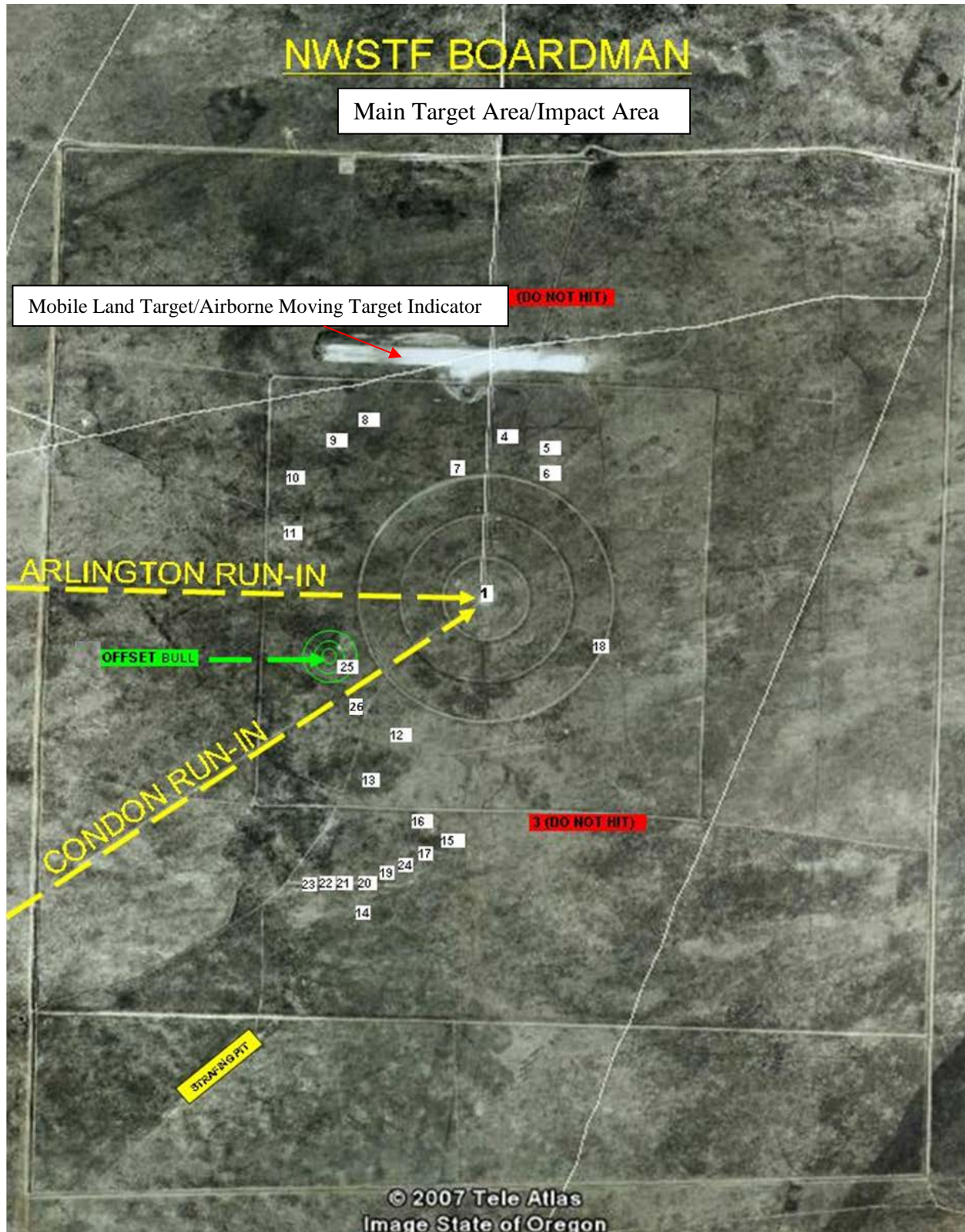
### Signature

Name (printed)	
Signature	
Date	
COMEX/FINEX Dates	

**Note: Turn in this signed form to security for assignment of keys and access to LHTR.**



APPENDIX D  
NWSTF BOARDMAN TARGET CONSTRAINTS



TARGET IDENTIFICATION	LOCATION	LAT/LONG
TGT 1 MAIN BULL	CENTER	45 43.589N/119 41.124W
TGT 2 REFLECTORS (DO NOT HIT)	CENTER	45 44.248N/119 41.125W
TGT 3 REFLECTORS (DO NOT HIT)	CENTER	45 43.272N/119 41.089W
TGT 4 AAA GUN	CENTER	45 43.931N/119 41.029W
TGT 5 AAA GUN	CENTER	45 43.873N/119 41.029W
TGT 6 AAA GUN	CENTER	45 43.826N/119 40.973W
TGT 7 SAM CONTROL VAN	CENTER	45 43.801N/119 41.177W
TGT 8 SAMS	CENTER	45 43.912N/119 41.497W
TGT 9 SAMS	CENTER	45 43.860N/119 41.561W
TGT 10 SAMS	CENTER	45 43.787N/119.41.617W
TGT 11 SAMS	CENTER	45 43.700N/119 41.640W
TGT 12 SAMS	CENTER	45 43.267N/119 41.328W
TGT 13 SAMS	CENTER	45 43.170N/119 41.366W
TGT 14 M-60 TANK	CENTER	45 42.931N/119 41.425W
TGT 15 M-60 TANK	CENTER	45 43.072N/119 41.153W
TGT 16 MOBILE SCUD	CENTER	45 43.114N/119 41.244W
TGT 17 MOBILE SCUD	CENTER	45 43.058N/119 41.241W
TGT 18 VAN/REFLECTORS	CENTER	45 43.488N/119 40.804W
TGT 19 M-60 TANK	CENTER	45 43.013N/119 41.313W
TGT 20 M-60 TANK	CENTER	45 42.993N/119 41.337W
TGT 21 TRUCK	CENTER	45 43.010N/119 41.436W
TGT 22 JEEP	CENTER	45 43.004N/119 41.490W
TGT 23 M-60 TANK	CENTER	45 43.003N/119 41.583W
TGT 24 DUMP TRUCK	CENTER	45 43.037N/119 41.269W
TGT 25 Offset Bull with LGB/LGTR Target	OFFSET	LGB/LGTR 45 43.476N/119 41.523W Offset Bull Center 45 43.471N/119 41.562W
TGT 26 OFFSET Target	OFFSET	45 43.353N/119 41.455W



