



# Eastern Washington Airspace Extension Environmental Assessment



**Final  
June 2024**



**FINAL**  
**ENVIRONMENTAL ASSESSMENT**  
**FOR**  
**EASTERN WASHINGTON**  
**AIRSPACE EXTENSION**



**June 2024**

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## ABSTRACT

**Lead Agency:** United States Department of the Navy  
**Cooperating Agency:** Federal Aviation Administration  
**Title of Proposed Action:** Eastern Washington Airspace Extension  
**Designation:** Environmental Assessment  
**Affected Region:** Northeastern Washington State  
**Action Proponent:** United States Pacific Fleet  
**Date:** June 2024  
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The U.S. Department of the Navy (hereinafter referred to as the Navy) has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), as implemented by the Council on Environmental Quality Regulations and Navy regulations for implementing NEPA. The Navy is the lead agency for this EA pursuant to NEPA (42 United States Code 4321, et. seq) section 107(a) and 40 Code of Federal Regulations section 1501.7. The Federal Aviation Administration (FAA) is a cooperating agency pursuant to NEPA section 107(a)(3), as amended by the Fiscal Responsibility Act of 2023, and 40 Code of Federal Regulations 1501.8. The FAA has jurisdiction by law and expertise in the establishment of new airspace under FAA Order 1050.1F and Joint Order 7400.2P. The purpose of the Proposed Action is to enhance training and operational readiness of Commander, Electronic Attack Wing, U.S. Pacific Fleet aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximizing training opportunities in the Northwest Training Range Complex (NWTRC).

This EA evaluates potential environmental impacts associated with three alternatives:

- No Action Alternative, under which the Okanogan and Roosevelt Military Operations Areas (MOAs) and the Molson, Methow, and Republic Air Traffic Control Assigned Airspace (ATCAA) would remain the same as analyzed in the 2010 NWTRC Environmental Impact Statement/Overseas Environmental Impact Statement. This alternative does not meet the purpose and need of the Proposed Action.
- Alternative 1 (Preferred Alternative) includes a new Okanogan D MOA and a Mazama ATCAA as an extension to the existing airspace. Alternative 1 includes a redistribution of the number of sorties for the Okanogan and Roosevelt MOAs and associated ATCAAs, with a slight decrease from the total number of sorties over those analyzed in the 2010 NWTRC Environmental Impact Statement/Overseas Environmental Impact Statement.
- Alternative 2 consists of the addition of the Okanogan D MOA and Mazama ATCAA that would occur under Alternative 1, and also considers an increase in the capacity of training. This alternative allows for the greatest flexibility for the Navy to maintain readiness when considering potential changes in the national security environment.

A thorough analysis of environmental resources determined that implementation of any of the alternatives would not result in significant impacts on air quality; biological resources; cultural resources; American Indian traditional resources; public health and safety; and socioeconomics, environmental justice, and children's environmental health and safety risk.

## EXECUTIVE SUMMARY

### Proposed Action

The United States (U.S.) Department of the Navy (hereinafter referred to as the Navy), Commander, U.S. Pacific Fleet, has prepared this Environmental Assessment (EA) to comply with the National Environmental Policy Act (NEPA), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations parts 1500–1508), and Department of the Navy Procedures for Implementing NEPA (32 Code of Federal Regulations part 775). This EA satisfies the requirements of NEPA.

This EA analyzes the potential impacts of actions associated with the extension of existing Special Activity Airspace, specifically, the establishment of the Okanogan D Military Operations Area (MOA) and the overlying Mazama Air Traffic Control Assigned Airspace (ATCAA) in Northeastern Washington State. The EA also analyzes the impacts of redistributing the number of military aircraft sorties occurring within the existing and proposed Special Activity Airspace. Existing airspace adjacent to where the Okanogan D MOA and Mazama ATCAA are proposed in eastern Washington include the Okanogan MOA and the associated overlying Molson and Methow ATCAAs, and the Roosevelt MOA and associated overlying Republic ATCAA. The existing Okanogan and Roosevelt MOAs are split into sections for scheduling purposes. The Okanogan MOA consists of section A, which overlies section B to the west and section C to the east. The Roosevelt MOA consists of section A, which overlies section B in the west. The extension of airspace to the existing MOAs and ATCAAs in the eastern Washington airspace would increase electronic warfare and air combat maneuver training capabilities for Commander, Electronic Attack Wing, U.S. Pacific Fleet (CVWP), and would help compensate for past training airspace reduction by the Federal Aviation Administration (FAA) that occurred in 2020.

In accordance with the guidelines described in the Memorandum of Understanding (MOU) between the FAA and the Department of Defense Concerning Environmental Review of Special Use Airspace Actions, dated September 23, 2019, the FAA establishes new airspace under the FAA Order 1050.1F and Joint Order 7400.2P. Congress has charged the FAA with administering all navigable airspace in the public interest as necessary to ensure the safety of aircraft and the efficient use of such airspace (49 United States Code section 40103 [b] [1]). This EA will serve as the NEPA analysis required for the airspace extension for the FAA and the Navy.

### Background

In 2010, the Navy completed the Northwest Training Range Complex (NWTRC) Environmental Impact Statement/Overseas Environmental Impact Statement, which analyzed ship, submarine, and aircraft training and testing activities, including aircraft training in the existing Okanogan and Roosevelt MOAs and the Molson, Methow, and Republic ATCAAs. In 2014, the Navy completed the Pacific Northwest Electronic Warfare Range EA, which analyzed the operation of Mobile Electronic Warfare Training System vehicle-mounted emitters on U.S. Forest Service lands to facilitate training within the area underlying the Okanogan and Roosevelt MOAs.

In 2018, the FAA sent a letter to the Air Traffic Control Officer at Naval Air Station Whidbey Island, detailing a Safety Review outlining safety concerns in the southern section of the Molson ATCAA known as the Molson South High ATCAA. These safety concerns were a direct result of having to reroute aircraft that were climbing or descending in the same geographic area that the military aircrew used for training.

This led the FAA to make the decision to reduce the Molson South High ATCAA's (now the Methow ATCAA) ceiling from 50,000 feet mean sea level to 23,000 feet mean sea level.

Due to the Navy's training airspace being reduced, the Navy began discussions with the FAA to find a solution to regain training airspace. During the course of negotiations, the Navy was able to reach an agreement with the FAA to establish the Methow ATCAA and extend the southern border of the Molson North (or Molson ATCAA as it was renamed and referred to in this document) by 5 nautical miles. This adjustment to airspace boundaries and altitudes was accomplished through an Administrative Airspace Action by the FAA. This still resulted in an overall reduction in the usable airspace, prompting the airspace extension proposal for the Okanogan D MOA and Mazama ATCAA.

### **Purpose of and Need for the Proposed Action**

The purpose of the Proposed Action is to enhance training and operational readiness of CVWP aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximizing training opportunities in the NWTRC. Current vertical and horizontal airspace dimensions of the Okanogan and Roosevelt MOAs and associated Molson, Methow, and Republic ATCAAs do not fully meet the training and operational readiness requirements of CVWP. The Proposed Action is needed to further the Navy's execution of its congressionally mandated roles and responsibilities under 10 United States Code section 8062.

### **Alternatives Considered**

The Navy is considering two action alternatives that meet the purpose and need for the Proposed Action and a No Action Alternative. Alternative 1 (Preferred Alternative) would include the addition of the Okanogan D MOA and the overlying Mazama ATCAA, with a redistribution in training sorties within the existing Okanogan and Roosevelt MOAs. Under Alternative 1, there is a slight decrease in overall airspace sorties. Alternative 2 consists of the addition of Okanogan D MOA and the overlying Mazama ATCAA that would occur under Alternative 1. In addition, Alternative 2 considers an increase in the capacity of training activities. Alternative 2 allows for the greatest flexibility for the Navy to maintain readiness when considering potential changes in the national security environment. Under the No Action Alternative, the Proposed Action would not occur, aircraft sortie numbers would be unchanged from current aircraft sorties, and the airspace would remain unchanged and would not meet the purpose and need of the Proposed Action.

### **Summary of Environmental Resources Evaluated in the EA**

The Council on Environmental Quality regulations, NEPA, and Navy instructions for implementing NEPA specify that an EA should address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact.

This EA analyzes the potential impacts of actions associated with the addition of the Okanogan D MOA and Mazama ATCAA, and the redistribution of training sorties within the Okanogan and Roosevelt MOAs and associated ATCAAs. A full range of environmental issues were considered for evaluation at the beginning of the NEPA process. Since potential impacts were insignificant, negligible, or nonexistent, the following resources were not evaluated in this EA: marine resources, geology and soils, hazardous materials, water resources, and traffic and infrastructure. A summary of impacts for resource areas carried forward for analysis is provided below.

The following resources were considered to have potential impact because of the Proposed Action and are addressed in Chapter 3 (Affected Environment and Environmental Consequences) of this EA: acoustic environment (noise); air quality; biological resources; cultural resources; American Indian traditional resources; public health and safety; and socioeconomics, environmental justice, and children's environmental health and safety risk.

### Summary of Potential Environmental Consequences of the Action Alternatives and Major Mitigating Actions

Table ES-1 provides a summary of the potential impacts on the resources associated with each of the alternative actions for analysis.

**Table ES-1: Summary of Potential Impacts on Resource Areas Pending Analysis**

Resource Area	No Action Alternative	Alternative 1 (Preferred Alternative)	Alternative 2
Acoustic Environment (Noise)	No Significant Impacts	No Significant Impacts	No Significant Impacts
Air Quality	No Significant Impacts	No Significant Impacts	No Significant Impacts
Biological Resources	No Significant Impacts	No Significant Impacts	No Significant Impacts
Cultural Resources	No Significant Impacts	No Significant Impacts	No Significant Impacts
American Indian Traditional Resources	No Significant Impacts	No Significant Impacts	No Significant Impacts
Public Health and Safety	No Significant Impacts	No Significant Impacts	No Significant Impacts
Socioeconomics, environmental justice, and children's environmental health and safety risk	No Significant Impacts	No Significant Impacts	No Significant Impacts

Notes: The Navy does not anticipate significant impacts on American Indian Traditional Resources under all three alternatives but has invited local tribes to participate in Government-to-Government consultations.

### Public Involvement

Public involvement included the development of project notification materials and participation through outreach efforts during several phases of the EA and Finding of No Significant Impact. The Navy solicited public comments on the Draft EA during a 42-day public review period, including two virtual public meetings that were held on February 13, 2024, and February 15, 2024. Three federally recognized tribes from Washington State were invited to participate in Government-to-Government consultations, and the Navy provided advanced project notifications to a number of elected officials and agencies.

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## Abbreviations and Acronyms

Acronym/ Abbreviation	Definition	Acronym/ Abbreviation	Definition
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter	FAA	Federal Aviation Administration
ACM	Air Combat Maneuver	FR	Federal Register
AGL	Above Ground Level	FRA	Fiscal Responsibilities Act
APE	Area of Potential Effect	ft.	foot/feet
ATCAA	Air Traffic Control Assigned Airspace	GHG	greenhouse gas
BGEPA	Bald and Golden Eagle Protection Act	GWP	global warming potential
BMP	Best Management Practice	HAP	Hazardous Air Pollutant
CAA	Clean Air Act	HC	Total Hydrocarbons
CEQ	Council on Environmental Quality	hr	hour
CFR	Code of Federal Regulations	IFR	Instrument Flight Rules
$\text{CH}_4$	methane	$L_{\text{dnr}}$	A-Weighted Onset-Rate Adjusted Day-Night Average Sound Level
CO	carbon monoxide	$L_{\text{max}}$	Maximum Received Sound Level
$\text{CO}_2$	carbon dioxide	MBTA	Migratory Bird Treaty Act
CVWP	Commander, Electronic Attack Wing, U.S. Pacific Fleet	MOA	Military Operations Area
CWA	Clean Water Act	MOU	Memorandum of Understanding
dB	decibel(s)	MSL	mean sea level
dBA	A-weighted decibel(s)	MTR	Military Training Route
DCAST	Data Collection and Scheduling Tool	$\text{N}_2\text{O}$	nitrous oxide
DNL	day-night average sound level	NAAQS	National Ambient Air Quality Standards
DoD	Department of Defense	NASWI	Naval Air Station Whidbey Island
E	endangered	Navy	U.S. Department of the Navy
EA	Environmental Assessment	NC	Compressor Stage Rotations Per Minute
EIS	Environmental Impact Statement	NEPA	National Environmental Policy Act
EO	Executive Order	NHPA	National Historic Preservation Act
EPA	U.S. Environmental Protection Agency	$\text{NM}^2$	square nautical miles
ESA	Endangered Species Act	$\text{NO}_2$	nitrogen dioxide
ESN	East Cascades North	$\text{NO}_x$	nitrogen oxides
EW	Electronic Warfare	NOTAM	Notice to Air Missions

<b>Acronym/ Abbreviation</b>	<b>Definition</b>	<b>Acronym/ Abbreviation</b>	<b>Definition</b>
NRHP	National Register of Historic Places	ppm	parts per million
NWTRC	Northwest Training Range Complex	PSD	Prevention of Significant Deterioration
O <sub>3</sub>	ozone	PT	proposed threatened
OEIS	Overseas Environmental Impact Statement	ROG	reactive organic gas(es)
OSHA	Occupational Safety and Health Administration	ROI	Region of Influence
Pb	lead	SAA	Special Activity Airspace
PCE	Primary Constituent Element	SO <sub>2</sub>	sulfur dioxide
PCT	Pacific Crest Trail	SOP	Standard Operating Procedure
PM	particulate matter	SIP	State Implementation Plan
PM <sub>2.5</sub>	fine particulate matter less than or equal to 2.5 microns in diameter	tpy	tons per year
PM <sub>10</sub>	fine particulate matter less than or equal to 10 microns in diameter	U.S.	United States
PNT	Pacific Northwest National Scenic Trail	U.S.C.	United States Code
ppb	parts per billion	USFS	U.S. Forest Service
		USFWS	U.S. Fish and Wildlife Service
		VFR	Visual Flight Rules
		VOC	Volatile Organic Compounds
		WHR	Washington Heritage Register

# 1 Purpose and Need

## 1.1 INTRODUCTION

Commander, United States Pacific Fleet, a command of the United States (U.S.) Department of the Navy (hereinafter, referred to as the Navy), is requesting the Federal Aviation Administration (FAA) establish an extension to existing Special Activity Airspace<sup>1</sup> (SAA) in eastern Washington to meet mission readiness requirements for the Commander, Electronic Attack Wing, U.S. Pacific Fleet (CVWP). Under the Proposed Action, the FAA would establish an extension to existing vertical and lateral airspace dimensions to the west of the existing airspace over northeastern Washington State. The Proposed Action would also include a redistribution of the current CVWP training flight sorties analyzed in the 2010 Northwest Training Range Complex (NWTRC) Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS), hereinafter referred to as NWTRC EIS/OEIS, to accurately characterize how CVWP is projecting to use the airspace. With the proposed redistribution, the overall total number of annual sorties would decline slightly from what was analyzed in the 2010 NWTRC EIS/OEIS. The total number of annual sorties in the Okanogan Military Operations Area<sup>2</sup> (MOA) and overlying Air Traffic Control Assigned Airspace<sup>3</sup> (ATCAA) would decrease, and the number of annual sorties in the Roosevelt MOA and overlying ATCAA would increase.

The airspace for analysis in this Environmental Assessment (EA) is part of the larger NWTRC. In 2010, the Navy completed the NWTRC EIS/OEIS, which analyzed potential impacts associated with aircraft training in the Okanogan and Roosevelt MOAs and the Molson and Republic ATCAAs. While the NWTRC EIS/OEIS and Record of Decision also analyzed the Chinook and Olympic MOAs in Washington State, no changes are proposed in those areas as part of the Proposed Action, and analysis of those areas are not included in this EA. The analysis in this EA is limited to the Okanogan and Roosevelt MOAs, the Molson, Methow, and Republic ATCAAs, and the Okanogan D MOA and Mazama ATCAA as a part of the Proposed Action (Figure 1.1-1 and Figure 1.1-2).

The Navy has prepared this EA in accordance with the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] sections 4321-4370h) as amended by the Fiscal Responsibility Act of 2023 (FRA) and as implemented by the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] parts 1500-1508) and Navy regulations for implementing NEPA (32 CFR part 775). The Navy is the lead agency for the Proposed Action and is responsible for the scope and content of this EA. The FAA is a cooperating agency as defined under NEPA (section 107(a)(3) as amended by the FRA) and CEQ regulations (40 CFR section 1501.8) due to its expertise and regulatory authority over federal aviation and the establishment of the SAA. The FAA will conduct an independent review of the Proposed Action to determine if it will adopt all or part of the Navy's EA, and then issue its own decision, such as a Finding of No Significant Impact or Record of Decision.

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<sup>1</sup> SAA is airspace with defined dimensions within the National Airspace System wherein limitations may be imposed upon operations for national defense, homeland security, public interest, or public safety (Federal Aviation Administration, 2023b).

<sup>2</sup> A MOA is airspace established outside of Class A airspace to separate or segregate certain non-hazardous military flight activities from instrument flight rules aircraft and to identify for visual flight rules aircraft where these activities are conducted (Federal Aviation Administration, 2023d).

<sup>3</sup> ATCAA is airspace of defined vertical and lateral limits, assigned by Air Traffic Control, for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other instrument flight rules traffic (Federal Aviation Administration, 2023c).

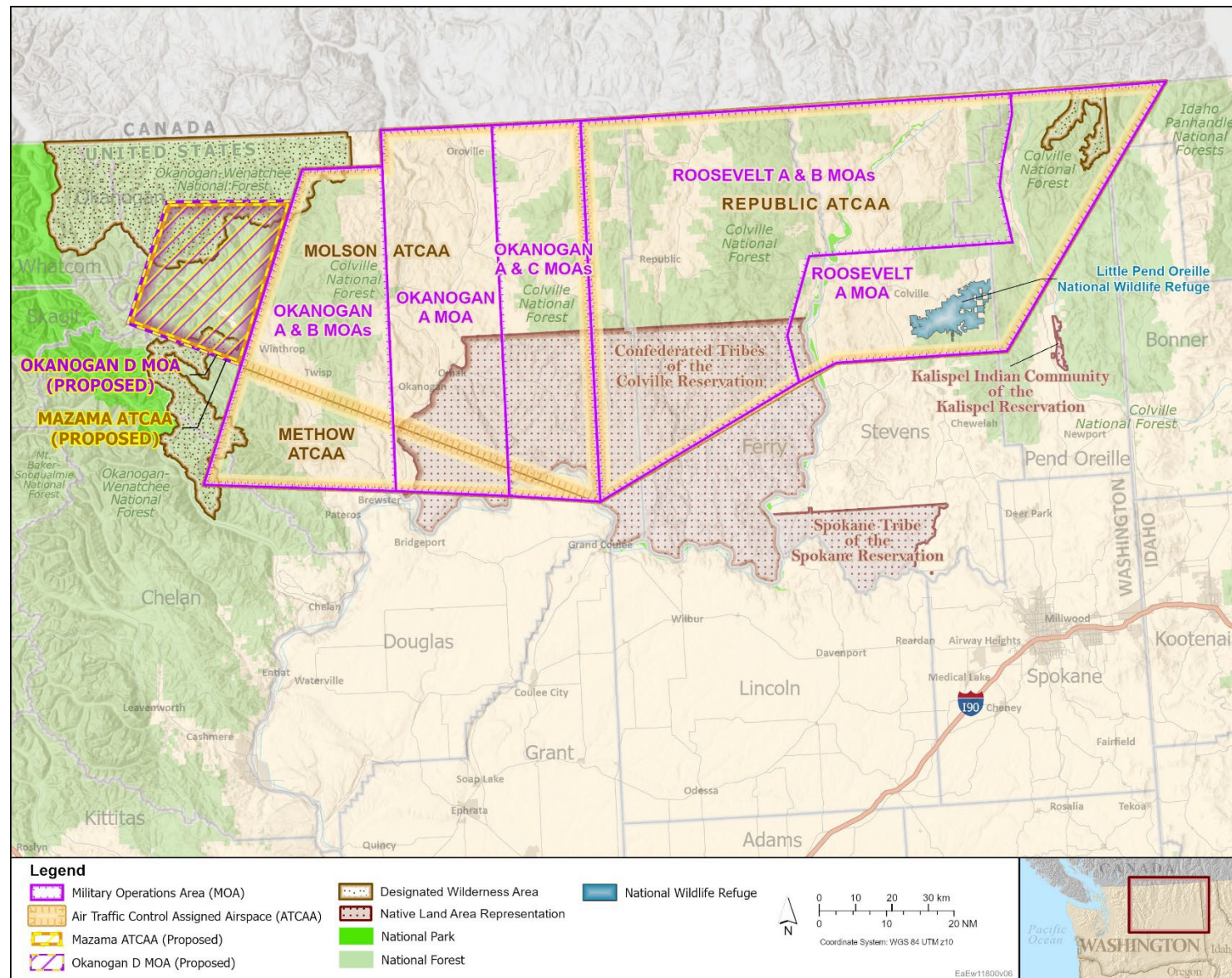
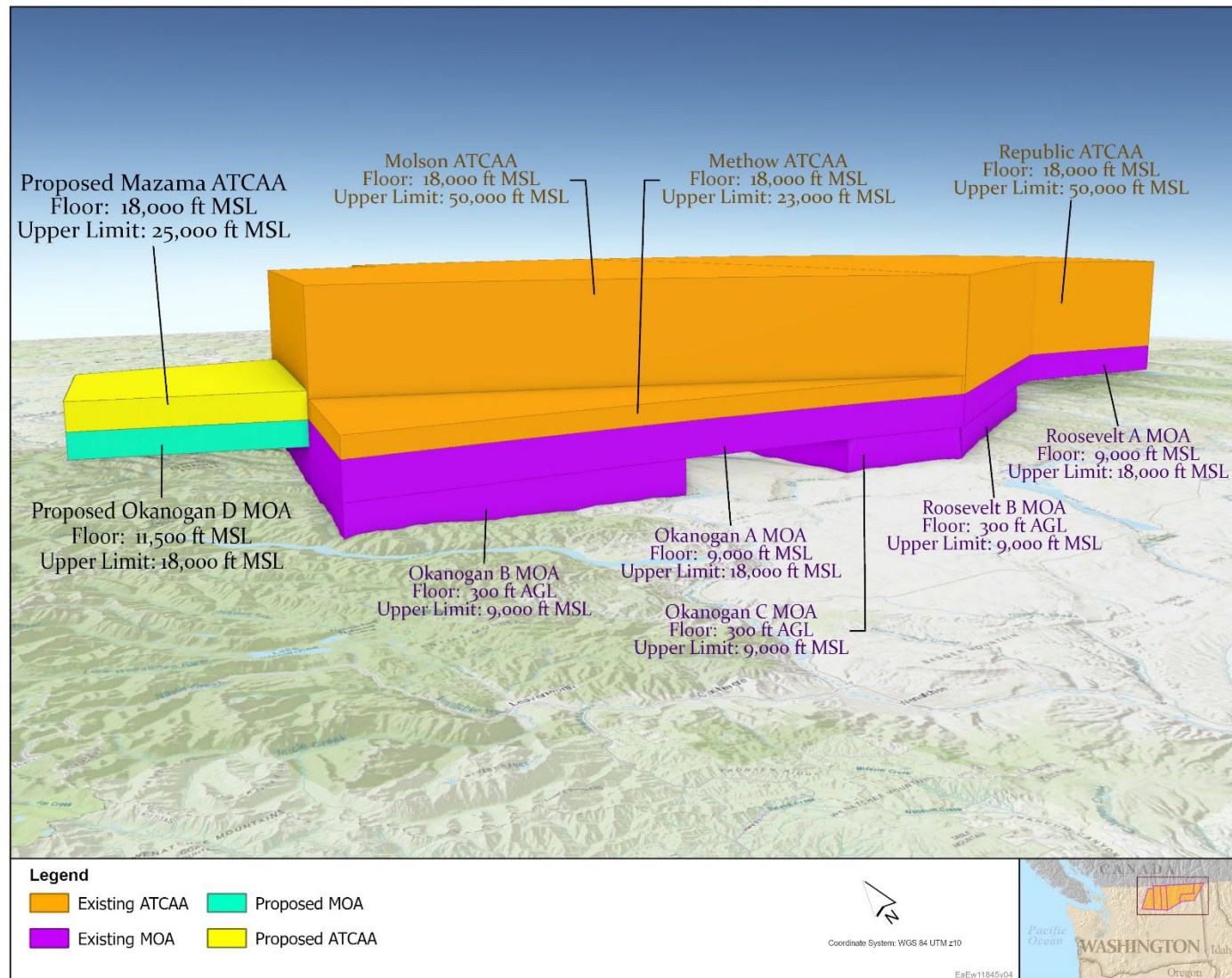


Figure 1.1-1: Existing and Proposed MOAs and ATCAAs in the Action Area





**Figure 1.1-2: Existing and Proposed SAA Altitude Limits**

## 1.2 BACKGROUND

All navigable airspace in the United States is regulated by the FAA by direction of Congress (49 U.S.C. section 40103 [b] [1]). The FAA designated the airspace in eastern Washington in 1977 for use by the military for training purposes. Figure 1.1-1 and Figure 1.1-2 show the location of the existing and proposed SAA as well as airspace floors (lower limit) and ceilings (upper limits). Definitions of the airspace terms used throughout this document are provided in Appendix A (Glossary).

Beginning in 2007 the Navy initiated a transition from EA-6B Prowler aircraft to EA-18G Growler at Naval Air Station Whidbey Island (NASWI). The transition between aircraft spanned nine years, culminating in 2015 and ultimately resulted in the EA-18G replacing the EA-6B and becoming the primary military aircraft using the Okanogan and Roosevelt MOAs and the associated ATCAA airspace. The type and number of sorties within the airspace has remained the same following the transition from the EA-6B to the EA-18G. However, EA-18Gs generally operate at higher altitudes than the EA-6B. For the type of training activities currently conducted in the airspace, there are typically two sorties (or aircraft) per training event. Each training event lasts approximately one hour within the MOAs and ATCAAs, not including the transit to and from NASWI where aircraft are primarily based. The primary military aircraft using this airspace is the EA-18G, with occasional use by other Navy and Department of Defense (DoD) aircraft.

In 2018, the FAA sent a letter to the Air Traffic Control Officer at NASWI detailing a Safety Review outlining safety concerns in the southern portion of the airspace in eastern Washington known as the Molson South High ATCAA. Civilian and commercial air traffic in the Pacific Northwest had been increasing in recent years and had placed military aircraft in conflict with other incoming civilian and commercial aircraft landing at Seattle-Tacoma International Airport, King County International Airport-Boeing Field, and Vancouver International Airport, as well as other Pacific Northwest regional airports. This led the FAA to make the decision in 2020 to reduce the Molson South High ATCAA's (now the Methow ATCAA) ceiling from 50,000 feet (ft.) mean sea level (MSL) to 23,000 ft. MSL.

Due to the training airspace being reduced, the Navy began discussions with the FAA to find a solution to add airspace to better meet training requirements. In May 2021, the Navy proposed the creation of the new Okanogan D MOA and overlying Mazama ATCAA to the FAA. The FAA sent a memorandum in November 2022 that included a Study of Aeronautical Effects in response to the Navy's proposal, in which the FAA determined that the Okanogan D MOA and Mazama ATCAA would have minor impacts on the National Airspace System. The FAA concluded the impact of the proposal was acceptable based on its analysis of air traffic patterns in and around the airspace, and further determined that no significant mitigations were necessary. The Navy's proposal is one of the alternatives carried forward in Section 2.3 (Alternatives Carried Forward for Analysis).

## 1.3 LOCATION

The Action Area includes the existing and proposed Okanogan and Roosevelt MOAs; the Methow, Molson, Republic, and Mazama ATCAAs; and the underlying land beneath the airspace, which includes northeastern Washington state and northwestern Idaho along the U.S.-Canadian border. The Okanogan and Roosevelt MOAs are broken up into sections for scheduling purposes. The Okanogan A MOA section overlies the Okanogan B MOA and Okanogan C MOAs, and the Methow ATCAA and Molson ATCAA overlie sections A, B, and C of the Okanogan MOA (Figure 1.1-1). The Okanogan MOA, Methow ATCAA, and Molson ATCAA are in airspace above Okanogan, Chelan, and Douglas counties (Figure 1.1-1). The airspace is also above the designated Pasayten and Lake Chelan-Sawtooth National Wilderness Areas

(Figure 1.1-1). The Roosevelt A section MOA overlies the Roosevelt B section MOAs, and the Republic ATCAA overlies both section A and B of the Roosevelt MOA (Figure 1.1-1). The Roosevelt MOA and Republic ATCAA are in airspace above Okanogan, Ferry, Stevens, and Pend Oreille counties. The Roosevelt MOA and Republic ATCAA are also above Boundary and Bonner counties in northwestern Idaho and overlie the designated Salmo-Priest Wilderness area in Washington State (Figure 1.1-1). The Okanogan MOA, Roosevelt MOA, and the Molson, Methow, and Republic ATCAAs overlie the Colville Indian Reservation (Figure 1.1-1).

The proposed Okanogan D MOA and overlying Mazama ATCAA are located west of the existing Okanogan MOA and are predominately above western Okanogan County, with a small area above eastern Skagit County and northern Chelan County. The Okanogan D MOA and Mazama ATCAA also overlie the western portion of the designated Pasayten and Lake Chelan-Sawtooth National Wilderness Areas. The Okanogan D MOA would have a floor of 11,500 ft. MSL, a ceiling of 18,000 ft. MSL, and an area of 393 square nautical miles (NM<sup>2</sup>) (520 square miles) (Figure 1.1-2). The Mazama ATCAA would overlie the same area as the Okanogan D MOA and would have a floor of 18,000 ft. MSL up to 25,000 ft. MSL (Figure 1.1-2). Coordinates for the proposed airspace are provided in Table 1.3-1.

**Table 1.3-1: Latitudes and Longitudes of Proposed Airspace Extension**

Latitude	Longitude
Okanogan D MOA/Mazama ATCAA Location	
N 48°26'00.00"	W 120°18'18.00"
N 48°32'48.05"	W 120°43'19.43"
N 48°50'25.50"	W 120°33'46.08"
N 48°49'51.60"	W 120°05'36.99"

Notes: MOA = Military Operations Area, ATCAA = Air Traffic Control Assigned Airspace

#### 1.4 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to enhance training and operational readiness of CVWP aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximizing training opportunities in the NWTRC. Current vertical and horizontal airspace dimensions of the Okanogan and Roosevelt MOAs and associated Molson, Methow, and Republic ATCAAs do not fully meet the training and operational readiness requirements of CVWP. The redistribution of sorties accounts for the differences between EA-6B and EA-18G training activities. EA-18Gs typically fly at higher altitudes, and redistributing the sorties amongst the existing and proposed SAA enables more effective use of the airspace. The Proposed Action is needed to further support the Navy's execution of its congressionally mandated roles and responsibilities under 10 U.S.C. section 8062.

10 U.S.C. section 8062: "The Navy, within the Department of the Navy, includes, in general, naval combat and service forces and such aviation as may be organic therein. The Navy shall be organized, trained, and equipped for peacetime promotion of the national security interests and prosperity of the United States and for prompt and sustained combat incident to operations at sea. It is responsible for the preparation of naval forces necessary for the duties described in the preceding sentence except as otherwise assigned and, in accordance with integrated joint mobilization plans, for the expansion of the peacetime components of the Navy to meet the needs of war."

## **1.5 SCOPE OF ENVIRONMENTAL ANALYSIS**

This EA includes an analysis of potential environmental impacts associated with two action alternatives and the No Action Alternative. The environmental analysis presented in this EA focuses on the specific environmental resources and topics that could reasonably be affected by the Proposed Action. Only those resources with a potential for impacts under the Proposed Action are analyzed in this EA, specifically: acoustic environment (noise); air quality; biological resources; cultural resources; American Indian traditional resources; public health and safety; and socioeconomics, environmental justice, and children's environmental health and safety risk. In this EA, the Navy analyzes direct, indirect, cumulative, short-term, long-term, irreversible, and irretrievable impacts. The area associated with potential impacts for each resource analyzed varies, depending on how the Proposed Action interacts with or impacts the resource. For instance, the analysis of recreation will be more localized to frequently used hiking and camping areas, whereas the analysis of noise in the environment will expand out to include the full Action Area, which could be impacted by airborne noise. Chapter 3 (Affected Environment and Environmental Consequences) provides information on resources evaluated in this EA.

This EA evaluates the impacts of adding airspace in eastern Washington, as well as a redistribution of the number of military training sorties within the Okanogan and Roosevelt MOAs. The Navy is the lead agency for the Proposed Action and is responsible for the scope and content of this EA. The FAA is a cooperating agency as defined under NEPA (section 107(a)(3) as amended by the FRA) and CEQ regulations (40 CFR section 1501.8) due to its expertise and regulatory authority over air traffic in the United States. As a cooperating agency, the FAA participates in the development of information and preparation of environmental analyses, including portions of this EA which the FAA has jurisdiction or special expertise. The FAA will determine if the analyses contained in this EA are sufficient to fulfill NEPA responsibilities in support of its aeronautical study and approval for the proposed airspace changes.

## **1.6 TRANSIT TO/FROM SPECIAL ACTIVITY AIRSPACE**

As discussed, the Proposed Action includes establishment of an extension to existing airspace by the FAA, and a redistribution of current training flight sorties across the airspace. The Proposed Action does not include the transit of aircraft to and from the SAA. Military aircraft may proceed to/from the SAA from various locations, but the majority of training sorties utilizing the airspace originate and terminate at NASWI. During transit, military aircraft fly in the National Airspace System in accordance with FAA Regulations (14 CFR Part 91), General Operating and Flight Rules, which directs inflight procedures for efficient order and flow of air traffic to which all pilots (military, civil and commercial) are subject with some exceptions.

Navy aircraft transiting between NASWI and the Eastern Washington SAA enter the National Airspace System and generally fly at altitudes greater than 20,000 ft. MSL in accordance with established routing under positive radar control and direction of Seattle Air Route Traffic Control Center. The FAA is overall responsible for the efficient management and safety of all commercial, civil, and military aircraft operating within the confines of the National Airspace System and, accordingly, has implemented inflight procedures so that pilots have a universal expectation and understanding for the standards and requirements of safe and acceptable conduct.

## 1.7 KEY DOCUMENTS

Key documents describing similar actions, analyses, or impacts that may apply to this Proposed Action are incorporated into this EA by reference. Documents incorporated by reference in part or in whole include the following:

- *Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest-Related Species within the Range of the Northern Spotted Owl*. (Northwest Forest Plan). (U.S. Department of Agriculture, 1994)
- *Final Northwest Training Range Complex Environmental Impact Statement/Overseas Environmental Impact Statement* (U.S. Department of the Navy, 2010)
- *Biological Opinion for U.S. Pacific Fleet Northwest Training Range Complex in the Northern Pacific Coastal Waters off the States of Washington, Oregon, and California and Activities in Puget Sound and Airspace over the State of Washington, 01EWF00-201 7-IC-0385* (U.S. Fish and Wildlife Service, 2010)
- *Final Environmental Assessment for Pacific Northwest Electronic Warfare Range* (U.S. Department of the Navy, 2014)
- *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* (Federal Aviation Administration, 2015)
- *Biological Evaluation for Navy Training within the Okanogan and Roosevelt Military Operations Areas* (U.S. Department of the Navy, 2016)
- *U.S. Fish and Wildlife Service Letter of Concurrence for the Continuation of Navy Training in the Okanogan and Roosevelt Military Operations Area Airspace, 01EWF00-2016-I-1238*. (U.S. Fish and Wildlife Service, 2017)
- *Environmental Impact Statement for EA-18-G Growler Airfield Operations at Naval Air Station Whidbey Island Complex and Record of Decision* (U.S. Department of the Navy, 2018a, 2019)
- *Final Northwest Training and Testing Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement* (U.S. Department of the Navy, 2020)
- *2020 Decennial Census of Population and Housing* (U.S. Census Bureau, 2020)

## 1.8 RELEVANT LAWS AND REGULATIONS

The Navy has prepared this EA based upon federal and state laws, statutes, regulations, and policies pertinent to the implementation of the Proposed Action, including the following:

- NEPA (42 U.S.C. section 4321 et seq.) as amended by the FRA of 2023
- CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR parts 1500–1508)
- Navy regulations for implementing NEPA (32 CFR part 775)
- Clean Air Act (CAA) (42 U.S.C. section 7401 et seq.)
- Clean Water Act (33 U.S.C. section 1251 et seq.)
- National Historic Preservation Act (NHPA) (54 U.S.C. section 300101 et seq.)
- National Forest Management Act of 1976 (16 U.S.C sections 1600 and 1604)
- Wilderness Act of 1964 (16 U.S.C sections 1131–1136)
- Endangered Species Act (ESA) (16 U.S.C. section 1531 et seq.)
- Migratory Bird Treaty Act (MBTA) (16 U.S.C. section 703 et seq.)

- Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. section 668 et seq.)
- Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. section 9601 et seq.)
- Emergency Planning and Community Right-to-Know Act (42 U.S.C. section 11001 et seq.)
- Energy Independence and Security Act of 2007 (42 U.S.C. section 17001 et seq.)
- Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.)
- Pollution Prevention Act of 1990 (42 U.S.C. section 13101 et seq.)
- Federal Aviation Act of 1958 (49 U.S.C. section 1301 et seq.)
- Toxic Substances Control Act (15 U.S.C. section 2601 et seq.)
- FAA Order 1050.1F Environmental Impacts: Policies and Procedures
- FAA Order Job Order 7400.2P Procedures for Handling Airspace Matters
- Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*
- EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations*
- EO 13007, *Indian Sacred Sites*
- EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*
- EO 13175, *Consultation and Coordination with Indian Tribal Governments*
- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*
- EO 13693, *Planning for Federal Sustainability in the Next Decade*
- EO 13834, *Efficient Federal Operations*
- EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*
- EO 14008, *Tackling the Climate Crisis at Home and Abroad*
- EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*
- Archeological and Historic Preservation Act of 1974 (54 U.S.C. section 312501 et seq.)
- Archaeological Resources Protection Act of 1979 (16 U.S.C. section 470aa et seq.)
- American Indian Religious Freedom Act of 1978 (42 U.S.C. section 1996)
- Native American Graves Protection and Repatriation Act (25 U.S.C. section 3001 et seq.)

A description of the Proposed Action's consistency with these laws, policies, and regulations, as well as the names of regulatory agencies responsible for their implementation, is presented in Chapter 5 (Other Considerations Required by NEPA).

## **1.9 PUBLIC AND AGENCY PARTICIPATION**

Regulations from the CEQ direct agencies to involve the public in preparing their analysis under NEPA. The Navy prepared a Draft EA to inform the public of the Proposed Action and to allow the opportunity for public review and comment. FAA regulations require 30 days' notice be provided prior to a public meeting; therefore, the Navy released the Draft EA for a 42-day public review period. On January 12, 2024, the public review period began with a public notice published in *The Spokesman Review*, the *Statesman Examiner*, the *Okanogan Valley Gazette-Tribune*, and the *Methow Valley News*. The notice described the Proposed Action; solicited public comments on the Draft EA; provided the dates of the public comment period, and location and dates of the public meetings; and announced that CD copies



and hard copies of the Draft EA were available for review at the following public locations: the Okanogan Public Library, the Twisp Public Library, the Colville Public Library, the Oroville Public Library, and the Oak Harbor Public Library. A digital version of the Draft EA was also made available on the Naval Facilities Engineering Systems Command Northwest NEPA website at <https://pacific.navfac.navy.mil/NWNEPA>. In addition, the NASWI Public Affairs Officer distributed a news release announcing the availability of the Draft EA and the virtual public meetings to local, regional, and national print and broadcast (radio and television) media outlets on January 12, 2024. A second news release was distributed to media outlets on February 2, 2024. Two virtual public meetings were held during the review period on February 13, 2024, and February 15, 2024. A hard copy of the Draft EA was also sent to the Winthrop Public Library after a request was made during the second virtual public meeting on February 15, 2024. Early engagement notifications were sent to elected officials, government agencies, and the following federally recognized tribes from Washington State: the Confederated Tribes of the Colville Reservation, Spokane Tribe of Indians, and Kalispel Tribe of Indians. Additional public notices included: a postcard mailer, which was distributed to various elected officials, government agencies, federally recognized tribes, non-governmental organizations, and the public within the Action Area; tribal letters which were mailed to six tribal leaders of federally recognized tribes or districts; and stakeholder letters which were mailed to federal, state, and local elected officials and government agencies. Additional information on public participation can be found in Appendix D (Public Involvement, Comments, and Responses). All comments the Navy received during the public review period have been compiled and can be accessed on the project website at <https://pacific.navfac.navy.mil/NWNEPA>.

As part of this EA process, the Navy invited Government-to-Government consultations with the following federally recognized tribes from Washington State: the Confederated Tribes of the Colville Reservation, the Spokane Tribe of Indians, and the Kalispel Tribe of Indians. The Navy also held a regulatory agency briefing with the U.S. Fish and Wildlife Service (USFWS) on September 13, 2023.

After evaluating the Final EA, the designated official decided a Finding of No Significant Impact is appropriate and the Proposed Action would not generate significant impacts requiring preparation of an EIS.

## 2 Description of the Proposed Action and Alternatives

### 2.1 DESCRIPTION OF THE PROPOSED ACTION

This EA analyzes the potential impacts of actions associated with the addition and operation of a new Okanogan D MOA and Mazama ATCAA. This new airspace is proposed to be west of the current Okanogan and Roosevelt MOAs and the Molson, Methow, and Republic ATCAAs in eastern Washington State. The Proposed Action would also include a redistribution of the overall number of training sorties occurring within the existing Okanogan and Roosevelt MOAs and associated ATCAAs to accurately characterize how CVWP is projecting to use the airspace.

#### 2.1.1 DESCRIPTION OF THE CURRENT AIRSPACE

The Okanogan and Roosevelt MOAs currently provide military aircraft maneuver and training space in eastern Washington and northwestern Idaho as a part of the NWTRC. The Molson, Methow, and Republic ATCAAs also provide training space to military aircraft in northeastern Washington and northwestern Idaho. Descriptions of this SAA are provided in Table 2.1-1.

**Table 2.1-1: Special Activity Airspace in Eastern Washington and Northwestern Idaho Summary**

Airspace	NM <sup>2</sup>	Lower Limit	Upper Limit
Okanogan MOAs (sections: A, B, & C)	4,339	A: 9,000 ft. MSL B: 300 ft. AGL C: 300 ft. AGL	A: 18,000 ft. MSL B: 9,000 ft. MSL C: 9,000 ft. MSL
Molson ATCAA		18,000 ft. MSL	50,000 ft. MSL
Methow ATCAA		18,000 ft. MSL	23,000 ft. MSL
Roosevelt MOA (sections: A & B)	5,319	A: 9,000 ft. MSL B: 300 ft. AGL	A: 18,000 ft. MSL B: 9,000 ft. MSL
Republic ATCAA		18,000 ft. MSL	50,000 ft. MSL
<b>TOTAL</b>	<b>9,658</b>		

Notes: NM<sup>2</sup> = square nautical miles, MOA = Military Operations Area, ATCAA = Air Traffic Control Assigned Airspace, MSL = mean sea level, AGL = above ground level.

#### 2.1.2 NAVAL AIR STATION WHIDBEY ISLAND AND ELECTRONIC ATTACK WING SQUADRON TRAINING

The MOAs and ATCAAs are used by CVWP to train military aircrews based primarily out of NASWI in western Washington. The primary aircraft using this airspace is the EA-18G, an aircraft platform designed to suppress enemy air defense systems. There are 14 operational Navy Electronic Attack Squadrons and one training squadron at NASWI that fly the EA-18G. The Electronic Attack Squadrons deploy with both East and West Coast Carrier Air Wings, as well as to joint air bases.

NASWI is also the location of the Electronic Attack Weapons School, which provides comprehensive, formal training to EA-18G aircrew and extensive weapons-related training to EA-18G ordnance and maintenance personnel. The Electronic Attack Weapons School staff is responsible for providing a graduate-level curriculum that prepares EA-18G squadrons for deployment around the world.

CVWP performs many types of training as described and analyzed in the 2010 NWTRC EIS/OEIS and in the Pacific Northwest Electronic Warfare Range EA, including the following:

- **Air Combat Maneuvers.** Aircrews maneuver against simulated threats to gain a tactical advantage. These are basic flight maneuvers in which aircrew engage in offensive and defensive maneuvering against each other, at distances within and beyond visual range. During air combat maneuver engagements, no ordnance is fired, but countermeasures such as flares may be used. These events typically involve two aircraft; however, based upon the training requirement, events may involve multiple aircraft.
- **Electronic Warfare.** Aircraft control or impede an adversary's ability to use its electronic systems, thereby creating vulnerabilities in the enemy's operations. Some of these training events may involve additional aircraft. Electronic Warfare Operations can be active or passive, offensive or defensive. Aircraft may practice employing simulated or actual jamming of the electromagnetic spectrum against simulated threat search radars.

## **2.2 ALTERNATIVE SELECTION SCREENING FACTORS**

NEPA's implementing regulations (40 CFR 1502.14) provide guidance on the consideration of alternatives to a federally proposed action and require exploration and objective evaluation of reasonable alternatives. Only those alternatives determined to be reasonable and to meet the purpose and need require detailed analysis. Potential alternatives that meet the purpose and need were evaluated against the following screening factors:

- Be of a suitable size to support training to meet operational readiness requirements for CVWP while reducing the risk of potentially hazardous situations associated with multiple aircraft in the same operating area.
- Meet the Navy's need to enhance realistic training and readiness in existing designated airspace.
- Fill the gaps in training that Live Virtual and Constructive technologies cannot.
- Allow for flexibility in scheduling use of the airspace.
- Comply with the provisions of FAA Order 1050.1F.

## **2.3 ALTERNATIVES CARRIED FORWARD FOR ANALYSIS**

Based on the reasonable alternative screening factors and meeting the purpose and need for the Proposed Action, the Navy has identified two action alternatives to be analyzed within this EA. The No Action Alternative is also carried forward for analysis in this EA, as required by NEPA.

### **2.3.1 NO ACTION ALTERNATIVE**

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). The No Action Alternative would not meet the purpose and need for the Proposed Action; however, as required by NEPA, the No Action Alternative is carried forward for analysis in this EA. The No Action Alternative will be used to analyze the consequences of not undertaking the Proposed Action, not simply conclude no impact, and will serve to establish a comparative baseline for analysis. Table 2.3-1 depicts the current sorties, and Figure 2.3-1 depicts the current airspace configurations.

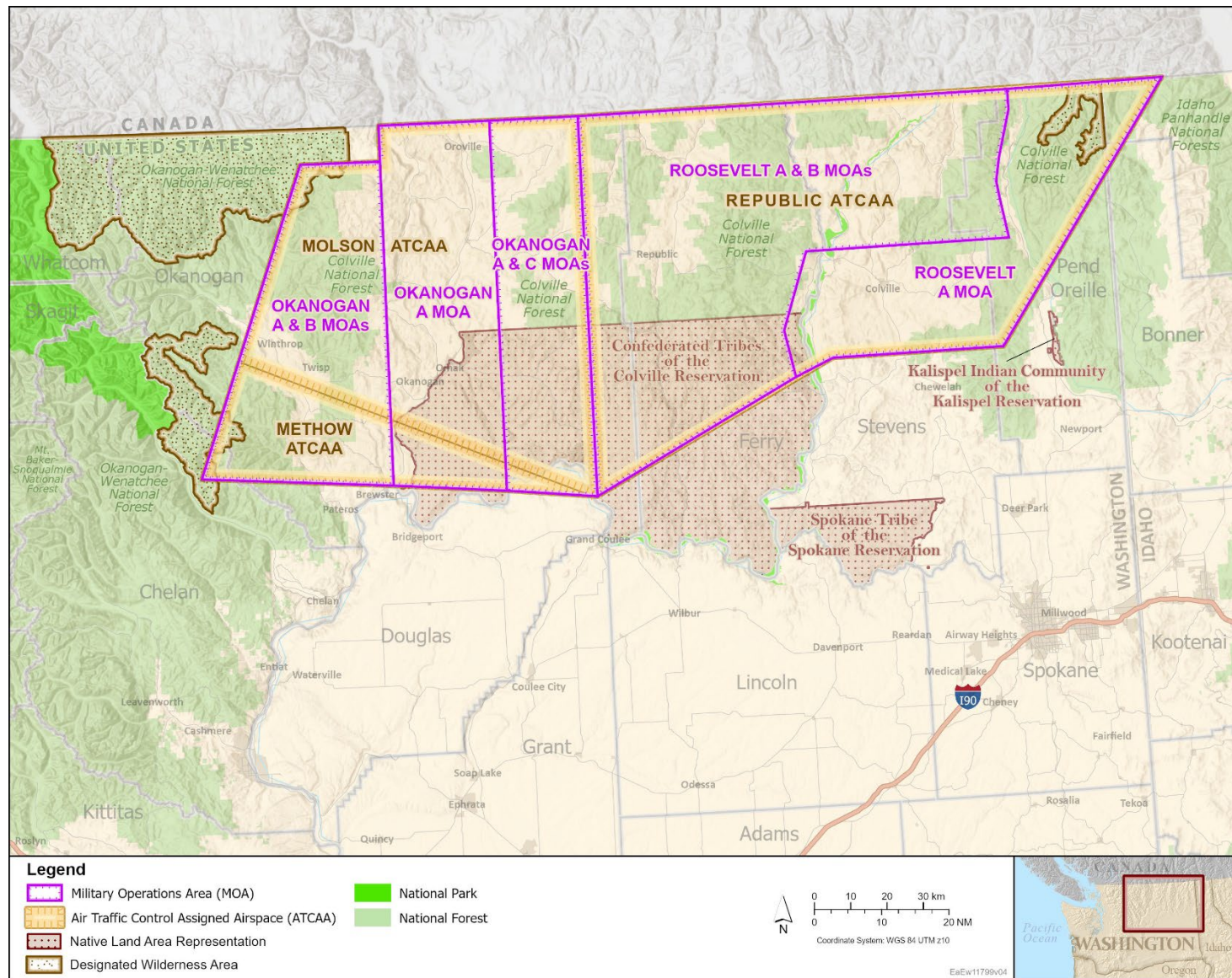


Figure 2.3-1: No Action Alternative

**Table 2.3-1: Summary of Aircraft Types and Annual Sorties in Select MOAs and ATCAAs for the No Action Alternative, Alternative 1 (Preferred Alternative), and Alternative 2**

	No Action Alternative		Alternative 1 (Preferred Alternative)		Alternative 2	
Aircraft Type	Existing Okanogan MOAs and Overlying ATCAAs	Existing Roosevelt MOAs and Overlying ATCAA	Okanogan MOAs and Overlying ATCAAs	Roosevelt MOAs and Overlying ATCAA	Okanogan MOAs and Overlying ATCAAs	Roosevelt MOAs and Overlying ATCAA
EA-18G Growler	2,939	1,310	2,500	1,800	2,800	2,000
Other Navy users	47	66	20	10	25	15
<b>Total</b>	<b>2,986</b>	<b>1,376</b>	<b>2,520</b>	<b>1,810</b>	<b>2,825</b>	<b>2,015</b>

Notes: ATCAA = Air Traffic Control Assigned Airspace, MOA = Military Operations Area

### 2.3.2 ALTERNATIVE 1 – ADDITION OF THE OKANOGAN D MOA AND MAZAMA ATCAA WITH A REDISTRIBUTION OF TRAINING SORTIES WITHIN THE EXISTING AIRSPACE (PREFERRED ALTERNATIVE)

Alternative 1 (Preferred Alternative) consists of the extension of the airspace through the establishment of a new Okanogan D MOA and Mazama ATCAA (Table 2.3-2 and Figure 2.3-2). In addition, Alternative 1 would adjust and redistribute the number of flights and flight profiles within the Okanogan and Roosevelt MOAs and associated ATCAAs (Table 2.3-1). With the redistribution, the total number of annual sorties in the Okanogan MOAs and overlying ATCAAs would decrease, and the number of annual sorties in the Roosevelt MOAs and overlying ATCAA would increase. Overall, however, the total number of annual sorties would decline slightly from what was analyzed in the 2010 NWTRC EIS/OEIS, from 4,362 sorties per year to 4,330 under Alternative 1. The EA-6B is no longer flown by the Navy and has been replaced by the EA-18G. Thus, the analysis in Chapter 3 (Affected Environment and Environmental Consequences) of this EA is based off the use of the EA-18G for training sorties.

The Okanogan D MOA and Mazama ATCAA would be located to the west of existing airspace. The Okanogan D MOA would have a floor of 11,500 ft. MSL, a ceiling of 18,000 ft. MSL, and an area of 393 NM<sup>2</sup> (Figure 2.3-2). The Mazama ATCAA would overlie the same area as the Okanogan D MOA and would have a floor of 18,000 ft. MSL and a ceiling of 25,000 ft. MSL (Figure 2.3-2). The Okanogan D MOA and Mazama ATCAA would be in airspace predominately above western Okanogan County and a very small area in the airspace above eastern Skagit County and northern Chelan County and would also overlie the western portion of the designated Pasayten and Lake Chelan-Sawtooth National Wilderness Areas (Figure 2.3-2).

**Table 2.3-2: Proposed Special Activity Airspace in Eastern Washington**

Airspace	NM <sup>2</sup>	Lower Limit	Upper Limit
Okanogan MOA (D)	393	11,500 ft. MSL	18,000 ft. MSL
Mazama ATCAA		18,000 ft. MSL	25,000 ft. MSL

Notes: NM<sup>2</sup> = square nautical miles, MOA = Military Operations Area, ATCAA = Air Traffic Control Assigned Airspace, ft. = feet, MSL = Mean Sea Level



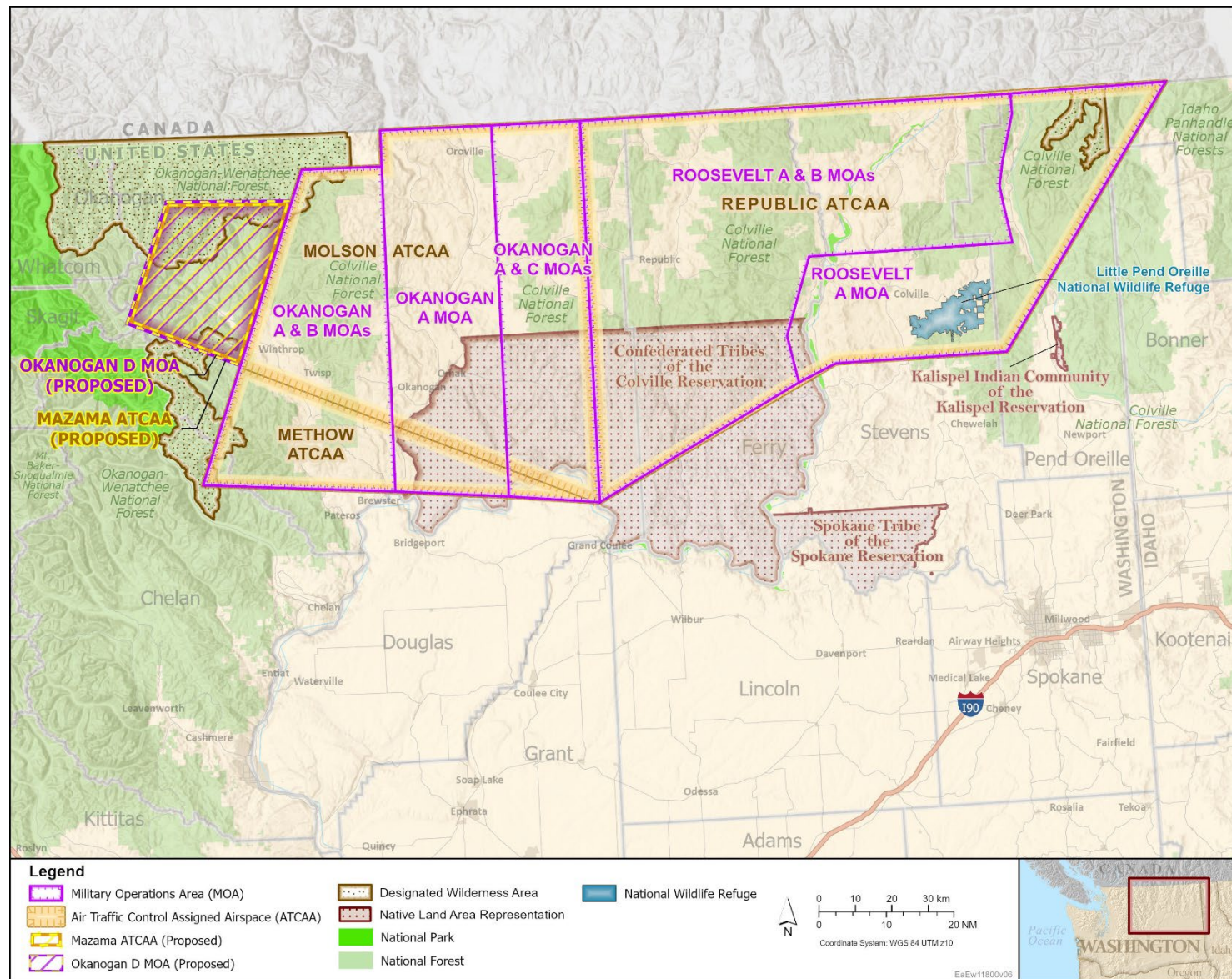


Figure 2.3-2: Action Alternative 1 (Preferred Alternative)



### **2.3.3 ALTERNATIVE 2 – ADDITION OF THE OKANOGAN D MOA AND MAZAMA ATCAA AND INCREASED TRAINING CAPACITY**

Alternative 2 consists of the addition of Okanogan D MOA and the overlying Mazama ATCAA that would occur under Alternative 1 (Table 2.3-1 and Figure 2.3-2). Alternative 2 also considers an increase in the total number of annual sorties. This alternative allows for the greatest flexibility for the Navy to maintain readiness when considering potential changes in the national security environment (Table 2.3-1).

### **2.4 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD FOR DETAILED ANALYSIS**

The following alternatives were considered for the airspace extension by the Navy but were not carried forward for detailed analysis in this EA as they either did not meet the purpose and need for the project or did not satisfy the reasonable alternative screening factors presented in Section 2.2 (Alternative Selection Screening Factors), which includes FAA approval.

#### **2.4.1 REINSTATEMENT OF THE FORMER MOLSON SOUTH HIGH ATCAA**

As was discussed in Section 1.2 (Background), the Molson South High ATCAA was removed by the FAA due to air traffic concerns in 2020. The reinstatement of the Molson South High ATCAA is not being pursued as an alternative in this EA.

#### **2.4.2 ROOSEVELT C MOA AND REPUBLIC ATCAA EXTENSION**

In October 2021, the Navy proposed to the FAA the extension of the Roosevelt MOAs through an extension of the Roosevelt C MOA and the Republic ATCAA to the east of the current Roosevelt MOA and Republic ATCAA (Figure 2.4-1). The FAA considered and was amenable to the extension but countered that accepting it would require the entire Republic ATCAA ceiling be reduced from 50,000 ft. to 32,000 ft., which would result in a reduction in size of the overall available training space. Therefore, the Navy withdrew the proposal because the lateral airspace gained from the extension would not outweigh the loss of vertical airspace.

#### **2.4.3 USE OF OLYMPIC AND BOARDMAN SPECIAL ACTIVITY AIRSPACE, AND WARNING AREA 237**

The Navy considered increasing training sorties in both the Olympic and Boardman SAA, and Warning Area 237 (Warning Area 237 is located over the Pacific Ocean off the coast of Washington State) in lieu of training in Eastern Washington SAA. However, none of these airspace areas are a direct substitute for the existing and proposed airspace because they could not support the required capacity of training sorties occurring in Eastern Washington SAA in addition to training currently occurring in these airspaces. The range instrumentation and geography of these airspace areas also make them unable to meet the purpose and need of the Proposed Action. Additionally, the Boardman SAA does not have sufficient horizontal and vertical airspace to meet required training scenarios.

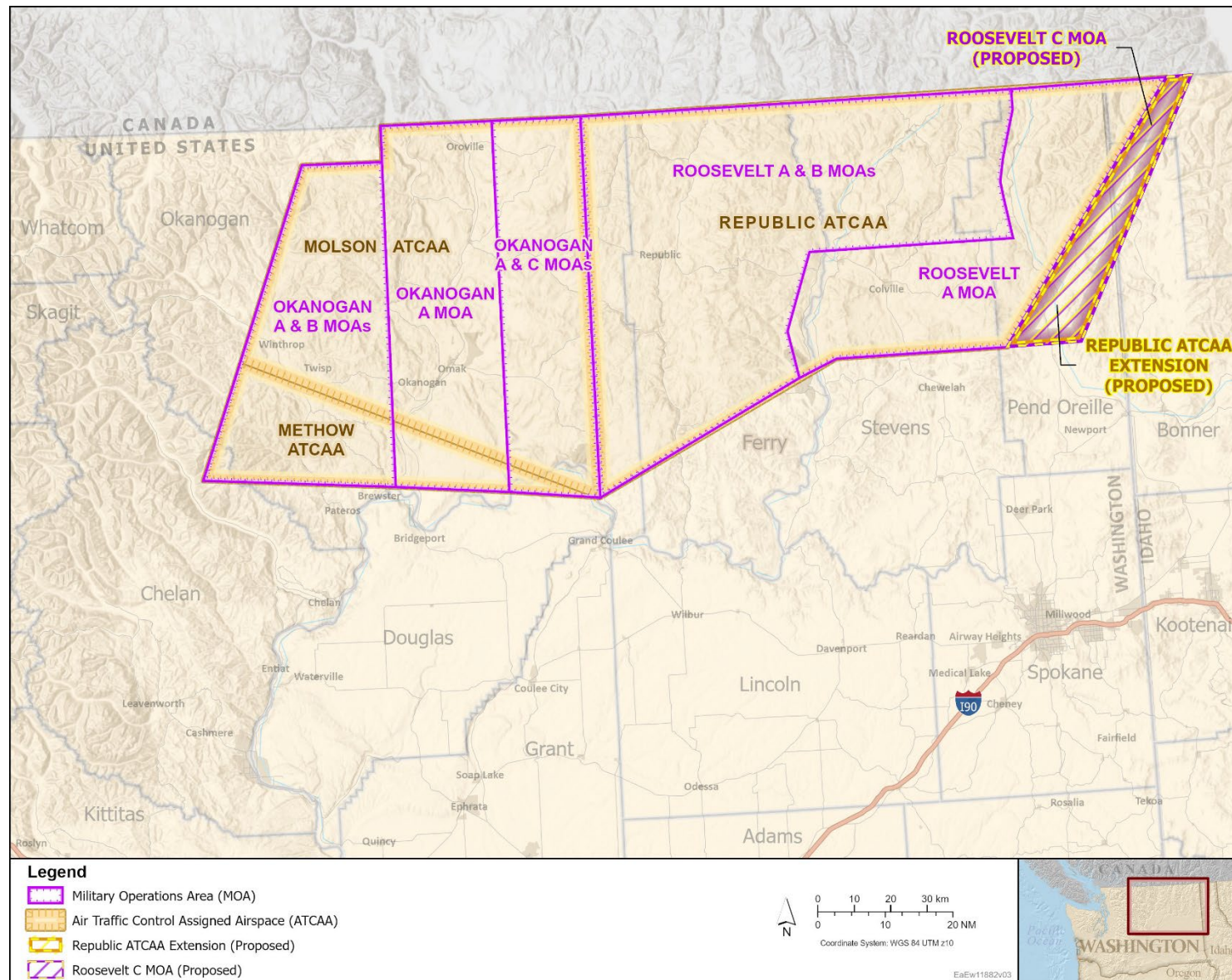


Figure 2.4-1: Roosevelt C MOA and Republic ATCAA Extension Not Carried Forward for Analysis

## **2.5 BEST MANAGEMENT PRACTICES INCLUDED IN THE PROPOSED ACTION**

Best management practices (BMPs) are incorporated into the Proposed Action in this document. BMPs are existing policies, practices, and measures that the Navy uses to reduce the environmental impacts of designated activities, functions, or processes. Although BMPs mitigate potential impacts by avoiding, minimizing, or reducing/eliminating impacts, BMPs are distinguished from potential mitigation measures because BMPs are (1) existing requirements for the Proposed Action; (2) ongoing, regularly occurring practices; or (3) not unique to this Proposed Action. In other words, the BMPs identified in this document are inherently part of the Proposed Action and are not potential mitigation measures proposed as a function of the NEPA environmental review process for the Proposed Action. BMPs include actions required by federal or state law or regulation. The recognition of the BMPs within the Proposed Action prevents unnecessarily evaluating impacts that are unlikely to occur.

### **2.5.1 LOW ALTITUDE TRAINING**

Low altitude training, which is defined as aircraft training which takes place beneath 1,500 ft. AGL, would not occur in the proposed airspace extension; however, low altitude training does occur in the existing Okanogan B and C MOAs and the existing Roosevelt C MOA because the floors of those MOAs are 300 ft. AGL. Despite these sections of airspace having 300-ft. AGL floors, CVWP uses standard operating procedures that prohibit aircraft from flying below 500 ft. AGL.

Existing CVWP standard operating procedures address noise from aircraft overflights and provide BMPs to minimize noise impacts within the Action Area. Specifically, low altitude training must avoid populated areas to the maximum extent possible and must be performed during daylight no earlier than 30 minutes after sunrise and no later than 30 minutes before sunset.

### **2.5.2 FLARE USE**

As stated above in Section 2.1.2 (Naval Air Station Whidbey Island and Electronic Attack Wing Squadron Training), during air combat maneuver engagements, countermeasures such as flares may be used in certain training areas with certain restrictions. Historically, flares have not been used in the Action Area due to the nature of the training that takes place within the Okanogan and Roosevelt MOAs and the Molson, Methow, and Republic ATCAAs. However, flare use is not strictly prohibited. Use of illumination flares is not permitted, but the use of self-protection flares is permitted.

Aircraft deploy self-protection flares as a defensive tactic (electronic protect deployment) to defeat tracking systems. Self-protection flares use a magnesium extruded flare grain that causes them to burn up and completely disintegrate while in the air. If the use of self-protection flares is required in future training, their use would be authorized under the following conditions:

1. Planned use must be coordinated with the appropriate Wing Operations Officer and NWTRC Range Program Manager and indicated in the "Remarks" on the NASWI Range Data Collection and Scheduling Tool (DCAST) Schedule.
2. Fire Season Restrictions may be implemented within the NWTRC depending on prevailing conditions:
  - I. Fire Season Restrictions are typically in effect from April 15 through October 15 each year and are seasonal and weather dependent. When in effect, no flares are authorized over land.
  - II. If flare use is approved, NASWI instruction restricts the altitude for each flare type.

### **3 Affected Environment and Environmental Consequences**

This chapter describes the relevant environmental conditions for resources potentially affected by the Proposed Action as described in Chapter 2 (Description of the Proposed Action and Alternatives).

Several resource areas, and potential impacts on those resource areas, were considered for evaluation at the outset of the process. However, consistent with NEPA, CEQ regulations, and Navy procedures for implementing NEPA, the description of the affected environment focuses only on those resources potentially subject to impact. As such, certain resource areas were eliminated from detailed study within the EA because research revealed that the Proposed Action is unlikely to have any potential environmental impacts on these resources, or that impacts would be negligible. The following resource areas were not evaluated in this EA: marine resources, geology and soils, hazardous materials, water resources, and traffic and infrastructure. Marine resources were not carried forward for analysis because the Proposed Action would occur in Eastern Washington, far from the Pacific Ocean and marine environment. Geology and soils, water resources, and traffic and infrastructure were not carried forward for analysis because the entirety of the Proposed Action is limited to aircraft in flight, and the floor of the proposed airspace extension is 11,500 ft. MSL, far above these resources. Hazardous materials were not carried forward for analysis because there will be no release of hazardous materials into the environment as a result of the Proposed Action.

The following resource areas were considered to have potential for impacts as a result of the Proposed Action and are addressed in this chapter of the EA: acoustic environment (noise); air quality; biological resources; cultural resources; American Indian traditional resources; public health and safety; and socioeconomics, environmental justice, and children's environmental health and safety risk. These resources are further described and analyzed in Sections 3.1 through 3.7. Aircraft noise modeling and analysis is included as Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension). Due to the lack of significant impacts on the resource areas analyzed in this EA, there are no mitigation procedures that are necessary for the Proposed Action.

Consultation and resource area data collection included liaison with or access to the following agencies: Okanogan-Wenatchee National Forest, Colville National Forest, the Washington State Department of Archeology and Historic Preservation, the Washington State Historic Preservation Office, U.S. Navy Pacific Fleet, NASWI, and other organizations and agencies as appropriate. Initial tribal correspondence occurred during August 2023. Formal tribal notification of the availability of the Draft EA for review and comment occurred on January 12, 2024. Appendix D (Public Involvement, Comments, and Responses) has more information regarding correspondence with public agencies, governments, and other organizations.

### 3.1 ACOUSTIC ENVIRONMENT (NOISE)

Noise is one of the most prominent environmental issues associated with military training activities. The acoustic environment at military bases and training areas can include various types of noise sources that can either be classified as continuous noise (e.g., on-base vehicular traffic), or impulsive noise (e.g., weapons firing or detonation of explosives). Not all of these noise sources are directly associated with military training, such as civilian vehicular traffic or building heating, ventilation, and air conditioning system noise. Noise associated with the Proposed Action that could potentially impact the acoustic environment would only include noise from aircraft training activities in the existing and proposed SAA.

The day-night average sound level (DNL) is the federally recommended noise measure used for assessing long-term sound levels occurring during a 24-hour period. DNL (which is sometimes denoted by  $L_{dn}$ ) is an average sound level, expressed in decibels (dB), which is commonly used to assess aircraft noise exposures in communities in the vicinity of airfields (Federal Interagency Committee on Urban Noise, 1980; U.S. Environmental Protection Agency, 1982). DNL values are related to compatible and incompatible land uses and do not directly relate to any singular sound event a human may hear. DNL includes a 10 dB adjustment for nighttime noise events. Acoustic daytime is defined as the period from 7 a.m. to 10 p.m., and acoustic nighttime is the period from 10 p.m. to 7 a.m. the following morning. The 10 dB adjustment accounts for the generally lower background sound levels and greater community sensitivity to noise during nighttime hours.

Aircraft noise generated in SAA is typically different from that associated with airfield operations. As opposed to patterned or continuous noise environments associated with airfields, overflights within SAA can be highly variable in occurrence and location. Individual military overflight events also differ from typical community noise events because noise from a low-altitude, high-air-speed flyover can have a sudden onset (i.e., exhibiting a rate of increase in sound level – onset rate – of up to 30 to 150 dB per second).

To represent these differences, the conventional DNL metric is adjusted to account for the “surprise” effect on humans from the sudden onset of aircraft noise events with an adjustment up to 11 dB above the normal Sound Exposure Level (Stusnick et al., 1993; 1992). Onset rates between 15 to 150 dB per second require an adjustment of 0 to 11 dB, while onset rates below 15 dB per second require no adjustment. The adjusted DNL is designated as the Onset-Rate Adjusted Day-Night Average Sound Level ( $L_{dnr}$ ).  $L_{dnr}$  employs A-weighted sound levels. A-weighting is an adjustment applied to sound measurement to reflect how a noise is perceived by the human ear.

Another noise metric that can provide additional information about the noise environment is the maximum noise level ( $L_{max}$ ). The  $L_{max}$  is the highest sound level measured during a single event where the sound level changes value with time (e.g., an aircraft overflight). The  $L_{max}$  is affected by several factors that are specific to a particular overflight (e.g., altitude, engine power setting). Due to the flight activities being dispersed throughout the airspace, persons on the ground experience noise events with a wide range of  $L_{max}$  values. In this setting, overflights with the highest possible  $L_{max}$  (i.e., the aircraft passes directly overhead at the lowest permitted altitude and highest engine power setting) are relatively rare.

#### 3.1.1 REGULATORY SETTING

Relevant noise-level thresholds established by the EPA, DoD, and FAA are described below.

- The EPA has identified 55 dB DNL as a level that protects public health and welfare with an adequate margin of safety (U.S. Environmental Protection Agency, 1974). This means that 55 dB DNL is a threshold below which adverse noise effects are usually not expected to occur. The

maximum DNLs associated with the Proposed Action would not exceed the EPA's 55 dB threshold.

- A widely used noise criterion is 65 dB DNL. It represents a compromise between acceptable noise and economic practicality. According to the Federal Interagency Committee on Urban Noise, noise exposure greater than 65 dB DNL is considered generally incompatible with residential, public use (e.g., schools), or recreational and entertainment areas (Federal Interagency Committee on Urban Noise, 1980).
- FAA Order 1050.1F states that significant noise impacts would occur if "The action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a 1.5 dB or greater increase, when compared to the No Action Alternative for the same timeframe." The FAA order defines "reportable" impacts as changes in noise level of 3 dB or more for 60 dB DNL to less than 65 dB DNL and changes of 5 dB or more for 45 dB DNL to less than 60 dB DNL. Reportable changes in noise level may warrant further evaluation of potential impacts. Of the FAA reportable impacts, only the change of 5 dB or more for 45 dB DNL to less than 60 dB DNL could occur in very limited, high-elevation terrain beneath the proposed Okanogan MOA D expansion. The FAA thresholds were considered because the proposed airspace action requires FAA approval.

### **3.1.2 AFFECTED ENVIRONMENT**

The affected environment for noise for the Proposed Action consists of the areas underlying the existing and proposed SAA (Figure 1.1-1). These areas may be subject to potential impacts from aircraft overflights and the associated noise from aircraft operations.

Training airspace noise was assessed using the Department of Defense (DoD) recommended noise metrics (Federal Interagency Committee on Urban Noise, 1980; U.S. Department of the Army, 2007). Aircraft flight noise was assessed using the A-weighted Onset-Rate Adjusted Day-Night Average Sound Level ( $L_{dnr}$ ). In addition, the aircraft flight noise was also assessed using the FAA-recommended DNL metric ( $L_{dn}$ ).

Table 3.1-1 through Table 3.1-3 provide the aircraft noise results in DNL (dBA) for different elevations within the existing and proposed airspace for each action alternative. Table 3.1-4 presents the maximum noise levels modeled in the existing and proposed airspace resulting from military aircraft overflights. Please see Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension) for the detailed noise analysis and modeling results.

Table 3.1-1: No Action Alternative Aircraft Noise Results in DNL (dBA) for 500-foot-step Ground Elevations

Location Within Airspace	Ground Elevation of Analysis (feet)																
	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500	6,000	6,500	7,000	7,500	8,000	8,500
Okanogan A (Middle Part Only) and Methow ATCAA	39.0	39.4	40.0	40.4	40.8	41.3	41.7	42.2	42.7	43.4	44.0	44.6	45.3	46.2	47.0	48.1	49.4
Okanogan A (Middle Part Only) and Molson ATCAA	39.6	39.9	40.3	40.7	41.1	41.6	42.0	42.5	43.0	43.5	44.1	44.7	45.4	46.2	47.0	48.0	49.3
Okanogan B and Methow ATCAA	46.6	46.7	46.9	47.1	47.3	47.5	48.1	48.2	48.3	48.5	48.6	48.7	48.9	49.1	49.3	49.5	49.8
Okanogan B and Molson ATCAA	46.7	46.8	46.9	47.1	47.3	47.6	48.2	48.3	48.4	48.5	48.6	48.8	48.9	49.1	49.3	49.6	49.9
Okanogan C and Methow ATCAA	46.1	46.2	46.4	46.5	46.8	47.0	47.6	47.7	47.8	47.9	48.1	48.2	48.4	48.6	48.8	49.0	49.3
Okanogan C and Molson ATCAA	46.5	46.6	46.8	47.0	47.2	47.4	48.0	48.1	48.2	48.4	48.5	48.6	48.8	49.0	49.2	49.5	49.8
Okanogan D and Mazama ATCAA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roosevelt A (Right Side Only) and Republic ATCAA	37.2	37.6	38.0	38.4	38.8	39.3	39.7	40.2	40.7	41.2	41.8	42.4	43.1	43.8	44.7	45.7	47.0
Roosevelt B and Republic ATCAA	44.2	44.3	44.4	44.6	44.8	45.1	45.7	45.8	45.9	46.0	46.2	46.3	46.5	46.7	46.9	47.1	47.4

Note: ATCAA = Air Traffic Control Assigned Airspace

Table 3.1-2: Alternative 1 (Preferred Alternative) Aircraft Noise Results in DNL (dBA) for 500-foot-step Ground Elevations

Location Within Airspace	Ground Elevation of Analysis (feet)																
	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500	6,000	6,500	7,000	7,500	8,000	8,500
Okanogan A (Middle Part Only) and Methow ATCAA	38.4	38.8	39.4	39.8	40.2	40.7	41.1	41.6	42.1	42.8	43.4	44.0	44.7	45.5	46.4	47.5	48.8
Okanogan A (Middle Part Only) and Molson ATCAA	39.0	39.3	39.7	40.1	40.5	41.0	41.4	41.9	42.4	42.9	43.5	44.1	44.8	45.5	46.4	47.4	48.7
Okanogan B and Methow ATCAA	46.0	46.1	46.3	46.5	46.7	46.9	47.5	47.6	47.7	47.8	48.0	48.1	48.2	48.5	48.6	48.9	49.2
Okanogan B and Molson ATCAA	46.1	46.2	46.3	46.5	46.7	47.0	47.6	47.7	47.8	47.9	48.0	48.2	48.3	48.5	48.7	49.0	49.3
Okanogan C and Methow ATCAA	45.5	45.6	45.8	45.9	46.1	46.4	47.0	47.1	47.2	47.3	47.5	47.6	47.7	48.0	48.2	48.4	48.7
Okanogan C and Molson ATCAA	45.9	46.0	46.2	46.4	46.6	46.8	47.4	47.5	47.6	47.7	47.9	48.0	48.2	48.4	48.6	48.8	49.1
Okanogan D and Mazama ATCAA	37.9	38.3	38.6	39.0	39.5	39.9	40.3	40.7	41.1	41.7	42.1	42.6	43.1	43.8	44.3	44.9	45.7
Roosevelt A (Right Side Only) and Republic ATCAA	37.2	37.6	38.0	38.4	38.8	39.3	39.7	40.2	40.7	41.2	41.8	42.4	43.1	43.8	44.7	45.7	47.0
Roosevelt B and Republic ATCAA	44.2	44.3	44.4	44.6	44.8	45.1	45.7	45.8	45.9	46.0	46.2	46.3	46.5	46.7	46.9	47.1	47.4

Notes: ATCAA = Air Traffic Control Assigned Airspace

Table 3.1-3: Alternative 2 Aircraft Noise Results in DNL (dBA) for 500-foot-step Ground Elevations

Location Within Airspace	Ground Elevation of Analysis (feet)																
	500	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500	6,000	6,500	7,000	7,500	8,000	8,500
Okanogan A (Middle Part Only) and Methow ATCAA	38.9	39.3	39.9	40.3	40.7	41.2	41.6	42.1	42.6	43.3	43.9	44.5	45.2	46.1	46.9	48.0	49.3
Okanogan A (Middle Part Only) and Molson ATCAA	39.4	39.8	40.2	40.6	41.0	41.5	41.9	42.4	42.9	43.4	44.0	44.6	45.3	46.0	46.9	47.9	49.2
Okanogan B and Methow ATCAA	46.5	46.7	46.8	47.0	47.2	47.4	48.0	48.1	48.2	48.4	48.5	48.6	48.8	49.0	49.2	49.4	49.7
Okanogan B and Molson ATCAA	46.6	46.7	46.8	47.0	47.2	47.5	48.1	48.2	48.3	48.4	48.5	48.7	48.8	49.0	49.2	49.5	49.8
Okanogan C and Methow ATCAA	46.0	46.1	46.3	46.4	46.7	46.9	47.5	47.6	47.7	47.8	48.0	48.1	48.3	48.5	48.7	48.9	49.2
Okanogan C and Molson ATCAA	46.4	46.5	46.7	46.9	47.1	47.3	47.9	48.0	48.1	48.3	48.4	48.5	48.7	48.9	49.1	49.4	49.6
Okanogan D and Mazama ATCAA	38.4	38.8	39.1	39.5	40.0	40.4	40.8	41.2	41.6	42.1	42.6	43.1	43.6	44.2	44.8	45.4	46.2
Roosevelt A (Right Side Only) and Republic ATCAA	37.7	38.1	38.5	38.9	39.3	39.7	40.2	40.7	41.2	41.7	42.3	42.9	43.6	44.3	45.2	46.2	47.5
Roosevelt B and Republic ATCAA	44.7	44.8	44.9	45.1	45.3	45.6	46.2	46.3	46.4	46.5	46.6	46.8	47.0	47.1	47.4	47.6	47.9

Note: ATCAA = Air Traffic Control Assigned Airspace



**Table 3.1-4: Maximum Noise Level from the EA-18G for Different Distances and Engine Powers**

Distance to aircraft (feet)	Engine Pwr 88.6% NC Cruise	Engine Pwr 96% NC Military	Engine Pwr 97% NC Afterburner
	Airspeed: 360 knots	Airspeed: 360 knots	Airspeed: 360 knots
	L <sub>max</sub> (dBA)	L <sub>max</sub> (dBA)	L <sub>max</sub> (dBA)
500	112.1	119.7	123.9
1,000	104.8	112.4	116.7
2,000	96.6	104.3	108.7
3,000	91.2	99.2	103.7
4,000	86.8	95.0	99.7
5,000	83.1	91.6	96.4
6,000	80.4	89.0	93.9
7,000	77.9	88.6	91.6
8,000	75.0	83.9	89.2
9,000	73.2	82.2	87.6
10,000	70.4	79.7	85.2
11,000	68.9	78.3	83.9
12,000	67.0	76.4	82.1
13,000	65.1	74.7	80.5
14,000	63.9	73.6	79.4
15,000	62.4	72.2	78.1

Notes: NC = Compressor Stage Rotations Per Minute (a measure of jet engine power setting), dBA = A-Weighted Sound Pressure Level, L<sub>max</sub> = Maximum Received Noise Level

### 3.1.3 ENVIRONMENTAL CONSEQUENCES

#### 3.1.3.1 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA, would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). Military aircraft overflights in the existing airspace would continue in accordance with the current operational tempo resulting in a maximum DNL of 49.9 dBA, which would be well below the FAA's significance threshold of DNL 65 dBA for noise effects of an action. Therefore, there would be no significant impacts on the acoustic environment.

#### 3.1.3.2 Alternative 1 (Preferred Alternative)

Under Alternative 1 (Preferred Alternative), the Proposed Action would occur, establishing the new Okanogan D MOA and Mazama ATCAA (Figure 2.3-2), and there would be a redistribution of the number

of flights and flight profiles within the Okanogan and Roosevelt MOAs (Table 2.3-1). The overall total number of annual sorties would decline slightly from what was analyzed in the 2010 NWTRC EIS/OEIS.

Under Alternative 1 (Preferred Alternative), the maximum DNL in the existing Okanogan and Roosevelt MOAs and overlying ATCAAs would be 49.3 dBA, a 0.6 dBA decrease from the No Action Alternative. The proposed Okanogan D MOA and overlying Mazama would experience a change in environmental conditions due to the introduction of military aircraft overflights and associated aircraft noise. As a result, the maximum DNL in the proposed airspace would be 45.7 dBA.

FAA reportable impacts, with a change of 5 dB or more for 45 dB DNL to less than 60 dB DNL, could occur beneath the proposed Okanogan MOA D extension. However, they would only potentially occur in terrain at the peaks of several mountains above 8,500 ft. MSL, and only during relatively rare overflights at the very bottom of the airspace. These noise levels were modeled to occur at DNL levels up to 45.7 dBA.

Because the maximum DNLs resulting from military aircraft overflights in both the existing and proposed airspace would be well below the FAA's significance threshold of DNL 65 dBA for noise effects of an action, there would be no significant impacts on the acoustic environment.

### **3.1.3.3 Alternative 2**

Alternative 2 consists of the addition of the Okanogan D MOA and the overlying Mazama ATCAA that occur under Alternative 1 (Figure 2.3-2). Alternative 2 also considers an approximately 12 percent increase in the capacity of training throughout all the Okanogan and Roosevelt MOAs that allows for the greatest flexibility for the Navy to maintain readiness when considering potential changes in the national security environment (Table 2.3-1).

Under Alternative 2, the maximum DNL in the existing Okanogan and Roosevelt MOAs and overlying ATCAAs would be 49.8 dBA, a 0.1 dBA decrease from the No Action Alternative and a 0.5 dBA increase from Alternative 1 (Preferred Alternative). The proposed Okanogan D MOA and overlying Mazama would experience a change in environmental conditions due to the introduction of military aircraft overflights and associated aircraft noise. As a result, the maximum DNL in the proposed airspace would be 46.2 dBA, a 0.5 dBA increase from Alternative 1 (Preferred Alternative).

FAA reportable impacts, with a change of 5 dB or more for 45 dB DNL to less than 60 dB DNL, could occur beneath the proposed Okanogan MOA D expansion. However, they would only potentially occur in terrain at the peaks of several mountains above 8,000 ft. MSL, and only during relatively rare overflights at the very bottom of the airspace. These noise levels were modeled to occur at DNL levels up to 46.2 dBA.

Because the maximum DNLs resulting from military aircraft overflights in both the existing and proposed airspace would be well below the FAA's significance threshold of DNL 65 dBA for noise effects of an action, there would be no significant impacts on the acoustic environment.

## **3.2 AIR QUALITY**

Congress passed the Clean Air Act (CAA) in 1970 and its amendments in 1977 and 1990 to improve air quality and reduce air pollution, set regulatory limits on air pollutants, and ensure basic health and environmental protection from air pollution. Air pollution damages the health of people, plants, animals, and water bodies as well as the exteriors of buildings, monuments, and statues. It also creates haze or

smog that reduces visibility and interferes with aviation. Air quality is defined by ambient concentrations of specific air pollutants the U.S. Environmental Protection Agency (EPA) determined may affect the health or welfare of the public or environment. The six major pollutants of concern are called “criteria pollutants”:

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen dioxide (NO<sub>2</sub>)
- Ozone (O<sub>3</sub>), which is represented as the precursor pollutants nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC)
- Sulfur dioxide (SO<sub>2</sub>)
- Particulate matter (with an aerodynamic size less than or equal to 10 microns [PM<sub>10</sub>] and with an aerodynamic size less than or equal to 2.5 microns [PM<sub>2.5</sub>]).

Criteria air pollutants are classified as either primary or secondary pollutants based on how they are formed in the atmosphere. Primary air pollutants are emitted directly into the atmosphere from the source of the pollutant. Secondary air pollutants are those formed through atmospheric chemical reactions that usually involve primary air pollutants (or pollutant precursors) and normal constituents of the atmosphere. For example, ozone is a secondary pollutant that is formed in the atmosphere by photochemical reactions of previously emitted pollutants, or precursors (VOCs, NO<sub>x</sub>, and suspended PM<sub>10</sub>). Some criteria air pollutants, including PM<sub>10</sub> and PM<sub>2.5</sub>, are a combination of primary and secondary pollutants.

### **3.2.1 REGULATORY SETTING**

#### **3.2.1.1 Criteria Pollutants and National Ambient Air Quality Standards**

The CAA required the EPA to establish National Ambient Air Quality Standards (NAAQS) for criteria pollutants (Table 3.2-1). States may also establish their own ambient air quality standards that are more stringent than those set by federal law. The state of Washington has adopted the federal standards as codified in Washington Administrative Code Chapters 173-476, with the addition of an annual and 24-hour standard for SO<sub>2</sub>. The Washington Ambient Air Quality Standard for SO<sub>2</sub> (annual) requires that the average concentration for sulfur oxides not exceed 0.02 parts per million by volume (ppmv) in a calendar year, and (twenty-four-hour) requires that the 24-hour average concentration for SO<sub>2</sub> not exceed 0.14 ppmv more than once per calendar year (Washington State Legislature, 2016). The state of Idaho has also adopted the federal standards as incorporated by reference in Idaho Administrative Rules, 58.01.01 – Rules for the Control of Air Pollution in Idaho Section 107 (3)(b) (Idaho Department of Environmental Quality, 2022).

**Table 3.2-1: National Ambient Air Quality Standards**

Pollutant		Primary/Secondary	Averaging Time	Level	Form
Carbon monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead		primary and secondary	Rolling 3-month period	0.15 µg/m <sup>3</sup> <sup>(1)</sup>	Not to be exceeded
Nitrogen dioxide (NO <sub>2</sub> )		primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb <sup>(2)</sup>	Annual mean
Ozone		primary and secondary	8 hours	0.070 ppm <sup>(3)</sup>	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (particulate matter)	PM <sub>2.5</sub>	primary	1 year	9.0 µg/m <sup>3</sup>	Annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m <sup>3</sup>	Annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m <sup>3</sup>	98th percentile, averaged over 3 years
	PM <sub>10</sub>	primary and secondary	24 hours	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over 3 years
Sulfur dioxide (SO <sub>2</sub> )		primary	1 hour	75 ppb <sup>(4)</sup>	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

<sup>1</sup> In areas designated nonattainment for the lead standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 micrograms per cubic meter as a calendar quarter average) also remain in effect.

<sup>2</sup> The level of the annual nitrogen dioxide standard is 0.053 parts per million. It is shown here in terms of parts per billion for the purposes of clearer comparison to the 1-hour standard level.

<sup>3</sup> Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) ozone standards additionally remain in effect in some areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) ozone (O<sub>3</sub>) standards.

<sup>4</sup> The previous sulfur dioxide standards (0.14 parts per million 24-hour and 0.03 parts per million annual) would additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which implementation plans providing for attainment of the current (2010) standard have not been submitted and approved and which is designated nonattainment under the previous sulfur dioxide standards or is not meeting the requirements of a State Implementation Plan (SIP) call under the previous sulfur dioxide standards (40 Code of Federal Regulations section 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS.

Notes: PM<sub>10</sub> = particulate matter ≤ 10 microns in diameter, PM<sub>2.5</sub> = particulate matter ≤ 2.5 microns in diameter, ppb = parts per billion, ppm = parts per million, µg/m<sup>3</sup> = micrograms per cubic meter.

Source: (U.S. Environmental Protection Agency, 2016b), last updated March 15, 2023

These standards set specific concentration limits for criteria pollutants in the outdoor air that are designed to aid in protecting public health and the environment. Areas with air pollution problems typically have one or more criteria pollutants consistently present at levels that exceed the NAAQS.

Ambient air quality is reported as the atmospheric concentrations of specific air pollutants at a particular time and location. The units of measure are expressed as a mass per unit volume (e.g., micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ] of air) or as a volume fraction (e.g., parts per million by volume). The ambient air pollutant concentrations measured at a particular location are determined by the pollutant emissions rate, local meteorology, and atmospheric chemistry. Wind speed and direction, the vertical temperature gradient of the atmosphere, and precipitation patterns affect the dispersal, dilution, and removal of air pollutant emissions from the atmosphere.

If the air quality in a geographic area meets or is cleaner than the national standard, it is called an attainment area (designated “attainment/unclassifiable”). Maintenance areas are those previously designated as a nonattainment area and subsequently redesignated to attainment. Nonattainment areas for some criteria pollutants are further classified as shown below, depending upon the severity of their air quality problem, to facilitate their management:

- ozone—marginal, moderate, serious, severe, and extreme
- carbon monoxide—moderate and serious
- particulate matter—moderate and serious

States, through their air quality management agencies, are required under the CAA to prepare a State Implementation Plan to demonstrate how the nonattainment and maintenance areas would achieve and maintain the NAAQS.

#### **3.2.1.2 Hazardous Air Pollutants**

In addition to the six criteria pollutants, the EPA currently designates 188 substances as hazardous air pollutants (HAPs) under the federal CAA. HAPs are air pollutants known or suspected to cause cancer or other serious health effects, or adverse environmental and ecological effects (U.S. Environmental Protection Agency, 2016a). NAAQS are not established for these pollutants; however, the EPA has developed rules and control standards that limit emissions of HAPs from specific stationary (National Emissions Standards for Hazardous Air Pollutants) and mobile sources (Mobile Source Air Toxics). These emissions control standards are intended to achieve the maximum degree of reduction in emissions of the HAPs, taking into consideration the cost of emissions control, non-air-quality health and environmental impacts, and energy requirements. These emissions are typically one or more orders of magnitude smaller than concurrent emissions of criteria air pollutants.

For the Proposed Action, HAPs are generated, in addition to criteria air pollutants, by combustion of fuels. Emissions of HAPs are intermittent and dispersed over a large area. Because only small quantities of HAPs are emitted into the lower atmosphere, which is well mixed in the air space and far from any sensitive receptors, the potential for exposure is very low, and the risk presented by the emissions is similarly very low. A quantitative evaluation of hazardous air pollutant emissions is thus not warranted and was not conducted.

### 3.2.1.3 Greenhouse Gases

The EPA specifically identified the most important greenhouse gases (GHGs) directly emitted by humans as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and several fluorine-containing halogenated substances, including hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride (U.S. Environmental Protection Agency, 2009). These gases influence global climate by trapping heat in the atmosphere that would otherwise escape to space. The heating effect of these gases is considered the probable cause of global warming observed over the last 50 years (U.S. Environmental Protection Agency, 2023d) and contributes significantly to climate change. GHGs have varying global warming potential (GWP). GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time (usually 100 years), relative to the emissions of 1 ton of CO<sub>2</sub> (U.S. Environmental Protection Agency, 2023b). The reference gas for GWP is CO<sub>2</sub>; therefore, CO<sub>2</sub> has a GWP of 1. The other main GHGs that are the most common GHGs that result from human activity include CH<sub>4</sub>, which is estimated to have a GWP of 27–30 over 100 years; N<sub>2</sub>O, which has a GWP of 273. CO<sub>2</sub>; and to a lesser extent, CH<sub>4</sub> and N<sub>2</sub>O, which are products of combustion and are generated from stationary combustion sources as well as vehicles, aircraft, and vessels. High GWP gases include GHGs that are used in refrigeration/cooling systems, such as chlorofluorocarbons and hydrofluorocarbons.

There currently are no regulatory thresholds of significance for GHG emissions; however, the CEQ has released interim guidance on when and how Federal agencies should consider GHG emissions and climate change in NEPA analyses (Council on Environmental Quality, 2023). The guidance emphasizes when conducting climate change analyses in NEPA reviews, agencies should consider the following: (1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts.

The guidance states that federal agencies should quantify the reasonably foreseeable direct and indirect GHG emissions of their proposed actions and reasonable alternatives (as well as the No Action Alternative). The guidance also recommends that “agencies provide additional context for GHG emissions, including through the use of the best available social cost of GHG estimates, to translate climate impacts into the more accessible metric of dollars, allow decision makers and the public to make comparisons, help evaluate the significance of an action’s climate change effects, and better understand the tradeoffs associated with an action and its alternatives.” (Council on Environmental Quality, 2023).

Though continued aircraft training in the airspace would emit GHGs from the combustion of fossil fuels, the proposal does not include any increase in aircraft sorties or flight time for the Preferred Alternative (Alternative 1). Sortie numbers are proposed to decrease very slightly under Alternative 1, therefore the social cost for the No Action Alternative and Alternative 1 would be essentially identical. Alternative 2 includes an approximate 12 percent increase in overall sortie numbers and therefore would result in an approximate 12 percent increase in GHG emissions. Minimization of potential environmental impacts, to include air emissions, was one of the determining factors in selecting Alternative 1 as the Preferred Alternative.

### 3.2.2 ANALYSIS FRAMEWORK

The air quality impact evaluation comprises two analyses: (1) the CAA General Conformity Analysis; and (2) an analysis under NEPA. The generated air emissions would be evaluated in one or more of the three identified analysis categories, based on the geographical and spatial locations where emissions occur and CAA air quality status (nonattainment, maintenance, or attainment) of those respective locations, as

well as pollutants emitted, type of emission source, and levels of emissions. The air emissions generated by the Proposed Action are from aircraft operations only.

#### **3.2.2.1 General Conformity**

Section 176(c)(1) of the CAA, commonly known as the General Conformity Rule, requires federal agencies to ensure that their actions conform to applicable implementation plans for achieving and maintaining the NAAQS for criteria pollutants for nonattainment and maintenance areas. Federal actions are required to conform with the approved State Implementation Plan for those areas of the United States designated as nonattainment or maintenance areas for any criteria air pollutants under the CAA (40 CFR parts 51 and 93 Subpart B). The purpose of the General Conformity Rule is to ensure that applicable federal activities do not cause or contribute to new violations of the NAAQS, do not worsen existing violations of the NAAQS, and do not delay attainment of the NAAQS. A conformity review must be completed for every applicable Navy action that generates emissions to determine and document whether a proposed action requires a conformity determination to comply with the General Conformity Rule. At the time of this applicability analysis, emissions generated by the aircraft sorties in the proposed airspace extension and existing airspace as detailed in the Preferred Alternative would not occur within a Federal CAA designated nonattainment or maintenance area for any criteria pollutants. Therefore, the action is not subject to the General Conformity Rule.

#### **3.2.2.2 National Environmental Policy Act**

Analysis of health-based air quality impacts under NEPA includes estimates of criteria air pollutants, HAPs, and greenhouse gases occurring as result of a federal action occurring onshore out to the U.S. territorial sea limits (within 12 nautical miles) for all construction or transport activities or those that involve vessels in U.S. territorial seas. In determining the total direct and indirect emissions caused by the action, agencies must project the future emissions in the area with the action versus the future emissions without the action, which NEPA entitles “the Baseline Condition/Affected Environment.” Total direct and indirect emissions consider all emission increases and decreases that are reasonably foreseeable and are possibly controllable through an agency’s continuing program responsibility to affect emissions.

For nonattainment and maintenance criteria pollutants, the conformity *de minimis* levels are useful as NEPA analysis screening thresholds to determine significance. For these pollutants, the General Conformity “*de minimis*” thresholds are identical to “major source” thresholds applicable to new stationary sources under the federal CAA. As such, they represent reasoned decisions under two regulatory programs as quantities that represent thresholds of increased concern. The thresholds are lowered as the air quality of a nonattainment or maintenance area worsens. For example, the threshold for an ozone precursor is 10 tons per year (tpy) in an extreme nonattainment area, but 100 tpy in a moderate nonattainment area.

The Prevention of Significant Deterioration (PSD) Program was adopted in the CAA under 40 CFR part 52.21. The PSD Program applies to major stationary sources of air pollutants located in attainment areas, requiring that a source demonstrates that it does not significantly deteriorate the air quality in attainment areas. Under PSD, a “major source” is defined as a facility that emits equal to or greater than 250 tons of a criteria pollutant or regulated precursor. As such, in attainment areas, the major emitting facility threshold of 250 tpy of a pollutant is the threshold of increased concern; therefore, this threshold is also a suitable screening threshold. In NEPA terms, the foregoing means that the thresholds serve as screening level thresholds of significance. That is, where emissions of a pollutant are below the

threshold for a nonattainment, attainment, or maintenance area, as applicable, they would not be significant absent compounding factors, such as proximity of sensitive receptors. Where those emissions exceed the applicable threshold discussed above, they demand a harder look at factors such as region of dispersal. It should be noted that the thresholds are conservative in that they are designed to apply to stationary sources. However, the Navy is conservatively applying them to mobile sources that may be diffused and dispersed. It should also be noted that by increasing and decreasing with the air quality of a region, these thresholds consider other activities in the region in the past and present. As such they are measures of cumulative impacts.

### **3.2.2.3 Greenhouse Gases**

The Proposed Action is anticipated to release GHGs into the atmosphere. GHG emissions have a global impact regardless of where they are emitted. These emissions were quantified using the Navy's Aircraft Emission Support Office Memorandum Reports for individual aircraft categories. The 3,000 ft. above ground level (AGL), which is the default mixing height above which criteria pollutants and HAPs emissions would not affect the ambient air quality, does not apply to GHG. Therefore, GHG emissions were calculated for all altitudes.

### **3.2.3 AFFECTED ENVIRONMENT**

Okanogan D MOA and Mazama ATCAA are proposed in eastern Washington. The Okanogan MOA, Methow ATCAA, and Molson ATCAA are in airspace above Okanogan, Chelan, and Skagit Counties. The Roosevelt MOA and Republic ATCAA are in airspace above Okanogan, Ferry, Stevens, and Pend Oreille Counties in Washington State, and Bonner and Boundary Counties in Idaho. Most aircraft using the airspace are based at NASWI, which is located in Island County. For air resource analysis, these areas are subject to regulations promulgated by the Washington Department of Ecology and the Idaho Department of Environmental Quality. All the affected counties in the state of Washington are classified as attainment/unclassified for the NAAQS for all pollutants. Spokane County, which is a maintenance area for CO and PM<sub>10</sub>, is not part of the Action Area. The Sandpoint Area in Bonner County, Idaho, is a maintenance area for the 1987 PM<sub>10</sub> NAAQS. As shown in Figure 1.1-1, the Sandpoint Area is not part of the Action Area. Boundary County in Idaho is in attainment for the NAAQS for all pollutants (U.S. Environmental Protection Agency, 2023c).

### **3.2.4 ENVIRONMENTAL CONSEQUENCES**

#### **3.2.4.1 Sources of Emissions**

The only emissions associated with the Proposed Action are aircraft emissions from redistributing of sorties under Alternative 1 (Preferred Alternative) and redistribution of sorties and addition of aircraft activities under Alternative 2. Aircraft emissions were quantified using the Navy's Aircraft Emission Support Office Memorandum Reports for individual aircraft categories. Appendix C (Air Quality Example Calculations) contains a detailed description of methodologies and emission factors used to calculate the emissions. For the purposes of assessing air quality effects under NEPA, all activities involving the use of aircraft at or below 3,000 ft. were included in emissions estimates for the criteria pollutants. In accordance with EPA guidance (U.S. Environmental Protection Agency, 1992), 40 CFR 93.153(c)(2), 3,000 ft. AGL is the default mixing height above which emissions would not affect the ambient air quality. For GHG, emissions from activities below and above 3,000 ft. were calculated.



### 3.2.4.2 Baseline Emissions

Baseline emissions were estimated for aircraft activities within the Okanogan and Roosevelt MOAs. Aircraft types and total annual sorties are based on the data analyzed in the 2010 NWTRC EIS/OEIS and presented in Table 2-2 of that EIS/OEIS. Table 3.2-2 summarizes the baseline emissions for Okanogan and Roosevelt MOAs.

**Table 3.2-2: Okanogan and Roosevelt MOAs – Baseline Emissions**

			Emissions (ton/year)						
Mission Type	Annual Sorties	Time below 3,000 ft.(hr)	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub> , MT/year
EA-18G									
Air Combat Maneuvers	105	0	0.00	0.00	0.00	0.00	0.00	0.00	1,566
Electronic Warfare	293	22	0.08	1.68	0.02	0.04	0.75	0.75	6,584
Subtotal	398	22	0.08	1.68	0.02	0.04	0.75	0.75	8,151
EA-6B									
Air Combat Maneuvers	1,013	63	1.39	1.82	0.26	0.10	2.81	2.81	12,327
Electronic Warfare	2,838	284	6.24	8.14	1.16	0.44	12.59	12.59	34,543
Subtotal	3,851	348	7.63	9.95	1.42	0.54	15.40	15.40	46,870
Other Navy users (modeled as half F/A-18 Super Hornet and half F-35 Lightning)									
Air Combat Maneuvers	30	0	0.00	0.00	0.00	0.00	0.00	0.00	284
Electronic Warfare	83	6	0.04	0.26	0.00	0.01	0.11	0.11	1,108
Subtotal	113	6	0.04	0.26	0.00	0.01	0.11	0.11	1,392
Total Baseline Emissions			7.75	11.89	1.44	0.59	16.26	16.26	56,413

Notes: CO = carbon monoxide, NO<sub>x</sub> = nitrogen oxides, VOC = volatile organic compounds, PM = particulate matter, SO<sub>x</sub> = oxides of sulfur, CO<sub>2</sub> = carbon dioxide, MT = metric ton, ft. = feet

### 3.2.4.3 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). Therefore, there would be no significant impacts on air quality.

Table 3.2-3 summarizes the No Action Alternative emissions. These emissions are different than the baseline emissions because, as shown in Table 3.2-2, the baseline emissions included EA-6B aircraft operations. Since then, the Navy has fully transitioned from EA-6B Prowler aircraft to EA-18G Growler. The emission characteristics and some of the activity data are different for two aircraft types. The No Action Alternative emissions reflect these differences. The change in emissions is primarily due to the following:

- EA-6B has higher emission rates for CO, volatile organic compounds, and PM compared to EA-18G.
- EA-18G has higher emission rates for NO<sub>x</sub> and CO<sub>2</sub> compared to EA-6B.

**Table 3.2-3: Okanogan and Roosevelt MOAs – No Action Alternative Emissions**

			Emissions (ton/year)						
Mission Type	Annual Sorties	Time below 3,000 ft. hr	CO	NOx	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub> , MT/year
EA-18G									
Air Combat Maneuvers	1,117	0	0.00	0.00	0.00	0.00	0.00	0.00	16,723
Electronic Warfare	3,132	235	0.87	17.91	0.17	0.45	7.96	7.96	70,294
Subtotal	4,249	235	0.87	17.91	0.17	0.45	7.96	7.96	87,017
Other Navy users (modeled as half F/A-18 and half F-35)									
Air Combat Maneuvers	30	0	0.00	0.00	0.00	0.00	0.00	0.00	284
Electronic Warfare	83	5	0.04	0.26	0.00	0.01	0.11	0.11	1,108
Subtotal	113	5	0.04	0.26	0.00	0.01	0.11	0.11	1,392
Total No Action Alternative Emissions			0.91	18.17	0.17	0.46	8.07	8.07	88,409
Baseline Emissions			7.75	11.89	1.44	0.59	16.26	16.26	56,413
Difference			-6.84	6.28	-1.27	-0.14	-8.19	-8.19	31,996

Notes: CO = carbon monoxide, NO<sub>x</sub> = nitrogen oxides, VOC = volatile organic compounds, PM = particulate matter, SO<sub>x</sub> = oxides of sulfur, CO<sub>2</sub> = carbon dioxide, MT = metric ton, ft. = feet, hr = hour

#### 3.2.4.4 Alternative 1

Alternative 1 (Preferred Alternative) would include the addition of the Okanogan D MOA and the overlying Mazama ATCAA, with a redistribution of the number of flights and flight profiles within the existing Okanogan and Roosevelt MOAs. Alternative 1 proposes a slight decrease to overall airspace sorties. Table 3.2-4 summarizes Alternative 1 emissions, which show a decrease in all pollutant emissions, except for NO<sub>x</sub> and CO<sub>2</sub>, compared to the baseline, and a negligible change in emissions compared to No Action Alternative emissions due to slight differences in the total number of sorties.

##### 3.2.4.4.1 National Environmental Policy Act Impacts from Criteria Pollutants

Alternative 1 (Preferred Alternative) would include the addition of the Okanogan D MOA and the overlying Mazama ATCAA, with a redistribution of the number of flights and flight profiles within the existing Okanogan and Roosevelt MOAs. Alternative 1 proposes a slight decrease to overall airspace sorties. As noted in Table 3.2-4, the estimated emissions for Alternative 1 (Preferred Alternative) are well below the applicable PSD major threshold of 250 tons per year for criteria pollutants, used as the screening level threshold of significance for attainment areas.

##### 3.2.4.4.2 Greenhouse Gases

Implementation of Alternative 1 (Preferred Alternative) would contribute directly to emissions of GHGs from the combustion of fossil fuels associated with aircraft operations. The GHG emissions from implementing Alternative 1 would result in a minor increase as compared to the GHG emissions for the No Action Alternative due to the assumed composition of other Navy aircraft sorties in the existing and proposed airspace (i.e., 50/50 split between F/A18 and F-35 aircraft) and the resulting difference in emission factors. Appendix C (Air Quality Example Calculations) contains the detailed calculations.

Implementation of Alternative 1 (Preferred Alternative) would not result in significant impacts on air quality since the estimated emissions are well below all applicable thresholds.

**Table 3.2-4: Okanogan and Roosevelt MOAs – Alternative 1 (Preferred Alternative) Emissions**

			Emissions (ton/year)						
Mission Type	Annual Sorties	Time below 3,000 ft. hr	CO	NOx	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub> , MT/year
EA-18G									
Air Combat Maneuvers	1,131	0	0.00	0.00	0.00	0.00	0.00	0.00	16,924
Electronic Warfare	3,169	238	0.88	18.12	0.17	0.45	8.06	8.06	71,137
Subtotal	4,300	238	0.88	18.12	0.17	0.45	8.06	8.06	88,061
Other Navy users (modeled as half F/A-18 and half F-35)									
Air Combat Maneuvers	8	0	0.00	0.00	0.00	0.00	0.00	0.00	75
Electronic Warfare	22	2	0.01	0.07	0.00	0.00	0.03	0.03	294
Subtotal	30	2	0.01	0.07	0.00	0.00	0.03	0.03	370
Total Alternative 1 Emissions			0.89	18.19	0.17	0.46	8.09	8.09	88,431
Baseline Emissions			7.75	11.89	1.44	0.59	16.26	16.26	56,413
Difference (ALT 1 - Baseline)			6.85	6.30	-1.27	-0.14	-8.17	-8.17	32,018
No Action Alternative Emissions			0.91	18.17	0.17	0.46	8.07	8.07	88,409
Difference (ALT 1 - No Action Alternative)			0.02	0.02	0.00	0.00	0.02	0.02	22

Notes: ALT = Alternative, CO = carbon monoxide, NO<sub>x</sub> = nitrogen oxides, VOC = volatile organic compounds, PM = particulate matter, SO<sub>x</sub> = oxides of sulfur, CO<sub>2</sub> = carbon dioxide, MT = metric ton, ft. = feet, hr = hour

### 3.2.4.5 Alternative 2

Alternative 2 consists of the addition of the Okanogan D MOA and Mazama ATCAA that would occur under Alternative 1. Alternative 2 also considers an increase in the capacity of training flights. Table 3.2-5 summarizes Alternative 2 emissions, which shows higher emissions than Alternative 1, a decrease in all pollutant emissions, except for NO<sub>x</sub> and CO<sub>2</sub>, compared to the baseline, and a slight increase compared to No Action Alternative emissions.

**Table 3.2-5: Okanogan and Roosevelt MOAs – Alternative 2 Emissions**

			Emissions (ton/year)						
Mission Type	Annual Sorties	Time below 3,000 ft. hr	CO	NOx	VOC	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub> , MT/year
EA-18G									
Air Combat Maneuvers	1,262	0	0.00	0.00	0.00	0.00	0.00	0.00	18,892
Electronic Warfare	3,538	265	0.99	20.23	0.19	0.51	9.00	9.00	79,409
Subtotal	4,800	265	0.99	20.23	0.19	0.51	9.00	9.00	98,301
Other Navy users (modeled as half F/A-18 and half F-35)									
Air Combat Maneuvers	11	0	0.00	0.00	0.00	0.00	0.00	0.00	101
Electronic Warfare	29	2	0.01	0.09	0.00	0.00	0.04	0.04	392
Subtotal	40	2	0.01	0.09	0.00	0.00	0.04	0.04	493
Total Alternative 2 Emissions			1.00	20.32	0.19	0.51	9.03	9.03	98,793
Baseline Emissions			7.75	11.89	1.44	0.59	16.26	16.26	56,413
Difference (ALT 2 - Baseline)			-6.75	8.43	-1.25	-0.08	-7.22	-7.22	42,381
No Action Alternative Emissions			0.91	18.17	0.17	0.46	8.07	8.07	88,409
Difference (ALT 2 - No Action Alternative)			0.09	2.15	0.02	0.05	0.96	0.96	10,385

Notes: ALT = Alternative, CO = carbon monoxide, NO<sub>x</sub> = nitrogen oxides, VOC = volatile organic compounds, PM = particulate matter, SO<sub>x</sub> = oxides of sulfur, CO<sub>2</sub> = carbon dioxide, MT = metric ton, ft. = feet, hr = hour

#### **3.2.4.5.1 National Environmental Policy Act Impacts from Criteria Pollutants**

Alternative 2 consists of the addition of the Okanogan D MOA and Mazama ATCAA that would occur under Alternative 1. Alternative 2 also considers an increase in the capacity of training flights. As noted in Table 3.2-5, the estimated emissions for Alternative 2 are well below the applicable PSD major threshold of 250 tons per year for criteria pollutants, used as the screening level threshold of significance for attainment areas.

#### **3.2.4.5.2 Greenhouse Gases**

Implementation of Alternative 2 would contribute directly to emissions of GHGs from the combustion of fossil fuels associated with aircraft operations. Compared to the No Action Alternative, the GHG emissions from implementing Alternative 2 would increase by approximately 12 percent. This is due to the proposed increase in training flights. Appendix C (Air Quality Example Calculations) contains the detailed calculations. The increase in GHG emissions represents a negligible incremental contribution to global GHG emissions and climate change.

Implementation of Alternative 2 would not result in significant impacts on air quality since the estimated emissions are well below all applicable thresholds.

### **3.3 BIOLOGICAL RESOURCES**

For this EA, biological resources are defined as the plants and animals, including special-status species, and their habitats that occur within areas under the proposed Okanogan D MOA and Mazama ATCAA and under existing airspace (Okanogan and Roosevelt MOAs and Methow, Molson, and Roosevelt ATCAAs). For this EA, the term “special status” refers to all animal species that are listed or proposed for listing by the USFWS under the Endangered Species Act (ESA) or have been given special status by the U.S. Forest Service (Sensitive Species). The Environmental Consequences section presents an analysis of the potential impacts on biological resources with implementation of the No Action Alternative, Alternative 1, and Alternative 2. Terrestrial plants and invertebrates and aquatic plants and animals are not included in this assessment as there would be no ground-disturbing activities and the proposed aircraft activities and overflights would not impact plants, invertebrates, or aquatic habitat. In addition, because the Proposed Action involves only aircraft overflights with no ground-disturbing activities, reptiles are not addressed given they typically rely on ground vibrations to detect prey and predators, and their hearing acuity would not detect noise from aircraft overflights.

#### **3.3.1 REGULATORY SETTING**

Regulatory requirements that are applicable to the Proposed Action in the project area are listed below. A discussion of the project’s compliance with applicable regulations is provided in Section 5.1 (Consistency with Other Federal, State, and Local Laws, Plans, Policies, and Regulations).

##### **3.3.1.1 Endangered Species Act**

The ESA (16 U.S.C. sections 1531–1544) protects federally listed threatened and endangered plant and animal species and associated designated critical habitat. Threatened species include those species that are likely to become endangered in the future. Endangered species are those species in danger of extinction throughout all or a major portion of their range. Critical habitat is the specific areas within the geographic area, occupied by the species at the time it was listed, that contain the physical or biological features that are essential to the conservation of endangered and threatened species and that may

need special management or protection. Critical habitat may also include areas that were not occupied by the species at the time of listing but are essential to its conservation.

The ESA authorizes the determination and listing of species as endangered and threatened and designation of critical habitat and provides regulatory protection for listed species and critical habitat. Each federal agency, in consultation with and with the assistance of the Secretary of the Interior pursuant to section 7(a)(2) of the ESA, is required to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any threatened or endangered species or result in the destruction or adverse modification of critical habitat of such species. Federal agencies are to use the best scientific and commercial data available in meeting these requirements.

In the analysis for potential effects to ESA-listed species and associated critical habitat from the Proposed Action, the Navy has presented effects of the action using definitions specified in the *Endangered Species Act Consultation Handbook* (U.S. Fish and Wildlife Service & National Marine Fisheries Service, 1998). Terms used in the effects analysis are defined in 50 CFR part 402. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. “May affect” with respect to a species is the appropriate conclusion when an ESA-listed species might be exposed to a reasonably foreseeable consequence of the proposed action and could respond to that exposure. For critical habitat, “may affect” is the appropriate conclusion if an essential physical or biological feature may be exposed. Discountable effects are those extremely unlikely to occur. Insignificant effects relate to the size of the impact and should never reach the scale where an adverse effect would occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects.

As stated in Section 2.3 (Alternatives Carried Forward for Analysis), the Navy has identified Alternative 1 as the Preferred Alternative. Section 2.3.2 (Alternative 1 – Addition of the Okanogan D MOA and Mazama ATCAA with a Redistribution of Training Sorties Within the Existing Airspace [Preferred Alternative]). Per section 7(a)(2) of the ESA, the Navy consulted with the USFWS regarding implementation of the Preferred Alternative and the potential impacts on ESA-listed species, designated critical habitat, and species proposed for listing. On April 17, 2024, the Navy received a letter of concurrence from the USFWS that the Proposed Action is not likely to adversely affect ESA-listed species and designated critical habitat. The outcome of the consultation, including any terms and conditions as well as BMPs, has been incorporated into this Final EA. The letter of concurrence from the USFWS is provided in Appendix E (Agency Correspondence).

#### **3.3.1.2 Migratory Bird Treaty Act**

Over 1,000 species of birds are protected in the United States under the MBTA of 1918 (16 U.S.C. sections 703–712; Ch. 128; 13 July 1918; 40 Stat. 755 as amended). A migratory bird is any species or family of birds that live or reproduce in or migrate across international borders at some point during their annual life cycle. The MBTA establishes federal responsibilities for the protection of nearly all species of birds, eggs, and nests.

In 2006, the USFWS and U.S. DoD signed a Memorandum of Understanding (MOU) to promote conservation of migratory birds (U.S. Department of Defense, 2006). The conservation of migratory bird populations by federal agencies is mandated by EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*. In February 2007, 50 CFR section 21.42 was promulgated and stated that the Armed

Forces may take migratory birds incidental to military readiness activities provided that, for those ongoing or proposed activities that the Armed Forces determine may result in a significant adverse effect on a population of a migratory bird species, the Armed Forces must confer and cooperate with the USFWS to develop and implement appropriate conservation measures to minimize or mitigate such significant adverse effects. Military readiness activities, as defined in Public Law 107314, section 315(f) in the 2003 National Defense Authorization Act, includes all training and operations of the Armed Forces that relate to combat, and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use. In April 2007, further guidance was issued by the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics on implementing the MOU to Promote the Conservation of Migratory Birds between the USFWS and DoD in accordance with EO 13186. This guidance covers all DoD-sponsored actions, including natural resources management, routine maintenance and construction, industrial activities, and hazardous waste cleanups.

### **3.3.1.3 Bald and Golden Eagle Protection Act**

In addition to the MBTA, bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are protected under the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. section 668). The Act states that no one, without a permit issued by the Secretary of the Interior, may take bald or golden eagles, including their parts, nests, or eggs. Take is defined as “to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” In addition, BGEPA further defines disturbance as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

### **3.3.2 AFFECTED ENVIRONMENT**

The region of influence (ROI) for biological resources for the Proposed Action consists of the areas underlying the existing and proposed SAA (Figure 1.1-1). These areas may be subject to potential impacts from aircraft overflights and the associated noise from aircraft operations.

#### **3.3.2.1 Birds**

The North American Bird Conservation Initiative is an endeavor to increase the effectiveness of bird conservation at the continental level and currently includes the United States, Canada, and Mexico. The USFWS has adopted bird conservation regions as the smallest geographic scale at which they identify Birds of Conservation Concern (U.S. Fish and Wildlife Service, 2008; U.S. North American Bird Conservation Initiative, 2000). The existing and proposed SAA extension includes parts of two bird conservation regions—Region 9 (Great Basin) and Region 10 (Northern Rockies). Region 9 is a large and complex region that includes the Northern Basin and Range, Columbia Plateau, and the eastern slope of the Cascade Range and spans portions of California, British Columbia, Idaho, Nevada, Oregon, Utah, and Washington. This area is dry due to its position in the rain shadow of the Cascade Range and the Sierra Nevada. Grasslands, sagebrush, and other shrubs dominate the flats and lowlands, with piñon-juniper woodlands and open ponderosa pine forests on higher slopes. Wetlands and ponding basins provide habitat for many migrating and resident waterfowl, such as the American avocet (*Recurvirostra americana*), black-necked stilt (*Himantopus mexicanus*), willet (*Tringa semipalmata*), and Wilson’s phalarope (*Phalaropus tricolor*). The region is also important for breeding mountain plover (*Charadrius montanus*) and snowy plover (*Charadrius nivosus*). Most of North American breeding white-faced Ibis (*Plegadis chihi*) and California gulls (*Larus californicus*) nest in marshes and lakes scattered across the

region. Region 10 encompasses the more mountainous regions of the northern Rocky Mountains. Species of note include high priority forest birds, such as the flammulated owl (*Psiloscops flammeolus*), black-backed woodpecker (*Picoides arcticus*), olive-sided flycatcher (*Contopus cooperi*), Townsend's warbler (*Setophaga townsendi*), and rufous hummingbird (*Selasphorus rufus*) (U.S. North American Bird Conservation Initiative, 2021).

### 3.3.2.2 Mammals

Numerous species of small and medium-sized mammals are found under the existing and proposed extended SAA, including coast mole (*Scapanus orarius*), voles (*Microtus* spp.), bushy-tailed woodrat (*Neotoma cinerea*), American pika (*Ochotona princeps*), North American deer mouse (*Peromyscus maniculatus*), mountain cottontail (*Sylvilagus nuttallii*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), American badger (*Taxidea taxus*), long-tailed weasel (*Mustela frenata*), hoary bat (*Lasiurus cinereus*), California myotis (*Myotis californicus*), and silver-haired bat (*Lasionycteris noctivagans*). Larger ungulates include mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus canadensis nelsoni*), and moose (*Alces americanus*). Larger carnivorous species include black bear (*Ursus americanus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), and cougar (*Felis concolor*).

### 3.3.2.3 Special-Status Species

Special-status species that occur beneath existing and proposed SAA are listed in Table 3.3-1.

The Sensitive Species list of Region 6 of the U.S. Forest Service lists 11 bird species as sensitive and that occur in either the Okanogan-Wenatchee National Forest or the Colville National Forest beneath the existing and proposed SAA: American white pelican (*Pelecanus erythrorhynchos*; also listed as state threatened), bald eagle, common loon (*Gavia immer*), gray flycatcher (*Empidonax wrightii*), great gray owl (*Strix nebulosa*), Harlequin duck (*Histrionicus histrionicus*), Lewis's woodpecker (*Melanerpes lewis*), long-billed curlew (*Numenius americanus*), northern goshawk (*Accipiter gentilis*), Sandhill crane (*Grus canadensis*; also listed as state endangered), and white-headed woodpecker (*Picoides albolarvatus*) (Table 3.3-1).

The Sensitive Species list of Region 6 of the U.S. Forest Service lists eight mammals as sensitive and that occur in either the Okanogan-Wenatchee National Forest or the Colville National Forest beneath the existing and proposed SAA: bighorn sheep (*Ovis canadensis*), Cascade red fox (*Vulpes cascadenensis*), gray wolf (*Canis lupus*), little brown bat (*Myotis lucifugus*), mountain goat (*Oreamnos americanus*), pygmy shrew (*Sorex hoyi*), red-tailed chipmunk (*Neotamias ruficaudus*), and western gray squirrel (*Sciurus griseus*; also listed as state threatened) (Table 3.3-1).

In addition, six species are listed under the federal ESA and may occur in the ROI: northern spotted owl (*Strix occidentalis caurina*), yellow-billed cuckoo (*Coccyzus americanus*), grizzly bear (*Ursus arctos horribilis*), Canada lynx (*Lynx canadensis*), gray wolf, and North American wolverine (*Gulo gulo luscus*). These species are discussed in detail below.

Table 3.3-1: Special-Status Species Underlying the Proposed SAA Extension

Common Name (Scientific Name)	USFWS Status	USFS Status <sup>1</sup>	State Status <sup>1</sup>	Occurrence under Proposed Airspace <sup>1,2</sup>	Occurrence under Existing Airspace <sup>1,2</sup>	CH under Proposed Airspace	CH under Existing Airspace
<b>Birds</b>							
American white pelican ( <i>Pelecanus erythrorhynchos</i> )	-	S	T	Yes	Yes	NA	
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	BGEPA	S	-	Yes	Yes	NA	
Golden Eagle ( <i>Aquila chrysaetos</i> )	BGEPA	-	C	Yes	Yes	NA	
Common loon ( <i>Gavia immer</i> )	-	S	-	Yes	Yes	NA	
Gray flycatcher ( <i>Empidonax wrightii</i> )	-	S	-	Yes	No	NA	
Great gray owl ( <i>Strix nebulosa</i> )	-	S	-	Yes	Yes	NA	
Harlequin duck ( <i>Histrionicus histrionicus</i> )	-	S	-	Yes	Yes	NA	
Lewis's woodpecker ( <i>Melanerpes lewis</i> )	-	S	-	Yes	Yes	NA	
Long-billed curlew ( <i>Numenius americanus</i> )	-	S	-	Yes	Yes	NA	
Northern goshawk ( <i>Accipiter gentilis</i> )	-	S	-	Yes	Yes	NA	
Northern spotted owl ( <i>Strix occidentalis caurina</i> ) <sup>3</sup>	T, CH	-	-	Yes	Yes	Yes	Yes
Sandhill crane ( <i>Grus canadensis</i> )	-	S	E	Yes	Yes	NA	
Yellow-billed cuckoo ( <i>Coccyzus americanus</i> ) <sup>9</sup>	T, CH	-	E	No	Yes	No	No
White-headed woodpecker ( <i>Picoides albolarvatus</i> )	-	S	-	Yes	Yes	NA	



Table 3.3-1: Special-Status Species Underlying the Proposed SAA Extension (continued)

Common Name (Scientific Name)	USFWS Status	USFS Status <sup>1</sup>	State Status <sup>1</sup>	Occurrence under Proposed Airspace <sup>1,2</sup>	Occurrence under Existing Airspace <sup>1,2</sup>	CH under Proposed Airspace	CH under Existing Airspace
<b>Mammals</b>							
Bighorn sheep ( <i>Ovis canadensis</i> )	-	S	-	Yes	Yes	NA	
Canada lynx ( <i>Lynx canadensis</i> ) <sup>5</sup>	T, CH	-	-	Yes	Yes	Yes	Yes
Cascade red fox ( <i>Vulpes cascadenensis</i> )	-	S	-	Yes	No	NA	
Gray wolf ( <i>Canis lupus</i> ) <sup>6</sup>	E	S	E	Yes	Yes	No	No
Grizzly bear ( <i>Ursus arctos horribilis</i> ) <sup>7</sup>	T	-	-	Yes	Yes	NA	
Little brown bat ( <i>Myotis lucifugus</i> )	-	S	-	Yes	Yes	NA	
Mountain goat ( <i>Oreamnos americanus</i> )	-	S	-	Yes	Yes	NA	
North American wolverine ( <i>Gulo gulo luscus</i> ) <sup>8</sup>	T	-	-	Yes	Yes	NA	
Pygmy shrew ( <i>Sorex hoyi</i> )	-	S	-	No	Yes	NA	
Red-tailed chipmunk ( <i>Neotamias ruficaudus</i> )	-	S	-	No	Yes	NA	
Western gray squirrel ( <i>Sciurus griseus</i> )	-	S	T	Yes	Yes	NA	

Notes: - = not listed; C = candidate for listing in Washington as state endangered, threatened, or sensitive; CH = critical habitat; E = endangered; NA = not applicable; S = sensitive; T = threatened; USFS = U.S. Forest Service, Region 6; USFWS = U.S. Fish and Wildlife Service.

Sources: <sup>1</sup>(Nature Mapping Foundation, 2023); <sup>2</sup>(U.S. Forest Service, 2019); <sup>3</sup>55 FR 26114, 86 FR 62606; <sup>4</sup>79 FR 59992, 86 FR 20798; <sup>5</sup>65 FR 16053, 79 FR 54782; <sup>6</sup>43 FR 9607; <sup>7</sup>40 FR 31734; <sup>8</sup>78 FR 7864.

### 3.3.2.3.1 Northern Spotted Owl

The northern spotted owl was listed in 1990 as threatened throughout its range primarily due to loss and adverse modification of suitable habitat as a result of timber harvesting, habitat changes that are exacerbated by catastrophic events such as fire, volcanic eruption, disease, and wind storms (55 FR 26114). Recent reviews have more specifically identified competition with the barred owl (*Strix varia*), and fire in the relatively dry east Cascades and Klamath provinces of California and Oregon (where other northern subspecies occur) as greater threats than previously considered. New potential threats of unknown magnitude to the subspecies include West Nile virus and the sudden oak death tree disease (U.S. Fish and Wildlife Service, 2011). Populations of the northern spotted owl are declining over time, with populations in Washington highlighting this trend (Franklin et al., 2021; Hollenbeck et al., 2018).

Over half of the nesting/roosting habitat occurs in the central (core) portions of the owl's range, within the Western Cascades of southern Oregon and Northern California (Franklin et al., 2021). Northern spotted owls generally inhabit older forested habitats that are characterized by dense canopy closure because they contain the structural characteristics required for nesting, roosting, and foraging. Although they are known to nest, roost, and feed in a wide variety of habitats, northern spotted owls prefer a multi-layered, multi-species canopy with moderate to high canopy closure. Typically, forests do not attain these characteristics until they are at least 150–200 years old (Hollenbeck et al., 2018).

Spotted owl nest locations have been documented up to about 5,000 ft. in parts of the Cascade Range. Within the Cascade Range, the density of spotted owls is generally higher in the south and becomes sparse north of Lake Chelan, the Skagit River, and underlying the proposed Okanogan D MOA (Buchanan, 2023).

A total of 2.9 million acres of northern spotted owl critical habitat was designated within Washington State in 2012 (77 FR 71876). Critical Habitat Unit 7 (East Cascades North [ECN]), and specifically the ECN-1 subunit, occurs within the ROI. The ECN-1 subunit consists of approximately 102,000 acres in Whatcom, Skagit, and Okanogan counties and comprises lands managed by the U.S. Forest Service (Figure 3.3-1). ECN-1 is located primarily in the watershed of the Methow River and includes a small portion of the upper Skagit River watershed. Ponderosa pine (*Pinus ponderosa*) and Douglas-fir (*Pseudotsuga menziesii*) forest are dominant at low elevations, Douglas-fir/grand fir (*Abies grandis*) mixed conifer forest are characteristic of mid-elevations, and higher elevations support forests of silver fir (*Abies alba*), hemlock (*Tsuga heterophylla*), and subalpine fir (*Abies lasiocarpa*).

At the time of critical habitat designation, the USFWS identified four primary constituent elements (PCEs) that are specific elements of the physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species (77 FR 71876). The PCEs for northern spotted owl critical habitat are listed below:

- PCE 1: Forest types that may be in early-, mid-, or late-seral stages and that support the northern spotted owl across its geographical range.
- PCE 2: Habitat that provides for nesting and roosting.
- PCE 3: Habitat that provides for foraging.
- PCE 4: Habitat to support the transience and colonization phases of dispersal.

Of the 2.9 million acres of northern spotted owl critical habitat within Washington, 6,700 acres underlies the current Okanogan A and B MOAs, and an additional 51,566 acres would be under the proposed Okanogan D MOA (Figure 3.3-1).

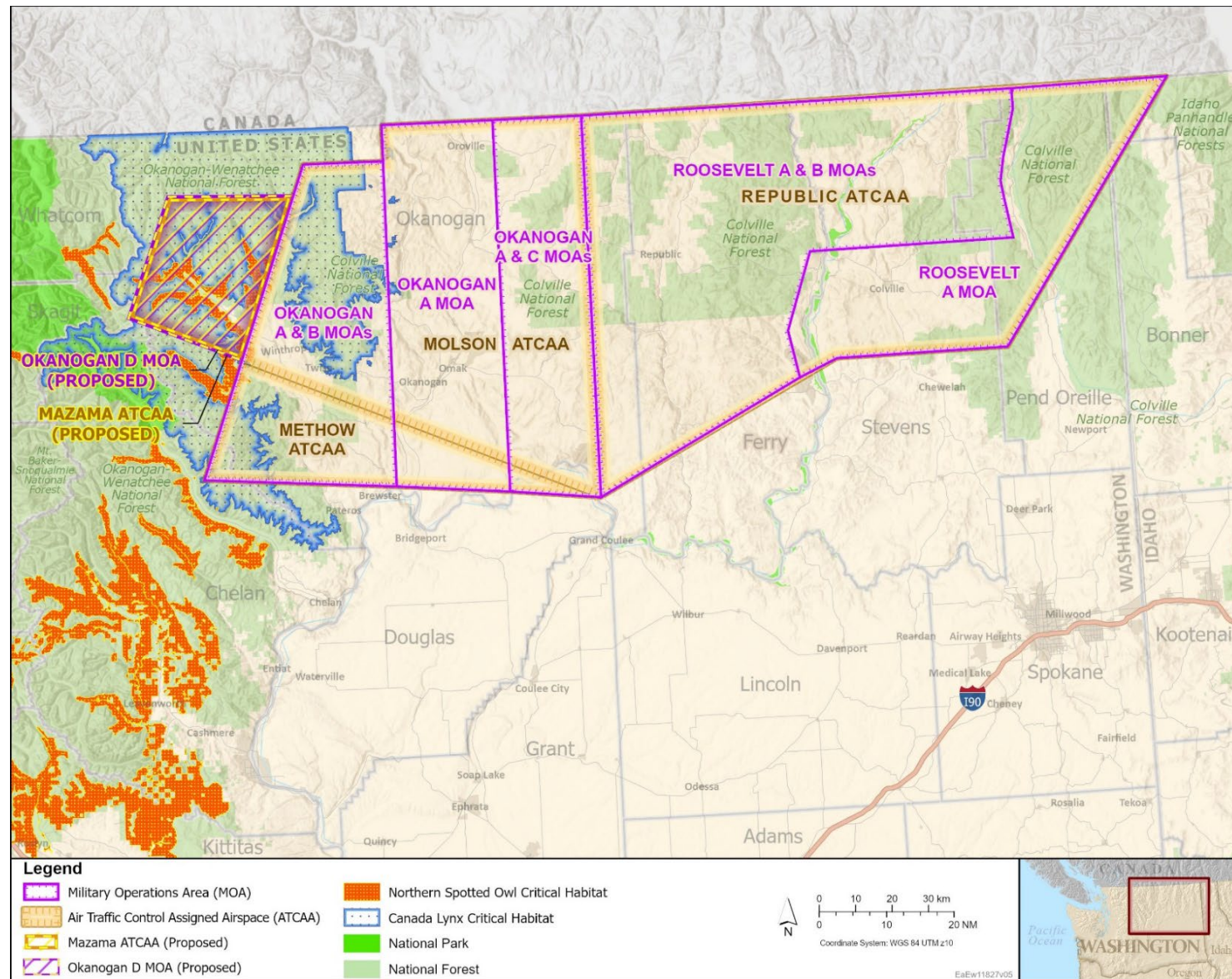


Figure 3.3-1: Designated Critical Habitat for the Northern Spotted Owl and Canada Lynx Within the ROI

### 3.3.2.3.2 Yellow-billed Cuckoo

The yellow-billed cuckoo was listed as a threatened species in 2014, due primarily to habitat loss and degradation within its riparian habitat (79 FR 59992). The yellow-billed cuckoo is a Neotropical migrant that winters in South America and breeds in North America. The geographical breeding range of the cuckoo in western North America (i.e., Western Distinct Population Segment) formerly included suitable habitat within the low- to moderate-elevation areas west of the crest of the Rocky Mountains in Canada, Mexico, and the United States, including the upper and middle Rio Grande, the Colorado River Basin, the Sacramento and San Joaquin River systems, the Columbia River system, and the Fraser River. Currently, the species no longer breeds in western Canada and the northwestern continental United States (Washington, Oregon, and Montana) (79 FR 59992).

The yellow-billed cuckoo has not been confirmed as breeding in Washington state since 1940 and is considered by the Washington Department of Fish and Wildlife as functionally extirpated in the state (Washington Department of Fish and Wildlife, 2023a). Based on Washington Department of Fish and Wildlife records, there have been 20 sightings of cuckoos in Washington since the 1950s, with 19 occurring from 1974 to 2016 at an average rate of one sighting every 2.3 years. Of the 20 records, 16 occurred in eastern Washington. All or nearly all of the birds recorded since the 1950s were very likely non-breeding vagrants or migrants (Washington Department of Fish and Wildlife, 2023b). In addition, per USFWS records, cuckoos have also been observed in Stevens County within the Little Pend Oreille National Wildlife Refuge (underlying the existing Roosevelt A MOA) in 2012, 2017, and 2019, and within Okanogan County northeast of Winthrop (underlying the proposed Okanogan D MOA) in 2015 (U.S. Fish and Wildlife Service, 2023). Therefore, there have been a total of 24 sightings of yellow-billed cuckoos in Washington state since the 1950s.

Critical habitat has been designated in Arizona, California, Colorado, Idaho, New Mexico, Texas, and Utah (86 FR 20798); therefore, yellow-billed cuckoo critical habitat does not occur within the ROI.

### 3.3.2.3.3 Grizzly Bear

The grizzly bear was federally listed as threatened in 1975 (40 FR 31734). Grizzly bears were once present across much of western North America, but extensive habitat loss and direct killing of individual bears through most of the 1900s reduced range and numbers of grizzly bears to 2 percent of their historical levels (Ransom et al. 2023). The decreases in historical range, the isolated nature of existing populations, the building of roads and trails in formerly secure grizzly bear habitat, and livestock practices on National Forests contributed to the decline in grizzly bear populations. Their current range is now estimated to be 6 percent of their historical range and includes Alaska, western and northern Canada, and the northern Rocky Mountains through the Selkirk Mountains in northwest Idaho and northeast Washington (U.S. Fish and Wildlife Service Grizzly Bear Recovery Office, 2022). Critical habitat has not been proposed or designated for the grizzly bear.

Currently, grizzly bears primarily occur only in four ecosystems or recovery zones: the Northern Continental Divide in northwest central Montana, Greater Yellowstone, Cabinet-Yaak in northwest Montana and northeast Idaho, and Selkirk in northeastern Washington and northern Idaho (Figure 3.3-2). There are no known populations in the North Cascades in north-central Washington State and the Bitterroot ecosystem of central Idaho, and no known populations outside these defined ecosystems. The grizzly bear is considered extirpated from the North Cascades ecosystem, a portion of which underlies the existing Okanogan A and B MOAs and Methow and Molson ATCAAs, and the proposed Okanogan D MOA/Mazama ATCAA (Figure 3.3-2). In 2019, approximately 44 bears were estimated to occur within the Selkirk Recovery Zone in the northeastern corner of Washington (Ransom et al., 2023; U.S. Fish and Wildlife Service Grizzly Bear Recovery Office, 2022).