TGT 1 MAIN BULL  
45 43.589N / 119 41.124W





**TGT 2 REFLECTORS (DO NOT HIT)**  
**45 44.248N / 119 41.125W**



**TGT 3 REFLECTORS (DO NOT HIT)**  
**45 42.124N / 119 41.929W**



TGT 4 AAA GUN	45 43.931N/119 41.029W
TGT 5 AAA GUN	45 43.873N/119 41.029W
TGT 6 AAA GUN	45 43.826N/119 40.973W



TGT 7 SAM CONTROL VAN  
45 43.801N / 119 41.177W





TGT 8 SAMS	45 43.912N/119 41.497W
TGT 9 SAMS	45 43.860N/119 41.561W
TGT 10 SAMS	45 43.787N/119 41.617W



TGT 11 SAMS  
45 43.700N / 119 41.640W





TGT 12 SAMS	45 43.267N/119 41.328W
TGT 13 SAMS	45 43.170N/119 41.366W



TGT 14 M-60 TANK  
45 42.931N / 119 41.425W





TGT 15 M-60 TANK  
45 43.072N / 119 41.153W



TGT 16 MOBILE SCUD  
45 43.114N / 119 41.244W



TGT 17 MOBILE SCUD  
45 43.058N / 119 41.241W





TGT 18 VAN AND REFLECTORS  
45 43.488N / 119 41.804W



TGT 19 M-60 TANK  
45 43.013N / 119 41.313W



TGT 20 M-60 TANK  
45 42.993N / 119 41.337W





TGT 21 TRUCK  
45 43.010N / 119 41.436W



TGT 22 JEEP  
45 43.004N / 119 41.490W



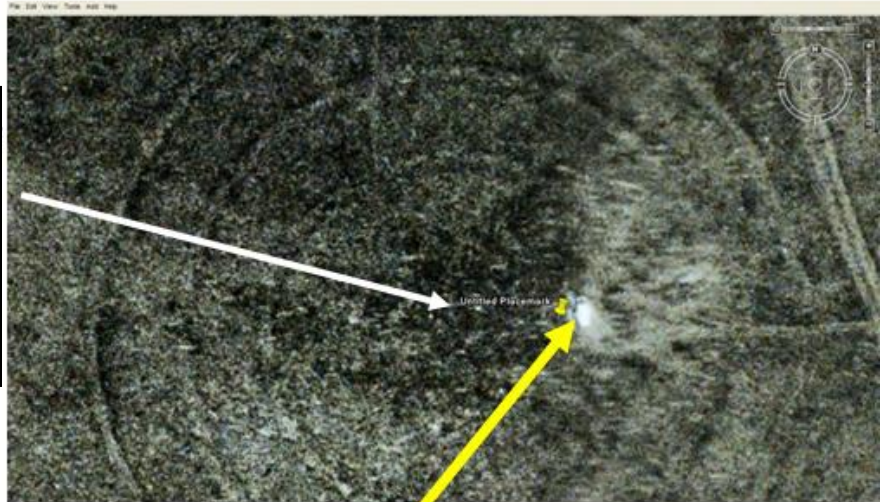


TGT 23 M-60 TANK  
45 43.003N / 119 41.583W



TGT 24 DUMP TRUCK  
45 43.037N / 119 41.269W

**Note that the TGT 25 Offset  
Center Bull and LGB/LGTR  
Target are not same location  
Center bull coordinates  
45 43.471N/119 41.562W**