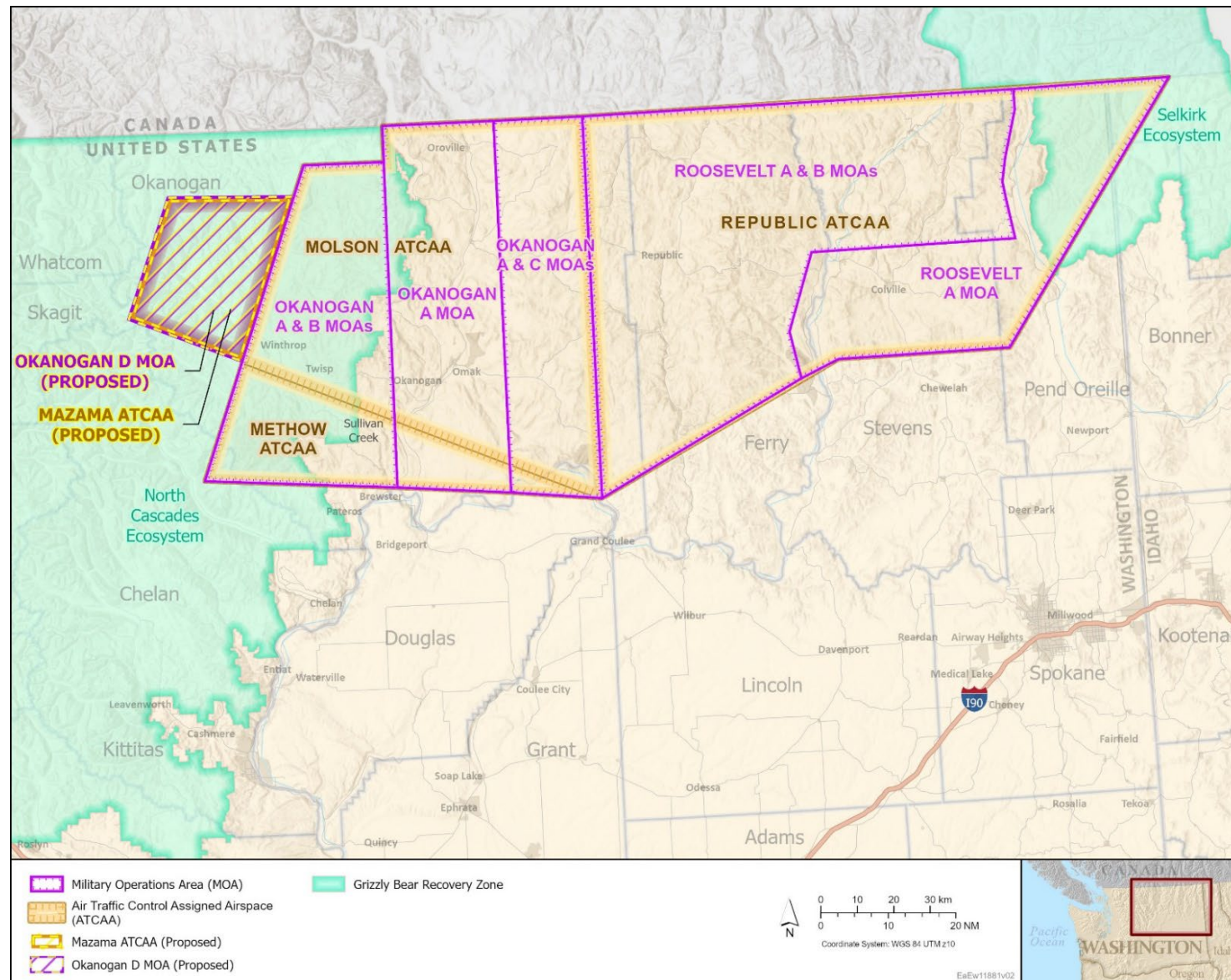


Figure 3.3-2: Grizzly Bear Recovery Zones Within the ROI

In 2017, the USFWS and National Park Service released a Draft EIS assessing a number of alternatives to recover the grizzly bear population in the North Cascades. In July 2020, the USFWS and National Park Service announced that they would discontinue the proposal to develop and implement a Grizzly Bear Restoration Plan for the North Cascades Ecosystem. However, in November 2022, the USFWS and National Park Service published a notice of intent to prepare an EIS to again assess a number of alternatives to recover the grizzly bear population in the North Cascades. The Draft EIS was published in September 2023 and the Final EIS published in April 2024. In May 2024, the USFWS published the final rule to establish a nonessential experimental population of the grizzly bear within the U.S. portion of the North Cascades Ecosystem in the State of Washington under section 10(j) of the ESA (89 FR 36982) (Figure 3.3-2).

#### **3.3.2.3.4 Gray Wolf**

The gray wolf is listed as federally endangered in the western two-thirds of Washington. The Northern Rocky Mountains Distinct Population Segment (the population segment east of Highway 97) was delisted in 2009 and is no longer protected under the ESA (Figure 3.3-3) (74 FR 15123). Wolves were formerly common throughout most of Washington but declined rapidly from being aggressively killed during the expansion of ranching and farming between 1850 and 1900. They were eliminated as a breeding species from the state by the 1930s.

Gray wolves are highly social and form packs consisting of a breeding male and female, pups from the current year and previous years, and sometimes other individuals. Typical pack size in the northern U.S. Rockies is 5–10 animals. Packs defend territories that generally average 193–386 square miles. One litter, usually numbering four to six pups, is born each year in April. The primary prey of wolves is elk, mule deer, and moose. In western North America, the species preferred habitat is generally found in forests and nearby open habitats characterized by lower elevations and gentle terrain, especially during winter (Washington Department of Fish and Wildlife, 2015).

In 2008, wolves and wolf pups began to naturally return to northeastern Washington from packs in British Columbia. By 2011, the Washington Department of Fish and Wildlife developed a recovery plan for the gray wolf, which established three wolf recovery areas (Eastern Washington, Northern Cascades, and Southern Cascades and Northwest Coast) (Wiles et al., 2011). Currently, there are 41 uniquely named packs in Washington, and to date, recovery goals had been met in the Northern Cascades and Eastern Washington Wolf Recovery Regions (Washington Department of Fish and Wildlife, 2022).

Within the ROI, the ESA-listed gray wolf population occurs only in the Northern Cascades Recovery Region, which underlies the existing Okanogan A and B MOAs and the proposed Okanogan D MOA (Figure 3.3-3). Six wolf packs totaling approximately 38 individuals occur under the existing Okanogan A & B MOAs: Chopaka (2 individuals), Loup (10 individuals), Chewuch (10 individuals), Lookout (6 individuals), Navarre (5 individuals), and Sullivan Creek (5 individuals) (Figure 3.3-4) (Washington Department of Fish and Wildlife, 2022). Only the Chewuch and Lookout wolf packs are known to occur under the proposed Okanogan D MOA/Mazama ATCAA.



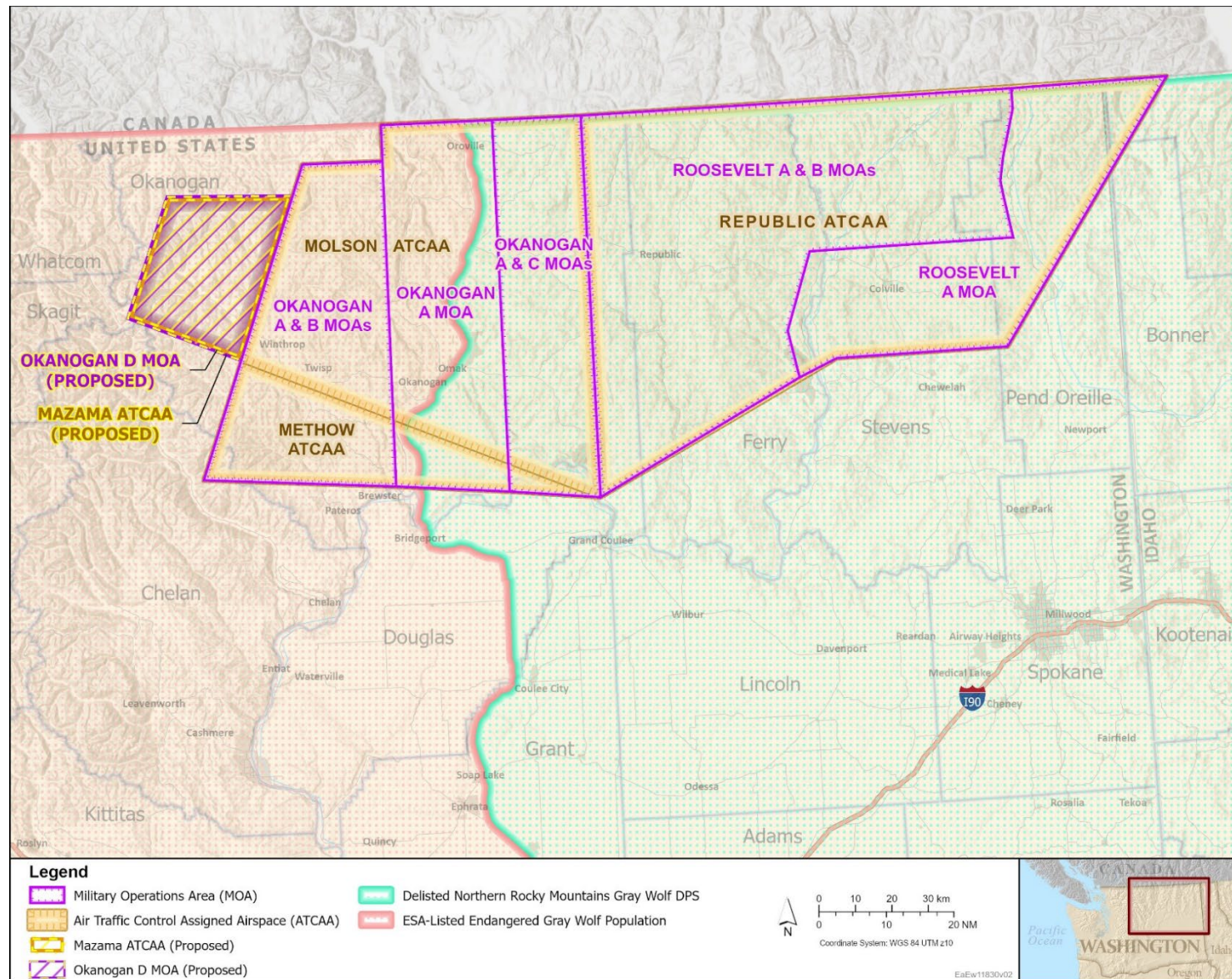


Figure 3.3-3: Current Status of Gray Wolf Populations in Northern Washington State





### 3.3.2.3.5 Canada Lynx

The Canada lynx was federally listed as threatened in 2000 (65 FR 16052). Lynx in the United States are at the southern margins of more dense populations in Canada and Alaska. At the time of listing, the range of the lynx was defined as the forested portions of 14 states: 4 in the Northeast Region, 3 in the Great Lakes Region, and 7 in the West Region. However, resident and breeding populations occurred only in Washington, Montana, Maine, Wyoming, and Minnesota. Introduced lynx are also breeding in Colorado (Interagency Lynx Biology Team, 2013).

Lynx are best known for their unique association with a single prey item, the snowshoe hare (*Lepus americanus*). The density of lynx populations oscillates in relation to the density of snowshoe hare. Lynx habitat in Washington includes subalpine and boreal coniferous forests higher than 4,600 ft. in elevation that have substantial accumulations of snow during the late fall, winter, and early spring. Lynx typically hunt for snowshoe hares in early successional forest, where hares are most abundant. Females commonly use mature forest stands for denning, and their den sites are often located in tangled piles of fallen trees (Washington Department of Fish and Wildlife, 2015).

Historically, lynx were found in Okanogan County, south through Chelan County and across Ferry, Steven, and Pend Oreille counties to Idaho. Washington contains one of the last and largest Canada lynx populations in the United States. Washington State represents approximately 0.5 percent of the total area occupied by lynx. However, Washington may support a significant proportion of the resident populations of lynx in the United States (79 FR 54782). A small population of a few dozen Canada lynx occupies high-elevation forests in the North Cascades, primarily north of Lake Chelan and east of Ross Lake, including the Pasayten Wilderness and Loomis State Forest underlying the existing Okanogan A and B MOAs and proposed Okanogan D MOA. A few individuals also occur in eastern Washington in the Kettle River Mountain Range in Ferry County and the Selkirk Mountains in Pend Oreille County underlying the Roosevelt A and B MOAs (Conservation Northwest, 2021).

Critical habitat for Canada lynx was designated in 2006 and amended in 2014 (79 FR 54782) (Figure 3.3-1). Per the final rule designating critical habitat (79 FR 54782), the PCE specific to lynx critical habitat in the United States is boreal forest landscapes supporting a mosaic of differing successional forest stages and containing the following:

- a. Presence of snowshoe hares and their preferred habitat conditions, which include dense understories of young trees, shrubs or overhanging boughs that protrude above the snow, and mature multistoried stands with conifer boughs touching the snow surface;
- b. winter conditions that provide and maintain deep fluffy snow for extended periods of time;
- c. sites for denning that have abundant coarse woody debris, such as downed trees and root wads; and
- d. matrix habitat (e.g., hardwood forest, dry forest, non-forest, or other habitat types that do not support snowshoe hares) that occurs between patches of boreal forest in close juxtaposition (at the scale of a lynx home range) such that lynx are likely to travel through such habitat while accessing patches of boreal forest within a home range.

The North Cascades Critical Habitat Unit consists of 1,174,000 acres located in north-central Washington in portions of Chelan and Okanogan counties and includes mostly Okanogan-Wenatchee National Forest lands as well as Bureau of Land Management lands in the Spokane District and Loomis State Forest lands (Figure 3.3-1) (79 FR 54782). This area is the only area in the Cascades region of the lynx's range that is known to support breeding lynx populations. There are 315,803 acres of designated Canada lynx critical habitat underlying the current Okanogan A and B MOAs and Methow ATCAA, and an additional 258,677 acres of designated Canada lynx habitat would be under the proposed Okanogan D MOA/Mazama ATCAA.

### **3.3.2.3.6 North American Wolverine**

The North American wolverine was listed as a threatened species under the ESA on November 30, 2023. During the late 1800s and early 1900s, the wolverine population declined or was extirpated in much of the lower 48 states, which has been attributed to unregulated trapping and habitat degradation (88 FR 83726). Critical habitat has not been proposed or designated for the wolverine.

Wolverines commonly occur in boreal forest, taiga, and tundra ecosystems. In Washington, they occupy alpine and subalpine forest habitats. Wolverine populations are characterized by naturally low densities in North America. Wolverines consume a variety of prey, and seasonal switching of prey is commonly observed (U.S. Fish and Wildlife Service, 2018).

Wolverines occur in the remote mountainous areas of the Cascades and in northeastern Washington. In the Cascade Range, wolverines occupy high-elevation landscapes from North Cascades National Park and Okanogan-Wenatchee National Forest, south to Mount Adams on the Gifford Pinchot National Forest. Wolverines were extirpated from Washington in the mid-1900s as a result of predator control and persecution; however, they became reestablished in the North Cascades beginning in the 1990s and in the South Cascades (i.e., south of Interstate 90) by 2008. Reproduction has been documented in the Northern Cascades since 2005, and litters of wolverine kits were photographed in the vicinity of Mount Rainier National Park in 2018 and 2020. The population in the Cascades is probably less than 25 individuals; however, this population appears to be relatively stable. Wolverines that occupy the North Cascades region are known to move from Washington into British Columbia (U.S. Fish and Wildlife Service, 2018; Washington Department of Fish and Wildlife, 2023a).

## **3.3.3 ENVIRONMENTAL CONSEQUENCES**

### **3.3.3.1 Evaluation Criteria and Stressors**

The Navy has identified one stressor type for assessing potential impacts on biological resources resulting from implementation of the No Action Alternative, Alternative 1 (Preferred Alternative), and Alternative 2: noise from aircraft overflights within the ROI.

Distance from the noise source (aircraft) to a receptor (e.g., a bird or mammal) is a primary determiner of the received level of noise. Because the aircraft operate at varying altitudes within the allowed airspace dimensions and due to the varying terrain elevations beneath the airspace, specific received levels and durations are not possible to calculate. However, these variables were all considered to derive the Day-Night Average Sound Level (DNL) and Onset-Rate Adjusted Day-Night Average Sound Level, as explained in Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension). In addition, maximum received noise levels ( $L_{\max}$  A-weighted decibels [dBA]) were also calculated for the primary aircraft (EA-18G) at various altitudes with respect to a potential receptor on the ground.

For comparison, the Navy also evaluated a Baseline of activities involving aircraft that are no longer in active Navy service. This baseline considers flight activities in the Okanogan and Roosevelt MOAs in 2010 when an analysis was conducted in the NWTRC EIS/OEIS (U.S. Department of the Navy, 2010). The 2010 NWTRC EIS/OEIS included both EA-6B aircraft and EA-18G aircraft. At this time the Navy was transitioning from the EA-6B to the EA-18G, and the 2010 flight activities were comprised predominantly of EA-6B aircraft. For a Baseline comparison, the analysis included in Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension) indicates a range of DNL from 40.8 dBA at the lower elevations to 62.7 dBA at the higher elevations.

The proposed Okanogan D MOA would have a floor of 11,500 ft. MSL and a ceiling of 18,000 ft. MSL, and the Mazama ATCAA (overlying the same area as the proposed Okanogan D MOA) would have a floor of 18,000 ft. MSL and a ceiling up to 25,000 ft. MSL. However, based on proposed flight profiles, approximately 80 percent of proposed flights throughout the existing Okanogan and Roosevelt MOAs would be at or above 15,000 ft. MSL, or above 10,000 ft. AGL. All of these facts were utilized in the noise modeling analysis conducted to estimate baseline and proposed noise levels (Appendix B, Noise Analysis for the Proposed Eastern Washington Airspace Extension).

### **3.3.3.2 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). Therefore, there would be no significant impacts on biological resources.

#### **3.3.3.2.1 Potential Impacts on Wildlife**

Numerous studies have documented that wild animals respond to human-made noise, including low-altitude aircraft overflights (Bowles, 1995; Lamp, 1989; Larkin et al., 1996; Mancini et al., 1988; National Park Service, 1994). The manner in which animals respond to overflights depends on several factors, including life-history characteristics of the species, characteristics of the noise source, loudness, how suddenly the sound occurs (onset rate), distance from the noise source, the presence or absence of associated visual stimuli, and previous exposure to the sound. Noise from aircraft overflights may cause physiological or behavioral responses that reduce the animals' fitness or ability to survive. Researchers have documented a range of behavioral responses to overflights, ranging from indifference to extreme panic. Common behavioral responses include alert behavior, startle response, flying or running away, and increased vocalizations (Grubb & Bowerman, 1997; Krausman et al., 1998; Larkin et al., 1996; National Park Service, 1994; Weisenberger et al., 1996). In some instances, behavioral responses could interfere with breeding, raising young, foraging, habitat use, and physiological energy budgets, particularly when an animal continues to respond to repeated exposures.

Most studies have focused on ungulates and birds, while little or no research has been conducted on carnivorous mammals, small mammals, reptiles, and amphibians. While difficult to measure in the field, some behavioral responses are likely accompanied by physiological responses, such as increased heart rate, or stress. Chronic stress can compromise the general health of animals, but a strong and consistent behavioral or physiological response is not necessarily indicative of negative consequences to individuals or to populations (Bowles, 1995; Larkin et al., 1996; National Park Service, 1994). For example, many of the reported behavioral and physiological responses to noise are within the range of normal adaptive responses to external stimuli, such as predation, that wild animals face on a regular basis. Unless repeatedly exposed to loud noises or simultaneously exposed to synergistic stressors, it is possible that individuals would return to homeostasis almost immediately after exposure, and the individual's overall metabolism and energy budgets would not be affected. If the individual does not recover before another exposure, physiological responses could be cumulative and lead to reduced fitness. It is also possible that an individual would have an avoidance reaction (i.e., move away from the noise source) to repeated exposure. Studies have also shown that animals can become habituated to noise following frequent exposure and cease to respond behaviorally to the noise (Bowles, 1995; Larkin et al., 1996; National Park Service, 1994). Aircraft noise is generally thought to be most detrimental during periods of stress such as winter, gestation, and nesting (Pepper et al., 2003).

In addition to noise level, the frequency and regularity of the noise also affect species sensitivity. That is, different types of noise sources produce varied effects on different species. Noise from aircraft overflights may not produce the same response from a wildlife species as noise from a land-based source such as a vehicle, chainsaw, or gunshot. Wildlife species often do not react to a noise source when unaccompanied by a visual cue, but often do react to the visual component associated with that noise source. For example, birds may not react to just the sound of a chainsaw, but when that sound is coupled with a human walking near the bird, the bird will flush. This is also shown in reactions by various species to aircraft overflights (airplanes and helicopters). An overflight with just a sound component does not elicit a strong response, but if an animal hears and then sees the aircraft, it will more likely flush and move away (Bowles, 1995; Krausman et al., 1993; Mancini et al., 1988).

A primary concern with implementation of the Proposed Action is that low-altitude overflights may cause physiological or behavioral responses that reduce the animals' fitness or ability to survive. High-noise events (like a low-altitude aircraft overflight) may cause animals to startle or engage in escape or avoidance behaviors, such as flushing or running away. These activities impose an energy cost that, over the long term, may affect survival or growth. In addition, the animals may spend less time engaged in necessary activities like feeding, foraging, or caring for their young because they spend time in noise-avoidance activity. However, most of the effects of noise are mild enough that they may never be detectable as changes in population size or population growth against the background of normal variation (Bowles, 1995). Many other environmental variables (e.g., predators, weather, changing prey base, ground-based human disturbance) may influence reproductive success and confound the ability to identify the ultimate factor in limiting productivity of a certain nest, area, or region.

Existing aircraft activities within the ROI, comprised predominantly of EA-18G aircraft and no EA-6B aircraft, make up the No Action Alternative. It is notable that since the introduction of the EA-18G, flights now are generally conducted at higher altitudes than when the EA-6B was the predominant aircraft.

Based on the previous review of the effects of noise and jet aircraft overflights on wildlife, wildlife exposed to low-altitude aircraft overflights under the No Action Alternative could exhibit short-term behavioral or physiological responses, but not to the extent where the general health of individuals or populations would be compromised. Based on the noise modeling results described in Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension), the range of DNL would decrease slightly compared to the levels assessed in 2017, when the flight activity was determined to have no significant impact on ESA-listed species. The No Action Alternative DNL estimates are provided in Table 3.3-2.

**Table 3.3-2: Predicted Day Night Average Sound Level (DNL dBA) by Terrain Elevation in the Action Area**

Terrain Elevation (ft. AGL)	% of Area – Proposed Action	Range of Predicted Day Night Average Sound Level (DNL)		
		No Action Alternative	Alternative 1	Alternative 2
0–1,000	0.7	37.2–46.8	37.2–46.2	37.7–46.7
1,000–2,000	10.6	38.0–47.1	38.0–46.5	38.5–47.0
2,000–3,000	24.8	38.8–47.6	38.8–47.0	39.3–47.5
3,000–4,000	32.1	39.7–48.3	39.7–47.7	40.2–48.2
4,000–5,000	19.4	40.7–48.5	40.7–47.9	41.2–48.4
5,000–6,000	8.2	41.8–48.8	41.8–48.2	42.3–48.7
6,000–7,000	3.5	43.1–49.1	43.1–48.5	43.6–49.0
> 7,000	0.7	44.7–49.9	44.7–49.3	45.2–49.8

Notes: ft. = feet, AGL = above ground level

Proposed aircraft overflights would result in short-term and widely dispersed noise events within existing and proposed SAA. As an aircraft in flight gains altitude, the received noise level drops, eventually becoming indistinguishable from the background noise. The duration of exposure to aircraft noise would be very brief (seconds).

In addition, maximum received noise levels ( $L_{max}$  dBA) were also calculated for the primary aircraft (EA-18G) at various altitudes (i.e., distances) from a receptor on the ground (Table 3.3-3).

**Table 3.3-3: Maximum Noise Level for the EA-18G for Different Distances from a Receptor**

<i>Distance to aircraft (ft.)</i>	<i><math>L_{max}</math> (dBA)</i>		<i>Distance to aircraft (ft.)</i>	<i><math>L_{max}</math> (dBA)</i>
500	123.9		8,000	89.2
1,000	116.7		9,000	87.6
2,000	108.7		10,000	85.2
3,000	103.7		11,000	83.9
4,000	99.7		12,000	82.1
5,000	96.4		13,000	80.5
6,000	93.9		14,000	79.4
7,000	91.6		15,000	78.1

Notes: ft. = feet,  $L_{max}$  = maximum noise level, dBA = A-weighted decibel(s)

Aircraft overflights in the existing Okanogan and Roosevelt MOAs are not expected to result in chronic stress to wildlife based on the short duration and infrequency of exposure because of the following:

1. Day-night average sound levels (DNL) in the airspace are lower than historic averages.
2. There is an overall lack of concentration of flights at a given altitude, area, and power setting.
3. There would be a relatively small number of low-altitude overflights (approximately one/day) and a relatively brief amount of time (seconds) that aircraft would be at lower altitudes.
4. Exposures would be intermittent and infrequent as training activities consist of non-continuous events.
5. The probability of an animal or specific location (e.g., nest, den) experiencing overflights more than once per day would be low due to the random nature of flight within the airspace and the large area of land overflown.
6. Short-term behavioral responses would not be expected to affect individual animal fitness or have population-level effects.
7. Individual animals would be expected to recover quickly from these responses.

### 3.3.3.2.2 Potential Impacts on Special-Status Species

In 2017, the Navy received concurrence from the USFWS Central Washington Field Office that aircraft flights over the existing Okanogan and Roosevelt MOAs would not adversely affect ESA-listed species (northern spotted owl, grizzly bear, gray wolf, Canada lynx, woodland caribou); designated critical habitat for the northern spotted owl, Canada lynx, and woodland caribou; and the proposed threatened North American wolverine. The USFWS determined that due to their elevation, short frequency and intermittent duration, aircraft noise would be sufficiently brief so that exposures to individuals would be immeasurable and discountable and therefore not result in adverse effects. Furthermore, proposed training activities are comprised predominantly of EA-18G aircraft, with no EA-6B aircraft (the primary aircraft assessed in the 2017 analysis (U.S. Fish and Wildlife Service, 2017)). It is notable that mission profiles have changed since the introduction of the EA-18G; flights now are generally conducted at higher altitudes than when the EA-6B was the predominant aircraft.

Aircraft overflights under the No Action Alternative would result in continued short-term and widely dispersed noise events within existing MOAs in accordance with current aircraft training operations. Accordingly, the Navy concludes that the No Action Alternative would not significantly impact biological resources.

#### **3.3.3.2.3 No Action Alternative Impact Conclusions**

Aircraft overflights under the No Action Alternative would result in continued short-term and widely dispersed noise events within existing MOAs in accordance with current aircraft training operations. Per the aforementioned summary of the reasons that aircraft overflights in the existing Okanogan and Roosevelt MOAs are not expected to result in significant impacts on wildlife species or populations, there would be no significant impacts on bald or golden eagles in accordance with BGEPA. Under the MBTA regulations applicable to military readiness activities (50 CFR Part 21), the impacts from aircraft noise during training activities described above are expected to be minimal and short term and would not result in a significant adverse effect on populations of birds protected under the MBTA. In addition, the potential impacts on mountain goats from aircraft noise during training activities described above are expected to be minimal and short term and would not result in a significant adverse effect to mountain goats occurring under the northeastern corner of the Roosevelt A and B MOAs and the northern portion of Okanogan A and B MOAs. Accordingly, the Navy concludes that implementation of the No Action Alternative would not significantly impact biological resources.

#### **3.3.3.3 Alternative 1 – Addition of the Okanogan D MOA and Mazama ATCAA With a Redistribution in Training Sorties Within the Existing Airspace (Preferred Alternative)**

The Okanogan D MOA would have a floor of 11,500 ft. MSL, a ceiling of 18,000 ft. MSL, and an area of 393 NM<sup>2</sup>. The Mazama ATCAA would overlie the same area as the Okanogan D MOA and would have a floor of 18,000 ft. MSL up to 25,000 ft. MSL (Figure 2.3-2). The average elevation in the mountainous terrain beneath the Okanogan D MOA is approximately 5,000 ft. MSL. Therefore, given the floor of the proposed Okanogan D MOA is 11,500 ft. MSL and the proposed flight profiles for aircraft within the existing and proposed SAA extension, aircraft flight time below 4,000 ft. AGL would only occur approximately 322 times per year (or during 7.5 percent of all annual sorties), or approximately 1.2 sorties per day would include flight time below 4,000 ft. AGL.

Alternative 1 (Preferred Alternative) consists of the extension of the airspace through the establishment of a new Okanogan D MOA and Mazama ATCAA. In addition, Alternative 1 would redistribute the number of flights and flight profiles currently within existing MOAs and ATCAAs to include the proposed Okanogan D MOA and Mazama ATCAA (Table 2.3-1). In addition, as shown in Table 2.3-1, the total number of proposed sorties within the ROI (within existing airspace and the proposed Okanogan D MOA) would decrease slightly from the 2017 analysis (U.S. Fish and Wildlife Service, 2017)—4,362 total sorties in the existing airspace in 2017 and 4,330 total sorties under the current Proposed Action within the ROI (i.e., including the proposed Okanogan D MOA).

#### **3.3.3.3.1 Potential Impacts on Wildlife**

Wildlife would be exposed to new levels of noise from aircraft in the proposed Okanogan D MOA and Mazama ATCAA, which would be in airspace predominately above western Okanogan County and a small area above eastern Skagit County and northeastern Chelan County, and would also overlie the western portion of the designated Pasayten and Lake Chelan-Sawtooth National Wilderness Areas (see Figure 2.3-2). As with the No Action Alternative, wildlife exposed to low-altitude aircraft overflights under Alternative 1 could exhibit short-term behavioral or physiological responses, but not to the extent



where the general health of individuals or populations would be compromised. Aircraft overflights in the Okanogan and Roosevelt MOAs, including the addition of Okanogan D MOA, are not expected to result in chronic stress based on the short duration and infrequency of exposure because of the following:

1. Noise levels (DNL) in the airspace are lower than historic averages, and are slightly lower than noise modeled for the No Action Alternative.
2. There is an overall lack of concentration of flights at a given altitude, area, and power setting.
3. There would be a relatively small number of overflights below 4,000 ft. AGL (approximately one/day) and a relatively brief amount of time (seconds) that aircraft would be at lower altitudes.
4. Exposures would be intermittent and infrequent as training activities consist of non-continuous events.
5. The probability of an animal or specific location (e.g., nest, den) experiencing overflights more than once per day would be low due to the random nature of flight within the airspace and the large area of land overflown.
6. Short-term behavioral responses would not be expected to affect individual animal fitness or have population-level effects.
7. Individual animals would be expected to recover quickly from these responses.

#### **3.3.3.3.2 Potential Impacts on Special Status Species**

In accordance with section 7(a)(2) of the ESA, the Navy consulted with the USFWS for activities that may potentially affect ESA-listed species and designated critical habitat with implementation of the Preferred Alternative (Alternative 1). In addition to the information contained in the USFWS Washington Fish and Wildlife Office's letter of concurrence for similar actions within the Okanogan and Roosevelt MOAs, the Navy conducted a literature review that included current species status information for the northern spotted owl (and critical habitat), yellow-billed cuckoo, grizzly bear, gray wolf, Canada lynx (and critical habitat), and wolverine beneath the proposed Okanogan D MOA and Mazama ATCAA. The literature review included updated information for species beneath the existing MOAs, along with a review of the most current understanding of the potential impacts of aircraft overflights on wildlife.

**Northern Spotted Owl and Designated Critical Habitat.** The potential exposure of spotted owls to aircraft overflights is limited to a corridor along the Chewuch River on the west edge of the Okanogan A and B MOAs and below the proposed Okanogan D MOA. This area represents the northeastern extent of the species' range in Washington. Spotted owl habitat in this area is extremely fragmented due to periodic wildfires that have burned east and west of the Chewuch River over the last 15–20 years. Critical habitat is designated in the East Cascades North Unit within the ROI.

The 2016 consultation between the Navy and USFWS addressing the proposed Northwest Training and Testing program and aircraft operations over spotted owls on the Olympic Peninsula concluded that jet overflights would not result in adverse effects to spotted owls. This was based on a number of studies that assessed jet overflights over spotted owl territories and nests (Johnson & Reynolds, 2002); U.S. Air Force (2012) as cited in U.S. Fish and Wildlife Service (2016). A review of the best available information supported the conclusion that spotted owls are not likely to respond to aircraft overflights by flying or by exhibiting other behaviors that are indicative of significant stress unless they are approached very closely.

Johnson and Reynolds (2002) assessed the behavioral responses of roosting spotted owls exposed to aircraft overflights that passed at greater than 1,500 ft. AGL. Behaviors of spotted owls during 25-second fly-by periods ranged from “no response” (no body movements) to “intermediate response” (sudden



movement of head, wing, or body). No spotted owls flushed from their day roosts in response to the aircraft overflights.

The 2012 U.S. Air Force study conducted a total of 282 military jet aircraft overflight experiments during the course of the six-year study (U.S. Fish and Wildlife Service, 2016). These experiments included 33 jet aircraft overflights that passed within a distance of  $\leq 500$  ft. AGL, with some approaching as close as 253 ft. AGL. Flight responses by spotted owls were not elevated above normal rates in response to military aircraft overflights. Flushing or other high intensity responses (e.g., hopping from a nest) by spotted owls were only likely to be elicited at distances much closer to spotted owls than military jet aircraft are expected to be.

Based on these findings, any exposure of spotted owls to sound from the proposed aircraft overflights is likely to result in only minor behavioral responses that are considered to be insignificant (i.e., would never reach a magnitude where take of the spotted owl is likely to occur). In addition, the 2017 LOC that addressed effects from aircraft training operations within the existing airspace within the Action Area concluded that effects from aircraft overflights on spotted owls were discountable (U.S. Fish and Wildlife Service, 2017). Under the current Proposed Action, the addition of the Okanogan D MOA with a floor of 11,500 ft. MSL, well above the floor of existing airspace within the ROI, would not result in increased exposure of spotted owls to aircraft overflights.

Proposed aircraft overflights would only introduce noise into the environment and not result in any physical impact on spotted owl critical habitat or the associated PCEs. Although the Proposed Action would expose spotted owl prey to noise from aircraft operations and possibly impact foraging opportunities by spotted owls, given the short duration of potential exposure, owls and their prey would likely quickly return to normal behavior such that effects would be insignificant.

Although overflights proposed under Alternative 1 (Preferred Alternative) may affect northern spotted owls and designated critical habitat, effects are likely to be both discountable (unlikely to occur) and insignificant (not measurable). This conclusion is also based on the relative low numbers of owls under existing MOAs and the proposed Okanogan D MOA, the unlikely occurrence of low-altitude overflights (approximately one/day), and the relatively brief amount of time that aircraft would be at lower altitudes.

**Yellow-billed Cuckoo.** Aircraft maneuvers in the proposed Okanogan D MOA and existing Roosevelt A MOA would occur over areas where the cuckoo has been irregularly observed since the 1950s. Overflights under the Proposed Action within the Roosevelt A MOA and proposed Okanogan D MOA may affect yellow-billed cuckoos within suitable habitat. Potential effects are likely to be both discountable (unlikely to occur) and insignificant (not measurable). This conclusion is based on the relatively low sightings of cuckoos (20 since the 1950s) underlying the existing and proposed SAA, the unlikely occurrence of overflights low enough to illicit a response, and the relatively brief amount of time that aircraft would be at lower altitudes.

**Grizzly Bear.** Aircraft maneuvers in the Okanogan MOAs, including the proposed Okanogan D MOA, would occur over the North Cascades Recovery Zone and the Selkirk Recovery Zone. The grizzly bear is considered extirpated from the North Cascades Ecosystem (U.S. Fish and Wildlife Service Grizzly Bear Recovery Office, 2022). Overflights under the Proposed Action within the Roosevelt MOA may affect grizzly bears within the Selkirk Recovery Zone located in northeastern Washington and northwestern Idaho. Potential effects are likely to be both discountable (unlikely to occur) and insignificant (not measurable). This conclusion is based on the relatively low numbers (approximately 44) of grizzly bears within the Selkirk Recovery Zone that are spread out between northeastern Washington and

northwestern Idaho, and British Columbia, which are outside the ROI, and none under the proposed Okanogan D MOA; the unlikely occurrence of low-altitude overflights (approximately one/day); and the relatively brief amount of time that aircraft would be at lower altitudes (seconds). During ESA section 7 consultation for the Preferred Alternative, the Navy received concurrence from the USFWS that aircraft flights in the existing and proposed Okanogan and Roosevelt MOAs would not adversely affect the grizzly bear, including the bears that are planned to be reintroduced into the North Cascades Ecosystem under the final rule to establish a nonessential experimental population of the grizzly bear under ESA section 10(j) (U.S. Fish and Wildlife Service, 2024).

**Gray Wolf.** Currently, six wolf packs totaling approximately 38 individuals occur under the existing the Okanogan A and B MOAs: Chopaka, Loup Loup, Chewuch, Lookout, Navarre, and Sullivan Creek (Washington Department of Fish and Wildlife, 2022). Only the Chewuch and Lookout wolf packs are known to occur under the proposed Okanogan D MOA.

Overflights under Alternative 1 may affect gray wolves because wolves and their prey are likely to be exposed to sound from aircraft overflights. However, given the relatively low number of wolves that live under the MOAs, exposure of individual or packs of wolves is discountable (unlikely to occur). In addition, due to the unlikely occurrence of low-altitude overflights (approximately one/day) and the short duration of potential exposure (seconds), wolves would likely quickly return to normal behavior such that effects would be insignificant. Such temporary disturbances are not expected to result in any reductions to prey availability for gray wolves, and effects to gray wolves are expected to be insignificant.

**Canada Lynx and Designated Critical Habitat.** Under Alternative 1, Canada lynx may be exposed to noise from low-flying aircraft in the Okanogan and Roosevelt MOAs, including the proposed Okanogan D MOA under the Proposed Action. Overflights under the Proposed Action may affect lynx because lynx and their prey are likely to be exposed to sound from aircraft overflights. However, given the relatively low number of lynx that live under the MOAs, exposure of individuals is discountable (unlikely to occur).

Proposed aircraft overflights would only introduce noise into the environment and not result in any physical impact on lynx critical habitat or the associated PCE. However, the Proposed Action would expose lynx prey to noise from aircraft operations and possibly affect foraging opportunities by lynx. Given the short duration of exposure to each flight, Canada lynx and their prey would briefly move and return to normal behavior. Such temporary disturbances are not expected to result in any reductions in prey availability for Canada lynx, and effects are expected to be insignificant (not measurable).

**North American Wolverine.** Overflights under the Proposed Action may affect North American wolverine because wolverine and their prey are likely to be exposed to sound from low-altitude flights within the Okanogan and Roosevelt MOAs, including the proposed Okanogan D MOA. However, due to the unlikely occurrence of low-altitude overflights (approximately one/day) and the short duration of exposure to each flight (seconds), North American wolverine and their prey would briefly move and return to normal behavior such that effects would be insignificant. Such temporary disturbances are not expected to result in any reductions to prey availability for North American wolverine, and effects are expected to be insignificant and discountable (not measurable).

### **3.3.3.3.3 Summary of Potential Impacts Under Alternative 1**

Aircraft overflights under Alternative 1 (Preferred Alternative) would result in short-term, localized increases in noise levels within the proposed Okanogan D MOA. Beneath the existing Okanogan and Roosevelt MOAs, wildlife (including all special-status species listed in Table 3.3-1) would experience similar but slightly lower sound levels to the No Action Alternative (Table 3.3-2) because flight tracks would be spread out over a wider area. Per the summary of the reasons in Section 3.3.3.3.1 (Potential Impacts on Wildlife), aircraft overflights in the existing Okanogan and Roosevelt MOAs and proposed Okanogan D MOA under Alternative 1 are not expected to result in significant impacts on wildlife species or populations, and there would be no significant impacts on bald or golden eagles in accordance with BGEPA. Under the MBTA regulations applicable to military readiness activities (50 CFR Part 21), the impacts from aircraft noise during training activities under Alternative 1 described above are expected to be minimal and short term and would not result in a significant adverse effect on populations of birds protected under the MBTA. Accordingly, the Navy concludes that Alternative 1 would not significantly impact biological resources.

### **3.3.3.4 Alternative 2 – Addition of the Okanogan D MOA and Mazama ATCAA and Increased Training Capacity**

Because of the approximately 12 percent increase in aircraft sorties under Alternative 2, average sound levels would be slightly higher than under Alternative 1 (Preferred Alternative) but would remain similar to the No Action Alternative sound levels (see Table 3.3-2). As an aircraft in flight gains altitude, the received noise level drops, eventually becoming indistinguishable from the background noise. The duration of exposure to aircraft noise would be very brief (seconds).

#### **3.3.3.4.1 Potential Impacts on Wildlife**

Impacts on wildlife with implementation of Alternative 2 would be similar as those previously discussed for Alternative 1. Wildlife exposed to low-altitude aircraft overflights under Alternative 2 could exhibit short-term behavioral or physiological responses, but not to the extent where the general health of individuals or populations would be compromised. Aircraft overflights in the Okanogan and Roosevelt MOAs, including the addition of Okanogan D MOA, are not expected to result in chronic stress based on the short duration and infrequency of exposure because of the following:

1. Noise levels (DNL) in the airspace are lower than historic averages.
2. There is an overall lack of concentration of flights at a given altitude, area, and power setting
3. The relatively small number of overflights below 4,000 ft. AGL (approximately one/day) and the relatively brief amount of time (seconds) that aircraft would be at lower altitudes.
4. Exposures would be intermittent and infrequent as training activities consist of non-continuous events.
5. The probability of an animal or specific location (e.g., nest, den) experiencing overflights more than once per day would be low due to the random nature of flight within the airspace and the large area of land overflown.
6. Short-term behavioral responses would not be expected to affect individual animal fitness or have population-level effects.
7. Individual animals would be expected to recover quickly from these responses.

#### **3.3.3.4.2 Potential Impacts on Special-Status Species**

Activities proposed under Alternative 2 would likely have the same effect on special-status species (see Table 3.3-1), including ESA-listed species, as activities analyzed under Alternative 1 (Preferred Alternative). Accordingly, noise generated from proposed aircraft activities within the Okanogan D MOA

and existing Okanogan and Roosevelt MOAs would not significantly impact special-status species underlying the MOAs.

#### **3.3.3.4.3 Summary of Potential Impacts Under Alternative 2**

Aircraft overflights under Alternative 2 would result in short-term, localized increases in noise levels within the proposed Okanogan D MOA. Beneath the existing Okanogan and Roosevelt MOAs, wildlife (including all special-status species listed in Table 3.3-1) would experience similar sound levels as the No Action Alternative (Table 3.3-2) because, while increasing in number, flight sorties would be spread out over a wider area. Per the summary of the reasons in Section 3.3.3.4.1 (Potential Impacts on Wildlife) that aircraft overflights in the existing Okanogan and Roosevelt MOAs and proposed Okanogan D MOA under Alternative 2 are not expected to result in significant impacts on wildlife species or populations, and there would be no significant impacts on bald or golden eagles in accordance with BGEPA. Under the MBTA regulations applicable to military readiness activities (50 CFR Part 21), the impacts from aircraft noise during training activities under Alternative 2 described above are expected to be minimal and short term and would not result in a significant adverse effect on populations of birds protected under the MBTA. Accordingly, the Navy concludes that Alternative 2 would not significantly impact biological resources.

### **3.4 CULTURAL RESOURCES**

The term cultural resources applies broadly to a variety of resources subject to consideration under NEPA, NHPA, Archeological Resources Protection Act, Native American Graves Protection and Repatriation Act, EO 13007 (*Indian Sacred Sites*), and similar laws. Section 106 of the NHPA is concerned exclusively with impacts on historic properties. As defined under the NHPA, historic properties consist of districts, sites, buildings, structures, or objects that are listed or eligible for listing in the National Register of Historic Places (NRHP).

Under NEPA, the consideration of the affected human environment includes aesthetic, historic, and cultural resources, including those that do not meet NRHP criteria, such as cemeteries and certain sacred sites (Council on Environmental Quality and Advisory Council on Historic Preservation, 2013). Thus, cultural resources analysis under NEPA is similar, but different than the analysis of impacts on historic properties required under Section 106 of the NHPA; however, NEPA encompasses Section 106 of the NHPA.

Cultural resources information relevant to this EA was derived from a variety of available sources, including previous environmental documents and reports; the National Register Information System (managed by the National Park Service); online maps and data; and published sources, as cited. This chapter mainly focuses on historic properties as defined under the NHPA as no other cultural resources were identified through consultation with federally recognized tribes or through public comments under NEPA.

#### **3.4.1 REGULATORY SETTING**

Cultural resources are governed by federal laws and regulations, as mentioned above, these laws include the NHPA, Archeological and Historic Preservation Act, American Indian Religious Freedom Act, Archaeological Resources Protection Act, and Native American Graves Protection and Repatriation Act. A federal agency's responsibility to consider the effects to historic properties for a project or undertaking is defined by Section 106 of the NHPA. Key implementing regulations include the Protection of Historic

Properties (36 CFR part 800), the Criteria for Evaluation (36 CFR section 60.4), and the Curation of Federally Owned and Administered Archeological Collections (36 CFR part 79).

### **3.4.2 AFFECTED ENVIRONMENT**

The area of potential effects (APE) for the purposes of Section 106 of the NHPA (36 CFR section 800.16[d]) for the project was defined as only the airspace extension area. The APE is immediately west of the existing airspace and consists of two parts, the Okanogan D MOA and the Mazama ATCAA. The proposed Okanogan D MOA would have a lower altitude floor limit of 11,500 ft. above MSL and an upper altitude limit (ceiling) of 18,000 ft. above MSL. The proposed Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 to 25,000 ft. above MSL. The total area of proposed airspace is 393 square nautical miles.

There are no historic properties within the APE. There are three NRHP-eligible sites under the APE: a trash dump associated with a homestead, a road, and a historic debris scatter; and 26 cultural resources sites (18 historic and 8 precontact) that have not been evaluated for inclusion in the NRHP, which therefore must be treated as eligible. Historic sites include six debris scatters, three ditches, three sites associated with mining, two cabin ruins, one homestead, one possible burial site, one tree stump, and one modified tree site. Precontact sites include five lithic scatters, one habitation site, one pictograph boulder, and one thermal feature. In addition to these historic properties, two cultural resources under the APE are listed on the Washington Heritage Register (WHR) at the state level, a lookout tower and a cookhouse.

All NRHP-eligible and unevaluated sites, as well as the two sites listed on the WHR under the proposed airspace, are listed below in Table 3.4-1. The elevation of these sites ranges from 1,850 ft. above MSL to 7,000 ft. above MSL. The proposed airspace extension and APE have a lower altitude limit of 11,500 ft. above MSL.

The Navy has not identified any other types of cultural resources under NEPA compared to the NHPA, such as sacred sites, under the existing project area or the proposed extension. This information is subject to consultation with the Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians and may be updated as a result of consultation. Consultation under Section 106 of the NHPA with the Washington State Historic Preservation Office has concluded.

**Table 3.4-1: NRHP Sites under Proposed SAA**

<b>Eligible and Unevaluated Sites Under the East Washington Airspace Extension APE</b>				
<b>Site Number</b>	<b>Site Name (if applicable)</b>	<b>Site Type</b>	<b>NRHP Status/ Criteria</b>	<b>WHR Status</b>
464364	Mini Goat Prospect-Small Structure	Historic Structure	Unevaluated	Unevaluated
646365	Mini Goat Prospect-Large Structure	Historic Structure	Unevaluated	Unevaluated
727093	Billy Goat Mine Cook House and Dining Hall	Historic Structure	Unevaluated	Eligible
OF00026	Cabin Remains	Historic Structure	Unevaluated	Unevaluated
OF00029	Cabin Remains	Historic Structure	Unevaluated	Unevaluated
OF00100	Mine	Historic Structure	Determined Not Eligible	Does Not Concur
OF00101	Lookout Tower	Historic Structure	Determined Not Eligible	Eligible
OK00082		Precontact Pictograph	Unevaluated	Unevaluated
OK00416		Precontact Hearth	Unevaluated	Unevaluated
OK00586		Historic Tree Stump	Unevaluated	Unevaluated
OK00587		Precontact Lithic Scatter	Unevaluated	Unevaluated
OK00588		Precontact Lithic Scatter	Unevaluated	Unevaluated
OK00589		Possibly Modern Rockshelter/Camp	Unevaluated	Unevaluated
OK00590		Precontact Lithic Scatter	Unevaluated	Unevaluated
OK00607		Precontact Pit Houses	Unevaluated	Unevaluated
OK00849		Historic Possible Burial	Unevaluated	Unevaluated
OK01125		Historic Modified Trees	Unevaluated	Unevaluated
OK01128	Hart's Pass Narrow Gauge Road	Historic Structure	Determined Eligible/A, C, D	Eligible
OK01266	Big Valley Site	Precontact Lithic Scatter	Unevaluated	Unevaluated
OK01361	Bowers Dump	Historic Debris Scatter	Eligible/D	Eligible
OK01552		Homestead Dump	Eligible/D	Eligible
OK02073		Historic Debris Scatter	Unevaluated	Unevaluated
OK02074		Historic Debris Scatter	Unevaluated	Unevaluated
OK02075		Historic Debris Scatter	Unevaluated	Potential
OK02076		Historic Ditch	Unevaluated	Potential
OK02100		Historic Ditch	Unevaluated	Potential
OK02105		Historic Debris Scatter	Unevaluated	Unevaluated
OK02251	Two Rivers Lithics	Precontact Lithic Scatter	Unevaluated	Unevaluated
OK02252	Yellowjacket Homestead	Historic Homestead	Unevaluated	Potential
OK02253	Lost River Refuse Scatter	Historic Debris Scatter	Unevaluated	Potential

Eligible and Unevaluated Sites Under the East Washington Airspace Extension APE				
Site Number	Site Name (if applicable)	Site Type	NRHP Status/ Criteria	WHR Status
OK02254	Mini Goat Prospect	Historic Debris Scatter	Unevaluated	Potential
OK02594		Historic Ditch	Unevaluated	Potential

Notes: APE = area of potential effect, NRHP = National Register of Historic Places, WHR = Washington Heritage Register, A = eligible due to an important event in history, C = eligible due to unique design, D = eligible due to information potential

### 3.4.3 ENVIRONMENTAL CONSEQUENCES

This section evaluates potential impacts on cultural resources that may result from implementation of the No Action Alternative and action alternatives. The proposed alternatives will not affect any of the seven aspects of integrity (location, design, setting, materials, workmanship, feeling, or association) that contribute to the significance of a historic property eligible for listing in the NRHP, the properties on the WHR, or the unevaluated sites. As there are no historic properties or cultural resources within the APE, the area under the APE was analyzed for potential effects of visual, auditory, and atmospheric nature to historic properties, unevaluated sites, and cultural resources. A reasonable and good-faith effort was made to identify historic properties and cultural resources that could be affected by the proposed alternatives.

#### 3.4.3.1 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). There would be no change to the visual, auditory, or atmospheric environment of the cultural resources or historic properties under the existing airspace. The finding of effects for the existing airspace is consistent with the NHPA Section 106 finding in 2010 (Log No. 092308-10-USN). The continued use of existing airspace has “no potential to cause effects” to historic properties as defined under 36 CFR section 800.3(a)(1). Under the No Action Alternative, there would be no impacts on cultural resources.

#### 3.4.3.2 Alternative 1 (Preferred Alternative)

As listed in Table 3.4-1, there are three NRHP-eligible sites, 26 unevaluated sites, and five WHR sites beneath the proposed Okanogan D MOA and Mazama ATCAA. Under Alternative 1 (Preferred Alternative), these areas would experience a change in the existing noise conditions from Navy aircraft overflights. Based on the noise analysis presented in Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension), the maximum DNL sound levels that would occur from aircraft activity under the proposed Okanogan D MOA and Mazama ATCAA is 45.7 dBA. The maximum DNL for the entire Action Area would be 49.3 dBA, 0.6 dBA less than under the No Action Alternative. In addition, the maximum DNLs would be experienced only at the highest ground elevations (elevations above 8,000 ft.), which are a very small percentage of overall ground elevations under the existing and proposed SAA. Only two sites have elevations above 5,000 ft., the unevaluated remains of a cabin at 5,280 ft. above MSL and a lookout tower that has been determined not eligible for the NRHP but is listed on the WHR at 7,000 ft. above MSL. Under Alternative 1, the introduction of noise associated with aircraft activity under the proposed Okanogan D MOA and Mazama ATCAA would not be at a level that would result in physical harm (vibration-related) to the NRHP-eligible or unevaluated sites, and overall noise levels underlying the existing Okanogan and Roosevelt MOAs would be less than those under the

No Action Alternative. Any changes to the visual, auditory, or atmospheric environment under the proposed Okanogan D MOA and Mazama ATCAA associated with new aircraft activity would be momentary and fleeting. Therefore, there would be “no historic properties affected” consistent with 36 CFR section 800.4(d)(1). No cultural resources outside of historic properties have been identified through consultation; therefore, there will be no impacts on cultural resources under Alternative 1.

#### **3.4.3.3 Alternative 2**

Under Alternative 2, impacts would be the same as those described under Alternative 1. However, the maximum DNL sound levels that would occur from aircraft activity in the proposed Okanogan D MOA and Mazama ATCAA would be 46.2 dBA. Despite being a 0.5 dBA increase from Alternative 1 (Preferred Alternative), the introduction of noise associated with aircraft activity under the proposed Okanogan D MOA and Mazama ATCAA would not be at a level that would result in physical harm (vibration-related) to the NRHP-eligible or unevaluated sites, and overall noise levels underlying the Okanogan and Roosevelt MOAs would still be slightly less (0.1 DNL) than those under the No Action Alternative. Therefore, there would be “no historic properties affected” consistent with 36 CFR section 800.4(d)(1). No cultural resources outside of historic properties have been identified through consultation; therefore, there will be no impacts on cultural resources under Alternative 2.



### 3.5 AMERICAN INDIAN TRADITIONAL RESOURCES

Protected tribal resources, as defined in DoD Instruction 4710.02, DoD Interactions with Federally Recognized Tribes (U.S. Department of Defense, 2018), are “those natural resources and properties of traditional or customary religious or cultural importance, either on or off Indian lands, retained by or reserved by or for Indian tribes through treaties, statutes, judicial decisions, or EOs, including Tribal trust resources.” Tribal trust resources are Indian lands or treaty rights to certain resources. These resources include plants, animals, and locations associated with hunting, fishing, and gathering activities for subsistence or ceremonial use. For the purposes of this section, the term “traditional resources” will be used to encompass protected tribal resources.

#### 3.5.1 REGULATORY SETTING

Consultation with Native American tribes is conducted government-to-government with federally recognized tribes, as reaffirmed by EO 13175, *Consultation and Coordination with Indian Tribal Governments*. The Navy conducts government-to-government consultation in accordance with Secretary of the Navy Instruction 11010.14B, *Department of the Navy Policy for Consultation with Federally Recognized Indian Tribes, Alaska Native Tribal Entities, and Native Hawaiian Organizations*; and Commander, Navy Region Northwest Instruction 11010.14A, *Policy for Consultation with Federally Recognized American Indian and Alaska Native Tribes* (May 10, 2021).

#### 3.5.2 AFFECTED ENVIRONMENT

The Navy has identified no protected tribal resources located under the proposed Okanogan D MOA and Mazama ATCAA. This information is subject to consultation with the affected Tribes and may be updated as a result of consultation.

The Colville Indian Reservation, which is approximately 1.4 million acres, underlies the existing Okanogan A, Okanogan C, Roosevelt A, and Roosevelt B MOAs, and the Methow, Molson, and Republic ATCAAs (Figure 2.3-2). The Confederated Tribes of the Colville Reservation is the federally recognized tribe that governs the Colville Indian Reservation (established in 1872). Twelve bands compose the tribe: Chelan, Chief Joseph Band of Nez Perce, Colville, Entiat, Lakes, Methow, Moses-Columbia, Nespelem, Okanogan, Palus, San Poil and Wenatchi.

The Spokane Tribe of Indians is the federally recognized tribe that governs the Spokane Indian Reservation (established in 1881). The Kalispel Tribe of Indians is the federally recognized tribe that governs the Kalispel Indian Reservation (established in 1914). The Spokane and Kalispel Indian Reservations (Figure 2.3-2) do not underlie any of the existing or proposed airspace.

#### 3.5.3 ENVIRONMENTAL CONSEQUENCES

This section evaluates how and to what degree the proposed activities described in Chapter 2 (Description of the Proposed Action and Alternatives) could impact American Indian traditional resources in the Action Area. The specific analysis considers proposed aircraft activities and associated changes in noise levels in relation to American Indian traditional resources. On August 23, 2023, letters were sent to The Confederated Tribes of the Colville Reservation, Spokane Tribe of Indians, and Kalispel Tribe of Indians inviting them to government-to-government consultations so the Navy can carefully consider and evaluate the extent of any potential impacts on American Indian traditional resources. None of the tribes have requested Government-to-Government consultation in response to the invitations.

### **3.5.3.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). Therefore, there would be no significant impacts on American Indian traditional resources.

### **3.5.3.2 Alternative 1 (Preferred Alternative)**

No significant impacts on American Indian traditional resources would occur as result of the establishment of the Okanogan D MOA and Mazama ATCAA because the Navy has not identified any American Indian traditional resources underlying the proposed airspace. This information is subject to consultation with the affected Tribes and may be updated as a result of consultation.

Based on the noise analysis presented in Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension), the maximum DNL for the entire Action Area would be 49.3 dBA, 0.6 dBA less than under the No Action Alternative. Proposed redistribution of the number of flights and flight profiles in the Okanogan and Roosevelt MOAs and associated ATCAAs is not expected to have significant impacts on American Indian traditional resources because noise levels would be less than baseline noise levels. Therefore, there would be no significant impacts on American Indian traditional resources under Alternative 1.

### **3.5.3.3 Alternative 2**

Under Alternative 2, impacts would be the same as those described under Alternative 1. Based on the noise analysis presented in Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension), despite there being a 0.5 dBA increase in noise levels from Alternative 1 (Preferred Alternative) in the proposed airspace, it would still be slightly less (0.1 DNL) than those under the No Action Alternative for the entire Action Area. Therefore, there would be no significant impacts on American Indian traditional resources under Alternative 2.

## **3.6 PUBLIC HEALTH AND SAFETY**

This discussion of public health and safety includes consideration for any activities, occurrences, or operations that have the potential to affect the safety, well-being, or health of members of the public. The primary goal is to identify and prevent potential accidents or impacts on the public. Historically, the FAA has designated military training airspace to be located in areas that are compatible with other aviation resources, such as major airports and commercial air routes, as well as in areas of relatively low population density. This is the case for the Eastern Washington SAA.

A safe environment is one in which there is no, or optimally reduced, potential for death, serious bodily injury or illness, or property damage. Public health and safety within this EA includes information pertaining to community emergency services, and operational safety.

Emergency services are organizations that ensure public health and safety by addressing different emergencies. The three main emergency service functions are police, fire and rescue service, and emergency medical service.

Operational safety may refer to the actual use of existing airspace, or training activities and potential risks to inhabitants or users of adjacent or nearby land and airspace. Safety measures are often implemented through designated safety zones, warnings areas, or other types of designations.

### **3.6.1 REGULATORY SETTING**

Aircraft safety is based on the physical risks associated with aircraft flight. Military aircraft fly in accordance with FAA Regulations 14 CFR part 91, *General Operating and Flight Rules* (U.S. Department of Transportation & Federal Aviation Administration, 2023), which govern such things as operating near other aircraft, right-of-way rules, aircraft speed, and minimum safe altitudes. These rules include the use of tactical training and maintenance test flight areas, arrival and departure routes, and airspace restrictions as appropriate to help control air operations. In addition, naval aviators must also adhere to the flight rules, air traffic control, and safety procedures provided in Navy guidance. The FAA issues a Notice to Air Missions (NOTAM) to disseminate information on upcoming or ongoing military training exercises with airspace restrictions. Operators of civilian and commercial aircraft are responsible for being aware of any NOTAMs that are in effect.

Navy Requirements outlined in the Office of the Chief of Naval Operations Instruction 3500.39D, *Operational Risk Management* (U.S. Department of the Navy, 2018b), provide a process to maintain readiness in peacetime and achieve success in combat while safeguarding people and resources. The FAA is responsible for ensuring safe and efficient use of U.S. airspace by military and civilian aircraft and for supporting national defense requirements. In order to fulfill these requirements, the FAA has established safety regulations, airspace management guidelines, a civil-military common system, and cooperative activities with the DoD. The primary safety concern with regard to military training flights is the potential for aircraft mishaps to occur, which could be caused by mid-air collisions with other aircraft or objects, weather difficulties, mechanical failures, pilot error, or bird/wildlife air strike hazards.

### **3.6.2 AFFECTED ENVIRONMENT**

#### **3.6.2.1 Airspace**

Military, commercial, institutional, and recreational activities take place simultaneously in the Action Area and have coexisted safely for decades because there are FAA regulations, and DoD and Navy policies and practices for safe use and operation of SAA.

By establishing a MOA as airspace of defined dimensions identified by an area on the surface of the earth wherein activities must be confined because of their nature, or wherein limitations are imposed upon aircraft operations that are not part of those activities, or both, the FAA considers the compatibility of the activities with other users in the vicinity (Federal Aviation Administration, 2023a). The FAA also coordinates ATCAA, which is of defined vertical and lateral limits, to provide air traffic separation between the specified activities being conducted within the airspace and other air traffic. The procedures governing operations within these areas are specified in letters of agreement between local military authorities and the air traffic control facility.

Navy procedures on planning and managing SAA are provided in Office of the Chief of Naval Operations Instruction 3770.2L, *Airspace Procedures and Planning* (U.S. Department of the Navy, 2017). Scheduling and planning procedures for training operations in the Action Area are issued through NASWI.

There is generally no recognized threshold of air safety that defines acceptable or unacceptable conditions. Instead, the focus of airspace managers is to reduce risks through several measures, which

include but are not limited to, providing and disseminating information to airspace users, requiring appropriate levels of training to those using the airspace, setting appropriate standards for equipment performance and maintenance, defining rules governing the use of airspace, and assigning appropriate and well-defined responsibilities to the users and managers of the airspace. When these safety measures are implemented, risks are minimized, even though they can never be eliminated.

Weather conditions dictate whether pilots (general aviation, commercial, or military) fly under visual flight rules (VFR) or instrument flight rules (IFR). Under VFR, the weather is favorable, and the pilot is required to remain clear of clouds by specified distances to ensure separation from other aircraft using see and avoid procedures. Such favorable conditions are referred to as visual meteorological conditions. Pilots flying under VFR must be able to see outside the cockpit, control the aircraft's attitude, navigate, and avoid obstacles and other aircraft based on visual cues. Pilots flying under VFR assume responsibility for their separation from all other aircraft and are generally not assigned routes or altitudes by air traffic control. During unfavorable weather, referred to as instrument meteorological conditions, and as required by FAA airspace regulations, pilots will follow IFR. Factors such as visibility, cloud distance, cloud ceilings, and weather phenomena cause visual conditions to drop below the minimums required to operate by visual flight referencing. IFR are the regulations and restrictions a pilot must comply with when flying in weather conditions that restrict visibility. Pilots can fly under IFR in visual meteorological conditions; however, pilots cannot fly under VFR in instrument meteorological conditions.

The Navy ensures the health and safety of the public by considering a location when planning activities, scheduling and notifying potential users of an area, and ensuring that an area is clear of nonparticipants. The Navy also has a proactive and comprehensive program of compliance with applicable standards and implementation of safety management systems.

Aircrew involved in a training exercise within SAA are aware that non-participating VFR aircraft are not precluded from entering the airspace and may not comply with NOTAMs or charted advisories. Aircrew are directed to maintain a vigilant visual and sensor look-out doctrine regardless of the meteorological conditions in order to avoid other aircraft that potentially enter the SAA during a training exercise. Any aircrew can call for termination of activities during an event or exercise should unsafe condition arise.

### **3.6.2.2 Noise**

A detailed description of current noise conditions and noise levels that would result from the Proposed Action is available in Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension).

Long, repeated exposure to noises exceeding 85 decibels (dB) has been found to result in noise-induced hearing loss (National Institute on Deafness and Other Communication Disorders, 2017). The louder the noise, the shorter the time necessary for the noise to result in noise-induced hearing loss. A possible secondary impact from loud noises and vibrations is elevated levels of stress, which can occasionally impact a person's health by causing annoyance, impairing sleep, and impacting cognitive performance (Schomer, 2005; Stansfeld & Matheson, 2003; U.S. Department of Defense, 2009). Regarding these nonauditory health effects, studies have been conducted to examine the nonauditory health effects of aircraft noise exposure, focusing primarily on stress response, blood pressure, birth weight, mortality rates, cardiovascular health, and impairment of cognitive performance in children.

Exposure to noise levels higher than those normally produced by aircraft operating in the existing and proposed SAA, can elevate blood pressure and stress hormone levels. However, the response to such

loud noise is typically short in duration: after the noise goes away, the physiological effects reverse, and levels return to normal. In the case of repeated exposure to aircraft noise, the connection is not as clear. The common factor in most studies is the chronic nature of noise that is required to result in any of the effects except for annoyance. Also, the chronic levels required for these effects are well in excess of the levels expected in the vicinity of the Action Area as a result of Navy flight activities (Basner et al., 2014; Correia et al., 2013; Evans et al., 1998; Haralabidis et al., 2008; Schomer, 2005; Stansfeld & Matheson, 2003).

### **3.6.3 ENVIRONMENTAL CONSEQUENCES**

This section evaluates how and to what degree the activities described in Chapter 2 (Description of the Proposed Action and Alternatives) could impact public health and safety. Potential public health and safety impacts were evaluated assuming continued implementation of the Navy's current safety procedures for training activities in the Action Area.

#### **3.6.3.1 No Action Alternative**

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). Therefore, there would be no significant impacts on public health and safety.

##### **3.6.3.1.1 Noise**

According to the noise analysis conducted (Appendix B, Noise Analysis for the Proposed Eastern Washington Airspace Extension) and as shown in Table 3.6-1, the maximum DNL (an average of noise level over a 24-hour period) that would occur from aircraft activity under the No Action Alternative is 49.9 dBA, which would be below the FAA's DNL 65 dBA significance threshold. The maximum DNL would be experienced only at the highest ground elevations (elevations above 8,000 ft., making up less than 0.03 percent of the total Action Area). The majority of the Action Area (76 percent) is between 2,000 and 5,000 ft. elevation, where maximum DNL noise levels would be between 38.4 and 48.5 dBA. Below 2,000 ft. elevation, which makes up approximately 11 percent of the Action Area, the maximum DNL noise levels would be between 37.2 and 46.9 dBA.

The highest modeled  $L_{max}$  a person would potentially be exposed to is 123.9 dBA (refer to Table 4-9 in Appendix B, Noise Analysis for the Proposed Eastern Washington Airspace Extension, for a full list of  $L_{max}$  values). For this to occur, an aircraft would have to be operating at 97 percent engine power, traveling at 360 knots, and located directly above a person at an altitude of 500 ft. Because the flight activities are dispersed throughout the airspace, persons on the ground experience noise events with a wide range of  $L_{max}$  values. In this setting, overflights with the highest possible  $L_{max}$  (i.e., aircraft passes directly overhead at the lowest permitted altitude and the highest engine power setting) are relatively rare. The potential for a person to be in the vicinity of aircraft while operating at the given parameters and producing maximum noise levels is limited because there is an overall lack of concentration of flights at a given altitude, area, and power setting, and aircraft would be at lower altitudes for a relatively brief amount of time. In the event a person is exposed to the highest possible  $L_{max}$ , exposure would be short in duration (only a couple of seconds). Therefore, there would be no significant impacts on public health and safety.

**Table 3.6-1: Predicted Day Night Average Sound Level by Terrain Elevation in the Action Area**

Terrain Elevation (Feet)	% of Area	Range of Predicted Day Night Average Sound Level (DNL)		
		No Action Alternative	Alternative 1	Alternative 2
0–1,000	0.7	37.2–46.8	37.2–46.2	37.7–46.7
1,000–2,000	10.6	38.0–47.1	38.0–46.5	38.5–47.0
2,000–3,000	24.8	38.8–47.6	38.8–47.0	39.3–47.5
3,000–4,000	32.1	39.7–48.3	39.7–47.7	40.2–48.2
4,000–5,000	19.4	40.7–48.5	40.7–47.9	41.2–48.4
5,000–6,000	8.2	41.8–48.8	41.8–48.2	42.3–48.7
6,000–7,000	3.5	43.1–49.1	43.1–48.5	43.6–49.0
> 7,000	0.7	44.7–49.9	44.7–49.3	44.8–49.8

**3.6.3.2 Alternative 1 (Preferred Alternative)**

Under Alternative 1 (Preferred Alternative), the Proposed Action would occur, establishing the new Okanogan D MOA and Mazama ATCAA (Figure 2.3-2), and there would be a redistribution of the number of flights and flight profiles within the Okanogan and Roosevelt MOAs (Table 2.3-1). The overall total number of annual sorties would decline slightly from what was analyzed in the 2010 NWTRC EIS/OEIS.

**3.6.3.2.1 Airspace**

Despite the introduction of Navy training activities into the proposed airspace, the total number of sorties in the entire Action Area would decrease slightly, and the types of flight activities themselves would be similar to those currently conducted. The new airspace would be over similar terrain where there is a small amount of air traffic. The proposed MOA only overlays one uncontrolled airport, which does not have any associated instrument procedures. The Navy would continue to adhere to its standard operating procedures, resulting in the continued safe execution of training activities.

**3.6.3.2.2 Noise**

Western Okanogan County, a small part of Skagit County and Chelan County, and the western portion of the designated Pasayten and Lake Chelan-Sawtooth National Wilderness Areas, would be beneath the newly established Okanogan D MOA and Mazama ATCAA. Under Alternative 1 (Preferred Alternative), these areas would experience a change in existing environmental conditions due to noise exposure from Navy aircraft overflights. The maximum DNL that would occur from aircraft activity in the new Okanogan D MOA and Mazama ATCAA would be 45.7 dBA. The maximum DNL for the entire Action Area would be 49.3 dBA, 0.6 dBA less than under the No Action Alternative. In addition, the maximum DNLs would be experienced only at the highest ground elevations (elevations above 8,000 ft.), which are a very small percentage of overall ground elevations under the Action Area. The highest possible  $L_{max}$  a person would potentially be exposed to remains consistent with the highest possible  $L_{max}$  under the No Action Alternative, and the likelihood of exposure remains low based upon the reasons provided under the No Action Alternative.

Under Alternative 1 (Preferred Alternate), noise levels remain similar to noise levels under the No Action Alternative. Therefore, there would be no significant impacts on public health and safety under Alternative 1.

### **3.6.3.3 Alternative 2**

Alternative 2 consists of the addition of the Okanogan D MOA and the overlying Mazama ATCAA that occur under Alternative 1 (Figure 2.3-2). Alternative 2 also considers an approximately 12 percent increase in the capacity of training throughout all the Okanogan and Roosevelt MOAs that allows for the greatest flexibility for the Navy to maintain readiness when considering potential changes in the national security environment (Table 2.3-1).

#### **3.6.3.3.1 Airspace**

While there is an increase in overall training sorties under Alternative 2, the increased sorties would not result in more crowded airspace, but in more frequent use of the airspace. The Navy would continue to follow established standard operating procedures and the FAA would continue to issue NOTAMs to disseminate information on upcoming or ongoing military training exercises. For these and all the other reasons stated above under Alternative 1, the proposed activities under Alternative 2 would not result in increased safety risks.

#### **3.6.3.3.2 Noise**

Under Alternative 2, western Okanogan County, a small part of Skagit County and Chelan County, and the western portion of the designated Pasayten and Lake Chelan-Sawtooth National Wilderness Areas would be beneath the newly established Okanogan D MOA and overlying Mazama ATCAA. These areas would experience a change in existing environmental conditions due to noise exposure from Navy aircraft overflights. However, the maximum DNL that would occur from aircraft activity in the new Okanogan D MOA and Mazama ATCAA would be 46.2 dBA. Despite being a 0.5 dBA increase from Alternative 1 (Preferred Alternative), the maximum DNL under Alternative 2 from aircraft activity would be well below the FAA's DNL 65 dBA significance threshold. The maximum DNL for the entire Action Area would be 49.8 dBA, a 0.1 dBA decrease from the No Action Alternative, which would also be well below the FAA's DNL 65 dBA significance threshold. In addition, the maximum DNLs would be experienced only at the highest ground elevations (elevations above 8,000 ft.), which are a very small percentage of overall ground elevations under the Action Area. In addition, the highest possible  $L_{max}$  a person would potentially be exposed to remains consistent with the highest possible  $L_{max}$  under the No Action Alternative, and the likelihood of exposure remains low based upon the reasons provided under the No Action Alternative. Therefore, there would be no significant impacts on public health and safety under Alternative 2.

### **3.7 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS**

In the context of NEPA, socioeconomics is defined as the economic and social conditions of the region potentially affected by the Proposed Action. The conditions describing socioeconomics include the population, demographics, employment opportunities, income, industries, housing, schools, and public finances of the surrounding community. The purpose of socioeconomic analysis is to assess the potential impacts of the Proposed Action on the human environment related to these conditions. Not all the conditions listed above would be affected by the establishment of the proposed Okanogan D MOA and Mazama ATCAA, and redistribution of the overall number or types of training sorties occurring within the Action Area.

The alternatives were evaluated based on the potential for and the degree to which training activities could impact socioeconomic resources. The potential for impacts depends on the likelihood that the

training activities would interact with public activities or infrastructure. If there is potential for this interaction, factors considered to estimate the degree to which an exposure could impact socioeconomic resources include whether there could be an impact on livelihood, quality of experience, resource availability, income, or employment. If there is no expected potential for the public to interface with an activity, the impacts would be considered negligible.

The alternatives were also reviewed for any disproportionately high and adverse effects on any low-income populations or minority populations, and children's environmental health risks and safety risks, in accordance with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, and EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, respectively.

The U.S. EPA's Environmental Justice Screening and Mapping Tool (EJScreen) was incorporated when considering and analyzing the potential impacts associated with the Proposed Action on environmental justice.

### **3.7.1 REGULATORY SETTING**

The EPA defines Environmental Justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (U.S. Environmental Protection Agency, 2023a).

EO 12898 requires each federal agency to identify and address, as appropriate, disproportionately high, and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. The CEQ has emphasized the importance of incorporating environmental justice review in the analyses conducted by federal agencies under the NEPA and of developing protective measures that avoid disproportionate environmental effects on minority populations and low-income populations. Consistent with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994), the Navy's policy is to identify and address any disproportionately high and adverse human health and environmental effects of its actions on minority populations and low-income populations.

Environmental health and safety risks to children are defined as those that are attributable to products or substances a child is likely to come into contact with or ingest, such as air, food, water, soil, and products that children use or to which they are exposed.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires federal agencies to "make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children and shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

Designated National Wilderness Areas, which are present beneath the Action Area, enjoy the protections as set forth in the Wilderness Act of 1964 (16 U.S.C. sections 1131–1136). Specifically, "there shall be no commercial enterprise and no permanent road within any wilderness area," and "no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area." The Wilderness Act defines a wilderness as "an area where the earth and its community of life are



untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions.” Wilderness designations only apply to land uses and do not prohibit aircraft overflights. The airspace above National Designated Wilderness Areas is part of the National Airspace System and is regulated by, and under the jurisdiction of, the FAA.

### **3.7.2 AFFECTED ENVIRONMENT**

The area of interest for assessing potential impacts on socioeconomic resources, environmental justice, and children’s environmental health and safety risks, is the Action Area and the communities and lands beneath it, as described in Section 1.3 (Location). The Action Area, within which the existing airspace was established in 1977 and where the Navy has flown similar types of training activities for more than 40 years, occupies airspace above Okanogan, Chelan, Douglas, Ferry, Stevens, and Pend Oreille counties in Washington state, and Boundary and Bonner counties in northwestern Idaho.

Utilizing the EPA’s EJScreen Tool, it was determined that four Environmental Justice Indexes were at or above the 80th percentile within the Action Area. These included lead paint, superfund proximity, risk management plan facility proximity, and wastewater discharge.

Table 3.6-1 breaks down the percentage of families, and all people, below the poverty line by county throughout the Action Area. In Okanogan, Chelan, Douglas, Ferry, Stevens and Pend Oreille counties, a higher percentage of incomes (families, all people, or both) are below the poverty line when compared to the Washington State average. It is the same case for families and all people in Boundary and Bonner counties in Idaho. These statistics show that when compared to the entirety of Washington and Idaho, the counties beneath the existing and proposed SAA are home to a larger percentage of low-income populations than the rest of their respective states. (U.S. Census Bureau, 2021)

All eight counties beneath the Action Area are predominantly white and have a similar or higher population percentage of white persons in comparison to their respective states. However, there are instances in which some counties have a higher population percentage of a minority group than the state. Okanogan, Ferry, Stevens, and Pend Oreille all have a higher population percentage of American Indian and Alaskan Native persons than Washington state. Okanogan, Chelan, and Douglas counties have a higher population percentage of Hispanic or Latino persons than Washington State. (U.S. Census Bureau, 2020)

A full breakdown of income statistics and population demographics by county and state are presented in Table 3.7-1 and Table 3.7-2.

**Table 3.7-1: Percent of Families and All People Whose Income is Below the Poverty Line**

County	Families		All People	
	Number below the poverty line	Percent below the poverty line	Below the poverty line	Percent below the poverty line
Okanogan	6,231	14.8%	8,463	20.1%
Chelan	6,642	8.4%	8,461	10.7%
Douglas	3,177	7.4%	4,165	9.7%
Ferry	624	8.7%	1,077	15%
Stevens	3,855	8.3%	5,991	12.9%
Pend Oreille	884	6.6%	1,501	11.2%
Boundary	1,495	12.4%	2,098	17.4%
Bonner	3,816	8.1%	5,512	11.7%
<b>State of Washington</b>	500,843	6.5%	770,528	10.0%
<b>State of Idaho</b>	137,933	7.5%	209,658	11.4%

Source: U.S. Census Bureau (2021)

The Action Area also includes several additional socioeconomic resources, including land-based recreational and tourism activities. Designated wilderness areas exist beneath the Action Area, including the Pasayten and Lake Chelan-Sawtooth National Wilderness Areas, and the Salmo-Priest Wilderness area, managed by the U.S. Forest Service. The Pasayten and Lake Chelan-Sawtooth National Wilderness Areas are located within Okanogan-Wenatchee National Forest, and the Salmo-Priest Wilderness is located within Colville National Forest. Activities in these wilderness areas include but are not limited to hiking, horseback riding, camping, and nature viewing.

**Table 3.7-2: Action Area Population Demographics**

County	Population %							
	White	Black or African American	American Indian and Alaskan Native	Asian	Native Hawaiian and Pacific Islander	Other race	Two or more races	Hispanic or Latino (of any race)
Okanogan	65.6%	0.4%	11.6%	0.7%	0.1%	11.8%	9.8%	19.5%
Chelan	69.9%	0.4%	1%	1%	0.2%	16.8%	10.7%	28%
Douglas	64.8%	0.3%	1.6%	1%	0.1%	17.9%	14.2%	34.1%
Ferry	71.3%	0.4%	18.2%	0.6%	0.2%	1.3%	8%	2.9%
Stevens	84.6%	0.3%	5.8%	0.6%	0.2%	1.3%	7.1%	3.6%
Pend Oreille	88.1%	0.4%	3%	0.6%	0.1%	1.4%	6.5%	3.3%
Boundary	88.9%	0.2%	1.4%	0.6%	0.1%	2.5%	6.3%	5.7%
Bonner	91.1%	0.3%	0.7%	0.5%	0.1%	1.1%	6.1%	3.2%
<b>State of Washington</b>	66.6%	4%	1.6%	9.5%	0.8%	6.7%	10.9%	13.7%
<b>State of Idaho</b>	82.1%	0.9%	1.4%	1.5%	0.2%	5.6%	8.3%	13%

Source: U.S. Census Bureau (2020)

### 3.7.3 ENVIRONMENTAL CONSEQUENCES

This analysis focuses on the evaluation of impacts on socioeconomic resources from physical disturbance and interaction stressors. Interactions include training activities that may not physically interact with socioeconomic resources but interact in a way that affects the resources. Visual impacts on socioeconomic resources are not anticipated as a result of the Proposed Action.

#### 3.7.3.1 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. The locations and areas of the Okanogan A/B/C MOAs and Molson and Methow ATCAAs, and Roosevelt A/B MOAs and Republic ATCAA would remain the same (Figure 2.3-1), and there would be no redistribution of the number of flights in the Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS (Table 2.3-1). Therefore, there would be no significant impacts on socioeconomics and environmental justice.

Existing aircraft overflights from air combat maneuver training activities and electronic warfare training activities occurring in the existing Okanogan and Roosevelt MOAs produce airborne acoustics and have the potential to disturb land-based recreational and tourism activities (e.g., hiking) in the Okanogan-Wenatchee National Forest and Colville National Forest, and other areas in the vicinity of the Action Area. The Navy has been conducting aircraft activities in the Action Area for decades, and while airborne acoustics from aircraft overflights are likely to be heard and may temporarily disturb some visitors to these areas, natural sounds are the predominantly occurring sounds in the vicinity of the Action Area.

According to the noise analysis conducted (Appendix B, Noise Analysis for the Proposed Eastern Washington Airspace Extension), the maximum DNL (an average of noise level over a 24-hour period) under the No Action Alternative would be 49.9 dBA, which is well below the FAA's DNL 65 dBA significance threshold. For comparison, the FAA states that the DNL of a quiet suburban residential area is around 50 dBA (Federal Aviation Administration, 2022a). In addition, the maximum DNL would be experienced only at the highest ground elevations (elevations above 8,000 ft., making up less than 0.03 percent of the total Action Area).

The highest possible  $L_{max}$  a person would potentially be exposed to is 123.9 dBA (refer to Table 4-9 in Appendix B, Noise Analysis for the Proposed Eastern Washington Airspace Extension, for a full list of  $L_{max}$  values), which is the same as discussed in Section 3.6.3.1.1 (Noise).

While noise levels can be measured and noise sources can be compared to each other using established metrics, the perception of a noise by individuals and their reaction to the same noise heard simultaneously may vary widely. While some visitors to a natural setting like the Wilderness Areas mentioned above may be disturbed by an aircraft overflight, others may not register the event or, if they do notice it, may not consider it to be significant.

Nevertheless, occasional disturbances from military aircraft have been occurring in this area for several decades and are not expected to have lasting impacts on broader socioeconomic resources. Therefore, environmental impacts on socioeconomic resources under the No Action Alternative would be negligible.

Existing aircraft overflights would produce emissions as discussed in Section 3.2 (Air Quality) however, those emissions would remain consistent with existing conditions and would continue to be well below all applicable thresholds. In addition, the use of lead paint, superfund facilities, risk management plan facilities, and wastewater discharge are not part of the Proposed Action. Therefore, existing aircraft

overflights associated with the No Action Alternative would not contribute to the four Environmental Justice Indexes identified in Section 3.7.2 (Affected Environment) that are at or above the 80th percentile.

Because impacts on socioeconomic resources are negligible, and emissions from existing aircraft overflights would remain consistent with current conditions and would be well below all applicable thresholds, there are no disproportionately high impacts or adverse effects on any low-income populations or minority populations. In addition to emissions being well below all applicable thresholds, the Navy's safety measures that protect adults from potential health and safety impacts also protect children. Therefore, the No Action Alternative would not disproportionately expose children to environmental health or safety risks.

### **3.7.3.2 Alternative 1 (Preferred Alternative)**

Alternative 1 (Preferred Alternative) consists of the extension of the airspace through the establishment of a new Okanogan D MOA and Mazama ATCAA (Figure 2.3-2). In addition, the number of annual sorties would decline slightly from what was analyzed in the 2010 NWTRC EIS/OEIS and the flights would be redistributed within the Action Area (Table 2.3-1).

Western Okanogan County, a small part of Skagit County and Chelan County, and the western portion of the designated Pasayten and Lake Chelan-Sawtooth National Wilderness Areas would be beneath the newly established Okanogan D MOA and Mazama ATCAA (Figure 2.3-2). Under Alternative 1 (Preferred Alternative), these areas would experience a change in existing environmental conditions due to noise exposure from Navy aircraft overflights. The maximum DNL from aircraft activity in the Okanogan D MOA and Mazama ATCAA would be 45.7 dBA. The maximum DNL for the entire Action Area under Alternative 1 (Preferred Alternative) would be 49.3 dBA, a 0.6 dBA decrease from the No Action Alternative. Visitors to National Forest and wilderness areas on weekends or at night would rarely hear an EA-18G, or other aircraft, because training flights typically occur Monday through Friday during daylight hours. The maximum DNL would be experienced only at the highest ground elevations (elevations above 8,000 ft.), which are a very small percentage of overall ground elevations under the Action Area. Since the maximum DNLs in the existing and proposed airspace would be well below the FAA's DNL 65 dBA significance threshold, airborne acoustics from Navy aircraft overflights would cause minimal disruption to land-based recreational and tourism activities. In addition, the highest possible  $L_{\max}$  a person would potentially be exposed to remains consistent with the highest possible  $L_{\max}$  under the No Action Alternative, and the likelihood of exposure remains low based upon the reasons provided under No Action Alternative.

Nevertheless, occasional disturbances from military aircraft have been occurring in this area for several decades and are not expected to have lasting impacts on broader socioeconomic resources. Therefore, environmental impacts on socioeconomic resources under the Alternative 1 (Preferred Alternative) would be negligible.

Aircraft overflights associated with Alternative 1 (Preferred Alternative) would produce emissions as discussed in Section 3.2 (Air Quality) however, emissions would be well below all applicable thresholds. In addition, the use of lead paint, superfund facilities, risk management plan facilities, and wastewater discharge are not part of the Proposed Action. Therefore, existing aircraft overflights associated with Alternative 1 (Preferred Alternative) would not contribute to the four Environmental Justice Indexes identified in Section 3.7.2 (Affected Environment) that are at or above the 80th percentile.

Because impacts on socioeconomic resources are negligible, and emissions from aircraft overflights associated with Alternative 1 (Preferred Alternative) would be well below all applicable thresholds, there are no disproportionately high impacts or adverse effects on any low-income populations or minority populations. In addition to emissions being well below all applicable thresholds, the Navy's safety measures that protect adults from potential health and safety impacts also protect children. Therefore, Alternative 1 (Preferred Alternative) would not disproportionately expose children to environmental health or safety risks.

### 3.7.3.3 Alternative 2

Alternative 2 consists of the addition of the Okanogan D MOA and the overlying Mazama ATCAA that would occur under Alternative 1 (Figure 2.3-2). Alternative 2 also considers an increase in the capacity of training, this allows for the greatest flexibility for the Navy to maintain readiness when considering potential changes in the national security environment (Table 2.3-1).

Under Alternative 2, the areas beneath the newly established Okanogan D MOA and Mazama ATCAA would experience a change in existing environmental conditions due to noise exposure from Navy aircraft overflights. The maximum DNL for the Okanogan D MOA and Mazama ATCAA would be 46.2 dBA, a 0.5 dBA increase from Alternative 1 (Preferred Alternative) but still well below the FAA's DNL 65 dBA significance threshold. Visitors to National Forest and wilderness areas on weekends or at night would rarely hear an EA-18G, or other aircraft, because training flights typically occur Monday through Friday and during daylight hours. In addition, the maximum DNL would be experienced only at the highest ground elevations (elevations above 8,000 ft.), which are a very small percentage of overall ground elevations under the Action Area. Since the maximum DNL within the proposed airspace would be well below the FAA's significance threshold, airborne acoustics from Navy Aircraft overflights would cause minimal disruption to land-based recreational and tourism activities.

Alternative 2 also considers an increase in the capacity of training. The Okanogan MOAs would undergo a 12 percent increase in training sorties, and the Roosevelt MOAs would see an 11 percent increase in training sorties. The maximum DNL for the entire Action Area under Alternative 2 would be 49.8 dBA, a 0.5 dBA increase from Alternative 1 (Preferred Alternative) and a 0.1 dBA decrease from the No Action Alternative, which would be well the FAA's DNL 65 dBA significance. In addition, the highest possible  $L_{max}$  a person would potentially be exposed to remains consistent with the highest possible  $L_{max}$  under the No Action Alternative, and the likelihood of exposure remains low based upon the reasons provided under No Action Alternative. While noise levels can be measured and noise sources can be compared to each other using established metrics, the perception of a noise by individuals and their reaction to the same noise heard simultaneously may vary widely.

Nevertheless, occasional disturbances from military aircraft have been occurring in this area for several decades and are not expected to have lasting impacts on broader socioeconomic resources. Therefore, environmental impacts on socioeconomic resources under the Alternative 2 would be negligible.

Aircraft overflights associated with Alternative 2 would produce emissions as discussed in Section 3.2 (Air Quality) however, emissions would be well below all applicable thresholds. In addition, the use of lead paint, superfund facilities, risk management plan facilities, and wastewater discharge are not part of the Proposed Action. Therefore, existing aircraft overflights associated with Alternative 2 would not contribute to the four Environmental Justice Indexes identified in Section 3.7.2 (Affected Environment) that are at or above the 80th percentile.

Because impacts on socioeconomic resources are negligible, and emissions from aircraft overflights associated with Alternative 2 would be well below all applicable thresholds, there are no disproportionately high impacts or adverse effects on any low-income populations or minority populations. In addition to emissions being well below all applicable thresholds, the Navy's safety measures that protect adults from potential impacts also protect children. Therefore, Alternative 2 would not disproportionately expose children to environmental health or safety risks.

### **3.8 SUMMARY OF POTENTIAL IMPACTS ON RESOURCES AND IMPACT AVOIDANCE AND MINIMIZATION**

A summary of the potential impacts associated with each alternative is provided in Table 3.8-1. No impact avoidance and minimization measures are proposed for the Proposed Action due to impacts being assessed to be negligible. DoD, Navy, and FAA regulations, policies, and standard operating procedures ensure the safe execution of training activities.

**Table 3.8-1: Summary of Potential Impacts on Resource Areas**

<b>Resource Area</b>	<b>No Action Alternative</b>	<b>Alternative 1 (Preferred Alternative)</b>	<b>Alternative 2</b>
<b>Acoustic Environment (Noise)</b>	Under the No Action Alternative, military aircraft overflights in the existing airspace would continue in accordance with the current operational tempo resulting in a maximum DNL of 49.9 dBA, which would be well below the FAA's significance threshold of DNL 65 dBA for noise effects of an action. Thus, there would be no significant impacts on the acoustic environment.	Under Alternative 1, the maximum DNL resulting from military aircraft overflights in the existing airspace would be 49.3 dBA, and the maximum DNL in the proposed airspace extension would be 45.7 dBA. Because the maximum DNLs resulting from military aircraft overflights in both the existing and proposed airspace would be well below the FAA's significance threshold of DNL 65 dBA for noise effects of an action, there would be no significant impacts on the acoustic environment.	Under Alternative 2, the maximum DNL resulting from military aircraft overflights in the existing airspace would be 49.8 dBA, and the maximum DNL in the proposed airspace extension would be 46.2 dBA. Because the maximum DNLs resulting from military aircraft overflights in both the existing and proposed airspace would be well below the FAA's significance threshold of DNL 65 dBA for noise effects of an action, there would be no significant impacts on the acoustic environment.
<b>Air Quality</b>	Under the No Action Alternative, emissions are different than the baseline emissions due to the transition from EA-6B Prowlers to EA-18G Growlers, but no significant impacts on air quality are expected.	Under Alternative 1, there would be a decrease in all pollutant emissions except NO <sub>x</sub> compared to the baseline, and a minor increase in emissions compared to the No Action Alternative. All emissions are well below applicable thresholds. Thus, no significant impacts on air quality are expected.	Under Alternative 2, emissions increase in comparison to Alternative 1 and the No Action Alternative but decrease compared to the baseline. The increase in emissions represents a negligible contribution to global GHG emissions and climate change. Thus, no significant impacts on air quality are expected.
<b>Biological Resources</b>	The No Action Alternative would result in continued short-term, localized noise events beneath the existing MOAs. Wildlife exposure to low-altitude aircraft overflights would be infrequent and short in duration, and could result in short-term behavioral or physiological responses, but not to the extent where the general health of individuals or populations would be	Alternative 1 would result in a small decrease in short-term localized noise events beneath the proposed and existing MOAs. Wildlife exposure to low-altitude aircraft overflights would be infrequent and short in duration and could result in short-term behavioral or physiological responses, but not to the extent where general health of individuals or populations would be	Under Alternative 2, impacts would be the same as those described under Alternative 1. Thus, no significant impacts on biological resources are expected.



<b>Resource Area</b>	<b>No Action Alternative</b>	<b>Alternative 1 (Preferred Alternative)</b>	<b>Alternative 2</b>
	compromised. No significant impacts on biological resources are expected.	compromised. No significant impacts on biological resources are expected.	
<b>Cultural Resources</b>	Under the No Action Alternative, no significant impacts on cultural resources are expected.	Under Alternative 1, NRHP listed sites underneath the proposed and existing MOAs would experience a change in existing noise conditions. Noise would not be at a level that would result in physical harm (vibration related) to the NRHP-listed or future potentially listed sites. Thus, no significant impacts are expected to cultural resources.	Under Alternative 2, impacts would be the same as those described under Alternative 1. Thus, no significant impacts on cultural resources are expected.
<b>American Indian Traditional Resources</b>	Under the No Action Alternative, no significant impacts on American Indian traditional resources are expected.	Under Alternative 1, noise levels would be less than the baseline. Thus, no significant impacts on American Indian traditional resources are expected.	Under Alternative 2, impacts would be the same as those described under Alternative 1. Thus, no significant impacts on American Indian traditional resources are expected.
<b>Public Health and Safety</b>	Under the No Action Alternative, SOPs in place ensure the safe execution of training activities. In addition, noise levels are within FAA standards. Thus, no significant impacts on public health and safety are expected.	Under Alternative 1, noise levels would be reduced slightly compared to those under the No Action Alternative and would not exceed the FAA's DNL 65 dBA significance threshold. In addition, SOPs in place ensure the safe execution of training activities. Thus, no significant impacts on public health and safety are expected.	Under Alternative 2, impacts would be the same as those described under Alternative 1. Thus, no significant impacts on public health and safety are expected.
<b>Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risk</b>	Under the No Action Alternative, noise from aircraft overflights would remain below the FAA's DNL 65 dBA significance threshold. Occasional disturbances from military aircraft have been occurring in the action area for decades and are not expected to have lasting impacts. Thus, no significant impacts on socioeconomics are expected. Because no significant impacts	Under Alternative 1, noise from aircraft overflights would be below the FAA's DNL 65dBA significance threshold and airborne acoustics would cause minimal disruption to land based recreational and tourism activities. Thus, no significant impacts are expected on socioeconomics. Because no significant impacts are	Under Alternative 2, impacts would be the same as those described under Alternative 1. Thus, no significant impacts are expected on socioeconomics. Because no significant impacts are expected on socioeconomics, public health and safety, or air quality, there are no expected impacts on

<b>Resource Area</b>	<b>No Action Alternative</b>	<b>Alternative 1 (Preferred Alternative)</b>	<b>Alternative 2</b>
	are expected on socioeconomics, public health and safety, or air quality, there are no expected impacts on environmental justice, and children's environmental health risk.	expected on socioeconomics, public health and safety, or air quality, there are no expected impacts on environmental justice, and children's environmental health risk.	environmental justice, and children's environmental health risk.

Notes: (1) The Navy has invited Government-to-Government consultations with local federally recognized tribes but does not anticipate significant impacts on American Indian Traditional Resources under all three alternatives.

(2) NO<sub>x</sub> = Nitrogen Oxides, NRHP = National Register of Historic Places, FAA = Federal Aviation Administration, DNL = Day-Night Average Sound Level, SOP = Standard Operating Procedure

## 4 Cumulative Impacts

This chapter (1) defines cumulative impacts; (2) describes past, present, and reasonably foreseeable future actions relevant to cumulative impacts; (3) analyzes the incremental interaction the Proposed Action may have with other actions; and (4) evaluates cumulative impacts potentially resulting from these interactions.

### 4.1 DEFINITION OF CUMULATIVE IMPACTS

The approach taken in the analysis of cumulative impacts follows the objectives of NEPA, CEQ regulations, and CEQ guidance. Cumulative impacts are defined in 40 CFR 1508.1(g) as “effects on the environment that results from the incremental effects of the action when added to the other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from actions with individually minor but collectively significant effects taking place over a period of time.”

To determine the scope of environmental impact analyses, agencies shall consider cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact analysis document.

In addition, CEQ and U.S. EPA have published guidance addressing implementation of cumulative impact analyses—*Guidance on the Consideration of Past Actions in Cumulative Effects Analysis* (Council on Environmental Quality, 2005) and *Consideration of Cumulative Impacts in Environmental Protection Agency Review of NEPA Documents* (U.S. Environmental Protection Agency, 1999). CEQ guidance entitled *Considering Cumulative Impacts Under NEPA* (Council on Environmental Quality, 1997) states that cumulative impact analyses should

“...determine the magnitude and significance of the environmental consequences of the proposed action in the context of the cumulative impacts of other past, present, and future actions...identify significant cumulative impacts...[and]...focus on truly meaningful impacts.”

Cumulative impacts are most likely to arise when a relationship or synergism exists between a proposed action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in close proximity to a proposed action would be expected to have more potential for a relationship than those more geographically separated. Similarly, relatively concurrent actions would tend to offer a higher potential for cumulative impacts. To identify cumulative impacts, the analysis needs to address the following three fundamental questions.

- Does a relationship exist such that affected resource areas of the proposed action might interact with the affected resource areas of past, present, or reasonably foreseeable actions?
- If one or more of the affected resource areas of the proposed action and another action could be expected to interact, would the proposed action affect or be affected by impacts of the other action?
- If such a relationship exists, then does an assessment reveal any potentially significant impacts not identified when the proposed action is considered alone?

## **4.2 SCOPE OF CUMULATIVE IMPACTS ANALYSIS**

The scope of the cumulative impacts analysis involves the geographic extent of the effects of the Proposed Action. For this EA, the Eastern Washington SAA and its proposed extension delimits the geographic extent of the cumulative impacts analysis. In general, the Action Area would include those areas previously identified in Chapter 3 (Affected Environment and Environmental Consequences) for the respective resource areas. The time frame for cumulative impacts analyzed in this EA is not bound by a specific future time frame, but rather centers on the timing of the Proposed Action, which is undefined. The FAA limits its analysis of cumulative impacts to five years. The cumulative impact analysis can include activities that occurred in the past, are occurring in the present, and will continue to occur.

Another factor influencing the scope of cumulative impacts analysis involves identifying other actions to consider. Beyond determining that the geographic scope and time frame for the actions interrelate to the Proposed Action, the analysis employs the measure of “reasonably foreseeable” to include or exclude other actions. For the purposes of this analysis, public documents prepared by federal, state, and local government agencies form the primary sources of information regarding reasonably foreseeable actions. Documents used to identify other actions include notices of intent for EISs and EAs, management plans, land use plans, and other planning related studies.

## **4.3 PAST, PRESENT, AND REASONABLY FORESEEABLE ACTIONS**

This section focuses on past, present, and reasonably foreseeable future actions that occur within or potentially impact resources analyzed in the Action Area. Using the first fundamental question included in Section 4.1 (Definition of Cumulative Impacts), in determining which projects to include in the cumulative impacts analysis, a preliminary determination was made as to whether a relationship exists such that the affected resource areas of the Proposed Action might interact with the affected resource area of a past, present, or reasonably foreseeable action. If no such potential relationship exists, the action was not carried forward into the cumulative impacts analysis. In accordance with CEQ guidance (Council on Environmental Quality, 2005), these actions considered but excluded from further cumulative effects analysis are not cataloged here because the intent is to focus the analysis on the meaningful actions relevant to inform decision making. Actions included in this cumulative impacts analysis were determined to affect resource areas that the Proposed Action would also affect and are listed and briefly described in Table 4.3-1.

**Table 4.3-1: Cumulative Action Evaluation**

<b>Project</b>	<b>Project Description</b>	<b>Project Timeframe</b>		
		<b>Past</b>	<b>Present</b>	<b>Future</b>
Pacific Northwest Electronic Warfare (EW) Range	In 2014, the Navy completed the Pacific Northwest EW EA, which analyzed the operation of Mobile Electronic Warfare Training System vehicle-mounted emitters on U.S. Forest Service land to facilitate training within the area underlying the Okanogan and Roosevelt MOAs. Though operation of mobile emitter vehicles was included in the 2014 EA, to date this action has not occurred. It is possible that emitter vehicle operations would occur in the future.			X
Copperstone Planned Development	The project is a planned development located east of the Methow River in Methow in the south westernmost boundary of the existing Okanogan MOA. The development includes 56 single-family homes within a 277.5-acre plot (LDC, 2023). A proposed Planned Development Application in April 2023 described the proposed subdivision and responded to public comments. Public concerns addressed included water, traffic, wildlife, air quality, and cultural resources. A State Environmental Policy Act checklist was provided by Burma Shores, LLC, on March 22, 2023, evaluating potential impacts on environmental resources (Burma Shores LLC, 2023). Based on preliminary public comments, the proposed development could have cumulative impacts, when combined with the Proposed Action, on air quality and wildlife.			X
Pacific Northwest National Scenic Trail (PNT) Comprehensive Plan EA	The U.S. Forest Service developed a Comprehensive Plan for the PNT, a 1,200-mile trail that crosses through the existing and proposed Okanogan and Roosevelt MOAs (U.S. Department of Agriculture, 2023). The project may have cumulative impacts, when combined with the Proposed Action, on socioeconomics and environmental justice.			X

Notes: EA = Environmental Assessment, MOA = Military Operations Area

#### **4.3.1 OTHER ONGOING ACTIVITIES**

##### **4.3.1.1 Military Training Routes**

Military Training Routes (MTRs) are designated corridors for low-altitude, high-speed training activities. Military Aircraft using MTRs are exempt from the FAA speed restriction of 250 knots below 10,000 ft. MTRs are comprised of a centerline that goes from each defined point on the route. Typically, 5-nautical-mile buffers exist on either side of the centerline (10-nautical-miles-wide route) (Aeronautical Information Publication, 2023). Low-altitude, high-speed military aircraft may cause noise disturbance to community members, individuals recreating in wilderness areas, and wildlife. Two MTR corridors exist beneath the eastern Washington MOAs.

It should be noted that MTRs are not part of this Proposed Action and are established separately by the FAA, as discussed in Section 1.6 (Transit to/from Special Activity Airspace). MTRs overlap with the SAA addressed in this EA in some areas, but the two cannot be utilized at the same time and are scheduled independently.

#### **4.3.1.2 Tourism and Recreation**

Three national forests are underneath the existing and proposed SAA: Colville, Okanogan, and Kaniksu National Forests. Small portions of Wenatchee and Mt. Baker National Forests are within the project area. Three wilderness areas are underneath the existing and proposed SAA: Pasayten, Lake Chelan-Sawtooth, and Salmo-Priest. Recreational activities such as hiking, camping, and fishing are common in these areas. Additionally, portions of the Pacific Crest Trail (PCT) and Pacific Northwest National Scenic Trail (PNT) are underneath the MOAs.

#### **4.3.1.3 National Forest Management Plans**

As required by the National Forest Management Act of 1976, each national forest administrative unit has its own land and resource management plan. The plans are intended to be strategic and programmatic in nature. They are intended to have a 15-year life and amendments are utilized to accommodate changes in the landscape and advances in knowledge, science, and technology. The Colville National Forest land and resource management plan was published in 1988 and has benefited from amendments and supplementation by the Northwest Washington Forestry Coalition by creation of timber management, restoration, and wilderness protection plans. The Okanogan National Forest Land and Resource(s) Management Plan was developed in 1989. The Wenatchee and Mt. Baker Forest Plans were developed in 1990. Kaniksu National Forest is included in the Idaho Panhandle National Forests Land Management Plan developed in 1987. This plan was superseded by the 2015 management plan. These plans are tools that provide framework and broad guidance for making management decisions.

#### **4.3.1.4 Federal Aviation Administration Aeronautical Study**

In November 2022, the FAA completed a study evaluating the potential impacts of the Proposed Action on the National Airspace System. The FAA determined two minor impacts on the National Airspace System. Air Traffic Service route, T332, is adjacent to the proposed Okanogan D MOA, and one Air Traffic Service route that intersects the proposed Mazama ATCAA. National Airspace System routes would be useable while sorties are in occurrence, posing no significant hazard to airspace. The FAA determined the impacts to be minor and acceptable (Federal Aviation Administration, 2022b).

### **4.4 CUMULATIVE IMPACT ANALYSIS**

Where feasible, the cumulative impacts were assessed using quantifiable data; however, for many of the resources included for analysis, quantifiable data is not available, and a qualitative analysis was undertaken. In addition, where an analysis of potential environmental effects for future actions has not been completed, assumptions were made regarding cumulative impacts related to this EA where possible. The analytical methodology presented in Chapter 3 (Affected Environment and Environmental Consequences), which was used to determine potential impacts on the various resources analyzed in this document, was also used to determine cumulative impacts.

#### **4.4.1 ACOUSTIC ENVIRONMENT (NOISE)**

Based on the analysis in Section 3.1 (Acoustic Environment [Noise]), noise levels under the Proposed Action would remain similar to noise levels under the No Action Alternative (current noise levels) and would be well below the FAA's DNL 65 dBA significance threshold. Therefore, there are no cumulative impacts on the acoustic environment associated with the implementation of the Proposed Action when added to effects of the other past, present, and reasonably foreseeable projects.

#### **4.4.2 AIR QUALITY**

##### **4.4.2.1 Relevant Past, Present, and Future Actions**

Actions that are relevant to the cumulative impacts on air quality in the ROI include 2014 Electronic Warfare (EW) Range EA, MTRs, and the Copperstone Development.

##### **4.4.2.2 Cumulative Impact Analysis**

Climate change is a global concern, and GHG are a concern from a cumulative perspective because individual sources of GHG are not large enough to have an appreciable impact on climate change. The CEQ provided interim guidance for evaluating cumulative effects of climate change and GHG emissions, stating: “In evaluating a proposed action’s cumulative climate change effects, an agency should consider the proposed action in the context of the emissions from past, present, and reasonably foreseeable actions. When assessing cumulative effects, agencies should also consider whether certain communities experience disproportionate cumulative effects, thereby raising environmental justice concerns” (Council on Environmental Quality, 2023). Currently, there are not formally adopted NEPA thresholds of significance for GHG emissions. It is difficult to determine what level of proposed emissions would substantially contribute to global climate change. The Proposed Action would redistribute military aircraft sorties occurring within the existing and proposed SAA. Under the Preferred Alternative, the Proposed Action would not increase the number of sorties. Due to the assumed composition of aircraft sorties, GHG emissions resulting from the Preferred Alternative are projected to increase by a negligible amount compared to the No Action Alternative (0.02 percent). Thus, the Proposed Action would not result in any significant cumulative impacts on greenhouse gas emissions.

The Department of the Navy released a climate action plan in May 2022 to “build a climate-ready force” (U.S. Department of the Navy, 2022). The plan outlines two Performance Goals: build climate resilience and reduce climate threat. The Department of the Navy aims to have 100 percent zero emission vehicles, 50 percent reduction in building emissions, and divert 50 percent of waste from landfills by 2025; reduce emissions 65 percent by 2030; and have 100 percent carbon pollution-free green energy by 2030 (U.S. Department of the Navy, 2022).

The 2014 EW Range EA analyzed impacts on air quality from emissions from the operation of mobile emitter vehicles. Total emissions from mobile emitters in the Okanogan and Roosevelt MOAs were evaluated to be 0.23 tons of PM<sub>10</sub> annually. These emissions were evaluated to not be regionally significant as they would be approximately 0.0031 percent of the regional emissions (U.S. Pacific Fleet, 2014) (Table 4.4-1). Further, emissions from mobile emitters would be contained within north-central Washington (Central and Eastern Air Basin), where the emitters would be operated. As such, the Proposed Action would not have cumulative impacts on top of those already identified in the 2014 EW Range EA.

The proposed Copperstone Development would generate dust and emissions from equipment during construction. Dust emissions would be managed during construction (LDC, 2023). Impacts on air quality from the construction and operation of the Copperstone Development would be minor and localized to Methow (located on the southwestern corner of the existing Okanogan MOA). As such, actions from the development would have no cumulative impacts on air quality when combined with the Proposed Action.

MTRs impacts on air quality are short term and infrequent. Such activities do not have a measurable impact on air quality within the MOAs, and cumulative impacts would be negligible.

Cumulative air quality resource impacts from past, present, and future actions within the ROI would be less than significant for the reasons stated above. Therefore, there are no cumulative impacts on air quality associated with the implementation of the Proposed Action when added to effects of the other past, present, and reasonably foreseeable projects.

**Table 4.4-1: Summary of Annual Air Emissions for the 2014 EW Range EA**

Emission Source	Emissions, tons/year				
	CO	NOx	HC	SOx	PM <sub>10</sub>
Mobile Emitters	0.93	3.26	0.09	0.22	0.23

Notes: (1) HC = total hydrocarbons, CO = carbon monoxide, NOx = nitrogen oxides, SOx = sulfur oxides, PM<sub>10</sub> = suspended particulate matter less than or equal to 10 micrometers in diameter  
 (2) Emissions are representative of only those emissions incurred in the existing Okanogan and Roosevelt MOAs under the 2014 EW Range EA.

#### **4.4.3 BIOLOGICAL RESOURCES**

##### **4.4.3.1 Relevant Past, Present, and Future Actions**

Actions relevant to cumulative impacts on biological resources include the 2014 EW Range EA and the Copperstone Development. Biological resources that would be primarily impacted include birds and terrestrial animals impacted by noise disturbance.

##### **4.4.3.2 Cumulative Impact Analysis**

The 2014 EW Range EA evaluates the impact of mobile emitters on birds and mammals. It was determined that disturbances from mobile emitters would have no direct or indirect changes that would have a significant impact on species. Mobile emitters associated with the project would be implemented primarily in the Olympic Peninsula, outside of the Action Area. As such, impacts from mobile emitters electromagnetic signals would have a minimal, short-term, and recoverable impact on birds and mammals (U.S. Pacific Fleet, 2014).

The Copperstone Development construction may contribute to cumulative noise impacts on wildlife. Construction activities would occur for at least three years. Long-term noise from motor-vehicles, humans, and pets would be minimal. The project would comply with all federal, state, and local noise regulations (LDC, 2023). The proposed development would be in the existing MOA and likely have no measurable cumulative impact on wildlife when combined with the Proposed Action.

Based upon the analysis in Section 3.3 (Biological Resources), and the reasons summarized above, the incremental contribution of the Proposed Action to cumulative impacts on bird populations would be low. Therefore, there are no cumulative impacts on biological resources associated with the implementation of the Proposed Action when added to effects of the other past, present, and reasonably foreseeable projects.

#### **4.4.4 CULTURAL RESOURCES**

Based on the analysis in Section 3.4 (Cultural Resources), implementation of the Proposed Action is not expected to have any effects on Cultural Resources. Cumulative visual, auditory, or atmospheric impacts are not anticipated. In addition, the Proposed Action does not involve construction, digging, or other practices that would affect cultural resources. Therefore, there are no cumulative impacts on cultural



resources associated with the implementation of the Proposed Action when added to effects of the other past, present, and reasonably foreseeable projects.

#### **4.4.5 AMERICAN INDIAN TRADITIONAL RESOURCES**

Based on the analysis in Section 3.5 (American Indian Traditional Resources), implementation of the Proposed Action is not expected to have any effects on American Indian traditional resources. Therefore, there are no cumulative impacts on American Indian traditional resources associated with the implementation of the Proposed Action when added to effects of the other past, present, and reasonably foreseeable projects.

#### **4.4.6 PUBLIC HEALTH AND SAFETY**

Activities occurring under the 2010 NWTRC EIS/OEIS would not change under the extension of the Eastern Washington SAA. Based on the analysis in Section 3.6 (Public Health and Safety), noise levels under the Proposed Action would remain similar to current levels and would not exceed the FAA's DNL 65 dBA significance threshold. In addition, standard operating procedures in place ensure the safe execution of training activities. Therefore, there are no cumulative impacts on public health and safety associated with the implementation of the Proposed Action when added to effects of the other past, present, and reasonably foreseeable projects.

#### **4.4.7 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE**

Three national forests underlie the existing airspace: Okanogan National Forest, Colville National Forest, and Kaniksu National Forest. Small portions of Mt. Baker National Forest and Wenatchee National Forest are within the Action Area. Pasayten, Salmo-Priest, and Lake Chelan-Sawtooth Wilderness areas are present within the Action Area. In addition to protected areas, the PCT and PNT underlie the existing and proposed SAA. A small portion of the PCT enters the southwestern corner of the proposed Okanogan D MOA. Portions of the PNT runs along the northern boundary of the proposed and existing airspace. Sorties associated with the Proposed Action and MTRs may disturb visitors in the National Forests and Wilderness areas. Similar aircraft overflight noise disturbances are evaluated in the 2020 NWTTC Supplemental EIS/OEIS within the Olympic MOA with regards to Olympic National Park (U.S. Pacific Fleet et al., 2020). The study concluded that the perception of overflight noise is highly variable depending on natural ambient noise, elevation, and location within these spaces. Airborne acoustics from aircraft overflights over the eastern Washington SAA may potentially impact recreational and tourism activities. Impacts on tourism and recreation impacts would be brief and not an impact on the overall long-term enjoyment of recreational areas.

The PNT EA evaluated the impacts of visitation and population increase on "gateway" communities. Increases in tourism and population to communities along the trail during peak months increases economic demands (U.S. Department of Agriculture, 2023). Aircraft noise over gateway communities may disturb tourists in these areas. However, for reasons stated in the previous paragraph, negative impacts on gateway communities are unlikely. As such, the Proposed Action would not have any cumulative socioeconomic impact on PNT gateway communities.

All other cumulative socioeconomic impacts from past, present, and future actions would be less than significant because the overall number of sorties would decrease slightly under the Preferred Alternative from what was analyzed in the 2010 NWTRC EIS/OEIS. Therefore, there are no cumulative impacts on socioeconomics and environmental justice associated with the implementation of the Proposed Action when added to effects of the other past, present, and reasonably foreseeable projects.

## 5 Other Considerations Required by NEPA

### 5.1 CONSISTENCY WITH OTHER FEDERAL, STATE, AND LOCAL LAWS, PLANS, POLICIES, AND REGULATIONS

Based on the evaluation with respect to consistency and statutory obligations, the Navy's Proposed Action for the Eastern Washington EA does not conflict with the objectives or requirements of federal, state, regional, or local plans, policies, or legal requirements. Table 5.1-1 summarizes environmental compliance requirements that were considered in preparing this EA.

**Table 5.1-1: Other Environmental Compliance Requirements Considered in Preparing this EA**

Plans, Policies, and Controls	Responsible Agency	Status of Compliance
Clean Air Act (CAA) (42 U.S.C. section 7401 et seq.) CAA General Conformity Rule (40 CFR part 93[B]) State Implementation Plan (SIP)	United States Environmental Protection Agency (EPA)/State of Washington	The CAA is the comprehensive federal law that regulates air emissions from stationary and mobile sources. The Proposed Action would not conflict with attainment and maintenance goals established in SIPs. A CAA conformity determination would not be required because emissions attributable to the alternatives including the Proposed Action would not occur within a Federal CAA designated nonattainment or maintenance area for any criteria pollutants.
Clean Water Act (CWA) (33 U.S.C. section 1251 et seq.)	EPA/State of Washington	The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. No permits are required under the CWA sections 401, 402, or 404(b)(1) as the Proposed Action does not include construction, demolition, or discharge of pollutants into waters of the U.S.
Endangered Species Act (ESA) (16 U.S.C. section 1531 et seq.)	U.S. Fish and Wildlife Service (USFWS)	The ESA established protection over and conservation of threatened and endangered species and the ecosystems upon which they depend. The Navy consulted with USFWS to determine impacts.
Migratory Bird Treaty Act (16 U.S.C. sections 703–712)	USFWS	The Migratory Bird Treaty Act prohibits the taking, killing, or possessing of migratory birds or the parts, nests, or eggs of such birds, unless permitted by regulation. The 2003 National Defense Authorization Act provides that the Armed Forces may take migratory birds incidental to military readiness activities provided that, for those ongoing or proposed activities that the Armed Forces determine may result in a significant adverse effect on a population of a migratory bird species, the Armed Forces confer and cooperate with the Service to develop and implement appropriate conservation measures to minimize or mitigate such significant adverse effects. The Proposed Action will not have significant adverse effects at the population level.

Plans, Policies, and Controls	Responsible Agency	Status of Compliance
Bald and Golden Eagle Protection Act (16 U.S.C. section 668–668d)	U.S. Forest Service (USFS)	This Act prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. Implementation of the Proposed Action would not result in an adverse effect on Bald or Golden Eagles as their protection is defined in the Bald and Golden Eagle Protection Act.
National Historic Preservation Act (36 CFR part 800)	Navy/State Historic Preservation Office	The Proposed Action would not result in any negative impacts, change, or alter cultural resources of surrounding areas. The Navy consulted with the Washington State Historic Preservation Office to determine impacts. The Washington State Historic Preservation Office did not object to the Navy's determination of "no historic properties affected."
EO 12898, <i>Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations</i> (58 FR 7269 [16 February 1994])	Navy	The Proposed Action would not disproportionately affect minority and low-income populations.
EO 13045, <i>Protection of Children from Environmental Health Risks and Safety Risks</i> (62 FR 19885 [23 April 1997])	Navy	The Proposed Action would not result in environmental health risks and safety risks that may disproportionately affect children.
EO 13175, <i>Consultation and Coordination with Indian Tribal Governments</i>	Navy	The Navy invited the tribal governments referenced in Section 3.5.3 (Environmental Consequences) to Government-to-Government consultation regarding the Proposed Action. None of the tribes have requested consultation in response to the invitations.
EO 12088, <i>Federal Compliance with Pollution Control Standards</i>	Navy	The Proposed Action would not result in any exceedance of pollution control standards.
EO 13007, <i>Indian Sacred Sites</i>	Navy	The Proposed Action would not result in any direct or indirect impacts on sacred sites.
EO 13423, <i>Strengthening Federal Environmental, Energy, and Transportation Management</i>	Navy	This order directs agencies to implement environmentally conscious goals in regard to energy, water, commerce, chemicals and toxic materials, and transportation. The Proposed Action complies with the goals of this order.
EO 13990, <i>Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis</i>	Navy	The Proposed Action would not have a significant impact on public health and safety.
EO 14008, <i>Tackling the Climate Change Crisis at Home and Abroad</i>	Navy	The Proposed Action would comply with the policy's goals.

Plans, Policies, and Controls	Responsible Agency	Status of Compliance
EO 14096, <i>Revitalizing Our Nation's Commitment to Environmental Justice for All</i>	Navy	The Proposed Action would not result in any disproportionately high and adverse human health or environmental effects on minority or low-income populations.
Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. section 9601 et seq.)	Navy	The Proposed Action would not deal with contaminated sites or pose threats of contamination.
Emergency Planning and Community Right-to-Know Act (42 U.S.C. section 11001 et seq.)	Navy	The Proposed Action is consistent with the Emergency Planning and Community Right-to-Know Act.
Energy Independence and Security Act of 2007 (42 U.S.C. section 17001 et seq.)	Navy	The Proposed Action is consistent with the Energy Independence and Security Act of 2007.
Resource Conservation and Recovery Act (42 U.S.C. section 6901 et seq.)	Navy	The Proposed Action is consistent with the Resource Conservation and Recovery Act.
Pollution Prevention Act of 1990 (42 U.S.C. section 13101 et seq.)	Navy	The Proposed Action is consistent with Pollution Prevention Act of 1990.
Federal Aviation Act of 1958 (49 U.S.C. section 1301 et seq.)	Navy	The Proposed Action is consistent with the Federal Aviation Act of 1958.
Toxic Substances Control Act (15 U.S.C. section 2601 et seq.)	Navy	The Proposed Action would not deal with toxic substances or pose threats of contamination.
Federal Aviation Administration (FAA) Order 1050.1F Environmental Impacts: Policies and Procedures	Navy/FAA	The Proposed Action would comply with the FAA Order 1050.1F policies and procedures.
FAA Order Job Order (JO) 7400.2P Procedures for Handling Airspace Matters	Navy	The Proposed Action would comply with FAA Order JO 7400.2P Procedures for Handling Airspace Matters.

Notes: U.S.C. = United States Code, CFR = Code of Federal Regulations, FR = Federal Register, EO = Executive Order

## 5.2 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES

Resources that are irreversibly or irretrievably committed to a project are those that are used on a long-term or permanent basis. This includes the use of non-renewable resources such as metal and fuel, and natural or cultural resources. These resources are irretrievable in that they would be used for this project when they could have been used for other purposes. Human labor is also considered destruction of natural resources that could limit the range of potential uses of that environment.

Implementation of the Proposed Action would not involve any additional human labor or non-renewable resources and would not result in significant irreversible or irretrievable commitment of resources.

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## Appendix A: Glossary





## Appendix A      Glossary

Term	Definition
Above Ground Level (AGL)	Altitude expressed in feet measured above ground level.
Air Traffic Control (ATC)	A service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.
Air Traffic Control Assigned Airspace (ATCAA)	Airspace of defined vertical/lateral limits, assigned by ATC, for the purpose of providing air traffic segregation between the specified activities being conducted within the assigned airspace and other instrument flight rules air traffic.
Ceiling	The highest altitude of a particular section of airspace.
Floor	The lowest altitude of a particular section of airspace.
Instrument Flight Rules	Rules governing the procedures for conducting instrument flight.
Mean Sea Level (MSL)	Altitude expressed in feet measured from mean sea level and adjusted locally (below 18,000 feet) based on prevailing barometric pressure.
Military Operations Area (MOA)	A MOA is airspace established outside of Class A airspace to separate or segregate certain non-hazardous military flight activities from instrument flight rules aircraft and to identify for visual flight rules aircraft where these activities are conducted.
Military Training Route (MTR)	Airspace of defined vertical and lateral dimensions established for the conduct of military flight training at airspeeds in excess of 250 knots indicated airspeed.
National Airspace System (NAS)	The common network of U.S. airspace managed by the Federal Aviation Administration; air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.
Notice to Air Missions (NOTAM)	A notice containing information (not known sufficiently in advance to publicize by other means) concerning the establishment, condition, or change in any component (facility, service, or procedure of, or hazard in the National Airspace System) the timely knowledge of which is essential to personnel concerned with flight operations.
Sortie	A single military aircraft training flight from takeoff to landing.

Term	Definition
Special Activity Airspace (SAA)	Airspace with defined dimensions within the NAS wherein limitations may be imposed upon operations for national defense, homeland security, public interest, or public safety. Special activity airspace includes but is not limited to the following: ATCAA, Altitude Reservations, MTR, Air Refueling Tracks and Anchors, Temporary Flight Restrictions, and Special Security Instructions.
Standard Operating Procedure (SOP)	A form of Best Management Practice, the establishment of procedures to be followed in carrying out a given operation or in a given situation to provide for the safety of personnel and equipment, as well as the success of the training activities.
Visual Flight Rules	Rules that govern the procedures for conducting flight under visual conditions.

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## Appendix B: Noise Analysis for the Proposed Eastern Washington Airspace Extension



# **Noise Analysis for the Proposed Eastern Washington Airspace Extension**

*June 2024*

*Prepared for:*

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## List of Acronyms

AAs	Action Alternatives
ACM	Air Combat Maneuvers
AGL	Above Ground Level
ATCAA	Air Traffic Control Assigned Airspace
BFM	Basic Fighter Maneuvers
dB	Decibels
dBA	A-Weighted Sound Level
CAS	Close Air Support
CVWP	Commander, Electronic Attack Wing, U.S. Pacific Fleet
DNL	Day-Night Average Sound Level
DoD	Department of Defense
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPR	Engine Pressure Ratio
ETR	Engine Temperature Variation
EW	Electronic Warfare
F	Fahrenheit Temperature Scale
FAA	Federal Aviation Administration
FL	Flight Level
ft.	Feet
HP	Horsepower
Hz	Hertz
In-Hg	Inches of Mercury
IR	Instrument Route
L <sub>dn</sub>	A-Weighted Day-Night Average Sound Level
L <sub>dnr</sub>	A-Weighted Onset-Rate Adjusted Day-Night Average Sound Level
L <sub>max</sub>	Maximum Received Sound Level
MOA	Military Operations Area
MOB	Main Operating Base
MR_NMap	MOA and Route NoiseMap Model
MSL	Mean Sea Level
MTR	Military Training Route
NAA	No Action Alternative
NASWI	Naval Air Station Whidbey Island
NC	Engine Core Speed
NM	Nautical Mile
NWTRC	Northwest Training Range Complex
OEIS	Overseas Environmental Impact Statement
PACFLT	United States Pacific Fleet
ROD	Record of Decision
RPM	Rotations Per Minute
SAA	Special Activity Airspace

Sq NM      Square Nautical Mile  
U.S.      United States

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## SECTION 1. INTRODUCTION

This noise analysis supports the Environmental Assessment (EA) for the potential addition of the Okanogan D Military Operations Area (MOA) and proposed Mazama Air Traffic Control Assigned Airspace (ATCAA). This report analyzes the aircraft noise associated with training operations under the No Action Alternative (NAA) (the existing conditions), Baseline Analysis (the previous noise study with the EA-6B Prowler aircraft), and the Action Alternatives (AAs).

### 1.1 PURPOSE

Commander, United States Pacific Fleet (PACFLT), a Command of the United States (U.S.) Navy (hereinafter, referred to as the Navy), is requesting the Federal Aviation Administration (FAA) establish an extension to existing Special Activity Airspace (SAA)<sup>1</sup> in eastern Washington State to meet mission readiness requirements for Commander, Electronic Attack Wing, U.S. Pacific Fleet (CVWP). Under the Proposed Action, the FAA would establish an extension to existing vertical and lateral airspace dimensions to the west of the existing airspace over northeastern Washington State. The Proposed Action would also include a redistribution of the current CVWP training flight sorties published in the 2010 Northwest Training Range Complex (NWTRC) Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) (Navy 2010), hereinafter referred to as NWTRC EIS/OEIS, to accurately characterize how CVWP is projecting to use the airspace.

The airspace in this EA is part of the larger NWTRC. In 2010, the Navy completed the NWTRC EIS/OEIS, which analyzed potential impacts associated with aircraft training in the Okanogan and Roosevelt MOAs and the Molson and Republic ATCAAs. While the NWTRC EIS/OEIS and Record of Decision (ROD) also analyzed the Chinook and Olympic MOAs in Washington State, no changes are proposed in those areas as part of the Proposed Action, and analyses of those areas are not included in this EA. The analysis in this EA is limited to the Okanogan and Roosevelt MOAs; the Molson, Methow, and Republic ATCAAs; and the Okanogan D MOA and Mazama ATCAA as a part of the Proposed Action (Figure 1-1).

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<sup>1</sup> SAA consists of airspace of defined dimensions within the National Airspace System wherein limitations may be imposed upon operations for national defense, homeland security, public interest, or public safety.

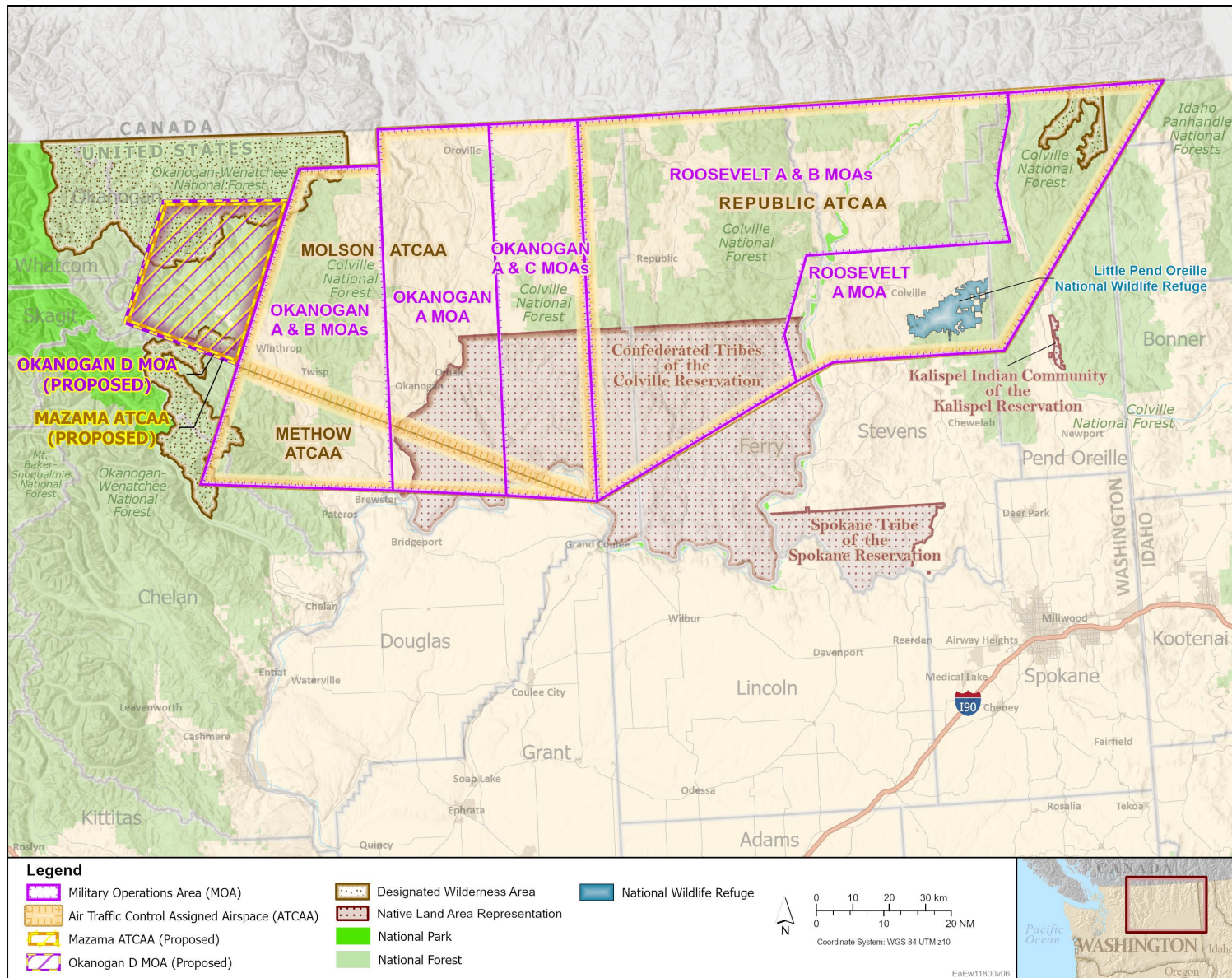


Figure 1-1. Existing and Proposed MOAs and ATCAAs in the Action Area

## **1.2 DESCRIPTION OF THE STUDY AREA**

All navigable airspace in the U.S. is regulated by the FAA by direction of Congress (49 U.S.C. Section 40103 [b] [1]). This EA analyzes the potential impacts of actions associated with the extension of existing airspace in the form of a MOA and in the form of an ATCAA. In 1977, the FAA designated the airspace in eastern Washington for use by the Navy for training purposes. Descriptions of the MOAs and ATCAAs are provided in Table 1-1. The existing SAA (i.e., the NAA) contains the following: Okanogan A, B, and C MOAs; the Molson and Methow ATCAAs above the Okanogan MOAs; the Roosevelt A and B MOAs; and the Republic ATCAA above the Roosevelt MOAs. Because the Okanogan B, Okanogan C, and Roosevelt B MOAs have airspace floors of 300 ft. above ground level (AGL), airport avoidance areas exist within these MOAs.



**Table 1-1. Existing Airspace Altitude Limits**

No Action	Airspace Name	Floor (ft MSL or ft AGL)	Ceiling (ft MSL)	Area (sq NM)	Avoidance Areas
	Okanogan A MOA	9,000 ft MSL	17,999	3,437	
	Okanogan B MOA	300 ft AGL	8,999	1,267	Excludes the airspace 1,500 ft AGL and below within a 3 NM radius of Twisp Municipal Airport and Methow Valley State Airport
	Okanogan C MOA	300 ft AGL	8,999	979	Excludes the airspace 1,500 ft AGL and below within a 3 NM radius of the Hart Range Airport
	Roosevelt A MOA	9,000 ft MSL	17,999	4,160	
	Roosevelt B MOA	300 ft AGL	8,999	2,898	Excludes the Airspace 1,500 ft AGL and below within a 3 NM radius of Ferry County Airport
	Molson ATCAA (above Okanogan A/B/C MOA)	18,000 ft MSL	50,000	2,752	
	Methow ATCAA (above Okanogan A/B/C MOA)	18,000 ft MSL	22,999	683	
	Republic ATCAA (above Roosevelt A/B MOA)	18,000 ft MSL	50,000	4,160	
AGL= above ground level; ATCAA = Air Traffic Control Assigned Airspace; FL = Flight Level; ft = feet; MOA = Military Operations Area; MSL= Mean Sea Level					

### 1.3 OVERVIEW OF SCENARIOS AND ANNUAL AIRCRAFT SORTIES

The Navy’s Proposed Action is to request the FAA extend the Okanogan MOA airspace, with three alternatives under consideration along with a previous analysis baseline for comparison: (a) NAA (the existing conditions); (b) AA 1, under which the FAA would create the new Okanogan D MOA from 11,500 ft. above mean sea level (MSL) up to but not including 18,000 feet MSL and the Mazama ATCAA (directly above the Okanogan D MOA) from 18,000 ft. MSL to 25,000 ft. MSL; and (c) AA 2, which has the same airspace units as AA 1 but increases the number of sorties within the Okanogan and Roosevelt MOAs and overlying ATCAAs. Summarized descriptions of the AAs are provided in the following bullets:

- Baseline: Operational Levels from the 2010 NWTRC EIS and Existing Airspace Units
- NAA: Present day (2024) levels with the EA-18G replacing EA-6B aircraft and Existing Airspace Units
- AA 1: Slight decrease from Baseline and NAA levels with the EA-18G replacing EA-6B aircraft; includes the proposed Okanogan D MOA and Mazama ATCAA
- AA 2: 12 percent increase in Okanogan A/B/C/D MOA sorties and 11 percent increase in Roosevelt A/B MOA sorties; includes the proposed Okanogan D MOA and Mazama ATCAA

Table 1-2 displays the AA airspace units to create new Okanogan D MOA and Mazama ATCAA. Table 1-3 presents the modeled aircraft sorties within the eastern Washington airspace for each of the modeled scenarios. The noise modeling has the aircraft sorties distributed equally in area throughout the entire Okanogan and Roosevelt MOAs.

**Table 1-2. Action Alternatives Airspace Units and Altitude Limits**

Proposed Action Alternatives	Airspace Name	Floor (ft MSL or ft AGL)	Ceiling (ft MSL)	Area (sq NM)	Avoidance Areas
	Okanogan A MOA	9,000 ft MSL	17,999	3,437	
	Okanogan B MOA	300 ft AGL	8,999	1,267	Excludes the airspace 1,500 ft AGL and below within a 3 NM radius of Twisp Municipal Airport and Methow Valley State Airport
	Okanogan C MOA	300 ft AGL	8,999	979	Excludes the airspace 1,500 ft AGL and below within a 3 NM radius of the Hart Range Airport
	Okanogan D MOA	11,500 ft MSL	17,999	519	
	Roosevelt A MOA	9,000 ft MSL	17,999	4,160	
	Roosevelt B MOA	300 ft AGL	8,999	2,898	Excludes the Airspace 1,500 ft AGL and below within a 3 NM radius of Ferry County Airport
	Molson ATCAA (above Okanogan A/B/C MOA)	18,000 ft MSL	50,000	2,752	
	Methow ATCAA (above Okanogan A/B/C MOA)	18,000 ft MSL	22,999	683	
	Republic ATCAA (above Roosevelt A/B MOA)	18,000 ft MSL	50,000	4,160	
	Mazama ATCAA (above Okanogan D MOA)	18,000 ft MSL	25,000	519	
AGL= above ground level; ATCAA = Air Traffic Control Assigned Airspace; FL= Flight Level; ft = feet; MOA = Military Operations Area; MSL = Mean Sea Level					

**Table 1-3. Annual Aircraft Sorties in the Eastern Washington Airspace for the Modeled Scenarios**

Aircraft Type	NWTRC EIS (Baseline)		No Action Alternative		Alternative 1		Alternative 2	
	Existing Okanogan MOAs and Overlying ATCAAs	Existing Roosevelt MOAs and Overlying ATCAAs	Existing Okanogan MOAs and Overlying ATCAAs	Existing Roosevelt MOAs and Overlying ATCAAs	Okanogan MOAs and Overlying ATCAAs	Roosevelt MOAs and Overlying ATCAAs	Okanogan MOAs and Overlying ATCAAs	Roosevelt MOAs and Overlying ATCAAs
EA-6B	2,584	1,267	0	0	0	0	0	0
EA-18G	355	43	2,939	1,310	2,500	1,800	2,800	2,000
Other Navy Users (modeled as 50% F/A-18 and 50% F-35)	47	66	47	66	20	10	25	15
<b>Total</b>	<b>2,986</b>	<b>1,376</b>	<b>2,986</b>	<b>1,376</b>	<b>2,520</b>	<b>1,810</b>	<b>2,825</b>	<b>2,015</b>

## SECTION 2. NOISE METRICS AND MODELS

### 2.1 NOISE METRICS

Noise is one of the most prominent environmental issues associated with military training activities. The noise environment at military bases and training areas can include various types of noise sources that can either be classified as continuous noise (e.g., on-base vehicular traffic), or impulsive noise (e.g., weapons firing or detonation of explosives). Not all of these noise sources are directly associated with military training, such as civilian vehicular traffic or building heating, ventilation, and air conditioning system noise. Noise associated with the Proposed Action would only include noise from aircraft training activities in the existing and proposed SAA.

The Day-Night Average Sound Level (DNL) is the federally recommended noise measure used for assessing long-term sound levels occurring during a 24-hour period. DNL (which is sometimes denoted by  $L_{dn}$ ) is an average sound level, expressed in decibels (dB), which is commonly used to assess aircraft noise exposures in communities in the vicinity of airfields (FICUN 1980, USEPA 1982, ANSI 2003). DNL values are related to compatible and incompatible land uses and do not directly relate to any singular sound event a human may hear. DNL includes a 10 dB adjustment for nighttime noise events. Acoustic daytime is defined as the period from 7 a.m. to 10 p.m., and acoustic nighttime is the period from 10 p.m. to 7 a.m. the following morning. The 10 dB adjustment accounts for the generally lower background sound levels and greater community sensitivity to noise during nighttime hours.

To accurately assess the impacts on humans from these different types of noise events, the DNL metric is used with different weighting factors that emphasize certain parts of the audio frequency spectrum. The normal human ear detects sounds in the range from 20 Hertz (Hz) to 20,000 Hz. It is most sensitive to sounds in the 1,000 to 4,000 Hz range. Community noise is assessed using a filter that approximates the frequency response of the human ear, adjusting low and high frequencies to match the sensitivity of the ear. This “A-weighting” filter is used to assess most community noise sources.

Aircraft noise generated in SAA is typically different from that associated with airfield operations. As opposed to patterned or continuous noise environments associated with airfields, overflights within SAA can be highly variable in occurrence and location. Individual military overflight events also differ from typical community noise events because noise from a low-altitude, high-air-speed flyover can have a sudden onset (i.e., exhibiting a rate of increase in sound level – onset rate – of up to 30 to 150 dB per second).

To represent these differences, the conventional DNL metric is adjusted to account for the “surprise” effect on humans from the sudden onset of aircraft noise events with an adjustment up to 11 dB above the normal Sound Exposure Level (Stusnick et al. 1992, Stusnick et al. 1993). Onset rates between 15 to 150 dB per second require an adjustment of 0 to 11 dB, while onset rates below 15 dB per second require no adjustment. The adjusted DNL is designated as the Onset-Rate Adjusted Day-Night Average Sound Level ( $L_{dnr}$ ).  $L_{dnr}$  employs A-weighted sound levels.