**TGT 25 Offset Bull with LGB/LGTR  
Target  
45 43.476N/119 41.523W  
Note: the White Bus has been removed.**

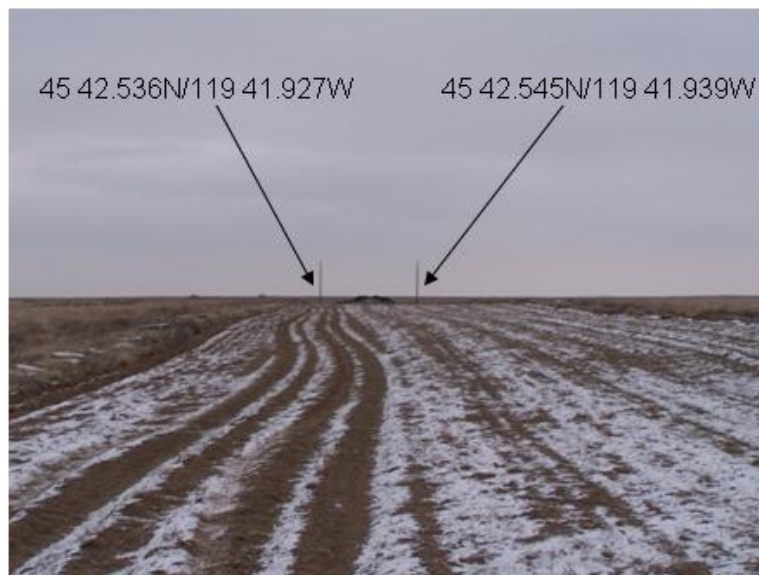




**TGT 26 OFFSET Target**  
**45 43.353/119 41.455W**



SOUTH-SOUTH WEST VIEW



NORTH-NORTH EAST VIEW

STRAFING TARGET  
45 42.545N / 119 41.939W

30 Nov 16

# APPENDIX E

## LIST OF ABBREVIATIONS/ACRONYMS

<b>A</b>	AA	Anti-Aircraft
	AAR	After Action Report
	ACM	Air Combat Maneuver
	ADIZ	Air Defense Identification Zone
	AEER	Advanced Extended Echo Ranging
	AIOPS	Air Operations
	AOR	Area of Responsibility
	AR	Air Refueling Route
	ARTCC	Air Route Traffic Control Center
	ASW	Anti-Submarine Warfare
	ATA	Advance Tactical Assessment
	ATC	Air Traffic Control
	ATCAA	Air Traffic Control Assigned Airspace
	AW	Air Warfare
<b>C</b>	CADIZ	Canadian Air Defense Identification Zone
	CATCC	Carrier Air Traffic Control Center
	CCA	Carrier Controlled Approach
	CIWS	Close in Weapons System
	CNI	Communications, Navigation and Identification Equipment
	CP	Control Point
	CPF	Commander Pacific Fleet
	CV1	CV-1 TACAN Approach
<b>D</b>	COMNAVWINGPAC	Commander, Electronic Attack Wing, U.S. Pacific Fleet
	DACM	Defensive Air Combat Maneuvers
	DCAST	Data Collection and Scheduling Tool
	DTR	Demolition Training Range
	DU	Depleted Uranium Ammunition
<b>E</b>	EAWS	Electronic Attack Weapons School
	ECM	Electronic Counter Measures
	EER	Extended Echo Ranging
	EIS	Environmental Impact Statement
	EW	Electronic Warfare
	EWR	Electronic Warfare Range
	EA	Electronic Attack
	ES	Electronic (Warfare) Support...to detect, intercept, identify, locate, record, and/or analyze sources of radiated electromagnetic energy for the purposes of immediate threat recognition
<b>F</b>	FAA	Federal Aviation Administration
	FCLP	Fleet Carrier Landing Practice
	FCF	Functional Check Flight

	FEIS	Final Environmental Impact Statement
	FLEETEX	Fleet Exercise
	FLIP	Flight Information Publication
	FWS	Fish and Wildlife Service
<b>H</b>	HFAS	High-Frequency Active Sonar
<b>I</b>	IAF	Initial Approach Fix
	IAS	Indicated Air Speed
	IEER	Improved Extended Echo Ranging
	IFF	Identification Friend or Foe
	IFR	Instrument Flight Rules
	IP	Initial Point