Another noise metric that can provide additional information about the noise environment is the maximum noise level ( $L_{max}$ ). The  $L_{max}$  is the highest sound level measured during a single event where the sound level changes value with time (e.g., an aircraft overflight). The  $L_{max}$  is unaffected by the number of training activities and is affected by the several factors that are specific to a

particular overflight (e.g., altitude, engine power setting). Due to the flight activities being dispersed throughout the airspace, persons on the ground experience noise events with a wide range of  $L_{\max}$  values. In this setting, overflights with the highest possible  $L_{\max}$  (i.e., the aircraft passes directly overhead at the lowest permitted altitude and highest engine power setting) are relatively rare.

Training airspace noise was assessed using the Department of Defense (DoD) recommended noise metrics (FICUN 1980, U.S. Army 2007). Aircraft flight noise was assessed using the A-weighted Onset-Rate Adjusted Day-Night Average Sound Level ( $L_{\text{dnr}}$ ). In addition, the aircraft flight noise was assessed using the FAA-recommended DNL metric ( $L_{\text{dn}}$ ).

## **2.2 COMPUTERIZED NOISE EXPOSURE MODELS**

Calculated noise levels for aircraft operations were developed using the MOA and Route NoiseMap Model (MR\_NMap) (Ikelheimer and Downing 2013). The Department of the Air Force developed this general-purpose computer model for calculating noise exposures occurring away from airbases, since aircraft noise is also an issue within MOAs and ranges, as well as along Military Training Routes (MTRs). This model expands the calculation of noise exposures away from airbases by using algorithms from both NoiseMap (Moulton 1992) and RouteMap (Bradley 1996). MR\_NMap, which is the DoD noise model for airspace noise analysis, uses two primary noise models to calculate the noise exposure: track and area operations. Track operations are for operations that have a well-defined flight track, such as MTRs, aerial refueling, and strafing tracks. Area operations are for operations that do not have well-defined tracks, but occur within a defined area, such as air-to-air combat practice within a MOA.

For track operations, input requirements are the same as for RouteMap, but more than just MTRs can be modeled. For area operations, the model allows flexibility. If little is known about the airspace utilization within a MOA, then the MOA boundaries can simply be used, and the operations are uniformly distributed within the defined area. However, if more is known about how and where the aircraft fly within the MOA, subareas can be defined within the MOA to more accurately model the noise exposure.

Once the airspace is defined, the user must describe the mission types occurring within each airspace segment. Individual aircraft missions include the altitude distribution, airspeed, durations, and engine power settings. These individual profiles are coupled with airspace components and annual operational rates. After the airspace and operational parameters are defined, MR\_NMap calculates the resulting  $L_{\text{dn}}$  or  $L_{\text{dnr}}$ . The model calculates these noise metrics for each airspace unit.

### SECTION 3. AIRSPACE TRAINING ACTIVITIES

The EA-18G squadrons at Naval Air Station Whidbey Island (NASWI) conduct Air Combat Maneuver (ACM) missions and Electronic Warfare (EW) missions within the eastern Washington airspace complex. The two mission types were also modeled for the previous baseline analysis of the EA-6B missions within the complex.

The EA-18G aircrews at NASWI developed distributions of missions in terms of both airspace used and annual sorties. For the NAA and AA 1 conditions, current operational data were used for the annual sortie rates along with airspace utilization. Current airspace utilization logs were used to determine the number of annual sorties flown in the Okanogan MOAs and Roosevelt MOAs. For the Baseline scenario, the annual sorties come from the 2010 NWTRC EIS and includes the EA-6B aircraft that was used in the previous noise model for the EIS. For AA 2, the EA-18G is projected to increase sorties by 12 percent in Okanogan MOAs and by 11 percent in Roosevelt MOAs. Table 3-1 provides the distribution of training mission sorties required for each mission types as well as the number of annual sorties across each of the modeled scenarios within the eastern Washington airspace. Another modeling parameter is the percentage of operations that occur during acoustic daytime (7 a.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) for each mission type (also presented in the tables).

**Table 3-1. Distribution of Mission Types and Annual Aircraft Sorties for Each Modeled Scenario**

Scenario	Aircraft Type	Mission Type	Percentage of Mission Type	Acoustic Day (0700-2200)	Acoustic Night (2200-0700)	Annual Sorties Acoustic Day	Annual Sorties Acoustic Night	Total Annual Sorties
Baseline	EA-18G	ACM	26.3%	97.5%	2.5%	102	3	105
		EW	73.7%	97.5%	2.5%	286	7	293
	EA-6B	ACM	26.3%	97.5%	2.5%	988	25	1,013
		EW	73.7%	97.5%	2.5%	2,767	71	2,838
No Action	EA-18G	ACM	26.3%	97.5%	2.5%	1,090	28	1,131
		EW	73.7%	97.5%	2.5%	3,053	78	3,169
PAA 1	EA-18G	ACM	26.3%	97.5%	2.5%	1,103	28	1,131
		EW	73.7%	97.5%	2.5%	3,090	79	3,169
PAA 2	EA-18G	ACM	26.3%	97.5%	2.5%	1,230	32	1,262
		EW	73.7%	97.5%	2.5%	3,450	88	3,538

The annual number of events, sorties, and missions for the EA-18G (and EA-6B for the Baseline scenario) within the airspace for the Baseline, NAA, AA 1, and AA 2 are shown in Table 3-2 through Table 3-5. Each mission event can have multiple aircraft sorties (depending on the number of aircraft that perform each mission), and if those events go through multiple sections of the airspace, then additional sorties are recorded for each event. For noise modeling, the number of annual sorties is modeled, and the duration within each section of the airspace is calculated based on the relative airspace areas when a sortie is performed across multiple MOAs.

Other Navy users utilize the eastern Washington airspace for their training, as well. These users include the Navy F/A-18 and F-35 aircraft displayed at the bottom of Table 1-3. Table 3-6 summarizes the annual sorties for these aircraft. Please note that the sortie numbers for “other Navy users” as shown in Table 1-3 are not included in Table 3-2 through Table 3-5.

**Table 3-2. Baseline EA-18G and EA-6B Sorties per Mission Type across Each MOA**

EA-18G	Mission Type	Okanogan MOAs		Roosevelt MOAs		Sum of Sorties
		%	Sorties	%	Sorties	
	ACM	26.3%	93	26.3%	11	105
	EW	73.7%	262	73.7%	32	293
	<b>TOTAL</b>		<b>355</b>		<b>43</b>	<b>398</b>
EA-6B	Mission Type	Okanogan MOAs		Roosevelt MOAs		Sum of Sorties
		%	Sorties	%	Sorties	
	ACM	26.3%	680	26.3%	333	1,013
	EW	73.7%	1,904	73.7%	934	2,838
	<b>TOTAL</b>		<b>2,584</b>		<b>1,267</b>	<b>3,851</b>

**Table 3-3. No Action Alternative EA-18G Sorties per Mission Type across each MOA**

EA-18G	Mission Type	Okanogan MOAs		Roosevelt MOAs		Sum of Sorties
		%	Sorties	%	Sorties	
	ACM	26.3%	773	26.3%	345	1,117
	EW	73.7%	2,166	73.7%	965	3,132
	<b>TOTAL</b>		<b>2,939</b>		<b>1,310</b>	<b>4,249</b>

**Table 3-4. Action Alternative 1 EA-18G Sorties per Mission Type across each MOA**

EA-18G	Mission Type	Okanogan MOAs		Roosevelt MOAs		Sum of Sorties
		%	Sorties	%	Sorties	
	ACM	26.3%	657	26.3%	474	1,131
	EW	73.7%	1,843	73.7%	1,326	3,169
	<b>TOTAL</b>		<b>2,500</b>		<b>1,800</b>	<b>4,300</b>

**Table 3-5. Action Alternative 2 EA-18G Sorties per Mission Type across each MOA**

EA-18G	Mission Type	Okanogan MOAs		Roosevelt MOAs		Sum of Sorties
		%	Sorties	%	Sorties	
	ACM	26.3%	728	26.3%	520	1,248
	EW	73.7%	2,072	73.7%	1,480	3,552
	<b>TOTAL</b>		<b>2,800</b>		<b>2,000</b>	<b>4,800</b>



**Table 3-6. Annual Sorties of Other Aircraft Types Within the Eastern Washington Airspace**

Aircraft Type	Baseline Annual Sorties		NAA Annual Sorties		AA 1 Annual Sorties		AA 2 Annual Sorties	
	Okanogan MOA	Roosevelt MOA	Okanogan MOA	Roosevelt MOA	Okanogan MOA	Roosevelt MOA	Okanogan MOA	Roosevelt MOA
KC-135	30	27	30	27	30	27	33	30
F-15	12	10	12	10	12	10	13	11
C-17	16	10	16	10	16	10	18	11
C-130	31	30	31	30	31	30	34	33
F-18E/F*	47	66	47	66	10	5	13	8
F-35*	0	0	0	0	10	5	12	7
<b>Total</b>	136	143	136	143	109	87	123	100

\*F-18E/F and F-35 are Navy users

### 3.1 TRAINING MISSIONS DESCRIPTIONS

For the two training missions for the EA-18G (and EA-6B for the Baseline scenario) within the eastern Washington airspace, a composite profile was developed with pilot input and review. These profiles provide accurate modeling of the overall noise from the training missions. The operational parameters cover event duration, average airspeed, distributions in engine power, airspace utilization, and altitude. These parameters are listed in the following sections.

#### 3.1.1 EA-18G Growler Air Combat Manuevers (ACM) Mission Profile

In ACM missions, aircrews maneuver against simulated threats to gain tactical advantage. These are basic flight maneuvers in which aircrew engage in offensive and defensive maneuvering against each other, at distances within visual range and beyond visual range. During ACM engagements, no ordnance is fired. ACM normally involves two aircraft operating with an average airspeed of 420 knots for 60 minutes in the 10,000 to 35,000 ft. MSL altitude band. Table 3-7 provides the engine power distribution, which does not change among the scenarios. Table 3-8 lists the altitude distributions, which also does not change among the scenarios.

**Table 3-7. Engine Power Distribution for EA-18G ACM Training Mission**

Engine Power Mode (%NC)	Percent in Mode
Afterburner 97%	19.6%
Military Power 96%	28.3%
Cruise 88.6%	52.1%

%NC = Engine Core Speed

**Table 3-8. Modeled Altitude Bands for EA-18G ACM Training Mission**

Altitude Band	Okanogan MOAs	Roosevelt MOAs
300 ft. AGL–500 ft. AGL	0%	0%
500 ft. AGL–1,500 ft. MSL	0%	0%
1,500–10,000 ft. MSL	0%	0%
10,000–15,000 ft. MSL	18.4%	18.4%
15,000–35,000 ft. MSL	81.6%	81.6%

#### 3.1.2 EA-18G Growler Electronic Warfare (EW) Mission Profile

In EW missions, aircrews use systems to degrade the enemy’s ability to use electronic equipment, such as communications systems and radar, and to confuse or deny them the ability to defend their forces and assets. EW is also used to detect enemy threats and counter their attempts to degrade the electronic capabilities of U.S. forces. Table 3-9 provides the engine power distribution, which does not change among the scenarios. Table 3-10 lists the altitude distributions for the EW mission profile, which also does not change among the scenarios. EW normally involves two aircraft for 90 minutes with an average airspeed of 360 knots in the 500 ft. AGL to 35,000 feet MSL altitude band. Note that the Okanogan A MOA and Roosevelt A MOA floors are 9,000 feet MSL and the Proposed Action Okanogan D MOA floor is 11,500 ft. MSL. For these MOAs, the percentages in the altitude bands below these floors in Table 3-10 are added to the 5,000–15,000 ft. MSL altitude band.

**Table 3-9. Engine Power Distribution for EA-18G EW Training Mission**

Engine Power Mode (%NC)	Percent in Mode
Afterburner 97%	1.7%
Military Power 96%	9.7%
Cruise 88.6%	88.6%

%NC = Engine Core Speed

**Table 3-10. Modeled Altitude Bands for EA-18G EW Training Mission**

Altitude Band	Okanogan MOAs	Roosevelt MOAs
300 ft. AGL–500 ft. AGL	0%	0%
500 ft. AGL–1,500 ft. MSL	4%	4%
1,500–5,000 ft. MSL	1%	1%
5,000–15,000 ft. MSL	17%	17%
15,000–35,000 ft. MSL	78%	78%

### 3.1.3 Baseline EA-6B Prowler Air Combat Maneuvers (ACM) Mission Profile

In ACM missions for the EA-6B for the Baseline scenario, flight activity consists primarily of single aircraft practice of “stalls and falls” as well as defensive tactics at altitude. The EA-6B did not conduct air-to-air tactics/presentations or Basic Fighter Maneuvers (BFM) like the current EA-18G operations. Formation flights were much less common, as opposed to the majority of EA-18G flights being multi-ship; and, when conducted these flights would focus on basic tactical formation sight picture, maneuvering as a formation and break-ups and rendezvous with lower power settings. The average EA-6B airspeed for ACM missions was 265 knots with 60-minute durations in the airspace in the 500 ft. AGL to 30,000 feet MSL altitude band. Table 3-11 provides the baseline scenario EA-6B engine power distribution. Table 3-12 lists the baseline scenario EA-6B altitude distributions. Since Methow ATCAA (above Okanogan A/B/C MOAs) has a ceiling of 22,999 ft. MSL, for the Okanogan sorties within the Methow ATCAA area, the 5 percent altitude band in 23,000 to 30,000 ft. MSL is moved and added to the 9,000 to 23,000 ft. MSL altitude band.

**Table 3-11. Engine Power Distribution for Baseline EA-6B ACM Training Mission**

Engine Power Mode (%RPM)	Percent in Mode
Military Power 95%	10%
Cruise 85%	90%

%RPM = percentage of the maximum allowed rotation speed

**Table 3-12. Modeled Altitude Bands for Baseline EA-6B ACM Training Mission**

Altitude Band	Okanogan MOAs	Roosevelt MOAs
300 ft. AGL–500 ft. AGL	0%	0%
500 ft. AGL–9,000 ft. MSL	20%	10%
9,000–23,000 ft. MSL	75%	85%
23,000–30,000 ft. MSL	5%	5%

### 3.1.4 Baseline EA-6B Prowler Electronic Warfare (EW) Mission Profile

In EW missions for the EA-6B for the Baseline scenario, the missions are mostly single aircraft in the MOAs practicing medium to low-level EW Close Air Support (CAS) missions for 60 minutes with an average airspeed of 300 knots in the 500 feet AGL to 30,000 feet MSL altitude band. Table 3-13 provides the engine power distribution for the EA-6B in the Baseline scenario for the EW missions. Table 3-14 lists the altitude distributions for the EA-6B in the Baseline scenario. Methow ATCAA (above Okanogan A/B/C MOAs) has a ceiling of 22,999 ft. MSL; thus, for the Okanogan sorties within the Methow ATCAA area, the 5 percent altitude band in 23,000 to 30,000 ft. MSL is moved and added to the 9,000 to 23,000 ft. MSL altitude band. The EW mission is in the 500 ft. AGL to 9,000 ft. MSL altitude band for 10 percent more time than in the ACM mission.

**Table 3-13. Engine Power Distribution for Baseline EA-6B EW Training Mission**

Engine Power Mode (%RPM)	Percent in Mode
Military Power 95%	10%
Cruise 85%	90%

%RPM = percentage of the maximum allowed rotation speed

**Table 3-14. Modeled Altitude Bands for Baseline EA-6B EW Training Mission**

Altitude Band	Okanogan MOAs	Roosevelt MOAs
300 ft. AGL–500 ft. AGL	0%	0%
500 ft. AGL–9,000 ft. MSL	30%	20%
9,000–23,000 ft. MSL	65%	75%
23,000–30,000 ft. MSL	5%	5%

### 3.1.5 Other Aircraft Mission Profiles

Table 3-15 displays the mission profiles of the other aircraft that utilize the Okanogan and Roosevelt MOAs (as listed in Table 3-6). The altitude bands, average airspeed, duration within the airspace, engine power, and percent utilization in acoustic nighttime of these aircraft were derived from the 2020 F-35A Operational Beddown MOB-7 Air Force Reserve Command EIS airspace noise analysis. For the altitude bands that fall under the floor of Okanogan A, Okanogan D, and Roosevelt A MOAs, those band percentages are shifted to the first band above the MOA floor. For the altitude bands that are above the ATCAA ceilings of Methow and Mazama ATCAAs, those band percentages are shifted to the highest band under the ATCAA ceiling.

**Table 3-15. Other Aircraft that Utilize the Eastern Washington Airspace Mission Parameters**

Aircraft	Average Airspeed (kts)	Duration (min)	Engine Power	% Acoustic Nighttime (10 p.m. to 7 a.m.)	Altitude Band	% in Altitude Band
F/A-18E/F	400	60	92% NC	12%	500–2,000 ft. AGL	9%
					2,000–3,000 ft. AGL	7%
					3,000–5,000 ft. AGL	13%
					5,000–10,000 ft. AGL	50%
					10,000–18,000 ft. AGL	17%
					18,000–30,000 ft. AGL	4%
F-35A	425	90	90% ETR	0%	5,000–10,000 ft. AGL	10%
					10,000–18,000 ft. AGL	30%
					18,000–30,000 ft. AGL	50%
					30,000–50,000 ft. AGL	10%
F-15E	400	60	74% NC	12%	500–2,000 ft. AGL	9%
					2,000–3,000 ft. AGL	7%
					3,000–5,000 ft. AGL	13%
					5,000–10,000 ft. AGL	50%
					10,000–18,000 ft. AGL	17%
					18,000–30,000 ft. AGL	4%
C-17	250	60	1.25 EPR	0%	1,000–3,000 ft. AGL	5%
					3,000–10,000 ft. AGL	40%
					10,000–18,000 ft. AGL	10%
					18,000–30,000 ft. AGL	20%
					30,000–50,000 ft. AGL	25%
C-130J	250	90	2200 HP	20%	500–1,000 ft. AGL	26%
					1,000–3,000 ft. AGL	6%
					3,000–10,000 ft. AGL	48%
					10,000–18,000 ft. AGL	10%
					18,000–30,000 ft. AGL	10%
KC-135R	240	90	80.3% NC	18%	18,000–30,000 ft. AGL	80%
					30,000–50,000 ft. AGL	20%

%NC = Engine Core Speed; RPM = rotations per minute; ETR = Engine Temperature Variation; EPR = Engine Pressure Ratio; HP = Horsepower; FL = Flight Level

### 3.1.6 Atmospheric Data

The atmospheric data used within MR\_NMap are displayed in Table 3-16Table 3-16. These are monthly averages over five years (2018–2022) at the Omak Airport (KOMK) weather station in Omak, WA, which is located close to the center of the eastern Washington airspace complex.

These data are used to determine the effect of atmospheric absorption that occurs during noise propagation. NoiseMap utilizes the daily average temperatures, relative humidity, and atmospheric pressure for each month to determine the appropriate values to represent the nominal acoustic absorption for a given year. For these monthly averages, the values for March are utilized to represent acoustical absorption for the year. It should be noted that these values represent the nominal acoustic absorption condition of the atmosphere and not the average weather conditions for the area.

**Table 3-16. Atmospheric Data Inputs for MR\_NMap**

Month	Temperature (degrees F)	Pressure (in-Hg)	Relative Humidity (%)
January	29.9	30.2	84.5
February	29.2	30.1	69.2
March	41.1	29.9	56.0
April	50.3	30.0	44.5
May	60.5	29.9	46.7
June	68.0	29.9	42.6
July	77.2	29.9	31.0
August	75.4	29.9	33.0
September	64.0	30.0	44.9
October	50.2	30.1	57.8
November	35.2	30.2	76.0
December	28.2	30.1	79.6

F = Fahrenheit Temperature Scale; in-Hg = inches of mercury

## SECTION 4. AIRCRAFT NOISE RESULTS

### 4.1 LDNR RESULTS

Aircraft noise in this study is represented by annual average  $L_{dnr}$  values at various elevations (in 500 ft. increments) under each portion of the MOAs. Because MR\_NMap does not directly include terrain in the model, 500-ft. elevation steps from 500 ft. ground elevation to 8,500 ft. ground elevation were modeled under the MOAs to account for the large variation in terrain elevations in the study area. These  $L_{dnr}$  values were developed from MR\_NMap, as described in Section 2 (Noise Metrics and Models). From these operational parameter inputs, the resulting noise was calculated for the Baseline, NAA, AA 1, and AA 2 scenarios. AA 1 introduces the Okanogan D MOA (with Mazama ATCAA directly over the MOA) to the west of Okanogan B MOA. AA 2 also has the Okanogan D MOA but increases the aircraft sorties in the entirety of the airspace. The results align with the expected changes among the previous baseline conditions, current conditions (NAA), and the AA 1 and AA 2.

The individual scenario noise results are provided in Table 4-1 through Table 4-4. Note that MR\_NMap assumes a uniform distribution in the airspace's area, and because the full extents of the Okanogan and Roosevelt MOAs are scheduled as single blocks each, the operations are distributed equally based on area throughout the MOAs and ATCAAs. The Baseline  $L_{dnr}$  noise is higher than the NAA because the Baseline EA-6B missions have altitude distributions with lower altitudes compared to the EA-18G. The operational tempo between the Baseline and NAA

scenarios are similar, but there are 90 percent EA-6B sorties and 10 percent EA-18G sorties in the Baseline. The NAA scenario has no EA-6B sorties, as the EA-6B has been completely replaced by the EA-18G. In the Okanogan MOAs, the range of differences between the Baseline and NAA is a 5.9 to 14.0 dBA decrease in the NAA (the difference increases with an increase in ground elevation), and the average decrease from the Baseline to the NAA is 8.5 dBA. In the Roosevelt MOAs, the range of differences between the Baseline and NAA is a 3.6 to 9.3 dBA decrease in the NAA (the difference increases with an increase in ground elevation), and the average decrease from the Baseline to the NAA is 4.9 dBA.

The AA scenarios add Okanogan D MOA and Mazama ATCAA to the noise analysis. This addition of more airspace volume for training in the Okanogan MOAs spreads the NAA noise exposure into the new area under the Okanogan D MOA. While there is a slight reduction in operational tempo between the NAA and AA 1 (both scenarios use current operational levels), the spread of noise exposure into the Okanogan D/Mazama ATCAA results in a net decrease of 0.6 dBA  $L_{dnr}$  under the Okanogan A/B/C MOAs. This 0.6 dBA decrease is consistent across all ground elevations under the existing Okanogan MOAs. For the noise exposure under the Roosevelt MOAs, there is no change in noise exposure between the NAA and AA 1 scenarios since there are no new airspace units in the Roosevelt MOA. For the AA 2 scenario, there is an 11 percent increase in EA-18G sorties and a 50 percent increase in other aircraft sorties in the Roosevelt MOAs. This increase results in a 0.5 dBA increase in  $L_{dnr}$  under the MOAs compared to the NAA and AA 1. AA 2 has a 12 percent increase in EA-18G sorties within the Okanogan MOAs along with a 25 percent increase in other aircraft sorties. This increase in sorties results in an increase of 0.5 dBA  $L_{dnr}$  over the AA 1 scenario under the Okanogan MOAs and a 0.1 dBA decrease in  $L_{dnr}$  compared to the NAA scenario.

**Table 4-1. Baseline Aircraft Noise Results in L<sub>dnr</sub> (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	45.0	45.4	45.9	46.3	46.8	47.3	47.8	48.3	48.9	49.5	50.2	50.9	51.6	52.5	53.5	54.7	56.8
Okanogan A (Middle Part Only) and Molson ATCAA	46.3	46.8	47.2	47.6	48.1	48.6	49.1	49.6	50.2	50.8	51.4	52.1	52.9	53.7	54.7	55.9	58.1
Okanogan B and Methow ATCAA	54.0	54.2	54.5	54.8	55.1	55.4	55.8	56.2	56.6	57.1	57.6	58.2	58.9	59.7	60.8	62.3	62.3
Okanogan B and Molson ATCAA	55.2	55.5	55.8	56.1	56.4	56.7	57.1	57.5	57.9	58.3	58.9	59.5	60.1	61.0	62.0	63.6	63.6
Okanogan C and Methow ATCAA	53.5	53.8	54.1	54.4	54.7	55.0	55.4	55.8	56.2	56.7	57.2	57.8	58.5	59.3	60.4	61.9	62.0
Okanogan C and Molson ATCAA	53.8	54.0	54.3	54.6	54.9	55.2	55.6	56.0	56.4	56.8	57.3	57.9	58.6	59.4	60.5	62.0	62.0
Okanogan D and Mazama ATCAA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roosevelt A (Right Side Only) and Republic ATCAA	40.8	41.2	41.6	42.1	42.5	43.0	43.5	44.0	44.6	45.2	45.8	46.5	47.3	48.2	49.2	50.4	52.5
Roosevelt B and Republic ATCAA	48.3	48.5	48.8	49.1	49.4	49.7	50.1	50.4	50.9	51.3	51.8	52.4	53.1	53.9	54.9	56.4	56.4

**Table 4-2. No Action Alternative (NAA) Aircraft Noise Results in L<sub>dnr</sub> (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	39.0	39.4	40.0	40.4	40.8	41.3	41.7	42.2	42.7	43.4	44.0	44.6	45.3	46.2	47.0	48.1	49.4
Okanogan A (Middle Part Only) and Molson ATCAA	39.6	39.9	40.3	40.7	41.1	41.6	42.0	42.5	43.0	43.5	44.1	44.7	45.4	46.2	47.0	48.0	49.4
Okanogan B and Methow ATCAA	46.6	46.7	46.9	47.1	47.3	47.5	48.1	48.2	48.3	48.5	48.6	48.7	48.9	49.1	49.3	49.5	49.8
Okanogan B and Molson ATCAA	46.7	46.8	46.9	47.1	47.3	47.6	48.2	48.3	48.4	48.5	48.6	48.8	48.9	49.1	49.3	49.6	49.9
Okanogan C and Methow ATCAA	46.1	46.2	46.4	46.6	46.8	47.0	47.6	47.7	47.8	48.0	48.1	48.2	48.4	48.6	48.8	49.0	49.3
Okanogan C and Molson ATCAA	46.5	46.6	46.8	47.0	47.2	47.4	48.0	48.1	48.2	48.4	48.5	48.6	48.8	49.0	49.2	49.5	49.8
Okanogan D and Mazama ATCAA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roosevelt A (Right Side Only) and Republic ATCAA	37.2	37.6	38.0	38.4	38.8	39.3	39.7	40.2	40.7	41.2	41.8	42.4	43.1	43.8	44.7	45.7	47.0
Roosevelt B and Republic ATCAA	44.2	44.3	44.4	44.6	44.8	45.1	45.7	45.8	45.9	46.0	46.2	46.3	46.5	46.7	46.9	47.1	47.5



**Table 4-3. Action Alternative 1 (AA 1) Aircraft Noise Results in L<sub>dnr</sub> (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	38.4	38.8	39.4	39.8	40.2	40.7	41.1	41.6	42.1	42.8	43.4	44.0	44.7	45.5	46.4	47.5	48.8
Okanogan A (Middle Part Only) and Molson ATCAA	39.0	39.3	39.7	40.1	40.5	41.0	41.4	41.9	42.4	42.9	43.5	44.1	44.8	45.5	46.4	47.4	48.7
Okanogan B and Methow ATCAA	46.0	46.1	46.3	46.5	46.7	46.9	47.5	47.6	47.7	47.9	48.0	48.1	48.2	48.5	48.7	48.9	49.2
Okanogan B and Molson ATCAA	46.1	46.2	46.3	46.5	46.7	47.0	47.6	47.7	47.8	47.9	48.0	48.2	48.3	48.5	48.7	49.0	49.3
Okanogan C and Methow ATCAA	45.5	45.6	45.8	45.9	46.1	46.4	47.0	47.1	47.2	47.3	47.5	47.6	47.8	48.0	48.2	48.4	48.7
Okanogan C and Molson ATCAA	45.9	46.0	46.2	46.4	46.6	46.8	47.4	47.5	47.6	47.7	47.9	48.0	48.2	48.4	48.6	48.9	49.1
Okanogan D and Mazama ATCAA	37.9	38.3	38.6	39.0	39.5	39.9	40.3	40.7	41.1	41.7	42.1	42.6	43.1	43.8	44.3	44.9	45.7
Roosevelt A (Right Side Only) and Republic ATCAA	37.2	37.6	38.0	38.4	38.8	39.3	39.7	40.2	40.7	41.2	41.8	42.4	43.1	43.8	44.7	45.7	47.0
Roosevelt B and Republic ATCAA	44.2	44.3	44.4	44.6	44.8	45.1	45.7	45.8	45.9	46.0	46.2	46.3	46.5	46.7	46.9	47.1	47.5

**Table 4-4. Action Alternative 2 (AA 2) Aircraft Noise Results in L<sub>dnr</sub> (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	38.9	39.3	39.9	40.3	40.7	41.2	41.6	42.1	42.6	43.3	43.9	44.5	45.2	46.1	46.9	48.0	49.3
Okanogan A (Middle Part Only) and Molson ATCAA	39.4	39.8	40.2	40.6	41.0	41.5	41.9	42.4	42.9	43.4	44.0	44.6	45.3	46.0	46.9	47.9	49.2
Okanogan B and Methow ATCAA	46.5	46.7	46.8	47.0	47.2	47.4	48.0	48.1	48.2	48.4	48.5	48.6	48.8	49.0	49.2	49.4	49.7
Okanogan B and Molson ATCAA	46.6	46.7	46.9	47.0	47.2	47.5	48.1	48.2	48.3	48.4	48.5	48.7	48.8	49.0	49.2	49.5	49.8
Okanogan C and Methow ATCAA	46.0	46.1	46.3	46.5	46.7	46.9	47.5	47.6	47.7	47.8	48.0	48.1	48.3	48.5	48.7	48.9	49.2
Okanogan C and Molson ATCAA	46.4	46.6	46.7	46.9	47.1	47.3	47.9	48.0	48.1	48.3	48.4	48.5	48.7	48.9	49.1	49.4	49.7
Okanogan D and Mazama ATCAA	38.4	38.8	39.1	39.5	40.0	40.4	40.8	41.2	41.6	42.1	42.6	43.1	43.6	44.2	44.8	45.4	46.2
Roosevelt A (Right Side Only) and Republic ATCAA	37.7	38.1	38.5	38.9	39.3	39.7	40.2	40.7	41.2	41.7	42.3	42.9	43.6	44.3	45.2	46.2	47.5
Roosevelt B and Republic ATCAA	44.7	44.8	44.9	45.1	45.3	45.6	46.2	46.3	46.4	46.5	46.6	46.8	47.0	47.2	47.4	47.6	47.9

## 4.2 DNL RESULTS

The aircraft noise was also modeled for the DNL metric to follow FAA guidance. Table 4-5 through Table 4-8 provide the DNL results of the Baseline, NAA, and AA scenarios. The DNL results follow the same trends as the  $L_{dnr}$  results.  $L_{dnr}$  results are only slightly higher than DNL for low-level operations. Across all ground elevations, the difference is less than 1 dBA, with most elevations under the MOAs seeing a 0.1 dBA difference. The largest differences occur for the Baseline scenario at the highest ground elevations because the EA-6B is closest to the ground at these higher elevations.

**Table 4-5. Baseline Aircraft Noise Results in DNL (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	45.0	45.4	45.9	46.3	46.8	47.3	47.8	48.3	48.9	49.5	50.2	50.9	51.6	52.5	53.5	54.7	56.5
Okanogan A (Middle Part Only) and Molson ATCAA	46.3	46.8	47.2	47.6	48.1	48.6	49.1	49.6	50.2	50.8	51.4	52.1	52.9	53.7	54.7	55.9	57.7
Okanogan B and Methow ATCAA	53.6	53.9	54.1	54.4	54.7	55.1	55.4	55.8	56.2	56.7	57.2	57.7	58.4	59.2	60.2	61.4	61.4
Okanogan B and Molson ATCAA	54.8	55.1	55.4	55.7	56.0	56.3	56.7	57.0	57.5	57.9	58.4	59.0	59.7	60.4	61.4	62.7	62.7
Okanogan C and Methow ATCAA	53.1	53.4	53.7	54.0	54.3	54.6	55.0	55.4	55.8	56.3	56.8	57.3	58.0	58.8	59.8	61.1	61.1
Okanogan C and Molson ATCAA	53.4	53.7	53.9	54.2	54.5	54.8	55.2	55.6	56.0	56.4	56.9	57.5	58.1	58.9	59.9	61.1	61.1
Okanogan D and Mazama ATCAA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roosevelt A (Right Side Only) and Republic ATCAA	40.8	41.2	41.6	42.1	42.5	43.0	43.5	44.0	44.6	45.2	45.8	46.5	47.3	48.2	49.2	50.4	52.1
Roosevelt B and Republic ATCAA	48.0	48.2	48.5	48.8	49.1	49.4	49.7	50.1	50.5	51.0	51.5	52.0	52.7	53.4	54.4	55.6	55.7

**Table 4-6. No Action Alternative (NAA) Aircraft Noise Results in DNL (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	39.0	39.4	40.0	40.4	40.8	41.3	41.7	42.2	42.7	43.4	44.0	44.6	45.3	46.2	47.0	48.1	49.4
Okanogan A (Middle Part Only) and Molson ATCAA	39.6	39.9	40.3	40.7	41.1	41.6	42.0	42.5	43.0	43.5	44.1	44.7	45.4	46.2	47.0	48.0	49.3
Okanogan B and Methow ATCAA	46.6	46.7	46.9	47.1	47.3	47.5	48.1	48.2	48.3	48.5	48.6	48.7	48.9	49.1	49.3	49.5	49.8
Okanogan B and Molson ATCAA	46.7	46.8	46.9	47.1	47.3	47.6	48.2	48.3	48.4	48.5	48.6	48.8	48.9	49.1	49.3	49.6	49.9
Okanogan C and Methow ATCAA	46.1	46.2	46.4	46.5	46.8	47.0	47.6	47.7	47.8	47.9	48.1	48.2	48.4	48.6	48.8	49.0	49.3
Okanogan C and Molson ATCAA	46.5	46.6	46.8	47.0	47.2	47.4	48.0	48.1	48.2	48.4	48.5	48.6	48.8	49.0	49.2	49.5	49.8
Okanogan D and Mazama ATCAA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Roosevelt A (Right Side Only) and Republic ATCAA	37.2	37.6	38.0	38.4	38.8	39.3	39.7	40.2	40.7	41.2	41.8	42.4	43.1	43.8	44.7	45.7	47.0
Roosevelt B and Republic ATCAA	44.2	44.3	44.4	44.6	44.8	45.1	45.7	45.8	45.9	46.0	46.2	46.3	46.5	46.7	46.9	47.1	47.4

**Table 4-7. Action Alternative 1 (AA 1) Aircraft Noise Results in DNL (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	38.4	38.8	39.4	39.8	40.2	40.7	41.1	41.6	42.1	42.8	43.4	44.0	44.7	45.5	46.4	47.5	48.8
Okanogan A (Middle Part Only) and Molson ATCAA	39.0	39.3	39.7	40.1	40.5	41.0	41.4	41.9	42.4	42.9	43.5	44.1	44.8	45.5	46.4	47.4	48.7
Okanogan B and Methow ATCAA	46.0	46.1	46.3	46.5	46.7	46.9	47.5	47.6	47.7	47.8	48.0	48.1	48.2	48.5	48.6	48.9	49.2
Okanogan B and Molson ATCAA	46.1	46.2	46.3	46.5	46.7	47.0	47.6	47.7	47.8	47.9	48.0	48.2	48.3	48.5	48.7	49.0	49.3
Okanogan C and Methow ATCAA	45.5	45.6	45.8	45.9	46.1	46.4	47.0	47.1	47.2	47.3	47.5	47.6	47.7	48.0	48.2	48.4	48.7
Okanogan C and Molson ATCAA	45.9	46.0	46.2	46.4	46.6	46.8	47.4	47.5	47.6	47.7	47.9	48.0	48.2	48.4	48.6	48.8	49.1
Okanogan D and Mazama ATCAA	37.9	38.3	38.6	39.0	39.5	39.9	40.3	40.7	41.1	41.7	42.1	42.6	43.1	43.8	44.3	44.9	45.7
Roosevelt A (Right Side Only) and Republic ATCAA	37.2	37.6	38.0	38.4	38.8	39.3	39.7	40.2	40.7	41.2	41.8	42.4	43.1	43.8	44.7	45.7	47.0
Roosevelt B and Republic ATCAA	44.2	44.3	44.4	44.6	44.8	45.1	45.7	45.8	45.9	46.0	46.2	46.3	46.5	46.7	46.9	47.1	47.4

**Table 4-8. Action Alternative 2 (AA 2) Aircraft Noise Results in DNL (dBA) for 500 ft. Step Ground Elevations**

Location within Airspace	Ground Elevation of Analysis (ft)																
	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Okanogan A (Middle Part Only) and Methow ATCAA	38.9	39.3	39.9	40.3	40.7	41.2	41.6	42.1	42.6	43.3	43.9	44.5	45.2	46.1	46.9	48.0	49.3
Okanogan A (Middle Part Only) and Molson ATCAA	39.4	39.8	40.2	40.6	41.0	41.5	41.9	42.4	42.9	43.4	44.0	44.6	45.3	46.0	46.9	47.9	49.2
Okanogan B and Methow ATCAA	46.5	46.7	46.8	47.0	47.2	47.4	48.0	48.1	48.2	48.4	48.5	48.6	48.8	49.0	49.2	49.4	49.7
Okanogan B and Molson ATCAA	46.6	46.7	46.8	47.0	47.2	47.5	48.1	48.2	48.3	48.4	48.5	48.7	48.8	49.0	49.2	49.5	49.8
Okanogan C and Methow ATCAA	46.0	46.1	46.3	46.4	46.7	46.9	47.5	47.6	47.7	47.8	48.0	48.1	48.3	48.5	48.7	48.9	49.2
Okanogan C and Molson ATCAA	46.4	46.5	46.7	46.9	47.1	47.3	47.9	48.0	48.1	48.3	48.4	48.5	48.7	48.9	49.1	49.4	49.6
Okanogan D and Mazama ATCAA	38.4	38.8	39.1	39.5	40.0	40.4	40.8	41.2	41.6	42.1	42.6	43.1	43.6	44.2	44.8	45.4	46.2
Roosevelt A (Right Side Only) and Republic ATCAA	37.7	38.1	38.5	38.9	39.3	39.7	40.2	40.7	41.2	41.7	42.3	42.9	43.6	44.3	45.2	46.2	47.5
Roosevelt B and Republic ATCAA	44.7	44.8	44.9	45.1	45.3	45.6	46.2	46.3	46.4	46.5	46.6	46.8	47.0	47.1	47.4	47.6	47.9

### 4.3 SUPPLEMENTAL AMBIENT SOUND LEVELS

Since flight operations do not currently occur within the proposed Okanogan D MOA, ambient noise levels within the area under the Okanogan D MOA are presented and compared to the AA Okanogan D MOA  $L_{dnr}$  noise results in this section. Ambient noise levels as represented by  $L_{50}$  daytime were estimated by Lympany et al, 2022 for the entire U.S., and the map of the area under the Okanogan and Roosevelt MOAs is displayed in Figure 4-1. The ambient soundscape map was generated by the BRRC soundscape model developed through the U.S. Army Small Business Innovation Research project “Mapping ambient sound levels using physics-informed machine learning.” The  $L_{50}$  is the median (average) sound level estimated to be occurring in the area. This metric can be compared to MR\_NMap modeled DNL and  $L_{dnr}$  values to assess the potential change in the sound levels with the introduction of aircraft activity within in the Okanogan D MOA and Mazama ATCAA for the AAs. Note in Figure 4-1 that the highest ambient  $L_{50}$  noise levels occur within cities and along highways and rivers. The ambient  $L_{50}$  noise levels under the Okanogan D MOA range from 23.1 to 46.6 dBA with an average  $L_{50}$  of 30.6 dBA. Comparing the modeled  $L_{dnr}$  to the average ambient noise level of 30.6 dBA under the Okanogan D MOA results in an increase of noise exposure by 7.3 to 15.1 dBA in AA 1 and an increase of 7.8 to 15.6 dBA in AA 2. The variance in noise exposure is due to the difference in modeled  $L_{dnr}$  between the low ground elevations of 500 ft. (with the smallest difference between average ambient  $L_{50}$  and modeled  $L_{dnr}$ ) and the high ground elevation of 8,500 ft. (with the largest difference between average ambient  $L_{50}$  and modeled  $L_{dnr}$ ).

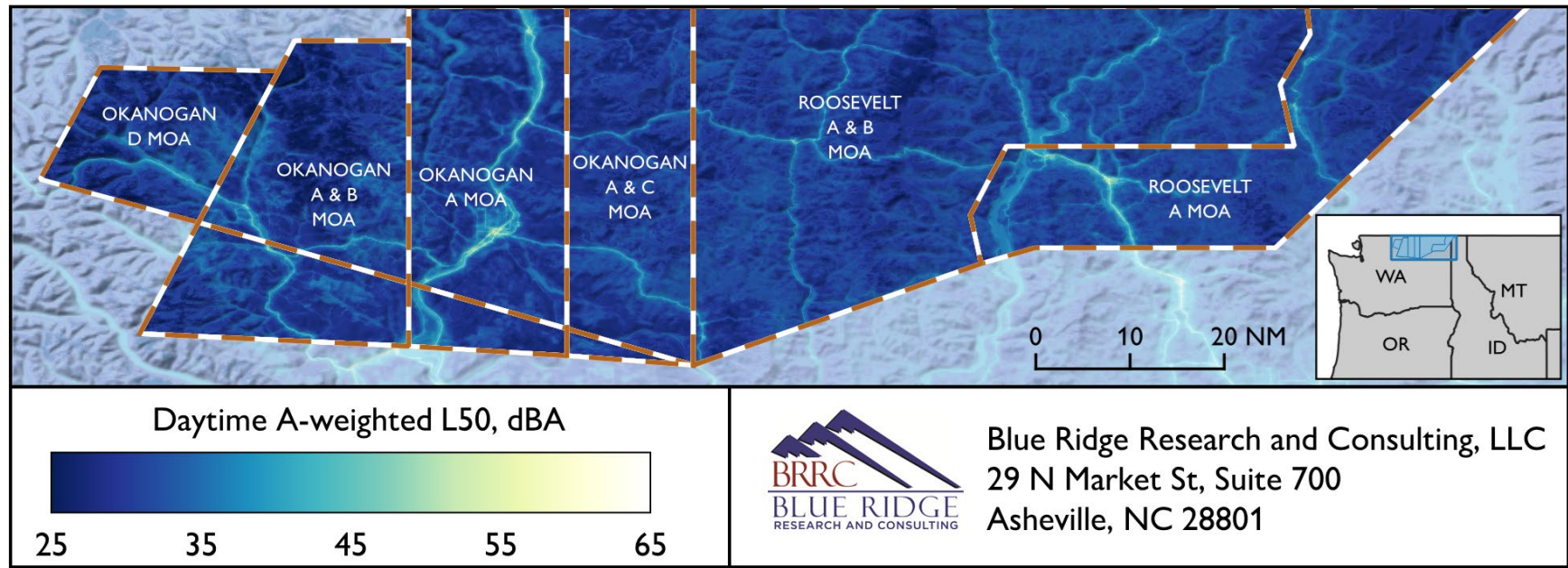


Figure 4-1. Daytime Ambient Noise Under the Eastern Washington MOAs

#### 4.4 MAXIMUM NOISE LEVEL

Cumulative noise metrics, such as DNL, are well suited for general land use planning, but fall short of providing an understanding of the experience from individual events. In contrast, the maximum noise level ( $L_{\max}$ ) provides a simple metric to describe single noise events from flights conducted within the Action Area that people in the vicinity may experience. The  $L_{\max}$  perceived on the ground are dependent on the elevation of the terrain below the aircraft. For the mission profiles in Section 3.1 (Training Mission Descriptions), the loudest event in terms of  $L_{\max}$  only occurs when the aircraft is at a relatively high engine power (97 percent Compressor Stage Rotations Per Minute [NC]), flying at the lowest altitudes (2,000 AGL or less), and at a speed of 360 knots (Table 4-9). For ACM missions, aircraft would only spend 19.6 percent of the time at 97 percent NC (Table 3-7) and would be flying exclusively in the 10,000 to 35,000 ft. MSL altitude band (Table 3-8). Aircraft performing EW missions only spend 1.7 percent of their flight time at 97 percent NC (Table 3-9) and spend 78 percent of time in the 15,000 to 35,000 ft. MSL altitude band, 17 percent of the time in the 5,000 ft. MSL to 15,000 ft. MSL, and a combined 5 percent of the time in the 500 ft. AGL to 5,000 ft. MSL altitude band (Table 3-10).

**Table 4-9. Maximum Noise Level from the EA-18G for Different Distances and Engine Powers**

<i>Distance to aircraft (ft.)</i>	<i>Engine Pwr 88.6% NC Cruise</i>	<i>Engine Pwr 96% NC Military</i>	<i>Engine Pwr 97% NC Afterburner</i>
	<i>Airspeed: 360 knots</i>	<i>Airspeed: 360 knots</i>	<i>Airspeed: 360 knots</i>
	<i><math>L_{\max}</math> (dBA)</i>	<i><math>L_{\max}</math> (dBA)</i>	<i><math>L_{\max}</math> (dBA)</i>
500	112.1	119.7	123.9
1,000	104.8	112.4	116.7
2,000	96.6	104.3	108.7
3,000	91.2	99.2	103.7
4,000	86.8	95.0	99.7
5,000	83.1	91.6	96.4
6,000	80.4	89.0	93.9
7,000	77.9	88.6	91.6
8,000	75.0	83.9	89.2
9,000	73.2	82.2	87.6
10,000	70.4	79.7	85.2
11,000	68.9	78.3	83.9
12,000	67.0	76.4	82.1
13,000	65.1	74.7	80.5
14,000	63.9	73.6	79.4
15,000	62.4	72.2	78.1

Notes: NC = Compressor Stage Rotations Per Minute (a measure of jet engine power setting), dBA = A-Weighted Sound Pressure Level,  $L_{\max}$  = Maximum Received Noise Level

As an example, suppose a hiker is beneath the Okanogan D MOA at a terrain elevation of 3,500 ft. This is a likely situation, as 32.1 percent of the Action Area is over terrain between 3,000 and 4,000 ft. MSL (Table 3.5-1 in Section 3.5.3.1.2, Noise, of the EA). If an EA-18G aircraft flew directly overhead at 97 percent NC traveling at a speed of 360 knots, at the lowest permissible altitude within the Okanogan D MOA (the floor of the Okanogan D MOA airspace, 11,500 ft. MSL), the aircraft overflight would occur 8,000 ft. above the hiker, and the hiker would experience an 89.2 dBA exposure to the jet noise (referred to as  $L_{max}$  in Table 4-9). That is roughly the sound level the hiker might experience 5 meters from a busy roadway. However, the sound of the jet would be at this level for only an instant, decreasing rapidly as the jet flew away from the hiker, just as the sound of a truck would be at its peak noise level only for an instant, then decrease as it drove away.

As the hiker climbs in elevation, the loudest possible noise exposure from an EA-18G would increase as the hiker is moving up in elevation, closer to the floor of the Okanogan D MOA airspace. If the hiker was at 4,500 ft. terrain height, the noise level could potentially be as loud as 91.6 dBA.



## SECTION 5. REFERENCES

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## Appendix C: Air Quality Example Calculations



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## Appendix C Air Quality Example Calculations

This appendix discusses emission factor development, calculations, and assumptions used in the air quality analyses presented in Section 3.1 (Air Quality) of the Eastern Washington Airspace Extension Environmental Assessment (EA).

### C.1 Air Operations Emissions

Fleet training relevant to this EA utilizes various aircraft, including the EA-18G, F/A-18, and F-35. For the purposes of assessing air quality effects under the National Environmental Policy Act, all activities involving the use of aircraft at or below 3,000 feet (ft.) above ground level (AGL) were included in emissions estimates for the criteria pollutants. In accordance with EPA guidance (U.S. Environmental Protection Agency, 1992), 40 Code of Federal Regulations part 93.153(c)(2), 3,000 ft. AGL is the default mixing height above which emissions would not affect the ambient air quality. For greenhouse gases, emissions from activities below and above 3,000 ft. AGL were calculated. The pollutant emission rate is a function of the aircraft engine's fuel flow rate and efficiency. Emissions for one complete training activity for a particular aircraft are calculated by knowing the specific engine pollutant emission factors for each mode of operation.

For this EA, emission factors for aircraft engines were obtained from the Navy's Aircraft Environmental Support Office memoranda. Using these data, as well as number of sorties, pollutant emissions were calculated by applying the equation below.

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

Where:

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

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

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

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

*ENG = number of engines per aircraft*

*CF = conversion factor (0.001)*

### C.2 Emissions Estimates Spreadsheets

Tables C-1 through C-9 provide the basis for emissions calculations for the Baseline, No Action Alternative, and Alternatives 1 and 2.

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Table C-1: Aircraft Engine Emissions Indices, Factors, and Sources

General Information						Emission Indices, lb./1,000 lb. fuel							Emissions Factors (lb./hr.)						References
Aircraft	Engine Model	Engines (#)	Fuel Flow (lb./hr.)/Engine	Fuel Flow (gal./hr.)	Mode	CO	NO <sub>x</sub>	HC	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub>	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub>	Source of Emissions Indices Information
EA-18G	F414-GE-400 (2)	2	5,169	1,520	Approach	0.72	14.75	0.12	0.14	0.37	6.56	3,191.30	7.44	152.49	1.43	3.83	67.82	32,992	AESO Memorandum Report No. 9815 I, June 2017, Table 5
EA-6B	J52-P-408A (2)	2	4,227	1,243	Approach	5.19	6.77	0.84	0.97	0.37	10.48	3,173.88	43.88	57.23	8.17	3.13	88.60	26,832	AESO Memorandum Report No. 9917, Revision C, December 2009
FA-18E/F	F414-GE-400 (2)	2	5,169	1,520	Approach	0.72	14.75	0.12	0.14	0.37	6.56	3,191.30	7.44	152.49	1.43	3.83	67.82	32,992	AESO Memorandum Report No. 9815 I, June 2017, Table 5
General Information						Emissions (lb./op)													References
Aircraft	Engine Model	Engines (#)	Fuel Flow (lb./op)	Fuel Flow (gal./op)	Mode	CO	NO <sub>x</sub>	HC	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub>							Source of Emissions Indices Information
F-35	F135-PW-400	1	1,057	155	Military Takeoff	12.09	8.42	0.02	0.02	0.37	0.13	3,336.76							AESO Memorandum Report No. 2017-18 Revision A, December 2017, Table 1
F-35	F135-PW-400	1	1,220	179	Straight In Arrival	13.52	6.43	0.02	0.02	0.37	0.15	3,849.45							AESO Memorandum Report No. 2017-18 Revision A, December 2017, Table 1
F-35	F135-PW-400	1	629	93	Touch and Go – Carrier Pattern	0.47	9.96	0.003	0.003	0.37	0.08	1,986.01							AESO Memorandum Report No. 2017-18 Revision A, December 2017, Table 1
					Sum	26.08	24.81	0.04	0.05	1.11	0.36	9,172.22							

Notes: (1) Numbers may not add up due to rounding. (2) Emission factors for F/A-18 E/F were used to estimate from EA-18G. This is consistent with the approach use in previous EAs/EISs. (3) Fuel Sulfur Content is based on AESO Memorandum Report No. 2012-01 Revision H, JP-5, 2020.



Table C-2: Mission Distribution for Baseline

EA-18G Squadrons Mission Type Distributions					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	105	42	1.0	26.3	93	0%	100%	0	93	26.3	11	0%	100%	0	11	105
Electronic Warfare	73.7%	293	120	1.5	73.7	262	5%	95%	20	373	73.7	32	5%	95%	2	45	293
Total	Good	398	162			355						43					398
EA-6B Squadrons Mission Type Distributions					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	1,013	412	1.0	26.3%	680	7.5%	92.5%	51	629	26.3%	333	3.75%	96.25%	12	321	1,013
Electronic Warfare	73.7%	2,838	1,155	1.0	73.7%	1,904	11.25%	88.75%	214	1,690	73.7%	934	7.50%	92.50%	70	864	2,838
Total	Good	3,851	1,567			2,584						1,267					3,851
Half modeled as F/A-18 – used the same percentages and assumptions as Growler EA-18G					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	15	42	1.0	26.3%	6	0%	100%	0	6	26.3%	9	0%	100%	0	9	15
Electronic Warfare	73.7%	42	120	1.5	73.7%	17	5%	95%	1	25	73.7%	24	5%	95%	2	35	42
Total	Good	57	162			24						33					57
Half modeled as F-35 – used the same percentages and assumptions as Growlers EA-18G					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	15	42	1.0	26.3%	6	0%	100%	0	6	26.3%	9	0%	100%	0	9	15
Electronic Warfare	73.7%	42	120	1.5	73.7%	17	5%	95%	1	25	73.7%	24	5%	95%	2	35	42
Total	Good	57	162			24						33					57

Table C-3: Baseline Emissions

EA-18G			Emissions (lb/yr)							Emissions (ton/yr)					
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub>	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
Air Combat Maneuvers	105	105	0	0.00	0.00	0.00	0.00	0.00	3,453,369	0.00	0.00	0.00	0.00	0.00	1,566
Electronic Warfare	293	440	22	163.75	3,354.60	31.39	84.15	1,491.94	14,515,967	0.08	1.68	0.02	0.04	0.75	6,584
EA-6B															
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.												
Air Combat Maneuvers	1,013	1,013	63	2,784.62	3,632.34	518.29	198.52	5,622.88	27,175,780	1.39	1.82	0.26	0.10	2.81	12,327
Electronic Warfare	2,838	2,838	284	12,473.11	16,270.32	2,321.59	889.22	25,186.56	76,154,181	6.24	8.14	1.16	0.44	12.59	34,543
F/A-18															
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.												
Air Combat Maneuvers	15	15	0	0.00	0.00	0.00	0.00	0.00	490,240	0.00	0.00	0.00	0.00	0.00	222
Electronic Warfare	42	62	3	23.25	476.22	4.46	11.95	211.80	2,060,684	0.01	0.24	0.00	0.01	0.11	935
F-35															
Mission Type	Annual Sorties		Annual Sorties below 3,000 ft.												
Air Combat Maneuvers	15		0	0.00	0.00	0.00	0.00	0.00	136,295	0.00	0.00	0.00	0.00	0.00	62
Electronic Warfare	42		2	55.55	51.66	0.10	2.31	0.75	381,936	0.03	0.03	0.00	0.00	0.00	173

Emissions (lb/yr)						Emissions (ton/yr)					
CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
15,500	23,785	2,876	1,186	32,514	124,368,451	7.75	11.89	1.44	0.59	16.26	56,413

Notes: (1) Emission calculations for F-35 is different than the other aircraft because F-35 emission factors are in pounds per operation. Therefore, the number of operations below 3,000 feet were estimated. Criteria pollutant emissions below 3,000 feet above ground level are evaluated for NEPA purposes. GHG emissions are calculated for all elevations. (2) Numbers may not add up due to rounding.

Table C-4: Mission Distribution for the No Action Alternative

EA-18G Squadrons Mission Type Distributions					Okanogan MOAs						Roosevelt MOAs						Sum of Sorties
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	
Air Combat Maneuvers	26.3%	1,117	464	1.0	26.3%	773	0%	100%	0	773	26.3%	345	0%	100%	0	345	1,117
Electronic Warfare	73.7%	3,132	1,299	1.5	73.7%	2,166	5%	95%	162	3,087	73.7%	965	5%	95%	72	1,376	3,132
Total	Good	4,249	1,763			2,939						1,310					4,249
Half modeled as F/A-18 – used the same percentages and assumptions as Growler EA-18G																	
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	15	42	1.0	26.3%	6	0%	100%	0	6	26.3%	9	0%	100%	0	9	15
Electronic Warfare	73.7%	42	120	1.5	73.7%	17	5%	95%	1	25	73.7%	24	5%	95%	2	35	42
Total	Good	57	162			24						33					57
Half modeled as F-35 – used the same percentages and assumptions as Growlers EA-18G																	
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	15	42	1.0	26.3%	6	0%	100%	0	6	26.3%	9	0%	100%	0	9	15
Electronic Warfare	73.7%	42	120	1.5	73.7%	17	5%	95%	1	25	73.7%	24	5%	95%	2	35	42
Total	Good	57	162			24						33					57

Table C-5: No Action Alternative Emissions

EA-18G				Emissions (lb/yr)						Emissions (ton/yr)					
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub>	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
Air Combat Maneuvers	1,117	1,117	0	0.00	0.00	0.00	0.00	0.00	36,867,750	0.00	0.00	0.00	0.00	0.00	16,723
Electronic Warfare	3,132	4,697	235	1,748.17	35,813.27	335.07	898.37	15,927.80	154,970,715	0.87	17.91	0.17	0.45	7.96	70,294
F/A-18															
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.												
Air Combat Maneuvers	15	15	0	0.00	0.00	0.00	0.00	0.00	490,240	0.00	0.00	0.00	0.00	0.00	222
Electronic Warfare	42	62	3	23.25	476.22	4.46	11.95	211.80	2,060,684	0.01	0.24	0.00	0.01	0.11	935
F-35															
Mission Type	Annual Sorties		Annual Sorties below 3,000 ft.												
Air Combat Maneuvers	15		0	0.00	0.00	0.00	0.00	0.00	136,295	0.00	0.00	0.00	0.00	0.00	62
Electronic Warfare	42		2	55.55	51.66	0.10	2.31	0.75	381,936	0.03	0.03	0.00	0.00	0.00	173

Emissions (lb/yr)						Emissions (ton/yr)					
CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
1,827	36,341	340	913	16,140	194,907,620	0.91	18	0	0	8	88,409

Notes: (1) Emission calculations for F-35 is different than the other aircraft because F-35 emission factors are in pounds per operation. Therefore, the number of operations below 3,000 feet were estimated. Criteria pollutant emissions below 3,000 feet above ground level are evaluated for NEPA purposes. GHG emissions are calculated for all elevations. (2) Numbers may not add up due to rounding.

Table C-6: Mission Distribution for Alternative 1

EA-18G Squadrons Mission Type Distributions					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	1,131	464	1.0	26.3%	657	0%	100%	0	657	26.3%	473	0%	100%	0	473	1,131
Electronic Warfare	73.7%	3,169	1,299	1.5	73.7%	1,843	5%	95%	138	2,626	73.7%	1,327	5%	95%	99	1,890	3,169
Total	Good	4,300	1,763			2,500						1,800					4,300
Half modeled as F/A-18 – used the same percentages and assumptions as Growler EA-18G					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	4	42	1.0	26.3%	3	0%	100%	0	3	26.3%	1	0%	100%	0	1	4
Electronic Warfare	73.7%	11	120	1.5	73.7%	7	5%	95%	1	11	73.7%	4	5%	95%	0	5	11
Total	Good	15	162			10						5					15
Half modeled as F-35 – used the same percentages and assumptions as Growlers EA-18G					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	4	42	1.0	26.3%	3	0%	100%	0	3	26.3%	1	0%	100%	0	1	4
Electronic Warfare	73.7%	11	120	1.5	73.7%	7	5%	95%	1	11	73.7%	4	5%	95%	0	5	11
Total	Good	15	162			10						5					15

Table C-7: Alternative 1 Emissions

EA-18G				Emissions (lb/yr)						Emissions (ton/yr)					
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub>	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
Air Combat Maneuvers	1,131	1,131	0	0.00	0.00	0.00	0.00	0.00	37,310,268	0.00	0.00	0.00	0.00	0.00	16,924
Electronic Warfare	3,169	4,754	238	1,769.16	36,243.13	339.09	909.15	16,118.98	156,830,802	0.88	18.12	0.17	0.45	8.06	71,137
F/A-18															
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.												
Air Combat Maneuvers	4	4	0	0.00	0.00	0.00	0.00	0.00	130,152	0.00	0.00	0.00	0.00	0.00	59
Electronic Warfare	11	17	1	6.17	126.43	1.18	3.17	56.23	547,084	0.00	0.06	0.00	0.00	0.03	248
F-35															
Mission Type	Annual Sorties		Annual Sorties below 3,000 ft.												
Air Combat Maneuvers	4		0	0.00	0.00	0.00	0.00	0.00	36,184	0.00	0.00	0.00	0.00	0.00	16
Electronic Warfare	11		1	14.75	13.71	0.03	0.61	0.20	101,399	0.01	0.01	0.00	0.00	0.00	46

Emissions (lb/yr)						Emissions (ton/yr)					
CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
1,790	36,383	340	913	16,175	194,955,889	0.89	18	0	0	8	88,431

Notes: (1) Emission calculations for F-35 is different than the other aircraft because F-35 emission factors are in pounds per operation. Therefore, the number of operations below 3,000 feet were estimated. Criteria pollutant emissions below 3,000 feet above ground level are evaluated for NEPA purposes. GHG emissions are calculated for all elevations. (2) Numbers may not add up due to rounding.

Table C-8: Mission Distribution for Alternative 2

EA-18G Squadrons Mission Type Distributions					Okanogan MOAs						Roosevelt MOAs						
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	1,262	464	1.0	26.3%	736	0%	100%	0	736	26.3%	526	0%	100%	0	526	1,262
Electronic Warfare	73.7%	3,538	1,299	1.5	73.7%	2,064	5%	95%	155	2,941	73.7%	1,474	5%	95%	111	2,100	3,538
Total	Good	4,800	1,763			2,800						2,000					4,800
Half modeled as F/A-18 – used the same percentages and assumptions as Growler EA-18G																	
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	5	42	1.0	26.3%	3	0%	100%	0	3	26.3%	2	0%	100%	0	2	5
Electronic Warfare	73.7%	15	120	1.5	73.7%	9	5%	95%	1	13	73.7%	6	5%	95%	0	8	15
Total	Good	20	162			12						8					20
Half modeled as F-35 – used the same percentages and assumptions as Growlers EA-18G																	
Mission Type	Percentage	Annual Sorties	Annual Events	Avg. time per A/C, hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Percentage	Sorties	Percent below 3,000 ft.	Percent above 3,000 ft.	Total time below 3,000 ft., hr.	Total time above 3,000 ft., hr.	Sum of Sorties
Air Combat Maneuvers	26.3%	5	42	1.0	26.3%	3	0%	100%	0	3	26.3%	2	0%	100%	0	2	5
Electronic Warfare	73.7%	15	120	1.5	73.7%	9	5%	95%	1	13	73.7%	6	5%	95%	0	8	15
Total	Good	20	162			12						8					20

Table C-9: Alternative 2 Emissions

EA-18G				Emissions (lb/yr)						Emissions (ton/yr)					
Mission Type	Annual Sorties	Total time, hr	Total time below 3,000 ft., hr.	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub>	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
Air Combat Maneuvers	1,262	1,262	0	0.00	0.00	0.00	0.00	0.00	41,648,670.83	0.00	0.00	0.00	0.00	0.00	18,891.54
Electronic Warfare	3,538	5,306	265	1,974.87	40,457.45	378.52	1,014.86	17,993.3	175,066,941.44	0.99	20.23	0.19	0.51	9.00	79,409.12
F/A-18															
Air Combat Maneuvers	5	5	0	0.00	0.00	0.00	0.00	0.00	173,536.13	0.00	0.00	0.00	0.00	0.00	78.71
Electronic Warfare	15	22	1	8.23	168.57	1.58	4.23	74.97	729,445.59	0.00	0.08	0.00	0.00	0.04	330.87
F-35															
Mission Type	Annual Sorties		Annual Sorties below 3,000 ft.												
Air Combat Maneuvers	5		0	0.00	0.00	0.00	0.00	0.00	48,245.88	0.00	0.00	0.00	0.00	0.00	21.88
Electronic Warfare	15		1	19.66	18.28	0.04	0.82	0.27	135,198.52	0.01	0.01	0.00	0.00	0.00	61.33
				Emissions (lb/yr)						Emissions (ton/yr)					
				CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year	CO	NO <sub>x</sub>	VOC	SO <sub>x</sub>	PM	CO <sub>2</sub> , MT/year
				2,003	40,644	380	1,020	18,069	217,802,038	1	20	0	1	9	98,793

Notes: (1) Emission calculations for F-35 are different than the other aircraft because F-35 emission factors are in pounds per operation. Therefore, the number of operations below 3,000 feet were estimated. Criteria pollutant emissions below 3,000 feet above ground level are evaluated for NEPA purposes. GHG emissions are calculated for all elevations. (2) Numbers may not add up due to rounding



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## References

U.S. Environmental Protection Agency. (1992). *Procedures for Emission Inventory Preparation*. Washington, DC: U.S. Environmental Protection Agency.

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## Appendix D: Public Involvement, Comments, and Responses



# Eastern Washington Airspace Extension Environmental Assessment

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## **Appendix D      Public Involvement, Comments, and Responses**

### **D.1      Public Involvement Summary Report**

This report summarizes public involvement and stakeholder outreach activities conducted by the United States (U.S.) Department of the Navy (Navy) in support of the Eastern Washington Airspace Extension Environmental Assessment (EA). This report also summarizes public comments received during the public review and comment period for the Draft EA, which ran from January 12, 2024, to February 23, 2024. Though this appendix to the EA does not include all 6,189 individual comments received, all comments have been compiled and can be accessed on the project website at <https://pacific.navfac.navy.mil/NWNEPA>. The Federal Aviation Administration is a cooperating agency on this EA.

The purpose of public involvement and outreach during this phase was as follows: (1) notify the public, stakeholders, and federally recognized Native American tribes (“federally recognized tribes”) of the upcoming release of the Draft EA and, once released, the availability of the Draft EA for review and comment; (2) inform the public, stakeholders, and federally recognized tribes about the Proposed Action, its purpose and need, the alternatives analyzed, and the findings in the Draft EA; (3) identify and reach out to environmental justice communities in the Action Area; (4) provide the opportunity for the public, stakeholders, and federally recognized tribes to comment on the Draft EA; and (5) provide the opportunity for the public, stakeholders, and federally recognized tribes to submit information or comments regarding historic properties. Involvement and outreach efforts were conducted in accordance with the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and U.S. Navy guidance.

The Navy recognizes the importance of engagement with the public, stakeholders, and federally recognized tribes and took additional steps, such as advanced outreach (Section D.1.1.1., Advanced Notifications and Table D-1), beyond those required by NEPA to broaden efforts to notify and inform the public, as described in this report.

#### **D.1.1      Summary of Activities**

##### **D.1.1.1      Advanced Notifications**

Early in the EA development process, the Navy provided advanced notification or briefings to certain regional elected officials, government agencies, and federally recognized tribes. Advanced notifications informed stakeholders and federally recognized tribes of the Navy’s intent to prepare an EA to evaluate the potential environmental impacts associated with a proposed military training airspace extension in northeastern Washington state and requested points of contact for future communication. During this time, local media was informed of the upcoming Proposed Action and released related articles (Table D-5). The following, including Table D-1, is a summary of those advanced notices and briefings.

##### ***Stakeholder Emails***

The Northwest Training Range Complex Community Planning and Liaison Officer, Naval Air Station Whidbey Island Public Affairs Officer, and U.S. Pacific Fleet Program Lead sent notification emails on October 5, 10, and 11, 2023, to 14 potential project stakeholders.



### ***Tribal Letters***

Tribal letters were mailed on August 23, 2023, to three tribal leaders of federally recognized tribes. Tribal letters were signed by U.S. Navy Captain E. M. Hanks, Commanding Officer of Naval Air Station Whidbey Island. All tribal letter recipients received a copy of the proposed project area (Action Area) map.

### ***Stakeholder Briefings***

Navy personnel shared information with stakeholders and federally recognized tribes early in the EA planning process, including a description of the Proposed Action, resource areas to be analyzed in the EA, and the environmental impact analysis process. The Navy also offered briefings upon request. Table D-1 summarizes advanced outreach effort prior to the release of the Draft EA.

**Table D-1: Advanced Outreach Conducted Prior to Release of the Draft EA**

Stakeholders	Conducted By	Format of Outreach	Date
Federal Aviation Administration	Naval Air Station Whidbey Island	Briefing, Meetings every other week	July 6, 2023
U.S. Army, Joint Base Lewis-McChord	Naval Air Station Whidbey Island	Virtual Briefing	August 9, 2023
Spokane Tribe of Indians Kalispel Tribe of Indians Confederated Tribes of the Colville Reservation	Naval Air Station Whidbey Island	Letter	August 23, 2023
U.S. Fish and Wildlife Service	Naval Air Station Whidbey Island	Briefing	September 13, 2023
U.S. House of Representatives U.S. Senate Office of the Governor (Washington state) U.S. Forest Service, NEPA Coordinator, Pacific Northwest Region 6 Okanogan County Planning and Development Fairchild Air Force Base 92nd Mission Support Group Joint Base Lewis-McChord and Yakima Training Center	Naval Air Station Whidbey Island	Email	October 5, 10, and 11, 2023

Notes: NEPA = National Environmental Policy Act, U.S. = United States

#### **D.1.1.2 Environmental Justice-Related Outreach**

The U.S. Environmental Protection Agency defines environmental justice as the “fair treatment” and “meaningful involvement” of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (USEPA, 2024). Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. Meaningful involvement means:

- People have an opportunity to participate in decisions about activities that may affect their environment or health;
- The public’s contribution can influence the agency’s decision;
- Community concerns will be considered in the decision-making process; and

- Decision makers seek out and facilitate the involvement of those potentially affected (USEPA, 2024).

According to the Washington Office of Financial Management, in 2022, high percentages of Hispanic residents could be found in northern central Washington, including Okanogan, Chelan, and Douglas counties (between 19.6% and 65.3%).

Targeted engagement to minority or low-income populations helps to ensure these communities have an equal opportunity to participate and have an influence in the decision-making process. To this end, the Navy implemented strategies and tactics in its public involvement program to enhance outreach and engagement with environmental justice communities that may be directly or indirectly impacted by the Proposed Action or have special vulnerabilities, such as preexisting health conditions; unique routes of exposure; or cultural practices, e.g., subsistence fishing, hunting, gathering.

Strategies and tactics used to reach or improve communication with minority or low-income populations included:

- Used multiple methods and electronic forms of communication in disseminating project notifications and information to communities.
- Translated the project fact sheet into Spanish, and posted on the project website, based on research results showing a high population of Spanish speakers in certain counties under the airspace.
- Tailored printed materials or briefs to the audience for clear communication; avoid military jargon and highly technical terminology.
- Held two virtual public meetings to increase the public's ability to participate in a meaningful way by hearing project information directly from the Navy, asking questions, and having those questions answered.
- Posted additional frequently asked questions and answers to the project website that arose during the Draft EA virtual public meetings.
- Informed key stakeholders and the public of the outcomes of public involvement and outreach activities during the Draft EA public review and comment period and the nature of comments received from the public.

#### **D.1.1.3 Public Notification**

In preparation for the release of the Draft EA, the Navy developed materials to notify the public of the availability of the Draft EA for review and comment and provide information about the Proposed Action, virtual public meetings, and opportunity to submit comments. Notices were disseminated starting January 12, 2024, and posted to the project website at <https://pacific.navfac.navy.mil/NWNEPA>, to initiate the public review and comment period. The following is a summary of those notices.

#### ***Newspaper Advertisements***

Display advertisements were placed in four local and regional newspapers in eastern Washington. The advertisements were published beginning January 12, 2024, to coincide with the start of the public review and comment period. Publication dates were dependent on whether the newspaper published daily or weekly. Table D-2 shows the newspapers and corresponding publication dates for each advertisement.

**Table D-2: Newspaper Publications for the Notice of Availability and Virtual Public Meetings**

<b>Newspaper</b>	<b>Newspaper Coverage</b>	<b>Publication Frequency</b>	<b>Publication Dates</b>
<i>Methow Valley News</i>	Twisp, WA	Weekly; Wednesdays	Wednesday, January 17, 2024
<i>The Okanogan Valley Gazette-Tribune</i>	Okanogan Valley, WA	Weekly; Thursdays	Thursday, January 18, 2024
<i>The Spokesman Review</i>	Spokane, WA	Daily; except Saturday	Friday, January 12, 2024 Sunday, January 14, 2024 Monday, January 15, 2024
<i>Statesman-Examiner</i>	Colville, WA	Weekly; Wednesdays	Wednesday, January 17, 2024

***Tribal and Stakeholder Notification Letters***

Tribal letters were mailed via U.S. Postal Service priority mail or FedEx on January 11, 2024, to six tribal leaders of federally recognized tribes or tribal districts. Tribal letters were signed by U.S. Navy Captain J. H. Beattie of the U.S. Pacific Fleet. All tribal letter recipients received a copy of the Eastern Washington Airspace Extension Draft EA fact sheet.

Stakeholder letters were mailed via U.S. Postal Service on January 11, 2024, to 113 federal, state, and local elected officials and government agencies. Stakeholder letters were signed by U.S. Navy Captain J. H. Beattie of the U.S. Pacific Fleet. All stakeholder letter recipients received a copy of the Eastern Washington Airspace Extension Draft EA fact sheet.

***Stakeholder and Tribal Database/Mailing List***

A stakeholder and tribal database/mailling list was developed to include elected officials, government agencies, nongovernmental organizations, community and business groups, and federally recognized tribes to manage and document the distribution of project notifications.

***Postcard Mailer***

A postcard was mailed on January 10, 2024, to 33 nongovernmental organizations and community and business groups.

***News Releases and Media Distribution***

The Naval Air Station Whidbey Island Public Affairs Officer distributed a news release announcing the availability of the Draft EA and the virtual public meetings to local, regional, and national print and broadcast (radio and television) media outlets on January 12, 2024. A second news release was distributed to media outlets on February 2, 2024, to notify the public of the virtual public meetings again, closer to the meeting dates. Media outlets that published the news release can be found in Table D-5.

**D.1.1.4 Public Information*****Project Website***

A project webpage, tiered off of the Naval Facilities Engineering Systems Command Northwest NEPA project website, was established to provide the public with easy access to the Draft EA, a project fact sheet in both English and Spanish, maps, frequently asked questions and answers, commenting information, project information repositories, and information on the virtual public meetings. All materials posted were compliant with Section 508 of the Rehabilitation Act. The webpage went “live” the evening of January 11, 2024. The website URL (<https://pacific.navfac.navy.mil/NWNEPA>) was included in the newspaper advertisements, stakeholder letters, tribal letters, news releases, fact sheet, and postcard mailers.

On February 7, 2024, the Navy posted the presentation for the virtual public meetings on the website for the public to access. After the completion of the virtual public meetings, on February 22, 2024, the Navy posted the video and audio recording and written transcript of the Navy’s presentation given during the February 13, 2024, virtual public meeting. On March 15, 2024, the Navy posted additional frequently asked questions and answers based on public questions asked during the virtual public meetings.

***Fact Sheet***

A four-page fact sheet (English and Spanish versions) was developed to provide project information to the public and included the following topics:

- Proposed Action
- Alternatives
  - No Action Alternative
  - Alternative 1 (Preferred Alternative)
  - Alternative 2
- Resource Areas Analyzed
- NEPA and National Historic Preservation Act Processes
- Next Steps
- Information Repositories
- Commenting Information
- Virtual Public Meetings

The Navy translated the fact sheet into Spanish based on research results showing a high population of Spanish speakers in certain counties under the airspace.

The fact sheet was mailed as an enclosure with the stakeholder and tribal letters and was posted on the project website.

***Information Repositories***

Six information repositories were established in January 2024 to make documents available to members of the public without Internet access. A printed copy and CD-ROM of the Draft EA were mailed to each information repository:

- Colville Public Library
- Oak Harbor Public Library

- Okanogan Public Library
- Oroville Public Library
- Twisp Public Library
- Winthrop Public Library (added after release of the Draft EA per request of virtual public meeting attendee)

***Virtual Public Meetings***

The Navy determined that virtual public meetings, using the Zoom for Government webinar platform, were the best format to reach stakeholders from across the Action Area and ensure effective public involvement for this project. The Navy considered in-person meetings and a hybrid of in-person and virtual meetings, but decided to utilize the virtual meeting format to conduct two virtual public meetings for two reasons: 1) the proposed Action Area is geographically broad, with population centers spread across the region; and 2) with meetings occurring during the month of February, there also was a concern that weather might force cancellation of meetings or result in unsafe travel conditions for personnel supporting meetings or members of the public wishing to attend. Therefore, virtual meetings were the best option to encourage attendance and facilitate meaningful public participation to the greatest extent possible while being efficient with government resources. The virtual format allowed for a dedicated opportunity for the exchange of information between the public and Navy subject matter experts. The Navy's goals in hosting virtual meetings were to provide an opportunity for the public to learn more about the project and the environmental impact analysis, as well as have their questions answered as they would at an in-person public meeting.

The Navy held the two virtual public meetings on February 13 and February 15, 2024. Interested individuals could attend a virtual public meeting by computer, tablet, mobile device, or telephone. The virtual public meetings consisted of prerecorded opening remarks by U.S. Navy Captain E.M. Hanks, the Commanding Officer of Naval Air Station Whidbey Island, followed by a live Navy presentation and a public question-and-answer session to discuss the Proposed Action and the environmental impact analysis. Each meeting was scheduled for one hour; however, both meetings were extended 30 minutes to answer questions from the public submitted during the question-and-answer session. The Navy posted virtual public meeting materials, as well as follow-up frequently asked questions and answers, on the project website.

The public was encouraged to ask questions about the Proposed Action or the environmental impact analysis during the virtual public meetings. An email address, NASWIPAO@us.navy.mil, was used to receive questions from the public in advance for discussion with Navy representatives during the live question-and-answer portion of the virtual public meetings. Emailed questions were accepted between February 1 and February 12, 2024. During the virtual public meetings, attendees using a computer or mobile device could type their question using the "Q&A" function on Zoom. Individuals could also ask their question verbally using the "Raise Your Hand" function on Zoom or \*9 on telephones. A moderator read the emails and typed Zoom questions to be answered live by Navy team members. All questions submitted and discussed during the question-and-answer portion of the virtual public meetings were not considered official public comments nor part of the official public record. An official public comment could be submitted by mail or email through February 23, 2024. The Navy promoted the proper commenting channels in all public notices, informational materials, website content, and during the virtual public meetings.

***Virtual Public Meetings Summary***

Table D-3 includes a summary of the virtual public meetings held February 13, 2024, and February 15, 2024. In total, 65 members of the public, media, elected officials or staffers, government agencies,

nongovernmental organizations, contractors, and Navy employees attended the two virtual public meetings. The “Questions Asked and Responded to by the Navy” portion of the table provides the verbatim questions asked via email or during the virtual public meetings. Questions and answers were documented during both virtual public meetings and will be included in the administrative record. In addition, questions asked during the meetings were not considered official comments and were only responded to during the meetings. Only official comments submitted via U.S. postal mail or to the dedicated email address, [navfac-nw-NEPA@us.navy.mil](mailto:navfac-nw-NEPA@us.navy.mil), were considered and responded to in this appendix.

**Table D-3: Summary of Virtual Public Meetings**

Date/Time	Attendance
<p>Tuesday, February 13, 2024 3 to 4 p.m. Pacific Standard Time (scheduled duration) Meeting Duration: 90 minutes</p>	<p><b>Total Attendance: 31</b> General Public: 21 Navy Personnel or Known Navy Contractors: 10</p>
<p><b>Media Attendance:</b></p> <ul style="list-style-type: none"> <li>• Marcy Stamper - Methow Valley News</li> </ul>	
<p><b>Questions Asked and Responded to by the Navy (written as emailed, typed into the Zoom application, or verbally stated):</b></p> <ul style="list-style-type: none"> <li>• Table 2.3-1: Summary of Aircraft Types and Annual Sorties in Select MOAs and ATCAAs for the No Action Alternative, Alternative 1 (Preferred Alternative), and Alternative 2. How many and what kind of these sorties are in Okanogan D, also in A,B,C? And in the Roosevelt MOA. We basically need more detail on the locations and types of flights to understand the impact in any locale.</li> <li>• Are the number of sorties listed in Table 2.3-1 hard number limits? If not, what are the hard limits on the number and type of sorties?</li> <li>• What are the transit paths to and from the Whidbey base to the Okanogan D MOA, the balance of the Okanogan MOA and Roosevelt MOA. Are the outbound and return routes the same? At what elevation do the jets fly in transit? How much variability is allowed (vertically and horizontally) in the transit routes.</li> <li>• Why can't the training (or at least much more) be done at sea? And why isn't this alternative considered in the EA? Very few people live on the ocean and there is less commercial air traffic.</li> <li>• Why don't military jets have to use transponders while training?</li> <li>• How did you benchmark your noise model with actual measurements (provide a reference)?</li> <li>• How are you going to monitor the noise levels to make sure 46 dB noise level is not exceeded?</li> <li>• I'm a resident of Winthrop, WA. and I'm curious about the proposed establishment of new military operations (MOA) in Okanogan County. How low are the planes allowed to fly? And are there any rules or regulations that keep pilots to the zone above 11,500 feet? If so, what keeps pilots accountable to not fly too low? I'm asking because I'm a paragliding pilot and my fellow paragliding pilot friends and myself as well as many local residents have witnessed planes flying very low in the Methow Valley. We even have a video of a jet below Bowen Mountain, a popular paragliding launch at 3700 feet. My concern is a mid-air collision, a paraglider may not survive such an incident. I support the US military and would love to feel safer enjoying free flight near my home.</li> <li>• The EA states that the airspace of greatest value for Growler training is at high altitude. Why is the proposed extension at the lower altitudes. This appears to provide lesser value training while increasing noise intrusions over high value recreation, wildlife and residential locations.</li> <li>• Why is the Navy not providing an Environmental Impact Statement for this request?</li> <li>• Will the Navy be conducting an EIS before making a decision on this proposal?</li> <li>• Why is the Navy attempting to expand airspace in Washington without following the court's order to examine El Centro as an alternative training facility?</li> </ul>	

- In the EA it states that the Growlers will not fly past 30 minutes after sunset per regulations. But they sometimes fly at least until midnight in northwest WA. How will the regulations be enforced to make sure the real flights match what it in the proposal if it is approved?
- Why are you proposing a new EA for extended airspace when you have not yet completed a new EIS for the Growler expansion at NASWI?
- What efforts did the Navy make to notify residents of the proposed expansion area of this meeting, i.e., how did you send notice and to whom?
- How can the Navy consider that expanded MOA with a 300' above ground level NOT have a substantial environmental impact on wildlife and human health?
- You stated it is up to the Navy to decide whether an EIS is needed. Is there no oversight by the government?
- If there needs to be a division of training opportunities and a need for diverse environments, then why are all the Growlers single sited on Whidbey Island and only trained in Washington?
- Can you be more specific regarding the route growlers will take from Whidbey to the proposed expansion area and back? Your explanation was not particularly decipherable to the layman.
- Where can we find the recording for this meeting when it ends?
- Could the average sound level be much less than the instantaneous noise heard by someone on the ground?
- In the draft EA, there are maps showing that the extension would be over the habitats of some endangered species. What else is under the proposed airspace? Schools? Clinics? Public parks? How exactly will the people under the proposed airspace be impacted?
- Would it be possible to establish a noise monitoring station at a location in the Methow Valley, for instance, maybe at the school? We experience high levels of noise from these flights that are disruptive to everyone, but the school seems like a place with the very highest level of concern.
- What are those instantaneous levels under 2000?

**Notable Attendees:**

- Washington Department of Fish and Wildlife
- National Parks Conservation Association
- Kettle Range Conservation Group
- Federal Aviation Administration

Date/Time	Attendance
Thursday, February 15, 2024 6 to 7 p.m. Pacific Standard Time (scheduled duration) Meeting Duration: 90 minutes	<b>Total Attendance: 34</b> General Public: 23 Navy Personnel or Known Navy Contractors: 11
<b>Media Attendance:</b> None	
<b>Questions Answered (written as emailed, typed into the Zoom application, or verbally stated):</b>	
<ul style="list-style-type: none"> <li>• Why do we need low-level flyovers down the Methow Valley where 5,000 people live (I measured 119 dBA one day at the Winthrop library)?</li> <li>• Why is it safe for the military jets to not use transponders? We have two local airports in the Methow Valley plus there is a balloon festival + gliders + small single engine planes.</li> <li>• Please describe the scientific and public survey studies that provide a basis for the 46 dB limit that justifies a finding of no significant impact. How do you know there are no health impacts as a result of highly annoying, intrusive, disruptive and stressful, low frequency noise (50–200 Hz) of up to 5,000 times per year?</li> <li>• Regarding noise exposure, studies show that the annual-average DNL metric can obscure the frequency of noise events and is not always highly correlated with (or representative of) community noise complaints. Furthermore, the exclusive use of A-weighting underestimates the contribution of low-frequency growler noise to measurements, as well as the spatial extent of noise exposure. Why does the EA fail to mention these effects and quantify these supplemental metrics?</li> </ul>	

- The presentation states that noise will remain “consistent” with current conditions. However, changes in cumulative average levels are modeled to increase by up to 15 dB. Moreover, the cost of disrupting the tranquility of a previously pristine (or at least minimally disturbed) soundscape should be taken into account. This clearly suggests that noise will not remain “consistent” in the region, unless there are other relevant details that have not been mentioned?
- What metrics/criteria are being assessed to come up with these conclusions that there are no significant impacts? The existing noise levels are extremely intrusive - why would the conclusion that the status quo is OK be acceptable?
- Fish and Wildlife has taken several actions to preserve wildlife habitat - setting up Preserve areas, closing other areas to public access - as human population has increased. How was it decided that the roar and vibration of low flying jets have acceptable limits of impact? How is this compatible with these other actions?
- Why not have Growlers stationed at other naval air bases such as China Lake and Lamoore?
- Why can't training flights take place in less populated, areas with less sensitive habitat - southeastern WA, out over the ocean? I'm not understanding how this is a valuable presentation when we're hearing the blanket statement that this has no impacts without any info as to how the Navy reached those conclusions.
- What will be the frequency of flights be over Mazama?
- Hello. You have referred to a 'previous analysis' under the 'no action' alternative. When was this last analysis? thank you.
- What will the maximum decibel levels be in Mazama?
- Has the Navy considered the area to the south of current MOAs, not including Molson? If so, what area and why was it not chosen? If not, why not?
- I am wondering; how much ID airspace is being used by the project?
- Could your team provide a printed copy of the EA to the Winthrop Library? My understanding is that there is a copy at the Twisp Library but not the Winthrop Library.
- Are the decibel levels reported still be averaged over a 24-hour period rather than the actual decibel levels?
- The Navy says there will be a minor redistribution of flights between the old MOA and the proposed area. If this is the case, why is no action not the better alternative considering the cost and environmental impact?
- How many growlers are currently based at the Whidbey Island base? and are there any plans to increase these numbers? and will this effect the number of flights considered in this draft EA?
- Are you evaluating the effect of your proposal on the economy in Mazama?
- How will your radar jamming effect the health of citizens?
- The Navy says one purpose of the proposed area is to enhance training and operational readiness of CVWP aircrew by maintaining aircrew skills. Specifically, what skills cannot be maintained in the current MOAs? Specifically what airspace dimensions?"
- Will you be flying over the Pacific Crest Trail and other trails in the area?
- Why EA vs EIS?
- It's hard to understand—given the relative small size of the proposed extension (393 sq nautical miles) and the much larger area to the east— why is it needed? Is it the altitude of the Mazama extension? Is it the continuity and access for the jets coming from Whidbey?
- We live in a hill side community in Mazama 600 feet above the valley floor. We have seen navy jets flying below our altitude and have had jets so low over our house that we could see the pilots faces and we have seen jets fly just above the treetops over the Chewuch River residential area. Would this kind of low flying be permitted in the proposed plan? And again, how can pilots be held accountable for their flying?

**Notable Attendees:**

- Washington Department of Fish and Wildlife
- Federal Aviation Administration



**D.1.1.5 Summary of Public Comments**

***This section is intended to illustrate the main issues heard from the public during the Draft EA public review and comment period; it is not meant to capture all aspects of the comments or to serve as an administrative record.***

The public review and comment period ran from January 12, 2024, to February 23, 2024. The public could submit official public comments via U.S. postal mail or to a dedicated email address, [navfac-nw-NEPA@us.navy.mil](mailto:navfac-nw-NEPA@us.navy.mil). Postal mail and email comments were monitored by Naval Facilities Engineering Systems Command Northwest staff; comments were compiled and submitted to project team members frequently.

Six thousand one hundred eighty-nine (6,189) comments were received during the public comment period. All comments were submitted via email. Comments were received from government agencies, nongovernmental organizations, and individuals. Though this appendix to the EA does not include all 6,189 individual comments received, all comments have been compiled and can be accessed on the project website at <https://pacific.navfac.navy.mil/NWNEPA>.

Each comment was reviewed and categorized into specific resource areas or topics. One comment may include comments on multiple resource areas or topics. All comments were compiled, logged, and distributed to the EA project team and appropriate subject matter experts. The EA project team discussed the impact, significance, and relevance of the comments for the preparation of the Final EA. All comments submitted during the comment period will become part of the public record, and substantive comments are considered in this Final EA.

Table D-4 includes a summary of public comments to provide a brief overview of the general issues or concerns expressed during the public review and comment period.

**Table D-4: Summary of Public Comments**

Resource Area/Topic	Issue/Concern
Proposed Action and Alternatives	<ul style="list-style-type: none"> <li>• Support for the No Action Alternative as the best choice of all the alternatives.</li> <li>• Recommendation that the boundaries of all existing Military Operations Areas (MOAs) and Air Traffic Control Assigned Airspaces should be re-drawn to eliminate overlap with designated wilderness areas.</li> <li>• Recommendation that the military pilot training be held in non-wilderness areas with already disturbed visual and auditory resources.</li> <li>• Recommendation to put the necessary training exercises on Whidbey Island since aircraft noise is already present there instead of exposing wilderness areas to noise.</li> <li>• Suggestion to raise the elevations of the overall airspace to protect wildlife from noise pollution.</li> <li>• Concern that the use of Mean Sea Level as the sole metric for floor and upper limits for determining the impact of overflights is misleading.</li> <li>• Concern that this area has been subject to flights for decades and it is time to move the entire training space somewhere new.</li> <li>• Suggestion to raise the floors of Okanogan B and Roosevelt B MOAs to at least 2,000 feet above ground level.</li> <li>• Request for specific numbers and types of sorties in the extension area.</li> <li>• Request for an analysis of the impact of the transit routes from Whidbey Island to the MOAs.</li> <li>• Suggestion to examine more alternatives for this project.</li> <li>• Recommendation that the Navy install flight recording devices to record real-time altitude and noise emissions and make that data publicly available.</li> </ul>
Purpose and Need	<ul style="list-style-type: none"> <li>• Disbelief that there isn't already enough space to practice the necessary training.</li> <li>• Agreement that there is a need for training areas and that eastern Washington provides the proper terrain.</li> <li>• Urging of the military to shift focus from preparing for war to fostering peace.</li> <li>• Disbelief that anyone is threatening the U.S. military.</li> </ul>
Overall Military Training	<ul style="list-style-type: none"> <li>• Concern that when a military jet breaks the rules by flying too low there is nothing that the public can do.</li> <li>• Question why the Navy can't use flight simulators as a replacement for the extension.</li> <li>• Concern that training in the mountains is more prone to accidents and crashes.</li> <li>• Recommendation to hold military aircraft training over the ocean.</li> <li>• Recommendation to move training to a different location.</li> </ul>
Overall Environmental Impact Analysis	<ul style="list-style-type: none"> <li>• Recommendation to reevaluate the entire environmental scope of the project.</li> <li>• Concern about the impact U.S. military training has on resources in the State of Washington and other areas where the military frequently trains.</li> </ul>
Air Quality/Climate Change	<ul style="list-style-type: none"> <li>• Concern that air pollution could spread and contaminate a wider area, including more designated wilderness areas.</li> <li>• Emphasis that there is no safe level of air pollution.</li> <li>• Concern that global warming could increase due to fossil fuel use by the military.</li> </ul>
Biological Resources	<ul style="list-style-type: none"> <li>• Concern that the Draft EA inadequately analyzes the impacts on wilderness.</li> <li>• Concern that so much wilderness has been lost to development, climate change, and other human activities that there needs to be an emphasis on protecting what remains.</li> <li>• Question whether the Proposed Action violates the Wilderness Act.</li> </ul>

Resource Area/Topic	Issue/Concern
	<ul style="list-style-type: none"> <li>• Concern that military aircraft could drive away birds that many people go to wilderness areas to observe.</li> <li>• Concern for the potential impacts on mating seasons within wilderness areas.</li> <li>• Concern that when a wilderness environment is disturbed it never returns to its original condition.</li> <li>• Concern for jet trail particulates impacting plant and animal health.</li> <li>• Concern that the impact on animals' hearing is not properly evaluated since they have more sensitive hearing.</li> <li>• Concern for the impact on the potential reintroduction of the grizzly bear to wilderness areas.</li> <li>• Concern for the sensitive or endangered species in the area.</li> <li>• Concern that it is illegal to train over federally designated wilderness areas.</li> <li>• Concern that the conclusion of the EA of having a short-term and brief impact on recreation areas is highly debatable.</li> <li>• Concern for the loss of a wilderness presence that has existed for decades.</li> <li>• Request to compare how household pets react to fireworks to show the impact on wildlife.</li> <li>• Concern that the Navy is planning on "bombing" the wilderness area.</li> <li>• Reminder that individuals that raised animals in the past had instances where the animals "killed" themselves and their offspring due to fear from noise exposure.</li> <li>• Confusion as to how with a large country, there is not an area for training aviators while not disturbing wildlife.</li> <li>• Reminder that it is more important to protect the environment and public lands since the COVID-19 pandemic.</li> <li>• Claim that losing wilderness areas is equal to losing the "heart and health of America."</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• Question that if jet noise impacts are not harmful in short duration, why isn't aircraft training conducted over residential areas.</li> <li>• Concern that while quiet and solitude are qualities protected by Congress, they are not analyzed in the Draft EA.</li> <li>• Concern that noise from military aircraft could disrupt animal behavior and cause stress.</li> <li>• Emphasis on the importance of the issues of noise pollution and the protection of wildlife.</li> <li>• Request for a map showing where each maximum sound level would occur.</li> <li>• Emphasis that the number of places where people can find peace and solitude should be increasing instead of decreasing.</li> <li>• Concern about inadequate use of A frequency-weighting when it comes to the contribution of low-frequency Growler noise. Recommend using C frequency-weighting instead.</li> <li>• Recommendation that the EA be re-written using only maximum impact values for noise instead of day night average sound levels.</li> <li>• Concern that the noise impact analyzed was representative of EA-6B overflights, which are much quieter than the EA-18G overflights.</li> <li>• Emphasis that the people who live in the area do so intentionally to escape noise and live quiet, peaceful lives.</li> <li>• Support for the EA since there is already an abundance of noise from other sources, such as wildfire suppression training and heli-skiing.</li> </ul>
Expendable Materials	<ul style="list-style-type: none"> <li>• Concern about potential debris from military exercises.</li> <li>• Recommendation to replace chaff with a biodegradable alternative.</li> </ul>

Resource Area/Topic	Issue/Concern
	<ul style="list-style-type: none"> <li>• Question about the amount of fuel each plane uses during each exercise.</li> <li>• Concern about Growlers dumping fuel and the lack of analysis in the Draft EA.</li> </ul>
Public Health and Safety	<ul style="list-style-type: none"> <li>• Concern for the possibility of wildfires.</li> <li>• Concern that repeated exposure to jet flyovers upsets people's nervous systems.</li> <li>• Concern that many of the people that visit are veterans and uncertainty how this project could impact them.</li> <li>• Concern that a startling noise while people are hiking, kayaking, or rock climbing could lead to serious injuries.</li> <li>• Concern that older hikers who use the wilderness area to stay healthy and fit could lose this resource.</li> <li>• Unlikely to assume those with sensitive hearing would wear ear protection in their daily lives.</li> <li>• Recommendation to work with a scientist with a doctoral degree in epidemiology to properly analyze the impact on human health for the Final EA.</li> <li>• Concern about the impacts of aircraft noise on childhood learning.</li> <li>• Question why the Navy assumes in the Draft EA that people only visit the wilderness on weekends when people often visit during the week to maximize solitude and quiet.</li> </ul>
Socioeconomics and Environmental Justice	<ul style="list-style-type: none"> <li>• Concern that visitors invest money to experience solitude and quiet and the project could negate that investment.</li> <li>• Emphasis on protecting the wilderness areas since these areas are under constant attack by people trying to use them for profit.</li> <li>• Concern for park rangers who live under these proposed areas full time and their exposure to noise.</li> <li>• Concern that local communities rely on almost half a million outdoor enthusiasts who visit the wilderness areas for their economies.</li> <li>• Concern that this area was chosen due to its low-income and rural nature.</li> <li>• Recommendation to use the Environmental Protection Agency's EJScreen to evaluate impacts concerning Environmental Justice.</li> <li>• Concern that economic impacts were not comprehensively analyzed.</li> <li>• Concern that the U.S. is "wasting" tax money on lost causes due to the perception that the U.S. military has lost every war since 1945.</li> <li>• Concern that thinking people only visit wilderness areas on the weekends is discriminatory towards those who are retired and frequently seek out mid-week opportunities.</li> </ul>
Cumulative Impacts	<ul style="list-style-type: none"> <li>• Concern that the U.S. military pollutes the planet, and the proposal would increase pollution.</li> <li>• Emphasis that the limited pristine lands are significant gifts to be passed on to future generations and must be protected.</li> <li>• Concern that many national parks and wilderness areas across the United States have been destroyed by low flying military jets.</li> <li>• Belief that this action would hurt more than it would help.</li> </ul>
Mitigation Measures	<ul style="list-style-type: none"> <li>• Concern that the government does not show enough concern or implement procedures to protect the environment.</li> <li>• Recommendation that the Navy pays for relocation or renovation (soundproofing) of the houses most impacted.</li> <li>• Concern for how pilots would be monitored and reprimanded if flight rules are not followed.</li> <li>• Recommendation to divert funds to engineer a solution that reduces aircraft noise.</li> </ul>

Resource Area/Topic	Issue/Concern
Cultural Resources/ Historical Significance	<ul style="list-style-type: none"> <li>Recommendation to coordinate with affected tribes.</li> </ul>
National Environmental Policy Act	<ul style="list-style-type: none"> <li>Recommendation that an Environmental Impact Statement must be conducted for the Navy to fully analyze all impacts of the proposal.</li> <li>Concern that the Draft EA is substantially out of compliance with NEPA standards.</li> <li>Concern for the current lawsuit involving Growlers mandating an Environmental Impact Statement be performed.</li> <li>Concern that the map lacks enough detail.</li> <li>Concern that the Navy's public outreach was not adequate.</li> <li>Concern that the pre-made comment by Washington Wild has limited data to support their position, has not taken noise readings, and is spreading concerns that are vague and hypothetical.</li> </ul>
Other	<ul style="list-style-type: none"> <li>Grateful for the service the Navy does for the people of the United States.</li> <li>Request to compare the proposal to what was experienced in New York to understand the disturbance.</li> <li>Concern that the U.S. values war and war preparation.</li> <li>Recommendation that Navy officials spend time in the wilderness areas they are proposing to potentially impact.</li> <li>Reminder that the Navy exists to protect American citizens, not degrade their quality of life.</li> <li>Reminder that people do not want military flights to occur over the Gila National Forest in southwest New Mexico, as well.</li> <li>Recommendation to watch a documentary titled "The Year the Earth Changed."</li> <li>Thought that aircraft are not bothersome and are seen as inspirational to youth who see training in action.</li> </ul>

#### D.1.1.6 Summary of Media

Table D-5 includes media articles published about the project during the review and comment period, including the author, source, title, and date published.

**Table D-5: Summary of Media**

Media Log
<ul style="list-style-type: none"><li>• WA Wild Blog Staff. "37 Join WA Wild on Letter Urging the U.S. Navy to Reconsider Proposed Expansion of Flight Training Areas." Washington Wild. February 27, 2024.</li><li>• Stamper, Marcy. "Navy's training area expansion raises local concerns." Methow Valley News. February 22, 2024.</li><li>• WA Wild Blog Staff. "TAKE ACTION: U.S. Navy's Expansion of Flight Training Area Needs Stronger Review." Washington Wild. February 16, 2024.</li><li>• Gazette-Tribune Staff. "U.S. Navy invites public input on Draft Environmental Assessment for Eastern Washington Airspace Extension." Okanogan Valley Gazette-Tribune. January 19, 2024.</li><li>• Stamper, Marcy. "Navy releases plan to expand flight training over Methow." Methow Valley News. January 18, 2024.</li><li>• U.S. Navy Press Release. "U.S. Navy Invites Public Input on Draft Environmental Assessment for Eastern Washington Airspace Extension." Statesman Examiner print edition. January 17, 2024.</li><li>• Stamper, Marcy. "Navy considers expansion of flight-training area in the county." Methow Valley News. November 30, 2023.</li></ul>

## D.2 Public Comments and Responses

### D.2.1 Comments from Private Individuals and Nongovernment Organizations

The Navy received over 6,000 comments from private individuals and Nongovernmental Organizations, including the Sound Defense Alliance, Washington Wild, Methow Valley Citizens Council, and Kettle Range Conservation Group. Because of the vast number of comments the Navy received, the comments were reviewed, broken into categories and represented as “comment topics”, and responded to. All responses were prepared and reviewed for scientific and technical accuracy and completeness. Table D-6 provides the Navy’s responses to these comments. Though this appendix to the Final EA does not include all verbatim comments received, all comments have been compiled and can be accessed on the project website at <https://pacific.navfac.navy.mil/NWNEPA>.

**Table D-6: Responses to Comments from Private Individuals and Nongovernmental Organizations**

Comment Topic	Navy Response
<p>The Environmental Assessment (EA) inadequately analyzes impacts on wilderness areas, the wildlife within those wilderness areas, and the humans who recreate there, as well as requests that wilderness and wildlife be protected</p>	<p>The Navy has considered other alternatives (see Section 2.4, Alternatives Considered but Not Carried Forward for Detailed Analysis); however, those areas did not meet the Navy’s purpose of and need for the Proposed Action due to altitude restrictions or lack of approval from the FAA. The proposed airspace extension meets the Navy’s purpose and need because it enables the enhancement of training and operational readiness of Electronic Attack Wing Pacific (CVWP) aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximizing training opportunities due to its proximity to existing training airspace.</p> <p>Regarding impacts on wildlife and wilderness areas, noise associated with military aircraft overflights in existing airspace is anticipated to decrease slightly when compared to current conditions. Under Alternative 1 (Preferred Alternative) wildlife below the existing airspace would experience similar but slightly lower Day-Night Average Sound Levels (DNL) to current conditions because flight tracks would be spread out over a wider area due to the redistribution of aircraft sorties. Wildlife below the proposed Okanogan D MOA and Mazama ATCAA would be exposed to new levels of noise from aircraft overflights which would result in higher DNLs than current conditions under the proposed airspace. These overflights in the proposed Okanogan D MOA and Mazama ATCAA would result in short-term, infrequent, and localized increases in noise levels; however, the increase in noise levels would not compromise the general health of individuals or populations of wildlife.</p> <p>Potential effects from Navy aircraft overflights are analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of this EA. All training activities would be conducted in accordance with FAA rules and regulations, as well as best management practices (BMP) and existing CVWP standard operating procedures (SOP) as discussed in Section 2.5 (Best Management Practices</p>

Comment Topic	Navy Response
	<p>Included in the Proposed Action) of the EA to avoid or reduce potential impacts from the Proposed Action.</p> <p>The Navy consulted with the U.S. Fish and Wildlife Service (USFWS) on potential impacts on Endangered Species Act (ESA)-listed species and designated critical habitat. The Navy requested and received concurrence from the USFWS on the determination that the Proposed Action is not likely to adversely affect ESA-listed species and designated critical habitat. Per the 2010 USFWS <i>Biological Opinion for U.S. Pacific Fleet Northwest Training Range Complex in the Northern Pacific Coastal Waters off the States of Washington, Oregon, and California and Activities in Puget Sound and Airspace over the State of Washington</i>, and the 2017 U.S. Fish and Wildlife Service <i>Letter of Concurrence for the Continuation of Navy Training in the Okanogan and Roosevelt Military Operations Area Airspace</i> listed in Section 1.7 (Key Documents) of the EA, the USFWS has previously concurred with this determination for training activities within the existing airspace.</p>
<p>Low-level military aircraft overflights are illegal and requests the law be enforced</p>	<p>To the extent low-level military aircraft overflights could occur in the existing Okanogan B and C MOAs, and the Roosevelt B MOA, which have lower altitude limits of 300 feet AGL, these flights are not illegal and comply with all applicable FAA rules and regulations in addition to CVWP BMPs and SOPs. While the MOAs may allow aircraft overflights as low as 300 feet AGL, CVWP SOPs restrict pilots from flying below 500 feet AGL.</p> <p>Low-level military aircraft overflights would not occur in the proposed Okanogan D MOA. The floor of the proposed Okanogan D MOA is 11,500 feet above mean sea level (MSL). Since the highest terrain beneath this area is less than 9,000 feet, there is no opportunity for anyone to be closer than 2,500 feet from any aircraft operating in the proposed airspace. The communities within the vicinity of the proposed airspace are at much lower elevations.</p> <p>Though most likely to occur under the existing Okanogan B and C MOAs, and the Roosevelt B MOA, noise complaints are not limited to these areas. Residents may submit a noise complaint as follows. Please provide pertinent information to the Naval Air Station Whidbey Island (NASWI) noise complaint line at (360) 257-6665 or via e-mail at <a href="mailto:NASWI_Noise_Comments@us.navy.mil">NASWI_Noise_Comments@us.navy.mil</a> detailing your encounters. All noise complaints are considered and will be used to determine if a deviation from the approved airspace parameters was made.</p>
<p>A different Action Alternative, or an alternative location should be chosen</p>	<p>The purpose of the Proposed Action is to enhance training and operational readiness of CVWP aircraft squadrons based at NASWI. The existing training airspace in northeastern Washington was designated by the FAA in 1977 for this purpose.</p> <p>In 2020, safety concerns in the southern portion of the Molson South High ATCAA (now the Methow ATCAA) due to increasing civilian and commercial air traffic in the Pacific Northwest led the FAA to</p>



Comment Topic	Navy Response
	<p>make the decision to reduce the Molson South High ATCAA's ceiling from 50,000 feet MSL to 23,000 feet MSL. Due to the training airspace being reduced, the Navy began discussions with the FAA to find a solution to add airspace to better meet training requirements.</p> <p>The Navy has considered other alternatives (see Section 2.4, Alternatives Considered but Not Carried Forward for Detailed Analysis); however, those areas did not meet the Navy's purpose of and need for the Proposed Action due to altitude restrictions or lack of approval from the FAA. The proposed airspace extension meets the Navy's purpose and need because it enables the enhancement of training and operational readiness of CVWP aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximize training opportunities due to its proximity to existing training airspace and NASWI. In addition, the airspace proposal was approved by the FAA to move forward to be analyzed in this EA making it a viable alternative. All training activities would be conducted in accordance with FAA rules and regulations, as well as BMPs (see Section 2.5, Best Management Practices Included in the Proposed Action) and existing CVWP SOPs to avoid or reduce potential impacts from the Proposed Action.</p> <p>The consideration for moving training to other locations in the U.S. is beyond the scope of this project and does not meet the immediate purpose and need of this action.</p>
<p>Proposed Action is illegal and violates the Wilderness Act of 1964, and the boundaries of all existing MOAs and ATCAAs should be re-drawn, shrunk, or get rid of all overlap with designated wilderness</p>	<p>Wilderness areas are vital part of our country and should be protected to ensure current and future generations can enjoy these beautiful places, as well as to protect the wildlife and wilderness characteristics inherent to these areas. However, per the Wilderness Act, the definition of "a wilderness" does not include airspace. "Definition of Wilderness Section 2. (c) A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."</p> <p>Wilderness designations under the Wilderness Act of 1964 apply to land areas, however the airspace above wilderness areas is not part of wilderness designations. In addition, the Navy is not subject to section 4(f) of the U.S. Department of Transportation Act of 1966. Therefore, findings do not need to</p>

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	<p>be made about substantial impairment by the Navy as a result of military training activities in the proposed and existing airspace. The FAA is responsible for determinations under section 4(f) and will consider impacts on Wilderness Areas prior to making its determinations on the airspace extension.</p> <p>In 2020, safety concerns in the southern portion of the Molson South High ATCAA (now the Methow ATCAA) due to increasing civilian and commercial air traffic in the Pacific Northwest led the FAA to make the decision to reduce the Molson South High ATCAA's ceiling from 50,000 feet MSL to 23,000 feet MSL. Due to the training airspace being reduced, the Navy began discussions with the FAA to find a solution to add airspace to better meet training requirements.</p> <p>The Navy has considered other alternatives (see Section 2.4, Alternatives Considered but Not Carried Forward for Detailed Analysis); however, those areas did not meet the Navy's purpose of and need for the Proposed Action due to altitude restrictions or lack of approval from the FAA. The Proposed Action meets the Navy's purpose and need because it enables the enhancement of training and operational readiness of CVWP aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximize training opportunities due to its proximity to existing training airspace.</p>
<p>An Environmental Impact Statement (EIS) must be prepared to more thoroughly identify and analyze impacts from the Proposed Action</p>	<p>In accordance with the National Environmental Policy Act (NEPA), an EA is prepared for a proposed action that is not likely to have significant effects or when the significance of the effects is unknown. As part of the Proposed Action, the Navy is requesting the FAA establish an extension to existing vertical and lateral airspace dimensions to the west of the existing airspace over northeastern Washington State. The Proposed Action would also include a redistribution of the current CVWP training flight sorties published in the 2010 NWTRC EIS/OEIS, to accurately characterize how CVWP is projecting to use the airspace. Similar training has been occurring in the existing MOAs and ATCAAs for decades.</p> <p>Potential effects from Navy aircraft overflights are analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of this EA. All training activities would be conducted in accordance with FAA rules and regulations, as well as existing CVWP BMPs and SOPs, as discussed in Section 2.5 (Best Management Practices Included in the Proposed Action) of the EA to avoid or reduce potential impacts from the Proposed Action.</p> <p>The findings in the EA do not indicate any significant effects to the human or natural environment, therefore, the preparation of an EIS is not required.</p>
<p>The Proposed Action includes bombing wilderness areas</p>	<p>No bombing exercises of any kind are included in the Proposed Action, nor are they conducted by the Navy or other U.S. military forces who utilize the existing airspace over communities in Eastern Washington for training activities. The training conducted by CVWP in the existing and proposed</p>

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	airspace includes air combat maneuvers and electronic warfare and is discussed in Section 2.1.2 (Naval Air Station Whidbey Island and Electronic Attack Wing Squadron Training).
There is no added training benefit when considering the whole picture	<p>In 2020, safety concerns in the southern portion of the Molson South High ATCAA (now the Methow ATCAA) due to increasing civilian and commercial air traffic in the Pacific Northwest led the FAA to make the decision to reduce the Molson South High ATCAA's ceiling from 50,000 feet MSL to 23,000 feet MSL. The FAA's decision to reduce the Molson South High ATCAA's ceiling resulted in the loss of approximately 516 square nautical miles (approximately 684 square miles) of airspace. Due to the training airspace being reduced, the Navy began discussions with the FAA to find a solution to add airspace to better meet training requirements.</p> <p>The Proposed Okanogan D MOA is a small addition (393 square nautical miles); however, it is necessary for the Navy to sufficiently meet its training needs. CVWP SOPs include buffer zones which effectively shrink the usable airspace to ensure aircraft do not travel outside of the established airspace boundaries. The proposed extension would enable aircraft to train in a more realistic environment by utilizing the airspace extension to conduct training over a broader area when flying within the full Okanogan MOA.</p>
Using mean sea level as the sole metric for determining the floor and upper limits of airspace in order to determine the impact of overflights is misleading	MSL is the standard metric used by the FAA to define airspace parameters. Both MSL and AGL are used when describing airspace limits and potential impacts in this EA analysis. In the analysis, the range of predicted day night average sound levels (DNL) is provided in Table 3.3-2 based on terrain elevations ranging from 0 feet to greater than 7,000 feet. In addition, maximum noise levels received by a receptor are provided in Table 3.3-3 based on the distance a receptor is relative to the aircraft from 500 feet to 15,000 feet. This allows for an accurate analysis of what average and maximum sound levels would be for both humans and wildlife when in the vicinity of the existing and proposed airspace.
General opposition to the Proposed Action and the No Action Alternative should be implemented	<p>The EA analyzes the No Action Alternative, but the No Action Alternative does not include ceasing all Navy training activities in the area. Under the No Action Alternative, there would be no new Okanogan D MOA or Mazama ATCAA, nor would there be a redistribution of the number of flights or flight profiles in the existing Okanogan or Roosevelt MOAs from the 2010 NWTRC EIS/OEIS. However, Navy training in the existing airspace would continue. Though required as part of the NEPA process, the No Action Alternative would not meet the Navy's purpose of and need for the Proposed Action.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities, and it is worth noting that the Preferred Alternative results in fewer aircraft sorties per year in the SAA than the No Action Alternative.</p>

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The EA doesn't adequately analyze impacts from aircraft overflights on the areas and populations underlying the existing and proposed airspace	<p>Under the Proposed Action, the Navy would continue to adhere to its SOPs, resulting in the continued safe execution of training activities, as well as abide by all FAA rules and regulations. Under Alternative 1 (Preferred Alternative), noise associated with military aircraft overflights in existing airspace would decrease slightly when compared to with current conditions and would be well below the FAA's DNL 65 dBA significance threshold. Communities and individuals below the proposed airspace would experience a change in existing environmental conditions due to noise exposure from military aircraft overflights. These communities and individuals would experience a maximum DNL of 45.7 dBA, which is well below the FAA's DNL 65 dBA significance threshold. The highest possible Maximum Received Noise Level (<math>L_{max}</math>) a person would potentially be exposed to is 123.9 dBA. It is highly unlikely a person would be exposed to the highest possible <math>L_{max}</math> because there is an overall lack of concentration of flights at a given altitude, area, and power setting, and aircraft would be at lower altitudes for a relatively brief amount of time. In the event a person is exposed to the highest possible <math>L_{max}</math>, exposure would be short in duration (only a couple of seconds).</p> <p>Emissions from military aircraft activities in the existing airspace would remain consistent with current conditions. Under Alternative 1 (Preferred Alternative), communities and individuals beneath the proposed airspace would experience a change in environmental conditions. However, there would be a negligible change in emissions compared to current conditions because the total number of military aircraft overflights would decrease slightly when compared with the amount of training currently being conducted in the area. The estimated emissions associated with the Proposed Action are well below Prevention of Significant Deterioration (PSD) major thresholds and in accordance with the National Ambient Air Quality Standards (NAAQS).</p>
Comments in support of the Proposed Action	These comments are included as part of the official project record.
Jet noise from transit routes between NASWI and Methow Valley should be analyzed in the EA	Like all aircraft operating within the National Airspace System, aircraft transits between NASWI, or other locations, and training airspace follow FAA regulations and air traffic control direction. Aircraft transits are not part of the Proposed Action and are therefore not analyzed in this EA.
Take no action until the conclusion of the Environmental Impact Statement for EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island Complex	<p>The Proposed Action is of independent need and utility, is in a different geographic area, and is a separate and distinct action not related to the Environmental Impact Statement for EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island Complex.</p> <p>The Navy is complying with the court's order in the Environmental Impact Statement for EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island Complex litigation.</p>
The public was not provided adequate notice that the draft EA was available for public review and comment and that a hard copy of the EA wasn't sent to Winthrop public library	A robust public engagement effort accompanied the EA NEPA process. The NASWI Public Affairs Officer distributed a news release announcing the availability of the Draft EA and the virtual public meetings to local, regional, and national print and broadcast (radio and television) media outlets on January 12, 2024. A second news release was distributed to media outlets on February 2, 2024. The Draft EA was released for a 42-day public review from January 12, 2024, through February 23, 2024,

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	<p>which included two virtual public meetings on February 13, 2024, and February 15, 2024. A public notice was published in The Spokesman Review, The Statesman Examiner, The Okanogan Valley Gazette-Tribune, and The Methow Valley News. The notice described the Proposed Action; solicited public comments on the Draft EA; provided dates of the public comment period, and location and dates of the public meetings; and announced that CD copies and hardcopies of the Draft EA were available for review at the following public locations: The Okanogan Public Library, The Twisp Public Library, The Colville Public Library, The Oroville Public Library, and The Oak Harbor Public Library. A hard copy of the Draft EA was also sent to the Winthrop Public Library after a request was made during the second virtual public meeting on February 15, 2024.</p> <p>Early engagement notifications were sent to elected officials, government agencies, and the following federally recognized tribes from Washington State: the Confederated Tribes of the Colville Reservation, the Spokane Tribe of Indians, and the Kalispel Tribe of Indians. On January 10, 2024, a postcard was mailed to 33 nongovernmental organizations and community and business groups. On January 12, 2024, tribal letters were mailed to six tribal leaders of federally recognized tribes or districts, and stakeholder letters were mailed to 133 federal, state, and local elected officials and government agencies.</p> <p>A dedicated email address, NASWIPAO@us.navy.mil, was set up to receive questions from the public for discussion with Navy representatives at the live question-and-answer portion of the virtual public meetings. Questions were accepted between February 1 and February 12, 2024. Questions submitted (via the chat function or by coming off mute) and responded to during the question-and-answer portion of the virtual public meetings were not official public comments and not considered part of the official public record.</p> <p>The public could also submit comments to a dedicated email address, navfac-nw-NEPA@us.navy.mil, during the 42-day draft EA public review period. Email was monitored by NAVFAC NW staff, and comments were compiled and submitted to project team members frequently. The Navy received more than 6,000 comments from agencies, organizations, and the public.</p> <p>In addition, the Draft EA was made Section 508 compliant prior to public release. For more information on public involvement, please see the public involvement summary in Section D.1 (Public Involvement Summary Report) of this appendix.</p>
The Navy's Proposed Action lacks an adequate explanation of the purpose and need	In 2020, safety concerns in the southern portion of the Molson South High ATCAA (now the Methow ATCAA) due to increasing civilian and commercial air traffic in the Pacific Northwest led the FAA to make the decision to reduce the Molson South High ATCAA's ceiling from 50,000 feet MSL to 23,000 feet MSL. The FAA's decision to reduce the Molson South High ATCAA's ceiling resulted in the loss of

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	<p>approximately 516 square nautical miles (approximately 684 square miles) of airspace. Due to the training airspace being reduced, the Navy began discussions with the FAA to find a solution to add airspace to better meet training requirements.</p> <p>The Navy has considered other Alternatives (see Section 2.4, Alternatives Considered but Not Carried Forward for Detailed Analysis); however, those areas did not meet the Navy's purpose and need due to altitude restrictions or lack of approval from the FAA. The Proposed Action meets the Navy's purpose and need because it enables the enhancement of training and operational readiness of CVWP aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximize training opportunities due to its proximity to existing training airspace. In addition, the airspace proposal was approved by the FAA to move forward to be analyzed in this EA making it a viable alternative. All training activities would be conducted in accordance FAA rules and regulations, as well as BMPs and existing CVWP SOPs as discussed in Section 2.5 (Best Management Practices Included in the Proposed Action) of the EA to avoid or reduce potential impacts from the Proposed Action.</p> <p>The Proposed Okanogan D MOA is a small addition (393 square nautical miles); however, it is necessary for the Navy to sufficiently meet its training needs. CVWP SOPs include buffer zones which effectively shrink the usable airspace to ensure aircraft do not travel outside of the established airspace boundaries. The proposed extension would enable aircraft to train in a more realistic environment by utilizing the airspace extension to conducted training at over a broader area when flying with the full Okanogan MOA.</p>
Concerns for impacts on the local economy and recreational opportunities from noise	<p>Section 3.7 (Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks) provides the analysis of the socioeconomic impacts of aircraft noise on the communities in the vicinity of the proposed and existing airspace.</p> <p>Noise associated with military aircraft overflights in existing airspace is anticipated to decrease slightly when compared to current conditions. Areas underlying the existing Okanogan and Roosevelt MOAs and overlying ATCAA would experience similar but slightly lower DNLs sound levels to current conditions because flight tracks would be spread out over a wider area. Under Alternative 1 (Preferred Alternative), areas beneath the Proposed Okanogan D MOA and Mazama ATCAA would experience a change in existing environmental conditions due to noise exposure from military aircraft overflights. Visitors to National Forest and wilderness areas underneath the proposed airspace could be subject to noise from military aircraft overflights. Overflights would result in short-term, infrequent, and localized increase in noise levels; however, the maximum DNL would remain well below the FAA's DNL 65 dBA significance threshold.</p>

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	<p>Residents may submit a noise complaint as follows. Please provide pertinent information to the NASWI noise complaint line at (360) 257-6665 or via e-mail at NASWI_Noise_Comments@us.navy.mil detailing your encounters. All noise complaints are considered and will be used to determine if a deviation from the approved airspace parameters was made.</p>
<p>Concerns for impacts on human health from noise, including health impacts to children</p>	<p>Section 3.6 (Public Health and Safety) provides the analysis of the impacts on public health and safety from aircraft noise. Regarding these nonauditory health effects, studies have been conducted to examine the nonauditory health effects of aircraft noise exposure, focusing primarily on stress response, blood pressure, birth weight, mortality rates, cardiovascular health, and impairment of cognitive performance in children (Schomer, 2005; Stansfeld &amp; Matheson, 2003; U.S. Department of Defense, 2009). The chronic levels required for these effects are well in excess of the levels expected in the vicinity of the Action Area as a result of Navy flight activities (Basner et al., 2014; Correia et al., 2013; Evans et al., 1998; Haralabidis et al., 2008; Schomer, 2005; Stansfeld &amp; Matheson, 2003).</p> <p>Regarding the communities, which include children, underlying the existing and proposed airspace, the Navy would continue to adhere to its SOPs, resulting in the continued safe execution of training activities, as well as abide by all FAA rules and regulations. As mentioned in Section 2.5.1 (Low Altitude Training) of this EA, low altitude training must avoid populated areas (which would likely have schools and higher concentrations of children) to the maximum extent possible. In addition, 97.5% of flights would occur during acoustic day between 7 a.m. and 10 p.m.</p> <p>Though aircraft may periodically conduct maneuvers at lower altitudes within the airspace, the majority of flight time occurs at relatively high altitudes, with approximately 80% of all flight time occurring above 15,000 feet above mean sea level. The highest possible Maximum Received Noise Level (<math>L_{max}</math>) a person would potentially be exposed to is 123.9 dBA. However, for a person to be exposed to sound levels of 123.9 dBA, an aircraft would have to be operating at 97 percent engine power, traveling at 360 knots, and located directly above a person at an altitude of 500 ft. Because the flight activities are dispersed throughout the airspace, persons on the ground experience noise events with a wide range of <math>L_{max}</math> values. In this setting, overflights with the highest possible <math>L_{max}</math> (i.e., aircraft passes directly overhead at the lowest permitted altitude and the highest engine power setting) are relatively rare. The potential for a person to be in the vicinity of aircraft while operating at the given parameters and producing maximum noise levels is limited because there is an overall lack of concentration of flights at a given altitude, area, and power setting, and aircraft would be at lower altitudes for a relatively brief amount of time. In the event a person is exposed to the highest possible <math>L_{max}</math>, exposure would be short in duration (only a couple of seconds).</p>
<p>Use recording or monitoring devices to provide the public with flight altitudes and noise levels</p>	<p>The Navy does not propose to conduct monitoring of noise levels beneath the airspace. Previous monitoring efforts involving military aircraft have demonstrated the accuracy of the noise model</p>

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	used in the analysis presented in this EA. The following link provides Real-Time Aircraft Sound Monitoring Study and Reports completed in 2021 and 2022: <a href="https://www.navfac.navy.mil/Business-Lines/Public-Works/Products-and-Services/Aircraft-Sound-Monitoring/">https://www.navfac.navy.mil/Business-Lines/Public-Works/Products-and-Services/Aircraft-Sound-Monitoring/</a> . Additionally, the noise model used, MR_NMap is approved by the FAA and Department of Defense for these types of analyses.
Concerns that the use of the DNL metric artificially lowers the calculated sound levels and requests maximum noise exposure levels be analyzed	<p>Both DNL and <math>L_{max}</math> are important metrics in analyzing potential impacts from sound and are included in the EA analysis. DNL is the standard noise metric used by the FAA and the DoD. The federal government suggests land-use compatibility criteria for different noise zones; however, land-use compatibility is regulated at the local level. Based on the guidelines in the Federal Interagency Committee on Urban Noise, residential areas and schools are considered compatible where the DNL is less than or equal to 65 A-weighted decibels (dBA). Outdoor recreational activities are compatible with noise levels less than or equal to 70 dBA. Parks are compatible with noise levels less than or equal to 75 dBA. The time-weighted average of DNL is a standard that is used for land compatibility, whereas <math>L_{max}</math> is a measure of the loudest portion of a single noise event or the loudest noise during a collection period. As such, <math>L_{max}</math> can be used to determine how audible a noise event is, but it is incorporated into the time-weighted DNL, which provides compatibility information.</p> <p>See Appendix B: Noise Analysis for the Proposed Eastern Washington Airspace Extension. Maximum received noise levels are provided for distances ranging from 500 feet to 15,000 feet from an aircraft in Table 3.3-2. These values are incorporated into the analysis provided in Chapter 3 (Affected Environment and Environmental Consequences).</p>
Concerns about table 3-1 in appendix B (Noise Analysis) detailing night flights and describing acoustic daytime from 0700 - 2200	<p>Under Federal Aviation Regulation part 150, the DNL calculation weights noise during the hours of 10 p.m. to 7 a.m. differently than “daytime” acoustic levels. Because of this differentiation, the two different time periods are commonly referred to as “acoustic daytime” and “acoustic nighttime.”</p> <p>CVWP SOPs address noise from aircraft overflights and provide BMPs to minimize noise impacts within the existing and proposed airspace. The vast majority of flights (approximately 97.5%) occur during Acoustic Day (7 a.m. to 10 p.m.); however, some flights (approximately 2.5%) may occur during Acoustic Night (10 pm. To 7 a.m.). Additionally, for those flights that do occur at night, low altitude flight time is not conducted, and aircraft remain above 10,000 feet above mean sea level. Under Alternative 1 (Preferred Alternative), the distribution of flights in the existing and proposed airspace during the acoustic day (7 a.m. to 10 p.m.) and acoustic night (10 p.m. to 7 a.m.) would be consistent with the current distribution of military aircraft overflights being conducted in the existing airspace.</p>
Concerns about the effects of noise on land-based recreation	Predicted noise levels from the Navy’s Proposed Action are provided in Table 3.1-1 through and Table 3.1-4 in Section 3.1 (Acoustic Environment) of the EA. The maximum DNL in the Action Area would be well below the FAA’s DNL 65 dBA significance threshold.



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Concerns about the impact of fuel emissions on air quality and the climate	<p>The tables provided in Section 3.2.4 (Environmental Consequences) of this EA detail the specific amounts and types of emissions associated with the 2010 NWTRC EIS/OEIS, No Action Alternative, Alternative 1 (Preferred Alternative), and Alternative 2).</p> <p>Emissions from military aircraft activities in the existing airspace would remain consistent with current conditions. Under Alternative 1 (Preferred Alternative), there would be a negligible change in emissions compared to current conditions because the total number of military aircraft overflights would decrease slightly when compared with the amount of training currently being conducted in the area. The estimated emissions associated with the Proposed Action are well below PSD major thresholds and in accordance with the NAAQS.</p>
Include current training flights in cumulative impacts	<p>Under the Preferred Alternative (Alternative 1) no increase in current training flights (sorties) is proposed. In fact, a slight reduction of annual flights is proposed compared to the flight numbers that were analyzed in the 2010 NWTRC EIS/OEIS. A summary of current and proposed annual flight numbers can be seen in Table 2.3 1 of the Final EA. The analysis presented in Chapter 3 (Affected Environment and Environmental Consequences) of this EA includes current training flights in the Action Area in addition to the proposed airspace extension and redistribution of aircraft sorties. Cumulative impacts are analyzed in Chapter 4 (Cumulative Impacts) of this EA. Cumulative impacts were assessed for past, present, and reasonably foreseeable future actions that occur within or potentially impact resources analyzed in the Action Area. Impacts from three specific actions that have occurred, are occurring, or will occur, in combination with the Proposed Action, were analyzed: the 2014 Pacific Northwest Electronic Warfare EA, the Copperstone Planned Development, and the Pacific Northwest National Scenic Trail Comprehensive Plan EA. For each resource area analyzed in the EA, no cumulative impacts associated with the Proposed Action were found when added to the effects of the other past, present, and reasonably foreseeable projects.</p>
Enforce the minimum floor for airspace when pilots transit to, from, and over any training area	<p>Aircrews transiting to and from the proposed and existing airspace, as well as conducting training in the airspace, do so in accordance with FAA rules, regulations, and established airspace altitudes.</p>
Opposition of Growler flights on Whidbey Island	<p>The Proposed Action does not include military aircraft overflights on Whidbey Island because they are beyond the scope of this project. The Action Area analyzed under this EA consists of the airspace and lands underneath the proposed and existing airspace in eastern Washington and western Idaho.</p>
Concerns about low-level flights over Twisp Airport	<p>Existing SAA has been in place above the Twisp Airport since it was designated by the FAA in 1977. Per the BMPs and CVWP SOPs discussed in Section 2.5 (Best Management Practices Included in the Proposed Action), low altitude training occurring in the Action Area must avoid populated areas to the maximum extent practicable and be conducted in a MOA. Per FAA regulations and charting, the Okanogan B MOA excludes a three nautical mile circle and up to 1,500 feet AGL area around both the Twist (2S0) and Methow Valley State (S52) airports to allow simultaneous airport operations and MOA activities. Visual Flight Rules (VFR) apply when the MOA is active and non-participants are advised to use caution, but are not prohibited from flying in the MOA when it is active.</p>

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	Residents may submit a noise complaint as follows. Please provide pertinent information to the NASWI noise complaint line at (360) 257-6665 or via e-mail at NASWI_Noise_Comments@us.navy.mil detailing your encounters. All noise complaints are considered and will be used to determine if a deviation from the approved airspace parameters was made.
Provide the total number of annual noise events	Table 2.3-1 in Chapter 2 (Description of the Proposed Action and Alternatives) provides the total number of annual aircraft sorties for each action alternative in the various airspace areas. It should be noted that total sortie numbers are dispersed across the broad area of airspace, with aircraft events occurring randomly across these areas. No one area will experience all estimated sorties. Noise experienced on the ground will vary greatly based on the distance the receptor is from the aircraft, atmospheric conditions, and the training activity being conducted. Though aircraft may periodically conduct maneuvers at lower altitudes within portions of the airspace, the majority of flight time occurs at relatively high altitudes, with approximately 80% of all flight time occurring above 15,000 feet above mean sea level.
Incorporate alternative modeling and noise measurements into the analysis	The noise model used, MR_NMap is approved by the FAA and DoD for these types of analyses. Previous monitoring efforts involving military aircraft have demonstrated the accuracy of the noise model used in this analysis. The following link provides Real-Time Aircraft Sound Monitoring Study and Reports completed in 2021 and 2022: <a href="https://www.navfac.navy.mil/Business-Lines/Public-Works/Products-and-Services/Aircraft-Sound-Monitoring/">https://www.navfac.navy.mil/Business-Lines/Public-Works/Products-and-Services/Aircraft-Sound-Monitoring/</a> .
Use International Organization for Standardization and World Health Organization community noise standards	The noise standards used in this EA are the standards set by FAA, DoD, and U.S. Environmental Protection Agency, which are applicable to federal actions in the United States.
Conduct independent analysis of impacts	The Navy has conducted military aircraft activities in the existing airspace for decades, and there is no evidence that routine military aircraft activities have significantly impacted wildlife populations, the communities, and other environmental resources beneath the existing airspace. Based on the best available science summarized in the EA Chapter 3 (Affected Environment and Environmental Consequences), long-term impacts are unlikely to result from military aircraft activities in the existing and proposed airspace.
Provide specific information regarding aircraft sorties and noise levels in the existing and proposed airspace	In Appendix B (Noise Analysis for the Proposed Eastern Washington Airspace Extension), Table 3-3 through 3-5 provide the number and types of EA-18G sorties for the Okanogan and Roosevelt MOAs for each action alternative. Table 3-15 provides the mission parameters for other military aircraft that utilize the existing and proposed airspace. Table 4-1 through 4-9 provide the predicted $L_{dnr}$ , DNL, and $L_{max}$ noise levels throughout the airspace at different elevations or distances from an aircraft.
Provide a sound map showing the impact of flight operations	Unlike fixed aviation facilities like airports, SAA does not have established or consistent routes of flight, and noise contour maps are not practical. The predicted average noise levels that would occur beneath the existing and proposed airspace at various terrain elevations are provided in the EA in

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	Tables 3.1-1 through 3.1-3. In addition, the predicted maximum noise levels for various distances a receptor would be in relation to an aircraft flying overhead are provided in Table 3.1-4 in the EA.
Expand the transit routes	The FAA controls the National Airspace System which includes the safe transit of aircraft to and from the existing and proposed airspace in eastern Washington. The FAA air traffic control manages all air traffic in the region to safely deconflict military traffic from commercial and general aviation aircraft, with consideration given to the presence of Canadian National Airspace and air traffic to the north. The FAA is the responsible federal agency for determining the appropriate route of transit and any changes must be approved by the FAA air traffic control.
Conduct low-altitude training only between 0900 and 1700	<p>Low-level military aircraft overflights would not occur in the proposed Okanogan D MOA. The floor of the proposed Okanogan D MOA is 11,500 feet above mean sea level (MSL). Since the highest terrain beneath this area is less than 9,000 feet, there is no opportunity for anyone to be closer than 2,500 feet from any aircraft operating in the proposed airspace. The communities within the vicinity of the proposed airspace are at much lower elevations.</p> <p>To the extent low-level military aircraft overflights could occur in the existing Okanogan B and C MOAs, and the Roosevelt B MOA, which have lower altitude limits of 300 feet AGL, CVWP SOPs address noise from aircraft overflights and provide BMPs to minimize noise impacts within the existing airspace. Specifically, low altitude training in the existing airspace must avoid populated areas to the maximum extent possible and must be performed during daylight no earlier than 30 minutes after sunrise and no later than 30 minutes before sunset. The vast majority of flights (approximately 97.5%) occur during Acoustic Day (7 a.m. to 10 p.m.); however, some flights (approximately 2.5%) may occur during Acoustic Night (10 p.m. to 7 a.m.). Additionally, for those flights that do occur at night, low altitude flight time is not conducted, and aircraft remain above 10,000 feet above mean sea level.</p>
Since the extension is so small, why add it in the first place? The airspace is already adequate	The Proposed Okanogan D MOA is a small addition (393 square nautical miles); however, it is necessary for the Navy to sufficiently meet its training needs. CVWP SOPs include buffer zones which effectively shrink the usable airspace to ensure aircraft do not travel outside of the established airspace boundaries. The proposed extension would enable aircraft to train in a more realistic environment by utilizing the airspace extension to conduct training and over a broader area when flying within the full Okanogan MOA.
Conduct fewer flights due to advancements in simulation technology	<p>Under Alternative 1 (Preferred Alternative), the total number of annual sorties would decline from what was analyzed in the 2010 NWTRC EIS/OEIS.</p> <p>Aircraft simulations have reduced the number of required flights in this area. Despite advancements in simulation technology, there is no substitute for realistic training which is necessary to ensure operational readiness and maintenance of aircrew skills of CVWP aircrew.</p>

Comment Topic	Navy Response
Restricting flights to Monday through Friday ruins wilderness experience for those recreating during the week	Realistic training of military aircrews is critical to mission readiness. The Navy has conducted military aircraft activities in the existing airspace for decades, and there is no evidence that routine military aircraft activities have significantly impacted wilderness areas beneath the existing airspace. Regarding impacts on wilderness areas, noise associated with military aircraft overflights in existing airspace is anticipated to decrease slightly when compared to current conditions. Humans and wildlife would experience similar but slightly lower DNLs to current conditions because flight tracks would be spread out over a wider area. Under Alternative 1 (Preferred Alternative), humans and wildlife in wilderness areas would be exposed to new levels of noise from military aircraft overflights in the proposed Okanogan D MOA and Mazama ATCAA. These overflights would result in short-term, infrequent, and localized increases in noise levels; however, the increase in noise levels would not compromise the general health of individuals or populations of wildlife.
The impacts on wildlife species from noise are unstudied and unknown	<p>The Navy has conducted military aircraft activities in the existing airspace for decades, and there is no evidence that routine military aircraft activities have significantly impacted wildlife populations and the communities beneath the existing airspace. There have been studies on impacts of noise on various wildlife species and these studies are part of the best available science that informed the analysis in Chapter 3 (Affected Environment and Environmental Consequences) of this EA.</p> <p>The best available science is incorporated in the analysis on impacts to wildlife from noise associated with military aircraft overflights. Most studies have focused on ungulates and birds, while little or no research has been conducted on carnivorous mammals, small mammals, reptiles, and amphibians. While difficult to measure in the field, some behavioral responses are likely accompanied by physiological responses, such as increased heart rate, or stress. Chronic stress can compromise the general health of animals, but a strong and consistent behavioral or physiological response is not necessarily indicative of negative consequences to individuals or to populations (Bowles, 1995; Larkin et al., 1996; National Park Service, 1994). For example, many of the reported behavioral and physiological responses to noise are within the range of normal adaptive responses to external stimuli, such as predation, that wild animals face on a regular basis. Studies have also shown that animals can become habituated to noise following frequent exposure and cease to respond behaviorally to the noise (Bowles, 1995; Larkin et al., 1996; National Park Service, 1994).</p>
Comments noting the draft EA does not acknowledge, cite, or utilize the data and research results supplementing the Growler EIS ROD	This EA incorporated the best available science in the analysis presented in Chapter 3 (Affected Environment and Environmental Consequences). In addition, the Proposed Action analyzed in this EA has independent utility and need and is a separate action not related to the Environmental Impact Statement for EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island Complex.
Not analyzing the impacts on the Chinook and Olympic MOAs is a deficiency	No changes are proposed in the Chinook and Olympic MOAs in Washington State as part of the Proposed Action, and analysis of those areas are not included in this EA. The analysis in this EA is limited to the Okanogan and Roosevelt MOAs, the Molson, Methow, and Republic ATCAAs, and the Okanogan D MOA and Mazama ATCAA as a part of the Proposed Action.

Comment Topic	Navy Response
The entirety of the Growler program impacts need to be analyzed	<p>The Proposed Action includes the extension of the existing airspace in northeastern Washington as well as the redistribution of aircraft sorties in the airspace. Chapter 3 (Affected Environment and Environmental Consequences) incorporates the best available science in the analysis of the potential impacts from the Proposed Action on the following resource areas: air quality, biological resources, cultural resources, American Indian traditional resources, public health and safety, and socioeconomics and environmental justice. The potential impacts from actions in different geographic areas or that do not potentially impact the resources analyzed in this EA are not considered in the analysis.</p> <p>The proposed extension of the Okanogan D MOA and Mazama ATCAA, and redistribution of aircraft overflights in the existing and proposed Okanogan and Roosevelt MOAs, and overlying ATCAA, has independent utility and need and is a separate action not related to the Environmental Impact Statement for EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island Complex. In addition, the existing and proposed airspace that is part of the Proposed Action in this EA is in a different geographic area than the area studied in the aforementioned EIS.</p> <p>The Navy takes its environmental stewardship responsibilities seriously while preparing for its mission. As a steward of the environment, the Navy avoids, minimizes, or mitigates potential effects on the environment from its activities.</p>
Impacts from hazardous materials need to be analyzed in the EA	<p>The Council on Environmental Quality regulations, NEPA, and Navy instructions for implementing the NEPA specify that an EA should address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact.</p> <p>The EA analyzes the potential impacts of actions associated with the addition of the Okanogan D MOA and Mazama ATCAA, and the redistribution of training sorties within the Okanogan and Roosevelt MOAs and associated ATCAAs. A full range of environmental issues were considered for evaluation at the beginning of the NEPA process. Included in the analysis are impacts to air quality from emissions associated with the Proposed Action. However, because hazardous materials would not be released during the military aircraft overflights analyzed in this EA and potential impacts from hazardous materials were found to be insignificant, negligible, or nonexistent, impacts from hazardous materials were not evaluated in this EA.</p>
Impacts on North Cascades National Park should be analyzed in the EA	Military aircraft overflights included in the Proposed Action will not take place in the airspace above North Cascades National Park. Therefore, impacts on North Cascades National Park are not analyzed in this EA.