	IR	Instrument Flight Rules Military Training Route
<b>L</b>	LATT	Low Altitude Tactical Training
<b>M</b>	M24E2	Improved Moveable Weapon Mount System for the CH-47 Helicopter
	MARPAC	Canadian Maritime Pacific
	MARSA	Military Assumes Responsibility for Separation of Aircraft
	MFAS	Mid-Frequency Active Sonar
	MOA	Military Operations Area
	MSAT	Marine Species Awareness Training
	MTR	Military Training Route
<b>N</b>	NAS	Naval Air Station or National Air Space
	NMFS	National Marine Fisheries Service
	NORAD	North American Aerospace Defense Command
	NOTAM	Notice to Airman
	NTM	Notice to Mariners
	NWSTF	Naval Weapons Systems Training Facility
	NWTRC	Northwest Training Range Complex
	NWTRC OPAREA	Northwest Training Range Complex Operations Area
	NVD	Night Vision Device
<b>O</b>	OCNMS	Olympic Coast National Marine Sanctuary
	OCE	Officer Conducting the Exercise
	OEIS	Overseas Environmental Impact Statement
	OLF	Outlying Landing Field
	OPAREA	Operation Area
	ORE	Operational Readiness Exercise
	ORI	Operational Readiness Inspection
<b>P</b>	PSNS	Puget Sound Naval Shipyard
	PMAP	Protective Measures Assessment Protocol
	PNW	Pacific Northwest
	PT	Pacific Time (Note: 1 hour shift for daylight savings)

30 Nov 16

<b>R</b>	RDT&E	Research, Development, Test and Evaluation
	READYEX	Readiness Exercise
	RF	Radio Frequency
<b>S</b>	SAR	Search and Rescue
	SPORTS	Sonar Positional Reporting System
	SACT	Surface to Air Counter Tactics
	SDZ	Surface Danger Zone
<b>T</b>	TACAN	Tactical Air Navigation
	TFR	Temporary Flight Restriction
<b>U</b>	UAS	Unmanned Aircraft System
	UNICOM/M	Universal Integrated Communications Military use only. UNICOM normally is for civilian use only the abbreviation of UNICOM/M is to note that the designated frequency is for universal military use within designated airspace normally used in support of Safe Haven procedure and MARSA coordination. This abbreviation is applicable to NWTRC User's Manual and is for use in NWTRC designated areas only.
<b>V</b>	VFR	Visual Flight Rules
	VR	Visual Flight Rules Military Training Route
<b>W</b>	WADS	Western Air Defense Sector
	WDZ	Weapons Danger Zone



THIS PAGE INTENTIONALLY LEFT BLANK