Comment Topic	Navy Response
	As part of the public engagement effort, the Park Supervisor of North Cascades National Park was sent a stakeholder letter and accompanying fact sheet on January 12, 2024.
Military aircraft overflights will negatively impact the mule deer population (which has been protected) in the Action Area	<p>The Navy has conducted military aircraft activities in the existing airspace for decades, and there is no evidence that routine military aircraft activities have significantly impacted wildlife populations and the communities beneath the existing airspace, to include mule deer populations. Based on the best available science incorporated in the analysis in Chapter 3 (Affected Environment and Environmental Consequences) of the EA, long-term impacts are unlikely to result from military aircraft activities in the existing and proposed.</p> <p>The Navy requested and received concurrence from the USFWS on the determination that the Proposed Action is not likely to adversely affect ESA-listed species and designated critical habitat. Impacts to mule deer would be similar to those of ESA-listed species analyzed (e.g., slight startle response), with no impact on long term survival or reproduction.</p>
Sub-125 Hz frequencies and their effects on all parts of the ear including the vestibule should be analyzed in the EA	The EA analyzed impacts from noise on human health in Section 3.6 (Public Health and Safety). The likelihood of exposure to aircraft overflights would be low, and any exposures would be short in duration (only a couple of seconds). In addition, the maximum day-night average noise levels (which analyze all relevant frequencies) would be well below the FAA's DNL 65 dBA significance threshold.
Concerns about $L_{max}$ noise levels below 2,000 ft AGL not being included in the EA	Changes have been made to the Final EA analysis. The $L_{max}$ for distances less than 2,000 feet from an aircraft were not provided in the Draft EA because the lowest point of the Proposed Okanogan D MOA is greater than 2,000 feet above the lowest point beneath the airspace. After a request was made during the first virtual public meeting on February 13, 2024, Table 3.3-3 in the EA has been updated to show the $L_{max}$ for 500- and 1,000-foot distances from an aircraft.
Concerns that there was no differentiation between PM10 and PM2.5 in the air quality analysis	According to the Aircraft Environmental Support Office, since the vast majority of measurable aircraft emitted particles are smaller than 0.2 $\mu\text{m}$ in diameter, the PM2.5 emission factors are assumed to be the same as those for PM10 when estimating the PM2.5 emissions. For completeness, changes have been made to the Final EA analysis. Table 3.2-2 through Table 3.2-5 in Section 3.2 (Air Quality) have been updated to show the expected emissions of PM2.5 and PM10 under baseline conditions and each action alternative.
Concerns about aircraft accidents leading to wildfires	Regarding aircraft mishaps, non-anticipated accidents or emergencies are not included in the NEPA analysis. The Navy has trained safely in the existing airspace since 1977. All Navy aircraft overflights are conducted in accordance with FAA rules and regulations in addition to CVWP BMPs and SOPs, which help prevent and avoid aircraft mishaps.
Provide more detailed map including peaks and elevations, trails, national parks, wilderness and designated recreation areas, and the location of north cascade highway	The EA utilizes broad area maps that depict wilderness and designated recreation areas, National Park Service units, and other federal and tribal lands to represent the overall study area and support the impacts analysis presented in Chapter 3 (Affected Environment and Environmental Consequences) of this EA.

Comment Topic	Navy Response
Differentiate between aircraft noise from transits and aircraft noise from training in the proposed and existing airspace	<p>Aircraft noise from military aircraft overflights in the existing and proposed airspace is analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of this EA.</p> <p>The FAA controls the National Airspace System which includes the safe transit of aircraft to and from the existing and proposed airspace in eastern Washington. FAA air traffic control manages all air traffic in the region to safely deconflict military air traffic from commercial and general aviation aircraft. Transit to and from the training airspace is not part of the Proposed Action and therefore not analyzed in this EA.</p>
A public, in-person meeting would have been more appropriate	<p>The Navy utilized the virtual meeting format to conduct two virtual public meetings to facilitate meaningful public participation to the greatest extent possible, while being efficient with government resources. The proposed Action Area is geographically broad, with population centers spread across the region. With meetings occurring during the month of February, it was also felt that weather might force cancellation of meetings or result in unsafe travel conditions for personnel conducting meetings or those wishing to attend. The format allowed for dedicated opportunity for exchange of information between the public and Navy subject matter experts.</p>
The Navy has been ordered by the court to consider an El Centro alternative for the Growlers to train — as the Navy has not completed this order.	<p>The purpose of the Proposed Action is to enhance training and operational readiness of CVWP aircraft squadrons based at NASWI. The existing training airspace in northeastern Washington was designated by the FAA in 1977 for this purpose.</p> <p>The Navy is complying with the court's order in the Environmental Impact Statement for EA-18G Growler Airfield Operations and Naval Air Station Whidbey Island Complex litigation.</p>
Concerns noise level exposure up to 110 dB may result in significant adverse impacts	<p>Section 3.6 (Public Health and Safety) provides the analysis of the impacts on public health and safety from aircraft noise. A change has been made to the Final EA in Table 3.3-3 to include the <math>L_{max}</math> at 500 feet and 1,000 feet.</p> <p>Per the discussion in Section 3.6 (Public Health and Safety) of this EA, the highest possible <math>L_{max}</math> a receptor could possibly be exposed to is 123.9 dBA.</p> <p>The potential for a person to be in the vicinity of aircraft while producing maximum noise levels is limited because there is an overall lack of concentration of flights at a given altitude, area, and power setting, and aircraft would be at lower altitudes for a relatively brief amount of time. In the event a person is exposed to the highest possible <math>L_{max}</math>, exposure would be short in duration (only a couple of seconds).</p>
Concerns that because multiple aircraft will be in each sortie and that the number of Growler sorties in the airspace have been under-counted	<p>For the type of training activities currently conducted in the airspace, there are typically two sorties (or aircraft) per training event. Under the No Action Alternative, which represents the operational tempo currently being conducted in the existing airspace, the total number of annual sorties is 4,362. Under Alternative 1 (Preferred Alternative), there would be a total of 4,330 annual sorties in the</p>

Comment Topic	Navy Response
	proposed and existing airspace. Therefore, the implementation of the Preferred Alternative would result in a slight decrease in the total number of annual aircraft sorties in the proposed and existing airspace. Annual aircraft sorties for each action alternative are shown in table 2.3-1 in the EA.
Concerns about the protentional impacts of expanded jet overflights on the reintroduction of the Grizzly bear	The Navy conducted specific analyses on ESA-listed species and designated critical habitat in accordance with section 7(a)(2) of the ESA. The Navy received concurrence from the USFWS that aircraft flights in the existing and proposed Okanogan and Roosevelt MOAs would not adversely affect the Grizzly Bear, including bears potentially reintroduced to the North Cascades Ecosystem.
Concerns about species-specific impacts to birds and the lack of species-specific research done by the Navy	In the EA, the Navy did not state that increased noise would have species-specific impacts on the many birds in the affected area. The analysis considered the impacts of noise on all wildlife in the Action Area and concluded that the Proposed Action would not significantly impact biological resources based on the best available science.
The impact of an EA-6B overflight and that of an overflight of an EA-18G are in no way equivalent and should not be suggested as such by use of the simple numeric change in sortie frequency	<p>Impacts from an EA-18G overflight are different than impacts of an EA-6B overflight and this EA does not equate the impacts of the two aircraft. The Navy completed the transition from the EA-6B to the EA-18G in 2015 at which point the EA-18G became the primary military aircraft using the existing airspace. Because the EA-6B was the primary aircraft using the existing airspace prior to 2015, it is referenced when discussing the redistribution of aircraft within the existing and proposed airspace as it relates to what was analyzed in the 2010 NWTRC EIS/OEIS.</p> <p>The analysis presented in Chapter 3 (Affected Environment and Environmental Impacts) of this EA looks at the impacts from EA-18G aircraft overflights, not the EA-6B. The potential impacts associated with Alternative 1 (Preferred Alternative) and Alternative 2 are compared to potential impacts from the No Action Alternative, which describes the current conditions in the existing airspace.</p>
Concerns about the effects on of flight operations on air quality when the air quality index falls below healthy state air quality standards	<p>As much as 80 percent of flight time during proposed activities would occur above 15,000 feet MSL where emissions would have no discernable effect on local air quality.</p> <p>As discussed in Section 3.2 (Air Quality) of the EA, there would be slight decrease in the overall airspace sorties in the existing and proposed airspace under Alternative 1 (Preferred Alternative) as compared to existing conditions. Therefore, there would be a negligible change in emissions from military aircraft overflights in the existing and proposed airspace compared to the No Action Alternative. Emissions from military aircraft activities would continue to be below all applicable thresholds, and therefore, impacts to air quality would not be significant.</p>
Concerns the Navy observes, collects, or interprets real-time citizen electronic communication and/or electronic entertainment	Navy training does not include observing real-time private citizen electronic communications and/or electronic entertainment, and the Navy does not collect or interpret real-time citizen electronic communications.



Comment Topic	Navy Response
Concerns that repeated evidence suggest EA 18G aircraft are attracted to and circle locations using satellite Internet and TV/video	EA-18G aircraft training does not include monitoring of or interference with satellite internet and TV/radio.
Questions about why the proposed airspace extension is at lower altitudes when the EA states the airspace of greatest value for Growler training is at high altitudes	The proposed airspace extension meets the Navy's purpose and need because it enables the enhancement of training and operational readiness of CVWP aircrew by maintaining aircrew skills, providing the ability to accommodate future training requirements, and maximize training opportunities due to its proximity to existing training airspace. In addition, the airspace proposal was approved by the FAA to move forward to be analyzed in this EA making it a viable alternative.
Concerns that low flying aircraft can trigger snow avalanches that can bury and kill winter recreationists	Based on information provided by the Sierra Avalanche Center ( <a href="https://www.sierraavalanchecenter.org/FAQ">https://www.sierraavalanchecenter.org/FAQ</a> ), it is extremely unlikely low flying aircraft would trigger an avalanche that can bury and kill winter recreationists. "Noise is simply not enough force unless it's EXTREMELY loud noise such as an explosive going off at close range. Even sonic booms or low flying helicopter trigger avalanches only in extremely unstable conditions in which natural avalanches would likely occur on their own anyway. In 90 percent of avalanche fatalities, the avalanche is triggered by the weight of the victim, or someone in the victim's party."
Concerns that low flying aircraft could cause livestock to stampede which could lead to injury and death	Studies have been conducted on the impacts of low-altitude subsonic flights on domesticated animals, which generally consisted of startle reactions that were considered minimal (Manci, K.M., D.N. Gladwin, R. Vilella, and M.G. Cavendish. 1988. Effects of aircraft noise and sonic booms on domestic animals and wildlife: a literature synthesis. U.S. Fish and Wildlife Service National Ecology Research Center, Ft. Collins, CO. NERC-88/29. 88 pp). The likelihood of military aircraft overflights associated with the Proposed Action causing livestock to stampede leading to injury and death is minimal.
Concerns that low flying aircraft in the Roosevelt and Okanogan MOAs can frighten people	<p>To the extent low-level military aircraft overflights could occur in the existing Okanogan B and C MOAs, and the Roosevelt B MOA, which have lower altitude limits of 300 feet AGL, CVWP SOPs restrict pilots from flying below 500 feet AGL.</p> <p>The Navy incorporated the best available science into the analysis conducted in Chapter 3 (Affected Environment and Environmental Consequences) of this EA. While low flying aircraft could potentially frighten someone in the vicinity of aircraft training, military aircraft overflights would not result in significant public health and safety risks as discussed in Section 3.6.3 (Environmental Consequences).</p>

### D.2.2 Comments from Agencies

Table D-7 contains the Navy's responses to comments from government agencies. Responses to these comments were prepared and reviewed for scientific and technical accuracy and completeness.

**Table D-7: Responses to Comments from Agencies**

Commenter	Comment	Navy Response
Washington Department of Fish and Wildlife Region 2 (WDFW)-1	On January 16, 2024, the Washington Department of Fish and Wildlife (WDFW) received notice from the Department of the Navy's United States Pacific Fleet, that it is accepting comments regarding the proposal referenced above. The Washington Department of Fish and Wildlife (WDFW) interest in this project is based on our agency's mandate to perpetuate fish, wildlife, and their habitat (Regulatory Code of Washington (RCW) 77.04.012). We reviewed the project proposal for potential impacts to fish, wildlife, and their habitats, as well as possible impacts to recreational opportunities, according to our mission; we appreciate the opportunity to offer these comments	Thank you for your participation in the NEPA process. Your comment is part of the official project record.
WDFW-2	<p>The Eastern Washington Airspace Extension Draft Environmental Assessment (DEA), dated January 2024, shows the new proposed airspace of Okanogan D MOA and Mazama ATCAA (Figure 1.1-1). The new proposed airspace provides habitat for multiple wildlife species noted in Table 3.2-1 of the DEA. There are two species, mountain goats, listed under Table 3.2-1, and golden eagles, not listed under Table 3.2-1, that WDFW is concerned about the potential impacts of the new airspace as they are sensitive to air traffic. Both of these species are identified as Species of Greatest Conservation Need under the Washington State Wildlife Action Plan and Priority Species under WDFW's Priority Habitat and Species Program. WDFW recommends these species be evaluated for potential impacts in the final Environmental Assessment and the following mitigation measures be added to the proposal:</p> <p>Golden Eagle WDFW has designated this species as a candidate for listing in Washington State. The majority of the Navy's existing and proposed Eastern Washington airspace is within the species' range (Larsen et al., 2004). Additionally, our WDFW Priority Habitat and Species (PHS) on the Web Map (<a href="https://wdfw.wa.gov/species-habitats/at-risk/phs/maps">https://wdfw.wa.gov/species-habitats/at-risk/phs/maps</a>), a source of</p>	<p>Changes have been made to the Final EA analysis in response to comments received about the Golden Eagle and Mountain Goat.</p> <p>Navy aircrews strictly adhere to the FAA established airspace parameters. This policy helps to minimize unnecessary environmental impacts but is also critical to ensuring airspace safety and separation from non-military aircraft.</p> <p>In addition to adhering to FAA rules and regulations when operating in the national airspace system, the Navy also implements standard operating procedures to further standardize pilot expectations and practices. In the case of potential wildlife disturbance, Commander Naval Air Forces (CNAF) Instruction 3710.7, requires Navy pilots to exercise good judgment, take steps to minimize frightening of wildlife and where conditions permit maintain 3,000</p>

Commenter	Comment	Navy Response
	<p>Best Available Science, shows that the new proposed airspace is above golden eagle breeding area. Golden eagle populations appear to be limited by the availability of undisturbed nest sites, and human activities have been shown to cause breeding failure (Kochert and Steenhof, 2002). Buffers of at least 1000 meters (~3280 feet) with no human disturbance are recommended to avoid disturbance to nesting eagles (Spaul and Health, 2017). Thus, WDFW asks that the navy be in strict compliance with their lower altitude limits of the new airspace to ensure aircraft do not fly within the suggested buffer. Additionally, since golden eagles occur throughout Okanogan and Ferry County, flights should follow a lower altitude limit of 1000 meters during the nesting period of February 15 to July 15 (Larsen et al., 2004) for the entirety of Okanogan and Ferry County.</p> <p>Mountain Goat Mountain goat is listed in table 3.2-1 as a federally sensitive species that occurs in the eastern cascades under the new proposed airspace (Rodrick and Milner, 1991). Over the last twenty- seven years, WDFW has witness a decrease in the number of mountain goats observed in the Methow Valley (Table 1), and this pattern is likely to continue as there will be an increase in thermal stress due to climate change and human disturbance from recreation pressure (Rodrick and Milner, 1991). Mountain goats have been documented to be highly disturbed by aircraft (Côté et al., 2013). Escape terrain consisting of rock-cliff habitats to escape predators is critical to mountain goats especially when their offspring are young. As much of the new proposed flight area could be considered escape terrain, we recommend flights not happen from May 15 to June 30 in the proposed Okanogan D MOA airspace, to avoid and minimize disturbance to goats while they are most vulnerable with their kids. Buffers of 1,500 meters (~4,291 feet) are recommended to avoid disturbance of mountain goats (Côté et al., 2013) year-round. WDFW recommends the Navy is in strict compliance with their lower altitude limits of the new airspace to ensure aircraft do not fly below the recommended buffer to avoid disturbance to mountain goats. Additionally, WDFW asks that if the pilot sees a group of mountain goats, the pilot actively avoids flying near them.</p> <p>To summarize, WDFW recommends that golden eagles and mountain goats be further assessed in the final Environmental Assessment for</p>	<p>feet above ground level in known noise sensitive habitat areas.</p> <p>In support of national defense mission readiness requirements, the Navy cannot commit to complete avoidance of flight time below 1,000 meters during the period of February 15 to July 15, nor commit to not conducting any military aircraft overflights in the Proposed Okanogan D MOA from May 15 to June 30. However, aircrews currently minimize low altitude maneuvers to help avoid potential environmental impacts. Throughout the year only approximately 7.5% of flight time occurs below 4,000 feet above ground level, occurring for brief and intermittent events. And, as described in the Final EA, the lowest available altitude (the floor) of the new Okanogan D MOA airspace is 11,000 ft. above mean sea level. Approximately 83% of the terrain beneath Okanogan D is 6,500 ft. and lower, providing a year-round buffer of 4,500 ft. for the majority of the area.</p>

Commenter	Comment	Navy Response
	<p>Eastern Washington Airspace. To avoid and minimize impacts to wildlife, WDFW recommends the final Environmental Assessment include the following measures:</p> <ol style="list-style-type: none"> <li>1. The Navy strictly enforces the lower altitude limit for the entire airspace to avoid further impacts on the above species and those listed in Table 3.2-1.</li> <li>2. Flights for the entire airspace do not occur beneath 1,000 meters in Okanogan and Ferry County where golden eagles are prevalent (Larsen et al., 2004) during the nesting period of February 15 to July 15.</li> <li>3. Flights do not occur in the new proposed Okanogan D MOA airspace from May 15 to June 30 during the period goats are most vulnerable with their kids.</li> <li>4. If pilots see mountain goats or any wildlife, they actively avoid flying near them.</li> </ol> <p>Thank you for the opportunity to comment on the Draft Environmental Assessment for Eastern Washington Airspace Extension. WDFW recommends the No Action Alternative or Alternative 1, with the above recommendations, be considered for the Final Environmental Assessment. Alternative 2 would increase the number of training activities and likely cause more impacts to the above-mentioned species. WDFW staff are available to provide technical assistance to you and the applicant. If you have any questions, please contact me at 509-570-2354 or <a href="mailto:Mallory.hirschler@dfw.wa.gov">Mallory.hirschler@dfw.wa.gov</a>.</p> <p>Sincerely, Mallory Hirschler WDFW Region 2 Habitat Biologist</p>	
U.S. Environmental Protection Agency Region 10 (EPA)-1	The U.S. Environmental Protection Agency has reviewed the United States Department of the Navy's January 2024 Draft Environmental Assessment for the Eastern Washington Airspace Extension Project (EPA Project Number 24-0008-USN). EPA has conducted its review pursuant to the National Environmental Policy Act and our review authority under Section 309 of the Clean Air Act. The CAA Section 309 role is unique to EPA and requires EPA to review and comment publicly on any proposed federal action subject to NEPA's environmental impact statement requirement.	Thank you for your participation in the NEPA process. Your comment is part of the official project record. Please see comment responses EPA-2 through EPA-17 which address all concerns in this comment and in the detailed comment provided.

Commenter	Comment	Navy Response
	<p>The DEA evaluates the potential environmental impacts of a Navy proposal to extend military training airspace (520 square miles) in northeastern Washington state and northwestern Idaho. This action will enhance realistic training and readiness of EA-18G aircraft squadrons based at Naval Air Station Whidbey Island and other locations. Activities will involve establishing a new Okanogan D Military Operations Area and overlying Mazama Air Traffic Control Assigned Airspace.</p> <p>The Navy's Preferred Alternative, Alternative 1, does not propose an increase in the number of overall training flights. The alternative includes a redistribution of where current training flights will occur within the existing Okanogan and Roosevelt MOAs from what was analyzed in the 2010 Northwest Training Range Complex Environmental Impact Statement/Overseas EIS.</p> <p>EPA identified that the project has the potential to impact to air quality, noise, communities with environmental justice (EJ) concerns and biological resources. EPA recommends that the NEPA analysis include the following:</p> <ul style="list-style-type: none"> <li>• Data regarding potential impacts to communities with EJ concerns utilizing EPA's EJScreen.</li> <li>• Detail the methods used to ensure meaningful participation of communities with EJ concerns and in decisions being made about the proposed action.</li> <li>• Establish a monitoring program for the project to verify that actual noise impacts do not exceed the maximum levels predicted in the DEA. Enhance outreach so that the public is aware on how to submit noise complaint. Identify additional actions to reduce noise impacts that will be taken in response to noise complaints and to meet environmental objectives throughout the proposed project lifespan.</li> <li>• Describe the methods for coordinating with federal and state agencies and affected tribes to ensure that this project is implemented in a manner protective of human health and the environment.</li> </ul> <p>Enclosed are EPA's Detailed Comments. Thank you for the opportunity to review the DEA for this project. If you have questions about this review, please contact Theo Mbabaliye of my staff at (206) 553-6322 and</p>	

Commenter	Comment	Navy Response
	<p>mbabaliye.theogene@epa.gov, or me, at (206) 553-1774 and chu.rebecca@epa.gov.</p> <p>Sincerely, REBECCA CHU Rebecca Chu, Manager Policy and Environmental Review Branch</p>	
EPA-2	<p>Impacts on Communities with Environmental Justice Concerns</p> <p>Section 3.6 of the DEA discusses socioeconomic and environmental justice and provides 2020 census data for the action area. In addition, the DEA states that, “The U.S. EPA’s Environmental Justice Screening and Mapping Tool was considered when analyzing the impacts on environmental justice. However, based on the nature of the Proposed Action and negligible impact it would have on the surrounding communities, it was not used extensively or represented in this analysis.” The DEA then concludes that there would be “no significant environmental impacts on socioeconomic resources, no disproportionately high impacts or adverse effects on any low-income populations or minority populations, and no disproportionate exposure of children to environmental health or safety risks.” It is important to consider both the proposed action’s potential short-term impacts and long-term impacts (e.g., flight noise, disrupted air quality, views and disrupted access to recreation areas and traditional use by Indigenous populations) on communities with EJ concerns.</p> <p>EPA recommends that the NEPA analysis utilize EPA’s EJScreen to identifying potential impacts on communities with EJ concerns for the following reasons:</p> <p>EJScreen is EPA’s nationally consistent environmental justice screening and mapping tool. It offers a variety of powerful data and mapping capabilities that enable users to understand details about the population of an area and the environmental conditions in which they live. The tool provides information on environmental and socioeconomic indicators as well as pollution sources, health disparities, critical service gaps, and climate</p>	<p>The Navy updated the Final EA to provide additional information and clarification regarding the EPA’s EJScreen tool.</p> <p>In relation to the Action Area, the EJScreen tool shows four EJ Indexes at or above 80<sup>th</sup> percentile, including lead paint, superfund proximity, Risk Management Plan facility proximity, and wastewater discharge. The Proposed Action would not contribute to the EJ indexes at or above the 80th percentile.</p> <p>Activities associated with the Proposed Action include military aircraft overflights which would result in the emission of criteria pollutants, hazardous air pollutants, and greenhouse gases. All emissions would be consistent with existing conditions from the current Navy training activities occurring in the existing airspace and emissions would remain well below all applicable thresholds.</p>

Commenter	Comment	Navy Response
	<p>change data. The data is displayed in color-coded maps and standard data reports which feature how a selected location compares to the rest of the nation and state. As the information was not included in the DEA EPA recommends it be included in the NEPA analysis.</p> <p>Assessing data from EJScreen is a useful first step in identifying locations in the area that may be candidates for further review or targeted outreach. EPA considers a project to be in an area of potential EJ concern when an EJScreen analysis for the impacted area shows one or more of the EJ Indexes at or above the 80th percentile in the nation and/or state. At a minimum, EPA recommends an EJScreen analysis consider EJScreen information for the block group(s) which contains the proposed action(s) and a one-mile radius around those areas. EPA encourages the Navy to include EJScreen results in the NEPA analysis and discuss implications for communities in the analysis area.</p> <p>It is important to consider all impacted areas by the proposed action(s). Areas of impact can be very focused and contained within a single block group, or broader, spanning across several block groups and communities. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Therefore, additional review or outreach may be necessary for the proposed action. To address these potential concerns, EPA recommends the NEPA document:</p>	
EPA-3	<p>Apply methods from "Environmental Justice Interagency Working Group Promising Practices for EJ Methodologies in NEPA Reviews" report to this project. This report compiles methodologies from current agency practices for integrating EJ considerations in NEPA processes. The Promising Practices Report provides particularly useful guidance in assessing the potential direct and indirect impacts of a project, as well as the potentially increased vulnerabilities certain populations may have due to the cumulative impacts of environmental harm.</p>	<p>Thank you for providing this reference. The Navy considered the strategies and best practices described and believes, based on the minimal impacts and their broad coverage across entire counties in Eastern Washington, that its processes applied to ensure environmental justice met or exceeded all requirements. Specific to the reference, the Navy:</p> <ul style="list-style-type: none"> <li>- Conducted a thorough and meaningful engagement with the public as described below in response to comment EPA-8.</li> <li>- Defined the affected environment and identified minority and low-income</li> </ul>

Commenter	Comment	Navy Response
		populations in Section 3.7 (Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks) of the EA, and determined in its impacts analysis that the selected alternatives would not disproportionately impact those populations.
EPA-4	Apply guidance from the Council of Environmental Quality's guidance document "Environmental Justice Guidance Under the National Environmental Policy Act" to this project (CEQ's EJ Guidance).	<p>The Navy completed this EA in adherence to the guidance provided in the CEQ's EJ Guidance document, specifically to the six principles described:</p> <ul style="list-style-type: none"> <li>- The Navy considered the composition of the affected area as described in Section 3.7.2 (Affected Environment) of this EA.</li> <li>- The Navy considered and analyzed the potential for cumulative health hazards in Chapter 4 (Cumulative Impacts).</li> <li>- The Navy analyzed the socioeconomic factors in Section 3.7 (Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks).</li> <li>- The public participation strategies applied by the Navy are described in Section 1.9 of this EA (Public and Agency Participation) and in response to comment EPA-8 below.</li> <li>- Community representation was included in the public involvement process.</li> <li>- The Navy invited the potentially affected Tribes to engage in Government-to-Government consultation.</li> </ul>
EPA-5	Characterize the project site with specific information or data related to EJ concerns.	The Action Area associated with the Proposed Action is the airspace above northeastern Washington State as described in Chapter 2 (Description of the Proposed Action and Alternatives) of this EA. Section 3.7 (Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks) of this EA includes environmental justice data specific to



Commenter	Comment	Navy Response
		<p>the areas beneath the existing and proposed airspace.</p> <p>As discussed in the comment response to EPA-6, EJ concerns related to Environmental Justice (EJ) Indexes within the vicinity of the Action Area would not be affected by the Proposed Action.</p>
EPA-6	Describe potential EJ concerns for all EJ Indexes at or above the 80th percentile in the state and/or nation.	<p>In relation to the Action Area, the EJscreen tool shows four EJ Indexes at or above 80<sup>th</sup> percentile, including lead paint, superfund proximity, Risk Management Plan facility proximity, and wastewater discharge. The Proposed Action would not contribute to the EJ indexes at or above the 80th percentile. Activities associated with the Proposed Action include military aircraft overflights which would result in the emission of criteria pollutants, hazardous air pollutants, and greenhouse gases. All emissions would be consistent with existing conditions from the current Navy training activities occurring in the existing airspace and emissions would remain well below all applicable thresholds.</p>
EPA-7	<p>Screen for and describe all individual block groups within or intersecting at least a 1- mile radius of the project.</p> <p>Describe individual block groups within the project area in addition to an area-wide assessment.</p> <p>Supplement data with state and county level reports and local knowledge such as data from Rural Health Information Hub Idaho State Guide7 and Idaho Department of Health and Welfare’s Population Health Data.</p>	<p>The potential likelihood of a human or biological resource being in close proximity to an aircraft while operating at settings producing maximum noise levels is low. In the unlikely event sound levels as high as 123 decibels are experienced by a human or biological resource, it would be of short duration (seconds) and not cause significant impacts, as discussed in Chapter 3 (Affected Environment and Environmental Consequences) Because the action involves a large area covering several counties, and due to the insignificant level of impacts, the Navy believes that the detailed descriptions requested would not provide information of benefit to the analysis.</p>

Commenter	Comment	Navy Response
EPA-8	<p>Meaningful Public Engagement</p> <p>EPA recommends the NEPA analysis detail the opportunities for effective and meaningful public engagement for communities with EJ concerns, as described in the Promising Practices for EJ Methodologies in NEPA reviews and Executive Order 14096. We recommend the following measures to further advance meaningful involvement:</p> <p>Review and consider community feedback provided during the NEPA process. Ensure that the NEPA engagement approach is sensitive and responsive to the wellbeing of affected communities.</p> <p>Ensure that community feedback is reflected in the decision-making process. Design robust community engagement practices to maximize participation opportunities for communities that would be affected by the project, such as community-based workshops to facilitate discussion and issue resolution. Community-based workshops may also provide an opportunity to identify key issues and milestones for meaningful engagement in the NEPA process for the communities.</p> <p>Provide early and frequent outreach and engagement opportunities to collect and incorporate community feedback throughout the NEPA process and to maintain maximum transparency.</p> <p>Ensure that translation/interpretation services are provided to accommodate linguistically isolated populations.</p> <p>Address technology barriers that may prohibit participation from communities affected by the project.</p> <p>Ensure that meetings are scheduled at a time and location that is accessible for community participants, including scheduling meetings after work hours and on weekends as appropriate.</p> <p>Promote engagement opportunities within appropriate outlets used by affected communities, such as newspapers, radio, and social media.</p>	<p>As described in Section 1.9 (Public and Agency Participation), a robust public engagement effort accompanied the EA NEPA process.</p> <p>The NASWI Public Affairs Officer distributed a news release announcing the availability of the Draft EA and the virtual public meetings to local, regional, and national print and broadcast (radio and television) media outlets on January 12, 2024. A second news release was distributed to media outlets on February 2, 2024. The Draft EA was released for a 42-day public review from January 12, 2024, through February 23, 2024, which included two virtual public meetings on February 13, 2024, and February 15, 2024. The two meetings were held via web meeting (virtual) and at different times to allow the greatest accessibility, including one meeting conducted after work hours.</p> <p>The Draft EA was posted to the project website at <a href="https://pacific.navfac.navy.mil/NWNEPA">https://pacific.navfac.navy.mil/NWNEPA</a> on January 12, 2024. A public notice was published in The Spokesman Review, The Statesman Examiner, The Okanogan Valley Gazette-Tribune, and The Methow Valley News on January 12, 2024, to coincide with the beginning of the public review and comment period. The notice described the Proposed Action; solicited public comments on the Draft EA; provided dates of the public comment period, and location and dates of the public meetings; and announced that CD copies and hardcopies of the Draft EA were available for review at the following public locations: The Okanogan Public Library, The Twisp Public Library, The Colville Public Library, The Oroville Public Library, and The Oak Harbor Public Library. A hard copy of the Draft EA was also sent to the Winthrop Public Library after a request was made during the second virtual public meeting on February 15, 2024.</p>

Commenter	Comment	Navy Response
	<p>Provide ample notice of meetings and commenting opportunities so that community members have sufficient time to prepare and participate.</p> <p>Promote engagement opportunities within appropriate outlets used by affected communities, such as newspapers, radio, and social media.</p> <p>Ensure that all project-related information is conveyed using plain language so that community members of varied reading proficiencies can readily understand the project-related information.</p>	<p>Early engagement notifications were sent to elected officials, government agencies, and the following federally recognized tribes from Washington State: the Confederated Tribes of the Colville Reservation, the Spokane Tribe of Indians, and the Kalispel Tribe of Indians. On January 10, 2024, a postcard was mailed to 33 nongovernmental organizations and community and business groups. On January 12, 2024, tribal letters were mailed to six tribal leaders of federally recognized tribes or districts, and stakeholder letters were mailed to 133 federal, state, and local elected officials and government agencies.</p> <p>A 4-page fact sheet (both English and Spanish versions) was developed to provide project information to the public. The fact sheet was mailed as an enclosure with the stakeholder and tribal letters and was posted on the project website.</p> <p>A dedicated email address, NASWIPAO@us.navy.mil, was set up to receive questions from the public for discussion with Navy representatives at the live question-and-answer portion of the virtual public meetings. Questions were accepted between February 1 and February 12, 2024. Questions submitted (via the chat function or by coming off mute) and responded to during the question-and-answer portion of the virtual public meetings were not official public comments and not considered part of the official public record.</p> <p>The public could also submit comments to a dedicated email address, navfac-nw-NEPA@us.navy.mil, during the 42-day draft EA public review period. Email was monitored by NAVFAC NW staff, and comments were compiled and submitted to project team members frequently. The Navy received</p>

Commenter	Comment	Navy Response
		<p>more than 6,000 comments from agencies, organizations, and the public.</p> <p>In addition, the Draft EA was made Section 508 compliant prior to public release. For more information on public involvement, please see the public involvement summary in Section D.1 (Public Involvement Summary Report) of this appendix.</p>
EPA-9	<p>Potential Impacts on Air Quality Because of this project's potential air quality impacts, EPA recommends that the NEPA analysis include:</p> <p>Air quality monitoring and appropriate mitigation measures in coordination with each State's Department of Environmental Protection and other entities in the area to ensure compliance with the National Ambient Air Quality Standards and related regulatory requirements throughout the project's lifespan.</p> <p>Monitoring strategies tailored to local conditions. This is because localized air quality impacts can be substantial (e.g., during wildfire burns) even though area-wide and/or long-term monitoring may show compliance with air quality regulatory requirements. In addition, sensitive populations, such as the elderly and children may exist within newly established MOA and ATCAA.</p>	<p>Section 3.2 (Air Quality) of this EA analyzes the impacts on air quality from military aircraft overflights associated with the Proposed Action. Under Alternative 1 (Preferred Alternative), there would be a change in environmental conditions under the Proposed Okanogan D MOA and Mazama ATCAA due to the introduction of military aircraft overflights. However, the total number of aircraft sorties in the entire Action Area will decrease slightly when compared with current conditions and there will be a negligible change in emissions associated with the Proposed Action. In addition, emission associated with the Proposed Action are well below all applicable thresholds. Therefore, impacts to all populations, including sensitive populations such as the elderly and children, as a result of emissions associated with the Proposed Action are not expected.</p> <p>The Proposed Action involves aircrew training activities projected to continue into the foreseeable future and the Navy intends to continue to monitor the frequency of these activities and assess impacts into the foreseeable future. As new scientific information becomes available or potential environmental impacts change, the Navy is committed to reviewing its actions, analysis, and mitigations.</p>

Commenter	Comment	Navy Response
EPA-10	Increased fire prevention mitigation commensurate with rising risk due to climate change.	The one potential fire risk from the proposed action would involve the use of self-protection flares (a pyrotechnic device). As described in Section 2.5 (Best Management Practices Included in the Proposed Action), flares have not been used in the Action Area due to the nature of the training. However, if flares are required for future training, their use would be authorized only under conditions that consider Fire Season Restrictions.
EPA-11	EPA appreciates that the DEA describes current air quality conditions within the analysis area. Air quality in the project area is in "attainment" or "unclassifiable /attainment" with all criteria pollutants and General Conformity is not applicable to the analysis area. Although this may be true, local air quality may still be impacted due to cumulative impacts from surrounding activities such as road construction and site operations, traffic on unpaved roads, local traffic emissions, use of woodstoves, agriculture, fire, and civilian air traffic. Changes in climate may also result in increased air pollution from future wildfires. Further, use of flares in airspace may generate air emissions with potential for cumulative air quality impacts. If a flare is still burning when it hits the ground, it may cause a fire and result in a variety of secondary impacts on soil, water, biological resources, cultural resources, land use, and human safety. All these impacts could also be exacerbated due to prevailing weather conditions and the analysis area is in arid and windy environment.	Cumulative impacts are analyzed in Chapter 4 (Cumulative Impacts) of this EA. Cumulative impacts were assessed for past, present, and reasonably foreseeable future actions that occur within or potentially impact resources, including air quality, analyzed in the Action Area. Impacts from three specific actions that have occurred, are occurring, and/or will occur, in combination with the Proposed Action, were analyzed: the 2014 Pacific Northwest Electronic Warfare EA, the Copperstone Planned Development, and the Pacific Northwest National Scenic Trail Comprehensive Plan EA. For each resource area analyzed in the EA, no cumulative impacts associated with the Proposed Action were found when added to the effects of the other past, present, and reasonably foreseeable projects.
EPA-12	<p>Potential Impacts on Biological Resources EPA recommends that the NEPA analysis:</p> <p>Implement continued coordination with the U.S. Fish and Wildlife Service, and as appropriate, with each State's Department of Fish, Wildlife, and Game, to reduce risks and protect biota and habitat as the proposed action and related activities are implemented.</p> <p>At a minimum, extend the existing seasonal flight restrictions in areas of highest habitat quality; and includes such protective measures in the NEPA analysis and mitigation plan.</p>	The Navy conducted specific analyses on ESA-listed species and designated critical habitat in accordance with section 7(a)(2) of the ESA. The Navy received concurrence from the USFWS that aircraft flights in the existing and proposed Okanogan and Roosevelt MOAs would not adversely affect ESA-listed species, including the Northern Spotted Owl, Yellow-billed Cuckoo, Grizzly Bear, Gray Wolf, Canada Lynx, and North American Wolverine, and designated critical habitat for the Northern Spotted Owl and Canada Lynx.

Commenter	Comment	Navy Response
	<p>Include the outcomes of Section 7 of the Endangered Species Act consultations with the USFWS, including any recommended measures to protect species from impacts of activities in the MOAs, as well as coordination with other agencies.</p> <p>Avoid the use of chaff, particularly in low-altitude MOAs, and replace it with a biodegradable alternative. This is because chemicals released from chaff and flares tend to dissolve faster in water than on land, are more mobile and available to organisms in water, and their toxicity thresholds tend to be lower for sensitive aquatic species.</p> <p>The DEA discusses biological resources in the analysis area and indicates that this area includes the sagebrush steppe ecosystem, and the habitat supports a variety of wildlife species including species listed as endangered and threatened under the ESA, e.g., the endangered gray wolf and threatened grizzly bear, Canada lynx, and North American wolverine. Others include special status species, migratory birds, as well as mammals and plants. Information in the document also indicates that the proposed action has the potential to impact these resources primarily due to the anticipated higher than optimal noise levels, especially during low-level flight operations; chaff and flares releases; and bird-aircraft strikes.</p>	<p>Additional analysis was included in the Final EA in Section 3.3 (Biological Resources) in response to comments received from Washington Department of Fish and Wildlife.</p> <p>Changes have been made to the Final EA to include the outcome of Section 7 consultation of the ESA with the USFWS.</p> <p>The Proposed Action does not include the use of Chaff in the Action Area.</p>
EPA-13	<p>Impacts of Climate Change</p> <p>Section 3.1.1.3 of the DEA discusses greenhouse gases and indicates that total baseline emissions are estimated at 56,413 metric tons (MT) of CO<sub>2</sub> per year and that Alternative 1 (Preferred Alternative) will result in emissions totaling 88,413 MT of CO<sub>2</sub> per year, which includes baseline emissions. It is not clear why there is a difference between baseline emissions and no action alternative emissions. The difference is up to 31,996 MT of CO<sub>2</sub> per year. EPA recommends the NEPA analysis explain this difference and basis for it.</p>	<p>As stated in Section 3.1.4.3 (No Action Alternative) of the Draft EA (now Section 3.2.4.3 of the Final EA), Table 3.1-3 (now Table 3.2-3 in the Final EA) summarizes the No Action Alternative emissions. These emissions are different than the baseline emissions because, as shown in Table 3.2-2, the baseline emissions included EA-6B aircraft operations. Since then, the Navy has fully transitioned from EA-6B Prowler aircraft to EA-18G Growler. The emission characteristics and some of the activity data are different for two aircraft types. The No Action Alternative emissions reflect these differences. The change in emissions is primarily due to the following:</p> <ul style="list-style-type: none"> <li>EA-6B has higher emission rates for CO, volatile organic compounds, and PM compared to EA-18G.</li> </ul>

Commenter	Comment	Navy Response
		<ul style="list-style-type: none"> <li>EA-18G has higher emission rates for NOx and CO2 compared to EA-6B.</li> </ul>
EPA-14	<p>The DEA also states that the 2023 Council on Environmental Quality (CEQ) Interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change recommends that “agencies provide additional context for GHG emissions, including through the use of the best available social cost of GHG estimates, to translate climate impacts into the more accessible metric of dollars, allow decision makers and the public to make comparisons, help evaluate the significance of an action’s climate change effects, and better understand the tradeoffs associated with an action and its alternatives.” EPA appreciates that the DEA includes estimated emissions for all alternative, but the DEA does not include social cost estimates of these emissions. EPA recommends the NEPA analysis also estimate the social cost of GHG emissions for each alternative to facilitate decisionmakers' and the public's evaluation of the proposed alternatives by monetizing the calculated GHG emissions. It will also be useful to include an evaluation of the effects of climate change on each of the proposed alternatives, including evaluating how a changing climate may impact each alternative and identifying potential mitigation measures that could improve resiliency of the project.</p>	<p>The Proposed Action is to add a horizontal and vertical extension to existing airspace. The Proposed Action does not include any increase in aircraft sorties or flight time for the Preferred Alternative (Alternative 1), in fact sortie numbers are proposed to decrease very slightly under Alternative 1. Therefore, the social cost for the No Action Alternative and Alternative 1 would be essentially identical. Alternative 2, which is not the Navy’s Preferred Alternative includes an approximate 12% increase in overall sortie numbers and therefore would result in an approximate 12% increase in GHG emissions. Minimization of potential environmental impacts was one of the determining factors in the Navy proposing Alternative 1 as the Preferred Alternative.</p>
EPA-15	<p>Coordination with Tribal Governments EPA encourages the Navy to continue consultations with affected Tribes and incorporate feedback from the Tribes when making decisions regarding the project. EPA recommends the NEPA analysis describe the issues raised during ongoing consultations and how those issues will be addressed.</p>	<p>Regarding coordination with Tribal Governments, as part of the NEPA process, the Navy invited Government-to-Government consultations with the following federally recognized tribes: The Confederated Tribes of the Colville Reservation, the Spokane Tribe of Indians, and the Kalispel Tribe of Indians. The Navy provided notifications to the Tribes throughout the EA process, and the National Historic Preservation Act process. As the Proposed Action in the EA is tied to the ongoing and long-term requirement to conduct military aircrew training in this region, the Navy is firmly committed to an enduring and meaningful long-term Government-to-Government relationship with the Tribes, not bound by the NEPA process.</p>

Commenter	Comment	Navy Response
		<p>As mentioned above, the Navy consulted with the Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians under Section 106 of the National Historic Preservation Act and received responses from each. The Kalispel Tribe of Indians declined to consult on the project. The Spokane Tribe of Indians deferred to the Confederated Tribes of the Colville Reservation. The Confederated Tribes of the Colville Reservation responded in which they agreed with the Area of Potential Effect and preemptively agreed there will be no impact to historic properties; however, concerns were raised regarding auditory impacts potentially affecting places of traditional significance. The Navy offered to meet with the Confederate Tribes of the Colville Reservation to discuss potential concerns and the Navy will take into consideration for the potential sensitivity of any information the Tribe chooses to provide.</p>
EPA-16	<p>Monitoring of the Project and Adaptive Management</p> <p>EPA recommends the NEPA analysis include a monitoring program designed to assess both impacts from activities and effectiveness of mitigation measures for the impacts and indicate how the program will use an effective feedback mechanism, such as adaptive management, so that any needed adjustments can be made to the activities to meet environmental objectives during project implementation. For example, there could be a plan to monitor noise impacts and take corrective action if noise complaints or damage claims exceed existing levels.</p>	<p>Because the Proposed Action in the EA involves aircrew training activities projected to continue into the foreseeable future, the Navy intends to continue to monitor the frequency of these activities and assessed impacts into the foreseeable future. As new scientific information becomes available or potential environmental impacts change, the Navy is committed to reviewing its actions, analysis, and mitigations.</p> <p>The Navy does not propose to conduct monitoring of noise levels beneath the airspace. Previous monitoring efforts involving the EA-18G and other military aircraft has demonstrated the noise model used in this analysis operates as intended and provides an accurate prediction of sound levels from aircraft operations. The following link provides Real-Time Aircraft Sound Monitoring Study and Reports</p>



Commenter	Comment	Navy Response
		<p>completed in 2021 and 2022: <a href="https://www.navfac.navy.mil/Business-Lines/Public-Works/Products-and-Services/Aircraft-Sound-Monitoring/">https://www.navfac.navy.mil/Business-Lines/Public-Works/Products-and-Services/Aircraft-Sound-Monitoring/</a>. Additionally, the noise model used, MR_NMap is approved by the FAA and Department of Defense for these types of analyses.</p> <p>Aircraft noise monitoring is poorly suited to analyze or verify predicted noise events in areas under the Eastern Washington Special Activity Airspace, because the training area is randomly used by aircraft to maneuver during various training activities. There are no specific flight tracks that are routinely followed during training in the airspace, and aircraft will not specifically fly over or in close proximity to any specific location. Additionally, there is no way to easily discern Navy aircraft flights from commercial or civil aviation aircraft flights, which also use the airspace.</p> <p>Residents may submit a noise complaint as follows. Please provide pertinent information to the NASWI noise complaint line at (360) 257-6665 or via e-mail at <a href="mailto:NASWI_Noise_Comments@us.navy.mil">NASWI_Noise_Comments@us.navy.mil</a> detailing your encounters. All noise complaints are considered and will be used to determine if a deviation from the approved airspace parameters was made.</p>

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## Appendix E: Agency Correspondence



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There are no figures in this appendix.

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There are no tables in this appendix.

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## **Appendix E      Agency Correspondence**

Appendix E contains the correspondence between the Navy and federal or state agencies with respect to cooperating agency status (Section E.1), the airspace extension proposal (Section E.2), the Endangered Species Act (Section E.3), and the National Historic Preservation Act (Section E.4). Some information has been redacted in order to protect the locations of sensitive cultural and historic resources.

**E.1 COOPERATING AGENCY STATUS****DEPARTMENT OF THE NAVY**

COMMANDER  
UNITED STATES PACIFIC FLEET  
250 MAKALAPA DRIVE  
PEARL HARBOR HI 96860-3131

IN REPLY REFER TO:  
5090  
Ser N46/0448  
June 1, 2023

Mr. Byron Chew  
Group Manager, Operations Support Group (AJV-W2)  
Mission Support Services, Air Traffic Organization  
Federal Aviation Administration  
2200 South 216<sup>th</sup> Street  
Des Moines, WA 98198

Dear Mr. Chew:

**SUBJECT: EASTERN WASHINGTON SPECIAL USE AIRSPACE EXTENSION  
ENVIRONMENTAL ASSESSMENT - COOPERATING AGENCY REQUEST**

In accordance with the National Environmental Policy Act (NEPA), Commander, U.S. Pacific Fleet (COMPACFLT) will be initiating an Environmental Assessment (EA) to assess the potential environmental impacts of extending Special Use Airspace (SUA) and Air Traffic Control Assigned Airspace (ATCAA) in northeastern Washington State. To meet training and operational readiness requirements, COMPACFLT proposes to establish the Okanogan D Military Operations Area (MOA) and Mazama ATCAA adjacent to the existing Okanogan A and B MOA and Molson ATCAA, as identified in the Office of Chief of Naval Operations letter of October 11, 2022, submitted to your office.

Because of your jurisdiction by law over designation of SUA and ATCAA and your expertise in evaluation of airspace impacts, COMPACFLT requests that the Federal Aviation Administration (FAA) serve as a cooperating agency for the development of this EA pursuant to NEPA and associated regulations.

COMPACFLT requests FAA's cooperation in accordance with the guidelines described in the Memorandum of Understanding between the FAA and the Department of Defense concerning SUA Environmental Actions, dated October 4, 2005 (and subsequent Change 1, effective August 2011). The SUA and associated ATCAA serve as a regional training range for Navy, Air Force and other military units in the Pacific Northwest, including naval aviation units based at Naval Air Station Whidbey Island, Washington.

As defined in 40 CFR 1501.7, the Navy is the lead agency for the Eastern Washington SUA Extension EA. As the lead agency, the Navy is responsible for overseeing preparation of the EA that includes, but is not limited to, the following:

- a. Gathering all necessary background information and preparing the EA.
- b. Determining the scope of the EA including the alternatives evaluated.

5090  
Ser N46/0448  
June 1, 2023

- c. Working with the FAA to ensure compliance with Order 1050.1F, Environmental Impacts: Policies and Procedures as well as the 1050.1F version 2 Desk Reference.
- d. Circulating the appropriate NEPA documentation to the general public and any other interested parties.
- e. Scheduling and supervising meetings held in support of the NEPA process, and compiling any comments received.
- f. Maintaining an administrative record and responding to Freedom of Information Act requests relating to the EA.

As a cooperating agency, COMPACFLT requests the FAA to support the Navy in the following manner:

- a. Providing timely comments throughout the EIS process, to include working drafts of the EA documents.
- b. Participating, as necessary, in meetings hosted by the Navy for discussion of EIS related issues.
- c. Adhering to the project's overall schedule as set forth by the Navy.
- d. Participating in public meetings, if held, during the Draft EA review phase.

We appreciate your consideration of our request and look forward to your response. Should you have any questions or need additional information, please contact the program manager for the Eastern Washington SUA Extension EA, Mr. John Mosher, COMPACFLT Northwest Environmental Program Manager, at (360)257- 3234, or [john.g.mosher.civ@us.navy.mil](mailto:john.g.mosher.civ@us.navy.mil).

Sincerely,



A. K. HUTCHISON  
Captain, U.S. Navy  
Deputy Fleet Civil Engineer  
By direction

Copy to:  
Chief of Naval Operations (N41, N98)  
Commander, Navy Region Northwest  
Commanding Officer, Naval Air Station Whidbey Island  
Navy Representative FAA Western Service Area (ANM-903)





U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

**Air Traffic Organization**  
FAA Headquarters, Washington, DC

800 Independence Avenue, S.W.  
Washington, DC 20591

August 2, 2023

A.K. Hutchison, Captain, U.S. Navy  
Deputy Fleet Civil Engineer  
Department of the Navy  
U.S. Pacific Fleet  
250 Makalapa Drive,  
Pearl Harbor, Hawaii 96860-3131

**Subject:** Federal Aviation Administration (FAA) Acceptance of National Environmental Policy Act (NEPA) Cooperating Agency Status for Navy, Pacific Fleet, Environmental Assessment

Dear Captain Hutchison,

Thank you for your letter dated June 1, 2023, requesting that Federal Aviation Administration (FAA) participate as a cooperating agency in the Commander, U.S. Navy Pacific Fleet's (COMPACFLT) Environmental Assessment (EA) for actions related to COMPACFLT's training and operational readiness requirements in eastern Washington State.

The FAA appreciates the Navy's recognition of our role as a cooperating agency in the evaluation of potential environmental impacts from the Navy's use of Special Use Airspace (SUA) and Special Activity Airspace (SAA) toward meeting its training and operational readiness requirements as required by the National Environmental Policy Act (NEPA) and its implementing regulations at 40 CFR Part 1500. Since this Navy project involves the proposed establishment, expansion and use of SUA and SAA, the FAA accepts the Navy's request to act as a cooperating agency per NEPA's requirements at 40 CFR Section 1501.8 regarding the roles of cooperating agencies.

To meet training and operational readiness requirements, the Navy proposes that the FAA establish Okanogan D Military Operations Area (MOA) and Mazama Air Traffic Control Assigned Airspace (ATCAA) adjacent to existing Okanogan A and B MOAs and Molson ATCAA.

FAA performs its role as a cooperating agency in accordance with the guidelines set forth in the 2019 Memorandum of Understanding (MOU) between FAA and Department of Defense (DoD) "Concerning Environmental Review of Special Use Airspace Actions" (Appendix 7 to FAA Order 7400.2P, Chapter 32), and in accordance with the NEPA regulations at 40 CFR Section 1501.8 on cooperating agencies, FAA's NEPA implementing Order 1050.1F, and FAA Order 7400.2P, Chapter 32, Appendix 8 – FAA Special Use Airspace Environmental Processing Procedures, which outlines the process by which the FAA works with the DoD as a cooperating

agency on projects involving SUA. See

[https://www.faa.gov/documentLibrary/media/Order/7400.2P\\_Basic\\_dtd\\_4-20-23--COPY\\_FINAL.pdf](https://www.faa.gov/documentLibrary/media/Order/7400.2P_Basic_dtd_4-20-23--COPY_FINAL.pdf)

The FAA's participation in the development of the Navy's EA and related NEPA documentation for this proposed action resides under the jurisdiction of the FAA's Western Service Center, Operations Support Group (OSG) in at 2200 South 216<sup>th</sup> Street, Des Moines, Washington 98198. Joseph Burt, the OSG's Environmental Team Manager, and a designated Environmental Protection Specialist, will coordinate with the Navy on NEPA document developments and reviews. The Western Service Center's Environmental Protection Specialist will be the primary point of contact for matters related to the development and review of the Navy's NEPA documentation for this project, including related airspace issues that will be tracked and coordinated by FAA Headquarters Airspace Regulations and Policy Group (AJV-P23).

While Appendix 8 of FAA Order 7400.2P indicates that the airspace review (see FAA Order 7400.2, Ch. 21, Section 3) and environmental impacts review should be conducted in tandem as much as possible, they are still separate review and approval processes. FAA's approval of either the DoD's aeronautical proposal or the DoD proponent's environmental impact analysis does not automatically indicate approval of the entire proposal. See link to FAA Order 7400.2P, Appendices 7 and 8, for additional details on coordination of NEPA documentation for projects involving the use of SUA between FAA and DoD.

[https://www.faa.gov/documentLibrary/media/Order/7400.2P\\_Basic\\_dtd\\_4-20-23--COPY\\_FINAL.pdf](https://www.faa.gov/documentLibrary/media/Order/7400.2P_Basic_dtd_4-20-23--COPY_FINAL.pdf)

A copy of the Navy's request for the FAA's cooperating agency status and this reply are being forwarded to the Environmental Team Manager, Mr. Joseph Burt of the Western Service Center's Operations Support Group. Mr. Burt can be contacted at [joseph.m.burt@faa.gov](mailto:joseph.m.burt@faa.gov) for coordination and review of the NEPA document(s). For general questions regarding NEPA document processing and coordination with the DoD, FAA's Service Centers, or FAA headquarters, please contact Paula Miller in the ATO/AJV-P23, Environmental Policy Team at [paula.miller@faa.gov](mailto:paula.miller@faa.gov).

Sincerely,

X Paula M. Miller, EPS,  
AJV P23 *Paula M. Miller, EPS*

Paula M. Miller  
JD, Environmental Protection Specialist, AJV-P23

Paula M. Miller, JD, EPS  
Airspace Environmental Policy Team, AJV-P23  
Air Traffic Organization, Mission Support Services  
Federal Aviation Administration

3

cc:

John Mosher, COMPACFLT Northwest Environmental Program Manager,  
[john.g.mosher.civ@us.navy.mil](mailto:john.g.mosher.civ@us.navy.mil), 360-257-3234

Joseph Burt, FAA, Environmental Team Manager, Western Service Center, Operations Support  
Group; [joseph.m.bert@faa.gov](mailto:joseph.m.bert@faa.gov)

Lonnie Covalt, FAA, Environmental Protection Specialist, Western Service Center, Operations  
Support Group; [Lonnie.d.Covalt@faa.gov](mailto:Lonnie.d.Covalt@faa.gov)

**E.2 AIRSPACE EXTENSION PROPOSAL**

DEPARTMENT OF THE NAVY  
COMMANDER NAVAL AIR FORCE  
UNITED STATES PACIFIC FLEET  
BOX 357051  
SAN DIEGO CALIFORNIA 92135-7051

3770  
Ser N3/006  
5 Aug 22

From: Commander, Naval Air Force, U.S. Pacific Fleet  
To: Commanding Officer, Naval Air Station Whidbey Island

Subj: VALIDATION OF COMMANDER ELECTRONIC ATTACK WING U.S. PACIFIC  
FLEET SPECIAL USE AIRSPACE PROPOSAL

Ref: (a) OPNAVINST 3770.2L  
(b) FAA Order 7400.2  
(c) Commanding Officer, Naval Air Station Whidbey Island Airspace Request ltr Ser  
N0/0634 of 14 Jul 2022.

1. Per reference (a) and (b), Commander, Naval Air Force, U.S. Pacific Fleet has reviewed and validated the Special Use Airspace proposal submitted on 14 Jul 2022, Serial N0/0634.
2. Per reference (c), the need and justification to meet the training and operational readiness of Commander, Electronic Attack Wing Pacific Fleet aircraft is significant enough to warrant the approval for the proposed airspace.

  
J. T. POKORSKY  
By direction

Copy to:  
Commander, Electronic Attack Wing, U.S. Pacific Fleet  
Commander, Navy Region Northwest

Enclosure (2)



DEPARTMENT OF THE NAVY  
FLEET AREA CONTROL AND SURVEILLANCE FACILITY  
NAVAL AIR STATION, NORTH ISLAND  
P.O. BOX 357062  
SAN DIEGO, CALIFORNIA 92135-7062

3000  
Ser N00/94  
24 Aug 22

From: Commanding Officer, Fleet Area Control and Surveillance Facility San Diego  
To: Director, Air Warfare (N98)

Subj: ENDORSEMENT OF COMMANDING OFFICER, NAVAL AIR STATION  
WHIDBEY ISLAND SPECIAL USE AIRSPACE PROPOSAL

Ref: (a) OPNAVINST 3770.2  
(b) FAA Order 7400.2  
(c) Commanding Officer, Naval Air Station Whidbey Island Airspace Request ltr  
Ser N0/0634 of 14 Jul 2022

1. Per reference (a) and (b), the Western Service Area Regional Airspace Coordinator (RAC) has reviewed and formally endorses reference (c).

A handwritten signature in red ink, appearing to be "C. J. SPEICHER", is written over a circular red stamp. The signature is stylized and cursive.

C. J. SPEICHER

Copy to:  
N98

**DEPARTMENT OF THE NAVY**

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

3770  
Ser N00/0830  
19 Sep 22

From: Commanding Officer, Naval Air Station Whidbey Island  
To: Chief of Naval Operations, N980A  
Via: (1) Regional Airspace Coordinator, Western Service Area  
(2) Navy Representative, Federal Aviation Administration, Western Service Area  
(3) Chief of Naval Operations, N980A, Airspace

Subj: SPECIAL USE AIRSPACE PROPOSAL IN SUPPORT OF COMMANDER,  
ELECTRONIC ATTACK WING U.S. PACIFIC FLEET

Ref: (a) OPNAVINST 3770.2L  
(b) FAA Order 7400.2

Encl: (1) Commander Electronic Attack Wing, U.S. Pacific Fleet Special Use Airspace  
Proposal  
(2) Commander, Naval Air Forces, U.S Pacific Fleet, Requirements Validation of SUA  
Request, 3770 Ser N3/006 of 5 Aug 22

1. Per references (a) and (b), request new Special Use Airspace (SUA) be established as described in enclosure (1) and validated by enclosure (2). This new airspace proposal is being submitted to meet the training and operational readiness requirements of Commander, Electronic Attack Wing, U.S. Pacific Fleet.
2. This airspace proposal formally withdraws the proposal from Commander, Electronic Attack Wing, U.S. Pacific Fleet ltr 3770 Ser N00/144 of 26 May 21 submitted to the Federal Aviation Administration (FAA) on 23 Sep 2021.
3. Contingent upon an approval by the FAA, this additional airspace will expand existing SUA in the Eastern Washington Training Complex and enhance the training requirements of EA18 tactical training curriculum.
4. My point of contact for this matter is: Commander Joseph Huffine, Operations Officer. He can be reached via email: joseph.a.huffine.mil@us.navy.mil, Commercial: (360) 257-6655 or DSN: 820-2132.

  
E. M. Hanks

Copy to:  
COMVAQWINGPAC  
COMNAVREG NW



**SPECIAL USE AIRSPACE PROPOSAL TO ESTABLISH OKANOGAN D MOA AND MAZAMA ATCAA**

**1. Proposal Summary and Points of Contact.**

a. Request new SUA be established in support of Commander, Electronic Attack Wing U.S. Pacific Fleet as defined in paragraph 2 and based upon the need and justification contained herein.

b. Primary POC: LCDR John Peters, Command Airspace Liaison Officer, email john.peters1.mil@us.navy.mil, commercial: (360) 257-2132/1310, or DSN: 820-2132.

c. Secondary POC: Mr. Robert Peddie, Assistant Command Airspace Liaison Officer, email robert.a.peddie.civ@us.navy.mil, commercial: (360) 257-2132/5913, or DSN: 820-2132.

**2. Proposed Area Description**

a. Title: Okanogan D MOA and Mazama ATCAA, Refer to Figure 1.

(1) Figure 1 depicts existing Okanogan A/B/C MOAs and Molson ATCAA, referred to as the Diablo Complex in reference (c) combined with the proposed Okanogan D MOA and Mazama ATCAA.

b. Boundaries: Refer to Figure 1.

(1) Proposed Okanogan D MOA:

Beginning at lat. 48°26'00"N., long. 120°18'18"W.,  
to lat. 48°32'48"N., long. 120°43'19"W.,  
to lat. 48°50'25"N., long. 120°33'46"W.,  
to lat. 48°49'51"N., long. 120°05'36"W.,  
to the point of beginning

(2) Mazama ATCAA:

Beginning at lat. 48°26' 00"N., long. 120°18'18"W.,  
to lat. 48°32'48"N., long. 120°43'19"W.,  
to lat. 48°50'25"N., long. 120°33'46"W.,  
to lat. 48°49'51"N., long. 120°05'36"W.,  
to the point of beginning

c. Altitudes:

(1) Requested altitude for proposed Okanogan D MOA and Mazama ATCAA:

(a) MOA: 11,500 FT MSL up to but not including FL180.

(b) ATCAA: FL180 up to and including FL250.

(c) Times of Use: MOA/ATCAA Intermittent by NOTAM.

d. Controlling Agency: FAA, Seattle ARTCC.

e. Using Agency: United States Navy, Commanding Officer, NAS Whidbey Island, WA.



Figure 1: Proposed Okanogan D MOA and Mazama ATCAA

### 3. Airspace Statement of Need and Justification

a. The overall need and justification are broken down to demonstrate the negative effect on the quality of training not necessarily the quantity of training. Even with advanced in-aircraft software technologies (e.g., Live Virtual Constructs), the amount of training that is required to be simulated due to a lack of current vertical and/or horizontal airspace dimensions has been exacerbated by the 21 percent reduction in airspace between FL230 and FL320 in the Methow ATCAA.

b. Below are brief descriptions of VAQ (EA-18G) mission requirements, the alternative simulations that are taking the place of realistic training, and how these simulations degrade the skills of fleet aircrew over time.



**NOTE 1: The shortfall in quality of training is currently only affecting Fleet VAQ Squadrons. VAQ-129 Fleet Replacement Squadron (FRS) primarily utilizes the Olympic MOA/ATCAA (vertical limit FL350) / W237A (vertical limit FL350 or above) in combination with the Pacific Northwest Electronic Warfare Range. Due to the volume of FRS events, Fleet Squadrons can only utilize this area for an average of two hours per day.**

**NOTE 2: This information has been vetted to preserve the appropriate security classification level. Should further explanation be required, please reach out the POCs listed above for coordination.**

c. Airborne Electronic Attack (e.g., Suppression of Enemy Air Defenses, Close Air Support, and Surface-to-Air Counter Tactics).

(1) Airborne Electronic Attack (AEA) missions are based on vertical and horizontal alignment in conjunction with optimal positioning and timing. The current Diablo Complex (without the Methow Valley) is only 50 X 40NM (at tactically significant altitudes) and in no way represents an area that can support realistic combat training given the proliferation of modern Surface-to-Air threats that are currently fielded. Utilizing any combination of direction in the airspace requires the aircrew to approximate the IP (Initial Point) to the target while working with the Protected Entity (PE). This leaves insufficient space to marshal forces, push on the strike, or exploit alternate leg routes while protecting the PE to/through the Surface-to-Air Missile (SAM) threat or dropping on a simulated target.

[REDACTED]

(3) If the PE and threat are simulated correctly, they must be positioned outside of the airspace requiring all aspects of the training to be simulated as well (alignment, PE positioning, EA-18G positioning to the PE, and especially timing). When these primary mission aspects are simulated, instructors have very little data available to debrief/evaluate mission commander candidates/squadron aircrew performance. The advent of Live Virtual Construct technologies provides some gap fill for inadequate airspace; but, training with a live PE or an opposing force is crucial for maintaining superiority and dominance both in exercises outside of home station (e.g. Joint Exercises or Air Wing integration) and against our adversaries. Extending the Diablo Complex both horizontally and vertically to the west would provide the best possible training with smallest amount of impact to the area (understanding the Methow Valley will remain as it is currently).

d. Air-to-Air Counter Tactics.

(1) As discussed, LVC technologies have matured, especially in the Air-to-Air environment. These advancements still utilize the correct tactical altitudes to simulate the enemy and the missile kinematics. The higher the altitude, the thinner the air, and the further the missile will travel. Air-to-Air tactics are based on these principles. Even with the Diablo/Hoodoo complexes combined, the separate airspace ceilings (FL320 & FL350) cause significant interruptions to tactical employment as derived by both TOPGUN (VFA) and HAVOC (VAQ) weapons schools. The most current tactical recommendations involve altitudes up to FL500 to continue to match pace with our adversaries.

(2) With the additional Methow Valley shelf (FL230) aircrew are now consistently making the decision to either not complete the tactic because the kinematics at altitude do not allow aircrew to employ on the correct tactical timeline or are required to bring that information back to the flight debrief as an alibi of an external factor out of their control. Both situations either provide no training at all, or worse, negative training creating habit patterns inconsistent with tactical recommendations and standards.

(3) VAQ aircrew will always put safety and airspace requirements above tactical training. For Within Visual Range (WVR) Air-to-Air Counter Tactics (e.g. Basic Fighter Maneuvers), the Methow Valley was the best area to train for this mission due to the lower safety deck that more closely simulated combat conditions while still conducting safe operations. It is currently not utilized because both the decks and the new FL230 ceiling sandwiches the fight in that area drawing focus away from flight conduct.

(4) Because of the complexity of this request, should all airspace modifications not be approved as requested, the suitability of just one or part of the airspace will not meet the needs of the EA18G Growler; therefore, the airspace requests should be approved together as a package. This proposal will meet 80 percent of the current requirements stated above. Based on the range of modern threats, and the nature of the missions, a degree simulations will still need to take place. Approving this proposal, in its entirety, merely lessens the amount of simulations and increases the amount of time for actual non-simulated training. These changes will enable aircrew to realistically train to combat modern threats and employ their aircraft and weapon systems in accordance with their full capability and Tactics, Techniques, and procedures while also increasing the number of assets able to safely utilize the training complex simultaneously. Most importantly, making these airspace modifications will reduce the potential for hazardous situations to develop between multiple aircraft in highly dynamic training evolutions due to the airspace horizontal confines with the addition or multiple altitude restrictions.

4. Joint-Use. When SUA is not active per NOTAM, or is no longer being utilized for its intended purpose, the SUA will released to the Controlling Agency for Joint-Use.

5. Air Traffic Control Assigned Airspace. Proposed Mazama ATCAA described in paragraph 2.

## 6. Activities

a. Aircraft Operations: Number and type of aircraft utilizing airspace. Refer to Table 1. The data in Table 1 is comprised of a three-year average from FY 2017 to FY 2019.

Type Aircraft	Annual Sorties	Type Aircraft	Annual Sorties
EA-18G	3571	Tanker	28
Other USN/USMC TACAIR	17	Jet — Other	30
USAF/ANG TACAIR	41	Pro - Other	10

Table 1: Annual Aircraft Activities

b. Specific activities and maximum altitudes required for each activity. Refer to Table 2.

Activity	Maximum Altitude
Surface-to-Air Counter Tactics SACT	FL350
Suppression of Enemy Air Defenses (SEAD)	
Close Air Support (CAS)	
Non-Traditional Intelligence, Surveillance, & Reconnaissance (TISR)	
Air-to-Air Counter Tactics (AACT)	FL500
USN/USAF Joint Training (AA/TTP)	

Table 2: Specific Activities and Altitude

c. Proposed Area is not intended for Supersonic Flight, Live Fire, or Ordnance.

## 7. Environmental and Land Use Information

a. Primary POC:

John Mosher, Commander, U.S. Pacific Fleet N465 NW Program Manager  
 3730 N. Charles Porter Ave Bldg. 385  
 Oak Harbor, WA 98278  
 Commercial: (360)-257-3234

b. Proposal to establish SUA below 1200 AGL: No.

c. Proposal to designate the surface as a floor of restricted airspace: No.

## 8. Communication and Radar

a. Radar and radio communications will be used to monitor the airspace. Seattle ARTCC is the designated Controlling Agency and will provide ATC and area containment support within the airspace.

b. Supersonic flight required: No.

c. Surface Operations: N/A

9. Safety Considerations

a. Measures taken to ensure containment of Navy activities:

(1) Airspace procedures for Diablo/Hoodoo are covered by current LOA between CVWP and Seattle ARTCC.

(2) Local familiarization training and Range Operations Manual doctrine are mandatory to all aircrew.

(3) Mandatory aircrew Course Rules Brief is required prior to scheduling and flight in the Diablo/Hoodoo.

(4) Pre-flight planning of airspace, route of flight, and deconflictions are mandatory prior to flight for all users.

(5) Aircrew briefings mandatory for all users.

(6) Flights with multiple aircraft will provide mutual support and monitor each other's position and make advisory radio calls to prevent spill-outs.

b. Procedures for handling malfunctions are addressed in the following publications:

(1) Standard Naval Aviation Training and Procedures Standardization (NATOPS) flight safety procedures apply for all users (Navy and Marine), and other service NATOPS equivalent (USAF/USA).

(2) NAS Whidbey Island Air Operations Manual, NAS WHIDBEY INST 3710.16 series.

10. Coordination Summary. The following organizations have been contacted in developing this proposal:

a. FAA Seattle ARTCC (ZSE).

b. Naval Air Station Whidbey Island, WA.

c. Naval Air Station Whidbey Island Command Airspace Liaison Officer, (CALO).

- d. FAA Air Traffic Control Representative (ATREP), Western Service Area.
  - e. Region Airspace Coordinator, Fleet Area Control and Surveillance Facility, San Diego, CA.
  - f. FAA Air Traffic Control Representative Western Service Area.
  - g. Chief of Naval Operations, N980A, Airspace and Procedures.
11. Area Chart. Refer to Figure 1.
12. Environmental Documents. Environmental Impact statement for existing airspace on file. Additional study will be performed as required by FAA.
13. Graphic Notice Information. N/A.
14. Other Area Maps. N/A.



DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
2000 NAVY PENTAGON  
WASHINGTON DC 20350-2000

3770  
Ser N98  
11 Oct 22

From: Director, Air Warfare (N98)  
To: Manager, Operations Support Group, FAA Western Service Area  
Subj: PROPOSAL TO AMEND SPECIAL USE AIRSPACE AND AIR TRAFFIC CONTROL  
ASSIGNED AIRSPACE  
Ref: (a) FAA Order JO 7400.2N  
(b) OPNAVINST 3770.2L  
Encl: (1) Commander, Electronic Attack Wing, U.S. Pacific Fleet ltr 3770 Ser N00/0830 of  
19 Sep 22  
1. In accordance with the references, the Commander, Electronic Attack Wing, U.S. Pacific  
Fleet Airspace Proposal is readdressed and forwarded.  
2. The proposal has been reviewed and been determined to be in compliance with the  
requirements of the reference and applicable service policies.  
3. The CNO POC is CDR Granville Wright, WSA NAVREP (ANM-903), email 9-AJO-WSA-  
DON@faa.gov, commercial phone (206) 231-2502.

*J. N. Dugard*  
J. N. DUGARD  
By direction

Copy to:  
NAVREP (ANM-903)  
FACSFAC SAN DIEGO  
NAS Whidbey Island (N3)  
CNRNW  
Commander, Electronic Attack Wing, Pacific (N3)



**E.3 ENDANGERED SPECIES ACT****DEPARTMENT OF THE NAVY**

COMMANDER  
UNITED STATES PACIFIC FLEET  
250 MAKALAPA DRIVE  
PEARL HARBOR HI 96860-3131

IN REPLY REFER TO:  
5090  
Ser N46/0045  
January 23, 2024

Mr. Brad Thompson  
State Supervisor  
United States Fish and Wildlife Service  
510 Desmond Drive SE, Suite 102  
Lacey, WA 98503

Dear Mr. Thompson:

**SUBJECT: REQUEST FOR REINITIATION OF ENDANGERED SPECIES ACT  
SECTION 7 INFORMAL CONSULTATION FOR EASTERN WASHINGTON  
AIRSPACE EXTENSION**

The U.S. Navy (Navy) conducts ongoing training activities involving aircraft maneuvers in Central and Eastern Washington State within Federal Aviation Administration (FAA) designated airspace. The Navy has been training in the existing eastern Washington airspace for decades and is expected to continue training in the area into the reasonably foreseeable future. Current vertical and horizontal airspace dimensions of the airspace do not fully meet the Navy's training and operational readiness requirements. Therefore, Commander, U.S. Pacific Fleet has proposed an extension to the existing airspace in this region to better support training and readiness requirements for aircraft squadrons based at Naval Air Station Whidbey Island, Washington.

The United States Fish and Wildlife Service (USFWS) issued a previous Letter of Concurrence (LOC) addressing the Navy's training activities within the airspace (Consultation 01EWF00-2016-I-1238; Cross Reference 01EWF00-2017-IC-0385). There are proposed changes and reductions to training activities previously analyzed in the 2017 USFWS LOC.

In accordance with Section 7(a)(2) of the Endangered Species Act (ESA), the Navy requests reinitiation of informal consultation for ongoing military training activities occurring within the existing and extended airspace. As provided in 50 C.F.R. §402.16(a), reinitiation of consultation is required if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not previously considered; or (4) a new species is listed or critical habitat designated that may be affected by the action. For the Eastern Washington Airspace Extension training activities analyzed in the 2017 LOC, the following triggers under §402.16 have been met:

a. §402.16(a)(2): The 2024 Biological Assessment (BA) incorporates new information on species presence, distribution, aircraft noise, and provides the updated acoustic analysis.

5090  
Ser N46/0045  
January 23, 2024

b. §402.16(a)(3): The 2024 BA includes the analysis for the new areas subject to aircraft noise.

c. §402.16(a)(4): The 2024 BA includes the analysis for the newly listed North American wolverine.

The Navy conducted a thorough search for new information, including best available scientific and commercial data on species, habitat, and effects of the stressors. The proposed action "*may affect*" listed species and critical habitat within the action area. The Navy is requesting concurrence on our "*not likely to adversely affect*" determination for effects to listed species and critical habitat. The BA (Enclosure 1) is the Navy's primary document that provides the required information pursuant to 50 C.F.R. §402.12(f). Enclosure 2 provides the consultation effect determination history for the species and habitats potentially in the Action Area.

We appreciate your continued support in helping the U.S. Navy meet its environmental responsibilities. If there are any questions, my point of contact is Ms. Andrea Balla-Holden. She may be reached via email at [andrea.n.balla-holden.civ@us.navy.mil](mailto:andrea.n.balla-holden.civ@us.navy.mil) or via phone at (360) 396-0002.

Sincerely,



J. H. BEATTIE  
Captain, U.S. Navy  
Deputy Fleet Civil Engineer  
By direction

Enclosures: 1. Biological Assessment (provided electronically)  
2. Effect Determinations for Species Potentially Present in Action Area

Copy to: USFWS Wenatchee Office





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Washington Ecological Services  
1009 College St. SE, Ste. 215  
Lacey, Washington 98503



In Reply Refer to:

**FWS/R1/2024-0043528**

**XRef:** 01EWF00-2016-I-1238

01EWF00-2017-IC-0385

Dan McNair  
Director, Environmental Readiness Division  
Department of the Navy  
U.S. Pacific Fleet  
250 Makalapa Drive  
Pearl Harbor, Hawaii 96860-3131

Dear Mr. McNair:

Subject: Eastern Washington Airspace Expansion

This letter is in response to your January 23, 2024 request for reinitiation and our concurrence with your determination that the proposed action in airspace above Okanogan, Chelan, Douglas, Ferry, Okanogan, Pend Oreille, and Skagit Counties, Washington, and Boundary and Bonner Counties, Idaho “may affect, but is not likely to adversely affect” federally listed species. Specifically, you requested informal consultation pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (ESA) for the federally listed species and critical habitat identified below.

We received your letter, Biological Assessment providing information in support of “may affect, not likely to adversely affect” determinations for the Canada lynx (*Lynx canadensis*) and critical habitat, gray wolf (*Canis lupus*), grizzly bear (*Ursus arctos horribilis*), Northern spotted owl (*Strix occidentalis caurina*) and critical habitat, Western Distinct Population Segment (DPS) yellow-billed cuckoo (*Coccyzus americanus*) and wolverine (*Gulo gulo luscus*), on January 23, 2024. We originally concurred with the Navy’s determination for the action in 2017 (see 01EWF00-2016-I-1238; cross reference 01EWF00-2017-IC-0385). The Navy requested reinitiation because of three triggers. First, new information on acoustic monitoring improved understanding of potential acoustic impacts to listed species. Next, the Navy proposes to modify the existing action by extending the airspace to include an additional Military Operating Area

#### PACIFIC REGION 1

IDAHO, OREGON\*, WASHINGTON,  
AMERICAN SAMOA, GUAM, HAWAII, NORTHERN MARIANA ISLANDS

\*PARTIAL

Dan McNair

2

(MOA) and Air Traffic Control Assigned Airspace (ATCAA) that will change the areas subject to acoustic impacts. Last, the status of wolverine was changed from proposed threatened to \threatened in January 2024. We requested additional information on February 22, 2024, regarding the time frame, description of the action and noise levels. We received the final information necessary to complete the consultation on March 8, 2024.

The U.S. Navy has determined that the action will have “no effect” on woodland caribou (*Rangifer tarandus caribou*) and designated critical habitat, bull trout (*Salvelinus confluentus*) and critical habitat, monarch butterfly (*Danaus plexippus*), Ute ladies’-tresses (*Spiranthes diluvialis*) and whitebark pine (*Pinus albicaulis*). The determination of “no effect” to listed resources rests with the action agency. The U.S. Fish and Wildlife Service (USFWS) has no regulatory or statutory authority for concurring with a “no effect” determination, and no consultation with USFWS is required. We recommend that the action agency document their analysis on effects to listed species and maintain that documentation as part of the project file.

We think that sufficient information has been provided to determine the effects of the proposed action and to conclude whether it would adversely affect federally listed species and/or designated critical habitat. Our concurrence is based on information provided by the action agency, best available science, and complete and successful implementation of the conservation measures included by the action agency.

Project Description:

The Navy conducts a variety of training exercises at sea and over land within the Northwest Training Range Complex throughout the northwest region and has previously consulted with USFWS to conduct these activities. The Okanogan and Roosevelt MOAs and Republic, Molson and Methow ATCAAs are Federal Aviation Administration (FAA) regulated airspaces set aside to provide military aircraft sufficient space for non-hazardous training maneuvers. Each of these airspaces is divided into sections depicted in Figure 1. The FAA recently decreased the ceiling of the Molson ATCAA from 50,000 feet to 23,000 feet above mean sea level for commercial air traffic arrival and safe separation purposes. Therefore, the Navy is requesting the FAA to extend this airspace with the proposed Okanogan D MOA and Mazama ATCAA to maintain training capability (see Figure 1-1 of the BA).

Aircraft training in the Eastern Washington Special Activity Airspace is primarily conducted by Navy EA-18G aircraft, with greater than 99% of military aircraft flights in this airspace projected to continue to be EA-18G aircraft. Approximately 80% of all flight time would occur at 15,000 feet above mean sea level and higher across the entire existing and proposed airspace. Approximately seven percent of flights would occur below 3,000 feet. It is estimated that flights will occur over approximately 260 days per year, with relatively few flights occurring after sunset or on weekends and holidays. Training activities include two major types of mission: 1) Electronic Warfare (EW), and 2) Air Combat Maneuvers (ACM).

- In EW missions, aircrews use systems to degrade the enemy’s ability to use electronic equipment, such as communications systems and radar, and to confuse or deny them the ability to defend their forces and assets. EW is also used to detect enemy threats and counter their attempts to degrade the electronic capabilities of U.S. forces. EW training normally involves two aircraft for up to 90 minutes with an average airspeed of 360 knots

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in the 500 feet above ground level to 35,000 feet above mean sea level altitude band. Approximately 74% of overall flight time in the airspace is dedicated to EW training.

- In ACM missions, aircrews maneuver against simulated threats to gain tactical advantage. These are basic flight maneuvers in which aircrew engage in offensive and defensive maneuvering against each other, at distances within visual range and beyond visual range. During ACM engagements, no ordnance is fired. ACM normally involves two aircraft operating with an average airspeed of 420 knots for 60 minutes in the 10,000 to 35,000 feet above mean sea level altitude band. Flights are dispersed randomly across the broad area of MOAs and do not follow specific tracks, so do not occur at any given area repetitively. Approximately 26% of overall flight time in the airspace is dedicated to ACM training, but only an estimated 7.2% of overall flight time may occur below 3,000 feet above ground level. Aircraft do not remain at low altitude throughout any entire flight, they may dip down to low altitude for brief periods during some flights. Ground based activities are not a part of this action.

#### Action Area

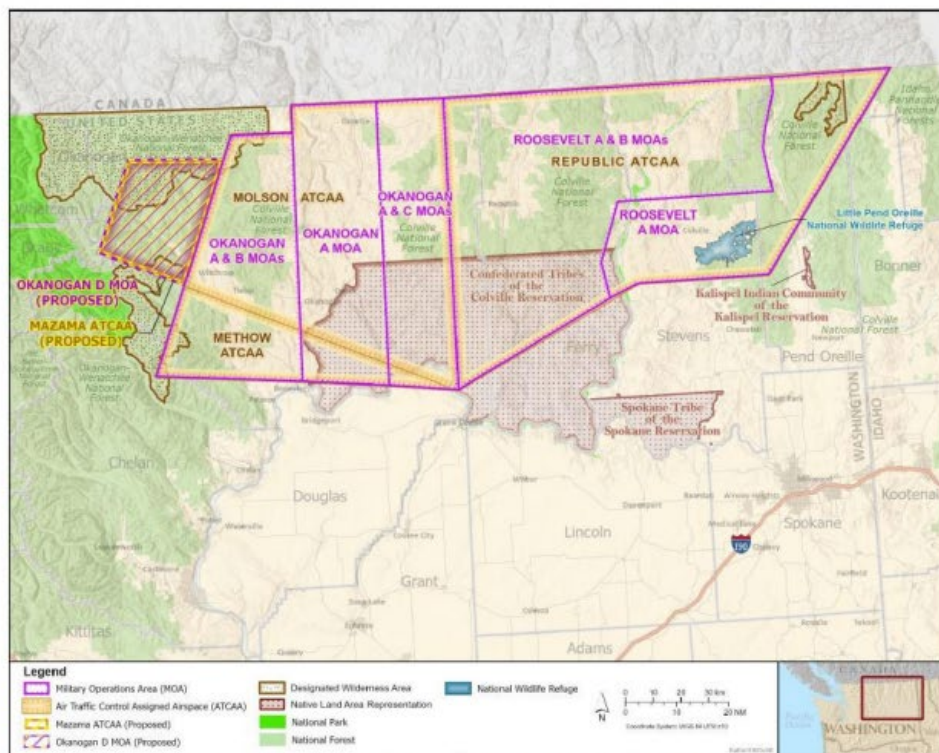


Figure 1. Action Area for the existing and proposed MOAs and ATCAAs in northern Washington and Idaho.



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The following paragraphs present summaries of the analyses for each species and critical habitat designation potentially affected by the Project. Aircraft that will be training within the Okanogan and Roosevelt MOAs are stationed at Naval Air Station Whidbey Island (NASWI). For all species, USFWS agrees with your finding in the BA that distant and intermittent sound associated with high-level flights (9,000-18,000 feet above ground level), such as those that would occur between NASWI and in the Okanogan and Roosevelt MOAs, will not result in any measurable effects to listed species or designated critical habitats due to their elevation. Therefore, the focus of this analysis is on low-level overflights. Low-level flights occur in Okanogan A/B MOA, Okanogan A/C MOA and Roosevelt A/B MOA. Table 1 identifies where low-level flights in each MOA section may potentially overlap with species and critical habitat designations.

Species/Critical Habitat	Okanogan A/B	Okanogan A/C	Roosevelt A/B
Canada lynx	X	X	X
Canada lynx Critical Habitat	X		
Gray wolf (federally-listed)	X		
Grizzly bear	X		X
Northern spotted owl (NSO)	X		
NSO Critical Habitat	X		
Western DPS yellow-billed cuckoo			X
Wolverine	X	X	X

Table 1. Potential species and critical habitat exposed to low-level flights MOAs are marked with an X. If no exposure is expected the column is left blank.

#### EFFECTS TO CANADA LYNX AND CRITICAL HABITAT

The Canada lynx is federally listed as threatened. The lynx is a habitat and prey specialist that requires dense boreal and subalpine forests that support abundant snowshoe hares (*Lepus americanus*), which typically constitute greater than 90 percent of the lynx's year-round diet. Lynx and hares are most abundant in areas with long winters and persistent deep, powdery snow. Atypically large, frequent, and intense wildfires over the past few decades have impacted over a third of the lynx habitat in Washington, perhaps substantially more after additional fires in 2017. Based on estimates of lynx carrying capacity, the North Cascades of Washington may have been capable of supporting roughly 50-60 resident lynx prior to large fires beginning in the early 1990s. Lynx also occurred historically in the Kettle/Wedge area of Washington. Recently, the

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Confederated Tribes of the Colville Reservation initiated an augmentation of lynx with the goal of translocating 10 lynx each year for five years.

Lynx do not appear to be sensitive to human presence and disturbance; however, during the denning period (late April to early July) lynx may respond to human disturbance (e.g., human presence) by relocating kittens (Ruediger et al. 2000) without observed effects to kitten survival (Olson et al. 2011). Canada lynx occur in all MOAs with low-level flights (Okanogan A/B and A/C and Roosevelt A/B). Designated Critical Habitat (79 FR 54782) for Canada lynx occurs in the Okanogan A/B MOA, where low-level flights occur. Over the next 20 years, Canada lynx may be exposed to elevated noise from low-flying aircraft in the Okanogan A/B MOA and Roosevelt A/B MOA. However, given the short duration of exposure and the infrequency of each flight, we expect lynx and their prey may exhibit vigilance or possibly run or hide from the noise but would quickly return to normal behavior such that effects would be insignificant. Similarly low-level overflights in Okanogan B MOA are unlikely to affect the primary constituent elements of critical habitat in western Okanogan County because activities take place in the air and there is no alteration to the boreal forests and winter snow conditions that are essential physical and biological features of the critical habitat.

#### **EFFECTS TO GRAY WOLF**

The gray wolf is federally listed as endangered in the western two thirds of the Washington State. Gray wolves occurring in the eastern two thirds of the state are part of the Northern Rocky Mountain DPS, which we delisted in 2011 (76 FR 25590) (the area west of U.S. Highway 97, State Route 17, and U.S. Highway 395). The most recent population update by the Washington Department of Fish and Wildlife notes that the state's wolf population increased by five percent between 2021 and 2022 (WDFW et al. 2023, p. 13).

Gray wolves are highly territorial, social animals and habitat generalists, normally living in packs of seven or fewer, but sometimes attaining pack sizes of 20 or more wolves (USFWS 2024, p. viii). Suitable wolf habitat consists of areas containing adequate wild ungulate populations (e.g., elk and deer) and a low risk of conflict with humans and livestock. Conflict generally increases the likelihood of human-caused wolf mortality, the primary stressor influencing wolf populations (USFWS 2024, p. 13). Wolf packs vary substantially in their tolerance toward human disturbance; they may be more tolerant in areas where they are protected from human-caused mortality through regulation, cover availability and human acceptance (Fritts et al. 2003, p. 301). For example, wolves in Minnesota live and den on Camp Ripley, the military training facility, and are regularly exposed to noise from low-level flights and explosions (Fritts et al. 2003, p. 301; Thiel et al. 1998, entire).

Currently, federally listed wolves are present in the Okanogan A/B MOA, and the proposed Okanogan D MOA. Federally listed wolf packs in the action area include the Chewuch, Chopaka, Lookout, Loup Loup, and Sullivan Creek. During the last consultation in 2017, only the Loup Loup, Lookout packs were present in the action area at that time. The Chewuch, Chopaka, and Sullivan Creek packs were formed in the past few years. New wolf packs may form in the action area in the future. In some of these areas, wolves may be exposed to noise from occasional and sporadic low-level flights. However, given the short duration of exposure to each flight, we expect wolves and their prey would briefly move and quickly return to normal

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behavior such that effects would be insignificant. These temporary disturbances are not expected to result in any reductions to prey availability for gray wolves, or cause wolves to relocate a den or rendezvous site. Therefore, effects to gray wolves are expected to be insignificant.

#### **EFFECTS TO GRIZZLY BEAR**

Grizzly bears are federally listed as threatened. Grizzly bears are large, long-lived, omnivores. Adults are typically solitary, but home ranges of adult bears frequently overlap. Although grizzly bears are very mobile, dispersal across the landscape and colonization of unoccupied areas is a slow process, because dispersing young tend to establish home ranges within or overlapping their mother's home range.

The USFWS designated two grizzly bear Recovery Zones in Washington: the North Cascades Ecosystem and the Selkirk Ecosystem. The North Cascade Ecosystem is functionally extirpated, where the last confirmed sighting occurred in 1996 (Rine 2018, p. 41). However, the USFWS and NPS recently completed a final Environmental Impact Statement to assess recovery options for grizzly bears in this ecosystem, including two alternatives that would reintroduce grizzly bears to this ecosystem by translocating 3-7 bears every year until an initial population of 25 is established (NPS and USFWS 2024, pp. 36-50). Alternative B outlined a reintroduction where grizzly bears would be introduced with their threatened status and existing 4(d) rule. Alternative C outlined a reintroduction under an experimental population designation (10(j)) that would allow management flexibility, including exempting take from federal activities. USFWS published a proposed 10(j) rule in 2023. No Record of Decision has been issued yet for this EIS. Concurrently, the Okanogan Nation Alliance in British Columbia, along with support from the Ministry of British Columbia, are considering reintroduction just north of the border. If bears are reintroduced into the North Cascades Ecosystem in the U.S. or Canada, they will likely be present in very low densities in the action area over the next 20 years. The grizzly bear population in the Selkirk Ecosystem is small but growing (annual growth rate of 2.9 percent between 1983 and 2020) with some bears now establishing home ranges outside the recovery zone boundaries (USFWS 2022, p. 69). In October 2023, biologists trapped and relocated a bear near Onion Creek, near Stevens County (within the Roosevelt A/B MOA). However, the Selkirk Recovery Zone, and most of the grizzly population in this area, lies entirely within Roosevelt A MOA, where flights will not occur below 9,000 feet.

Research on effects of aircraft use on grizzly bears has mostly focused on helicopter and fixed wing aircraft (USFS and USFWS 2009, entire). Generally, low flying aircrafts (particularly below 500 feet) can elicit responses such as physiological and behavioral stress, disturbance to denning, and slight loss of habitat in cases where bears will avoid areas of frequent and sustained, low-flying aircraft activity. Bears tend to be more sensitive to helicopters than fixed wing aircrafts (Quigley et al. 2024, p. 7-8; IGBC 1987, p. 71); bears in more remote wilderness area with lower levels human disturbance may also be more sensitive to aircraft presence and noise (Quigley et al. 2024, p. 11). Aircraft use above 500 meters (1640 feet) above ground level does not appear to elicit a response from grizzly bears (USFS and USFWS 2009, p. 6). A small number of grizzly bears may be exposed to low-level flights in the action area; we expect that they may become aware of the aircraft, move away from the area and resume normal behaviors shortly after (USFS and USFWS 2009, p. 2). Because all flights will occur above 500 feet and most flights (80%) will occur above 15,000 feet, we do not expect exposure to low-level flights



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to be a frequent occurrence. When flights do occur down to a minimum of 500 feet, they will only be in the lower altitudes for a few seconds in any given area. Therefore, we expect insignificant effects to grizzly bears due to the short duration and infrequency of low-level flights and the anticipated behavioral response of bears to these flights.

#### **EFFECTS TO NORTHERN SPOTTED OWL AND CRITICAL HABITAT**

Northern spotted owls are federally listed as threatened. They generally inhabit multilayered forests with moderate to high canopy closure that contain structural characteristics required for nesting, roosting, and foraging. Dispersal habitat that supports movements between larger habitat patches of nesting, roosting, and foraging consists of stands with adequate tree size and canopy cover to provide protection from avian predators and minimal foraging opportunities. The potential exposure of spotted owls to low-level flights is limited to a corridor along the Chewuch River on the west edge of Okanogan A/B MOA. This area represents the northeastern extent of the species' range in Washington. Spotted owl habitat in this area is extremely fragmented due to several major wildfires that have burned east and west of the Chewuch River over the last 15 years.

Northern spotted owls have never been detected within the Chewuch River watershed, despite numerous surveys since 1988. Given poor habitat distribution and abundance that is unlikely to recover over the term of this consultation, the lack of recorded observations in the watershed, and the expected population trajectory (Glenn et. al. 2016), it is extremely unlikely that spotted owls will be exposed to sound from low-level flights over the next 20 years. Furthermore, if an individual were exposed it will result in insignificant effects. Studies on effects of aircraft flights on northern spotted owls show that they are unlikely to respond to short fly-bys aside from suddenly turning their head (Johnson and Reynolds 2002, p. 3).

Critical habitat is designated in the East Cascades North Unit, immediately west of the low-level flight path in the MOA. The proposed action may affect the PCEs of spotted owl designated critical habitat. Because project-related impacts to the PCEs are short in duration, limited in extent, and will not alter the function of the PCE, these effects are considered insignificant.

#### **EFFECTS TO WESTERN YELLOW-BILLED CUCKOO**

The western yellow-billed cuckoo DPS is federally listed as threatened. Yellow-billed cuckoos spend the winter in South America and historically bred throughout most of North America from southeastern and western Canada (southern Ontario, Quebec, and southwestern British Columbia) south throughout the continental United States to the Greater Antilles and northern Mexico. Currently, the species no longer breeds in western Canada and the northwestern continental United States (Washington, Oregon, and Montana). Before 1950, records of cuckoos in Washington were limited almost entirely to the western part of the state (Clark, Grays Harbor, King, Mason, Pierce, Skagit, and Whatcom counties) (Figure 3). Just two records, both from Kittitas County, are known from east of the Cascades during this period. By contrast, most sightings since 1950 have occurred in eastern Washington (Adams, Asotin, Benton, Franklin, Grant, Okanogan, Stevens, and Walla Walla counties), with relatively few westside records (Grays Harbor, King, and Snohomish counties). The species is thought to be functionally extirpated in Washington (Wiles and Kalasz 2017, p. 9).

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Just 20 sightings of Yellow-billed Cuckoos have been documented in Washington since the 1950s, with 19 occurring from 1974 to 2016 at an average rate of one sighting every 2.3 years. Sixteen of the 20 records occurred in eastern Washington. All or nearly all of the birds recorded since the 1950s were very likely non-breeding vagrants or migrants, indicating that cuckoos are now functionally extirpated in the state. Nevertheless, due to a lack of surveys for the species and the presence of small areas of habitat in Washington, the possibility exists that this species may occasionally breed in the state and that these rare breeders are yet to be discovered (Wiles and Kalasz 2017, p. iv).

Available data suggest that if western yellow-billed cuckoos still breed in Washington, the numbers are extremely low, with pairs numbering in the single digits. Given the extremely low numbers of western yellow-billed cuckoo expected within the action area, and the relatively small amount of suitable habitat in the project action area, the potential project impacts to western yellow-billed cuckoo are anticipated to be extremely unlikely and are therefore discountable.

#### **EFFECTS TO WOLVERINE**

The wolverine is federally listed as threatened. Wolverines are a medium sized carnivore capable of moving and dispersing over great distances over short periods of time. Wolverine populations are characterized by naturally low densities in North America. The species is highly territorial, with very little overlap between same-sex adults. Wolverines occupy a variety of habitats, but generally select habitat in locations away from human settlements. Wolverines consume a variety of food resources and seasonal switching of prey is commonly observed (USFWS 2018, p. iii).

The wolverine occupies habitats that high elevation habitats (1,800 to 3,500 meters (5,906 to 11,483 feet), as they are dependent on deep persistent snow cover for successful denning, and they concentrate their year-round activities in areas that maintain deep snow into spring and cool temperatures throughout summer.

To the best of our knowledge, there are no studies that explicitly evaluate wolverines' response to aircraft presence. The areas in which there is some regular overlap with aircraft use and wolverines is during fire suppression activities, heli-skiing, and for research such as when wolverines are being darted and collared. One study indicated that female wolverines were negatively associated with heli-skiing in their winter models but did specifically analyze to determine if helicopters without backcountry skiing still displaced female wolverines (Krebs et al. 2007). Another study stated that they minimized the chase time within a helicopter to less than ten minutes to minimize stress to the wolverines during darting operations (Golden et al. 2002).

Over the course of 20 years, it is possible for wolverine to be present in the MOAs with low-level flights. However, given the short-duration of exposure to each flight, we expect wolverine and their prey would run away but quickly return to normal behavior such that effects would be insignificant.



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**CONCLUSION**

This concludes consultation pursuant to the regulations implementing the ESA (50 CFR 402.13). Our review and concurrence with your effect determinations is based on implementation of the project as described. It is the responsibility of the federal action agency to ensure that the projects they authorize or carry out are in compliance with the regulatory permit and ESA. If a permittee or the federal action agency deviates from the measures outlined in a permit or project description, the federal action agency has the obligation to reinitiate consultation and comply with section 7(d).

This project should be re-analyzed and re-initiation may be necessary if 1) new information reveals effects of the action that may affect listed species or critical habitat in a manner, or to an extent, not considered in this consultation, 2) if the action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not considered in this consultation, and/or 3) a new species is listed or critical habitat is designated that may be affected by this project.

This letter constitutes a complete response by the U.S. Fish and Wildlife Service to your request for informal consultation. A complete record of this consultation is on file at the Washington Fish and Wildlife Office, in Lacey, Washington. If you have any questions about this letter or our shared responsibilities under the ESA, please contact Abigail Sage (360-359-8062) [Abigail\\_sage@fws.gov](mailto:Abigail_sage@fws.gov)

Sincerely,

*For* Brad Thompson, State Supervisor  
Washington Ecological Services

cc:  
USN, Pearl Harbor, HI (A. Balla-Holden)

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**E.4 NATIONAL HISTORIC PRESERVATION ACT****DEPARTMENT OF THE NAVY**

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

5090  
Ser N00/0693  
October 12, 2023

Allyson Brooks, PhD  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: DAHP PROJECT NO. 2023-08-04885: INITIATION OF NATIONAL HISTORIC PRESERVATION ACT CONSULTATION REGARDING PROPOSED EASTERN WASHINGTON SPECIAL USE AIRSPACE EXTENSION, WASHINGTON STATE**

In accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, 36 C.F.R. Part 800, the U.S. Navy (Navy) is initiating consultation on a proposed undertaking to extend airspace in northeastern Washington State. The Navy is working in cooperation with the Federal Aviation Administration (FAA) on this undertaking, and the Navy will be the lead federal agency for consultation.

The purpose of the proposed undertaking is to establish new military airspace adjacent to existing airspace in this area to enhance training and readiness of squadrons based at Naval Air Station Whidbey Island and other locations. The proposal also helps compensate for the loss of training airspace the FAA removed in 2020 to address civilian air traffic safety requirements. The proposed undertaking is located in airspace above areas of eastern Washington State. The proposal does not include any increase in the current frequency of aircraft flights in the airspace, just the horizontal and vertical area extension described below, as well as a minor redistribution of where training flights occur within the overall airspace. The Navy is currently preparing an Environmental Assessment (EA) for the Eastern Washington Special Use Airspace (SUA) Extension. The Navy is currently in the process of determining the area of potential effects (APE) and will consult with your office to define the final APE.

The military has been using the designated airspace in this region since 1977 when it was established by the FAA. The proposed airspace extension is immediately west of the existing airspace, and has two parts, identified as the Okanogan D Military Operations Area (MOA) and the Mazama Air Traffic Control Assigned Airspace (ATCAA) (see Enclosure 1). The Okanogan D MOA would have a floor altitude of 11,500 feet above Mean Sea Level (MSL) and a ceiling altitude of 18,000 feet MSL. The Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 feet up to 25,000 feet MSL. The total area of the airspace extension is approximately 393 square nautical miles.

5090  
Ser N00/0693  
October 12, 2023

In order to meet its obligations under the NHPA, the Navy will use the SUA EA public involvement processes (e.g., public scoping and public review) and a separate Section 106 process involving interested and potential consulting parties.

Should you have any questions or require additional information, my point of contact for this proposed undertaking is Ms. Jenny Dellert, Archaeologist, Naval Facilities Engineering Command Northwest, (360) 396-4320, or [jenny.l.dellert.civ@us.navy.mil](mailto:jenny.l.dellert.civ@us.navy.mil).

Sincerely,



E. M. HANKS  
Commanding Officer

Enclosure: 1. Proposed Undertaking Location



Enclosure 1



**DEPARTMENT OF THE NAVY**

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

5090  
Ser N00/0694  
October 12, 2023

Mr. Kevin Lyons, Tribal Archaeologist  
Kalispel Tribe of Indians  
P.O. Box 39  
Usk, WA 99180

Dear Mr. Lyons:

**SUBJECT: INITIATION OF NATIONAL HISTORIC PRESERVATION ACT  
CONSULTATION REGARDING PROPOSED EASTERN WASHINGTON  
SPECIAL USE AIRSPACE EXTENSION, WASHINGTON STATE**

In accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, 36 C.F.R. Part 800, the U.S. Navy (Navy) is initiating consultation on a proposed undertaking to extend airspace in northeastern Washington State. The Navy is working in cooperation with the Federal Aviation Administration (FAA) on this undertaking, and the Navy will be the lead federal agency for consultation.

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The military has been using the designated airspace in this region since 1977 when it was established by the FAA. The proposed airspace extension is immediately west of the existing airspace, and has two parts, identified as the Okanogan D Military Operations Area (MOA) and the Mazama Air Traffic Control Assigned Airspace (ATCAA) (see Enclosure 1). The Okanogan D MOA would have a floor altitude of 11,500 feet above Mean Sea Level (MSL) and a ceiling altitude of 18,000 feet MSL. The Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 feet up to 25,000 feet MSL. The total area of the airspace extension is approximately 393 square nautical miles.

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Sincerely,



E. M. HANKS  
Commanding Officer

Enclosure: 1. Proposed Undertaking Location





Enclosure 1

**DEPARTMENT OF THE NAVY**

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

5090  
Ser N00/ 0692  
October 12, 2023

Mr. Randy Abrahamson, Tribal Historic Preservation Officer  
Spokane Tribe of Indians  
6195 Ford-Wellpinit Road  
P.O. Box 100  
Wellpinit, WA 99040

Dear Mr. Abrahamson:

**SUBJECT: INITIATION OF NATIONAL HISTORIC PRESERVATION ACT  
CONSULTATION REGARDING PROPOSED EASTERN WASHINGTON  
SPECIAL USE AIRSPACE EXTENSION, WASHINGTON STATE**

In accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, 36 C.F.R. Part 800, the U.S. Navy (Navy) is initiating consultation on a proposed undertaking to extend airspace in northeastern Washington State. The Navy is working in cooperation with the Federal Aviation Administration (FAA) on this undertaking, and the Navy will be the lead federal agency for consultation.

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The military has been using the designated airspace in this region since 1977 when it was established by the FAA. The proposed airspace extension is immediately west of the existing airspace, and has two parts, identified as the Okanogan D Military Operations Area (MOA) and the Mazama Air Traffic Control Assigned Airspace (ATCAA) (see Enclosure 1). The Okanogan D MOA would have a floor altitude of 11,500 feet above Mean Sea Level (MSL) and a ceiling altitude of 18,000 feet MSL. The Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 feet up to 25,000 feet MSL. The total area of the airspace extension is approximately 393 square nautical miles.

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In order to meet its obligations under the NHPA, the Navy will use the SUA EA public involvement processes (e.g., public scoping and public review) and a separate Section 106 process involving interested and potential consulting parties.

Should you have any questions or require additional information, my point of contact for this proposed undertaking is Ms. Jenny Dellert, Archaeologist, Naval Facilities Engineering Command Northwest, (360) 396-4320, or [jenny.l.dellert.civ@us.navy.mil](mailto:jenny.l.dellert.civ@us.navy.mil).

Sincerely,



E. M. HANKS  
Commanding Officer

Enclosure: 1. Proposed Undertaking Location





**DEPARTMENT OF THE NAVY**

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

5090  
Ser N00/0691  
October 12, 2023

Mr. Guy Moura, Tribal Historic Preservation Officer  
Confederated Tribes of the Colville Reservation  
21 Colville Street  
Nespelem, WA 99155

Dear Mr. Moura:

**SUBJECT: INITIATION OF NATIONAL HISTORIC PRESERVATION ACT  
CONSULTATION REGARDING PROPOSED EASTERN WASHINGTON  
SPECIAL USE AIRSPACE EXTENSION, WASHINGTON STATE**

In accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended, and its implementing regulations, 36 C.F.R. Part 800, the U.S. Navy (Navy) is initiating consultation on a proposed undertaking to extend airspace in northeastern Washington State. The Navy is working in cooperation with the Federal Aviation Administration (FAA) on this undertaking, and the Navy will be the lead federal agency for consultation.

The purpose of the proposed undertaking is to establish new military airspace adjacent to existing airspace in this area to enhance training and readiness of squadrons based at Naval Air Station Whidbey Island and other locations. The proposal also helps compensate for the loss of training airspace the FAA removed in 2020 to address civilian air traffic safety requirements. The proposed undertaking is located in airspace above areas of eastern Washington State. The proposal does not include any increase in the current frequency of aircraft flights in the airspace, just the horizontal and vertical area extension described below, as well as a minor redistribution of where training flights occur within the overall airspace. The Navy is currently preparing an Environmental Assessment (EA) for the Eastern Washington Special Use Airspace (SUA) Extension. Your tribal leadership was informed of the EA via a letter on September 5, 2023. The Navy is currently in the process of determining the area of potential effects (APE) and will consult with your office to define the final APE.


The military has been using the designated airspace in this region since 1977 when it was established by the FAA. The proposed airspace extension is immediately west of the existing airspace, and has two parts, identified as the Okanogan D Military Operations Area (MOA) and the Mazama Air Traffic Control Assigned Airspace (ATCAA) (see Enclosure 1). The Okanogan D MOA would have a floor altitude of 11,500 feet above Mean Sea Level (MSL) and a ceiling altitude of 18,000 feet MSL. The Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 feet up to 25,000 feet MSL. The total area of the airspace extension is approximately 393 square nautical miles.

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October 12, 2023

In order to meet its obligations under the NHPA, the Navy will use the SUA EA public involvement processes (e.g., public scoping and public review) and a separate Section 106 process involving interested and potential consulting parties.

Should you have any questions or require additional information, my point of contact for this proposed undertaking is Ms. Jenny Dellert, Archaeologist, Naval Facilities Engineering Command Northwest, (360) 396-4320, or [jenny.l.dellert.civ@us.navy.mil](mailto:jenny.l.dellert.civ@us.navy.mil).

Sincerely,

  
E. M. HANKS  
Commanding Officer

Enclosure: 1. Proposed Undertaking Location



Enclosure 1



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

5090  
Ser N00/ 0006  
January 4, 2024

Honorable Jarred-Michael Erickson, Chairman  
Confederated Tribes of the Colville Reservation  
21 Colville Street  
Nespelem, WA 99155

Dear Chairman Erickson:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING  
PROPOSED EASTERN WASHINGTON AIRSPACE EXTENSION

The U.S. Navy (Navy) is continuing consultation under 54 U.S.C. 306108 (formerly known as and hereinafter referred to as Section 106) of the National Historic Preservation Act (NHPA) of 1966 and 36 C.F.R. § 800, its implementing regulations, to add an extension to existing airspace in northeastern Washington State (Enclosures 1 and 2). The Navy is working in cooperation with the Federal Aviation Administration (FAA) on the undertaking, and the Navy is the lead federal agency. An initial consultation letter for the undertaking was sent to your office on October 12, 2023.

For background, the FAA established airspace in northeastern Washington in 1977 for use by the military for training purposes. This existing airspace was analyzed under Section 106 of the NHPA and the National Environmental Policy Act (NEPA) during completion of the 2010 Environmental Impact Statement (EIS) for the *Northwest Training Range Complex* (NWTRC). In the interest of regional air traffic safety, the FAA reduced a portion of the existing military airspace in 2020.

The purpose of this undertaking is to enhance training and operational readiness of Navy aircrew. With the reduction of airspace in 2020, current vertical and horizontal airspace dimensions do not meet training and operational readiness requirements. In addition to the airspace extension, the proposal includes a slight decrease in the current frequency of aircraft flights in the airspace, as well as a minor redistribution of where training flights occur within the overall airspace. The Navy is preparing an Environmental Assessment (EA) for the Eastern Washington Airspace Extension in accordance with NEPA.

The Navy is defining the area of potential effects (APE) for the proposed undertaking to be only the extension area per 36 C.F.R. § 800.16(d). The APE is immediately west of the existing airspace and consists of two parts, the Okanogan D Military Operations Area (MOA) and the Mazama Air Traffic Control Assigned Airspace (ATCAA) (Enclosures 1 and 2). The proposed Okanogan D MOA would have a lower altitude limit (floor) of 11,500 feet above mean sea level (MSL) and an upper altitude limit (ceiling) of 18,000 feet MSL. The proposed Mazama ATCAA



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would be directly above the Okanogan D MOA, extending from 18,000 feet to 25,000 feet MSL. The total area of the proposed airspace is 393 square nautical miles. In accordance with 36 C.F.R. § 800.4(a)(1), the Navy requests your Tribe's agreement on the proposed APE for this undertaking.

The Navy has determined its effects conclusion for the existing airspace is consistent with the NHPA Section 106 finding in 2010 (Log. No. 092308-10-USN); the continued use of existing airspace has "no potential to cause effects" to historic properties as defined under 36 C.F.R. § 800.3(a)(1). The Navy will be providing a finding of effects on the proposed undertaking separately.

In accordance with 36 CFR 800.4, the Navy is requesting comments from your Tribe to identify concerns about the undertaking and provide information on properties of historic, religious, or cultural significance that may be affected by the proposed undertaking. A similar letter will be sent to the Kalispel Tribe of Indians and Spokane Tribe of Indians.

If you have any questions or concerns regarding this undertaking, please contact Ms. Catherine Vaughn, Archaeologist, Naval Facilities Systems Engineering Command Northwest, (360) 396-4320, or [catherine.s.vaughn2.civ@us.navy.mil](mailto:catherine.s.vaughn2.civ@us.navy.mil).

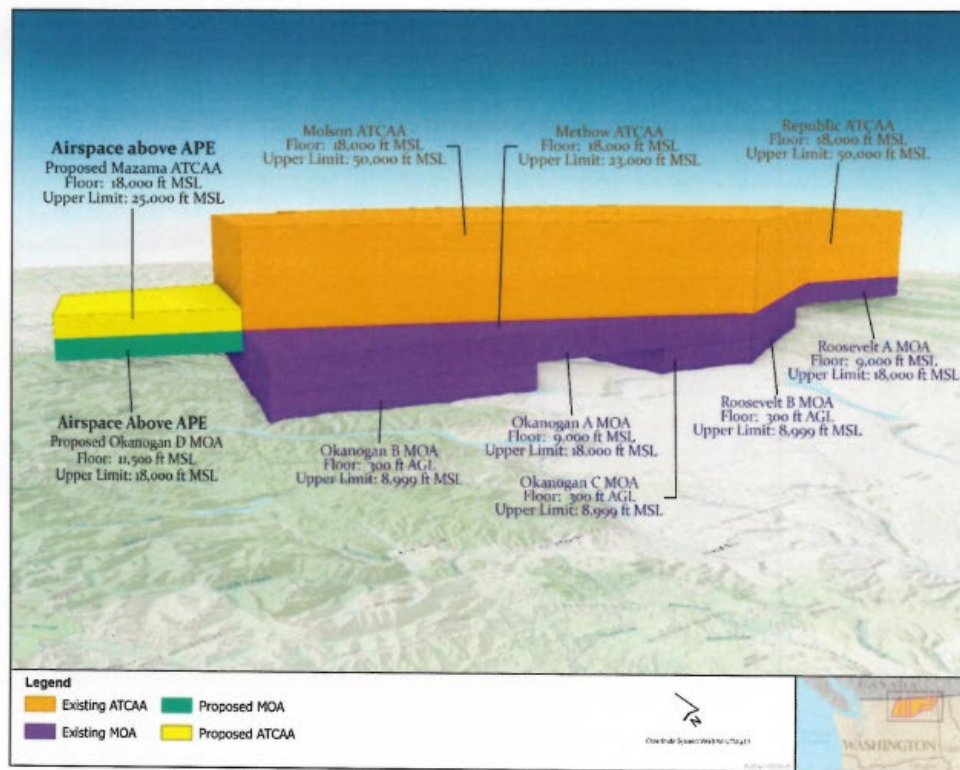
Sincerely,



E. M. HANKS  
Commanding Officer

- Enclosures:    1. Graphic of existing and proposed airspace and proposed APE  
                     2. Three-dimensional representation of airspace and proposed APE





Three-dimensional representation of airspace and proposed APE

Enclosure (2)



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

5090  
Ser N00/0007  
January 4, 2024

Mr. Guy Moura, Tribal Historic Preservation Officer  
Confederated Tribes of the Colville Reservation  
21 Colville Street  
Nespelem, WA 99155

Dear Mr. Moura:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING  
PROPOSED EASTERN WASHINGTON AIRSPACE EXTENSION

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January 4, 2024

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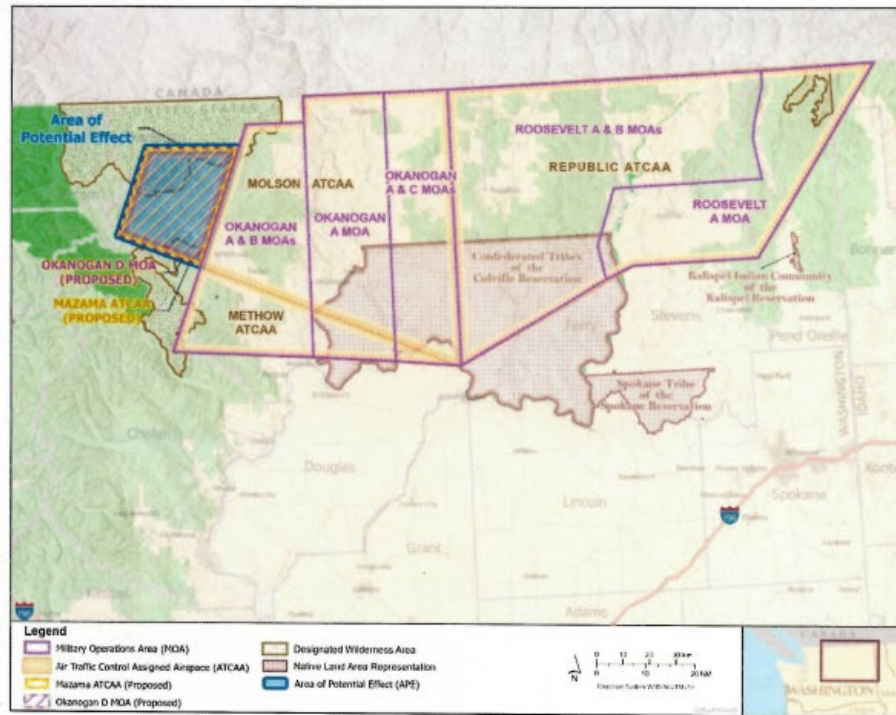
Sincerely,



E. M. HANKS  
Commanding Officer

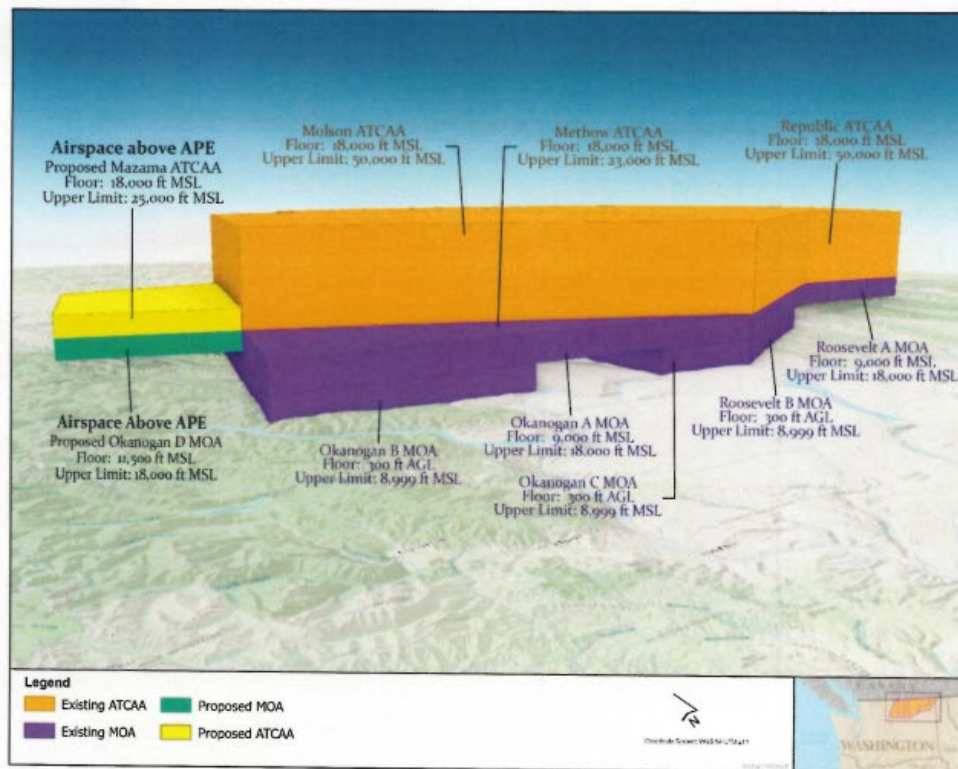
Enclosures: 1. Graphic of existing and proposed airspace and proposed APE  
2. Three-dimensional representation of airspace and proposed APE





Graphic of existing and proposed airspace and proposed APE

Enclosure (1)



Three-dimensional representation of airspace and proposed APE

Enclosure (2)



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

5090  
Ser N00/ 0008  
January 4, 2024

Mr. Kevin Lyons, Tribal Archaeologist  
Kalispel Tribe of Indians  
PO Box 39  
Usk, WA 99180

Dear Mr. Lyons:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING  
PROPOSED EASTERN WASHINGTON AIRSPACE EXTENSION

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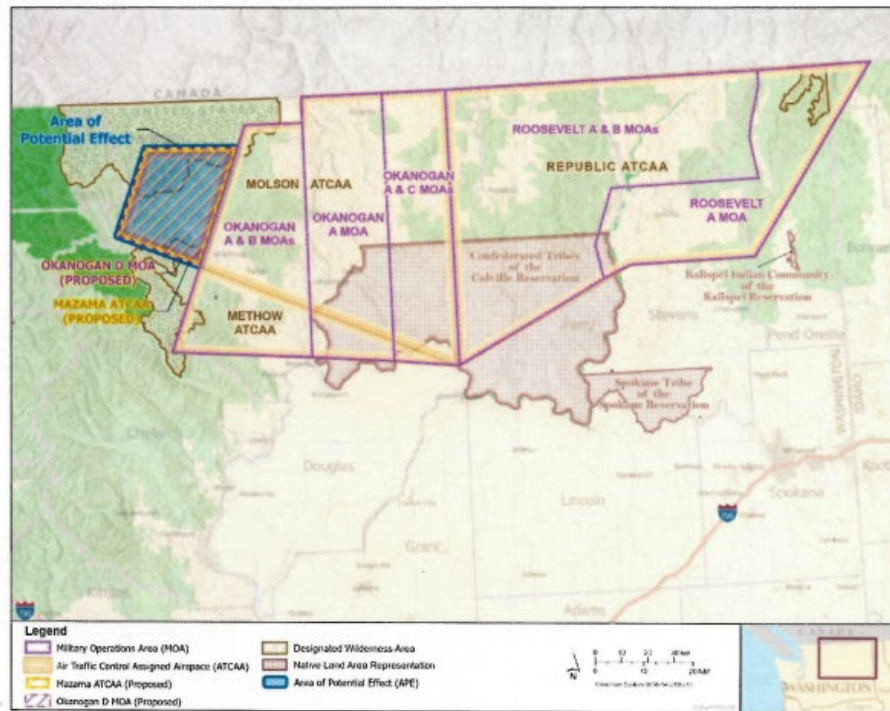
If you have any questions or concerns regarding this undertaking, please contact Ms. Catherine Vaughn, Archaeologist, Naval Facilities Systems Engineering Command Northwest, (360) 396-4320, or [catherine.s.vaughn2.civ@us.navy.mil](mailto:catherine.s.vaughn2.civ@us.navy.mil).

Sincerely,



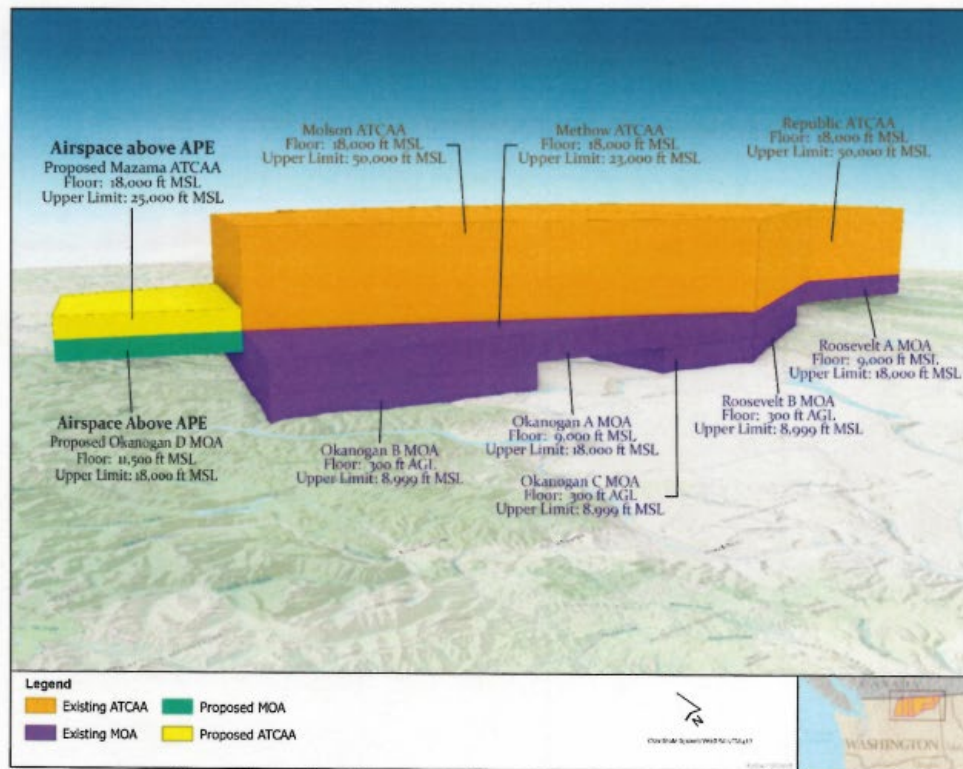
E. M. HANKS  
Commanding Officer

- Enclosures:
1. Graphic of existing and proposed airspace and proposed APE
  2. Three-dimensional representation of airspace and proposed APE



Graphic of existing and proposed airspace and proposed APE

Enclosure (1)



Three-dimensional representation of airspace and proposed APE

Enclosure (2)



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

5090  
Ser N00/ 0009  
January 4, 2024

Honorable Glen Nenema, Chairman  
Kalispel Tribe of Indians  
PO Box 39  
Usk, WA 99180

Dear Chairman Nenema:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING  
PROPOSED EASTERN WASHINGTON AIRSPACE EXTENSION

The U.S. Navy (Navy) is continuing consultation under 54 U.S.C. 306108 (formerly known as and hereinafter referred to as Section 106) of the National Historic Preservation Act (NHPA) of 1966 and 36 C.F.R. § 800, its implementing regulations, to add an extension to existing airspace in northeastern Washington State (Enclosures 1 and 2). The Navy is working in cooperation with the Federal Aviation Administration (FAA) on the undertaking, and the Navy is the lead federal agency. An initial consultation letter for the undertaking was sent to your office on October 12, 2023.

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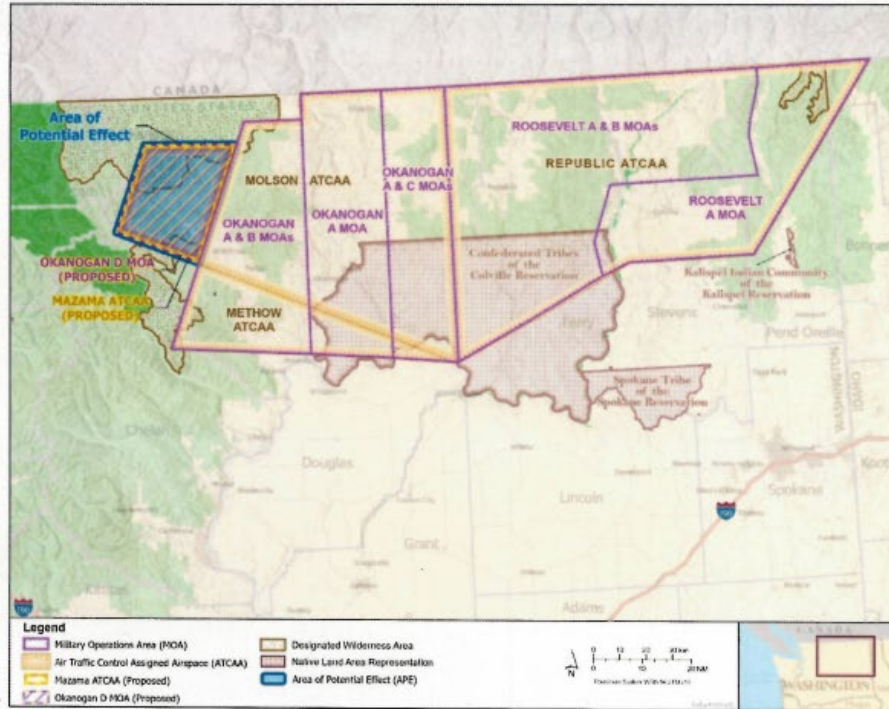
Sincerely,



E. M. HANKS  
Commanding Officer

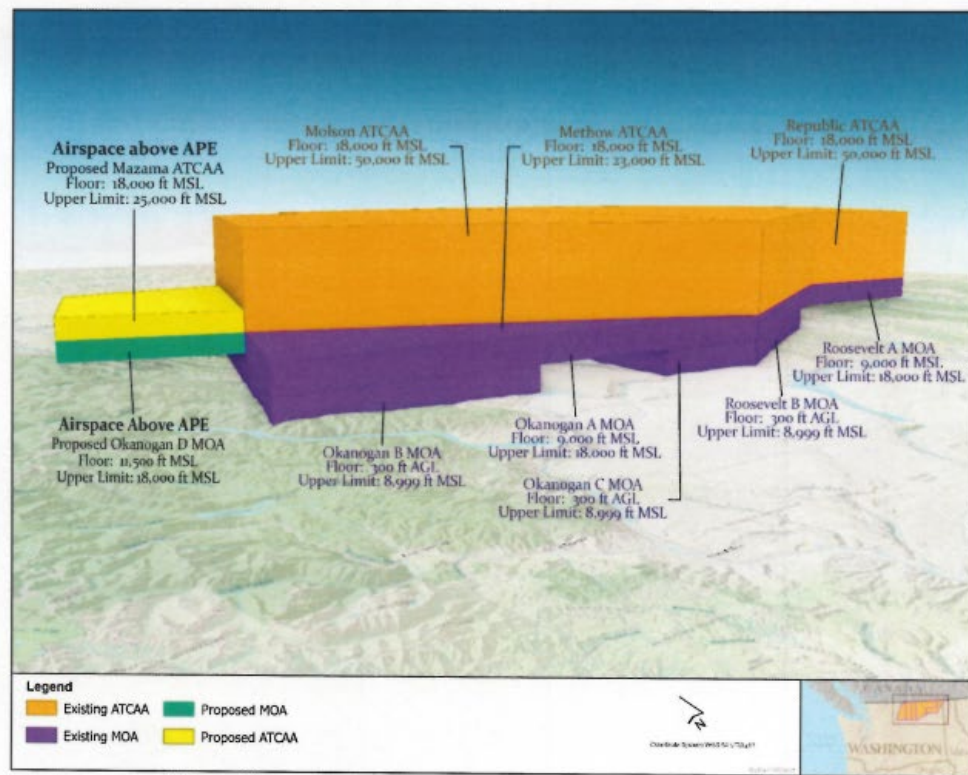
Enclosures: 1. Graphic of existing and proposed airspace and proposed APE  
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Graphic of existing and proposed airspace and proposed APE

Enclosure (1)



Three-dimensional representation of airspace and proposed APE

Enclosure (2)



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

5090  
Ser N00/0010  
January 4, 2024

Honorable Greg Abrahamson, Chairman  
Spokane Tribe of Indians  
6195 Ford-Wellpinit Rd  
PO Box 100  
Wellpinit, WA 99040

Dear Chairman Abrahamson:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING  
PROPOSED EASTERN WASHINGTON AIRSPACE EXTENSION

The U.S. Navy (Navy) is continuing consultation under 54 U.S.C. 306108 (formerly known as and hereinafter referred to as Section 106) of the National Historic Preservation Act (NHPA) of 1966 and 36 C.F.R. § 800, its implementing regulations, to add an extension to existing airspace in northeastern Washington State (Enclosures 1 and 2). The Navy is working in cooperation with the Federal Aviation Administration (FAA) on the undertaking, and the Navy is the lead federal agency. An initial consultation letter for the undertaking was sent to your office on October 12, 2023.

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January 4, 2024

(MSL) and an upper altitude limit (ceiling) of 18,000 feet MSL. The proposed Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 feet to 25,000 feet MSL. The total area of the proposed airspace is 393 square nautical miles. In accordance with 36 C.F.R. § 800.4(a)(1), the Navy requests your Tribe's agreement on the proposed APE for this undertaking.

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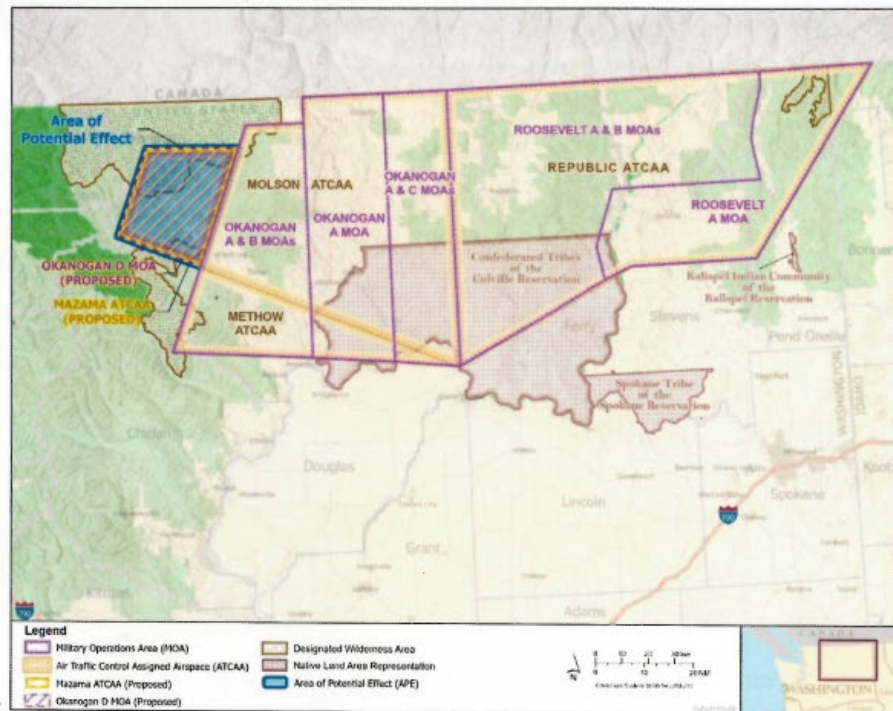
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Sincerely,



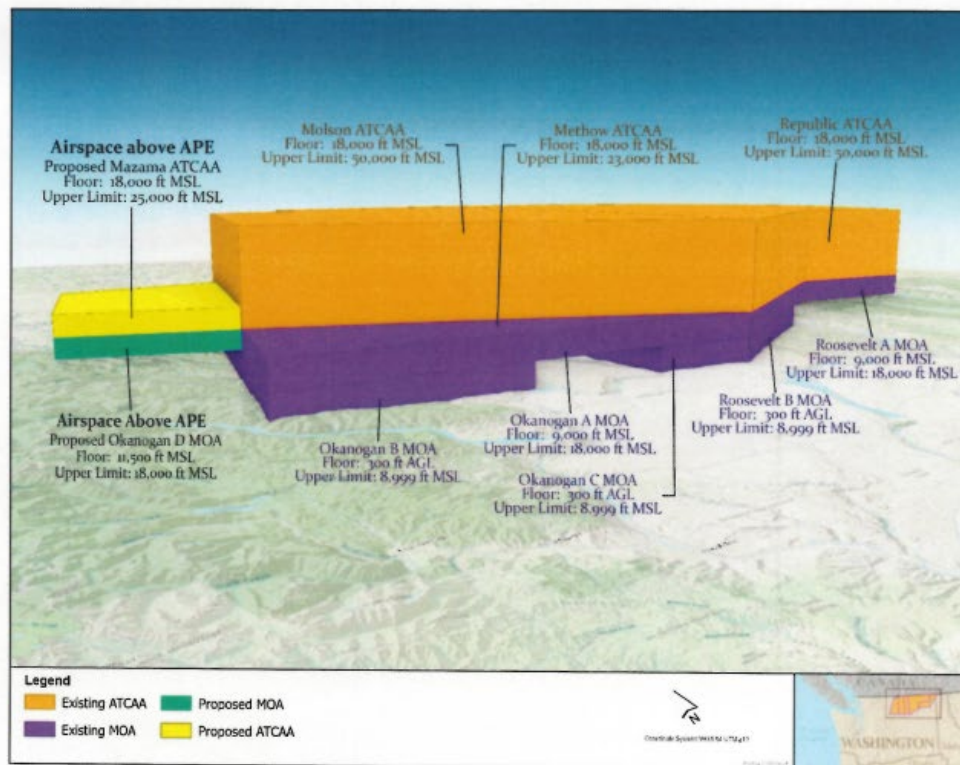
E. M. HANKS  
Commanding Officer

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Graphic of existing and proposed airspace and proposed APE

Enclosure (1)



Three-dimensional representation of airspace and proposed APE

Enclosure (2)



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

5090  
Ser N00/0011  
January 4, 2024

Mr. Randy Abrahamson, Tribal Historic Preservation Officer  
Spokane Tribe of Indians  
6195 Ford-Wellpinit Rd  
PO Box 100  
Wellpinit, WA 99040

Dear Mr. Abrahamson:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
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PROPOSED EASTERN WASHINGTON AIRSPACE EXTENSION

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For background, the FAA established airspace in northeastern Washington in 1977 for use by the military for training purposes. This existing airspace was analyzed under Section 106 of the NHPA and the National Environmental Policy Act (NEPA) during completion of the 2010 Environmental Impact Statement (EIS) for the *Northwest Training Range Complex* (NWTRC). In the interest of regional air traffic safety, the FAA reduced a portion of the existing military airspace in 2020.

The purpose of this undertaking is to enhance training and operational readiness of Navy aircrew. With the reduction of airspace in 2020, current vertical and horizontal airspace dimensions do not meet training and readiness requirements. In addition to the airspace extension, the proposal includes a slight decrease in the current frequency of aircraft flights in the airspace, as well as a minor redistribution of where training flights occur within the overall airspace. The Navy is preparing an Environmental Assessment (EA) for the Eastern Washington Airspace Extension in accordance with NEPA.

The Navy is defining the area of potential effects (APE) for the proposed undertaking to be only the extension area per 36 C.F.R. § 800.16(d). The APE is immediately west of the existing airspace and consists of two parts, the Okanogan D Military Operations Area (MOA) and the Mazama Air Traffic Control Assigned Airspace (ATCAA) (Enclosures 1 and 2). The proposed Okanogan D MOA would have a lower altitude limit (floor) of 11,500 feet above mean sea level

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(MSL) and an upper altitude limit (ceiling) of 18,000 feet MSL. The proposed Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 feet to 25,000 feet MSL. The total area of the proposed airspace is 393 square nautical miles. In accordance with 36 C.F.R. § 800.4(a)(1), the Navy requests your Tribe's agreement on the proposed APE for this undertaking.

The Navy has determined its effects conclusion for the existing airspace is consistent with the NHPA Section 106 finding in 2010 (Log. No. 092308-10-USN). The continued use of existing airspace has "no potential to cause effects" to historic properties as defined under 36 C.F.R. § 800.3(a)(1). The Navy will be providing a finding of effects on the proposed undertaking separately.

In accordance with 36 CFR 800.4, the Navy is requesting comments from your Tribe to identify concerns about the undertaking and provide information on properties of historic, religious, or cultural significance that may be affected by the proposed undertaking. A similar letter is being sent to the Colville Confederated Tribes and Kalispel Tribe of Indians.

If you have any questions or concerns regarding this undertaking, please contact Ms. Catherine Vaughn, Archaeologist, Naval Facilities Systems Engineering Command Northwest, (360) 396-4320, or catherine.s.vaughn2.civ@us.navy.mil.

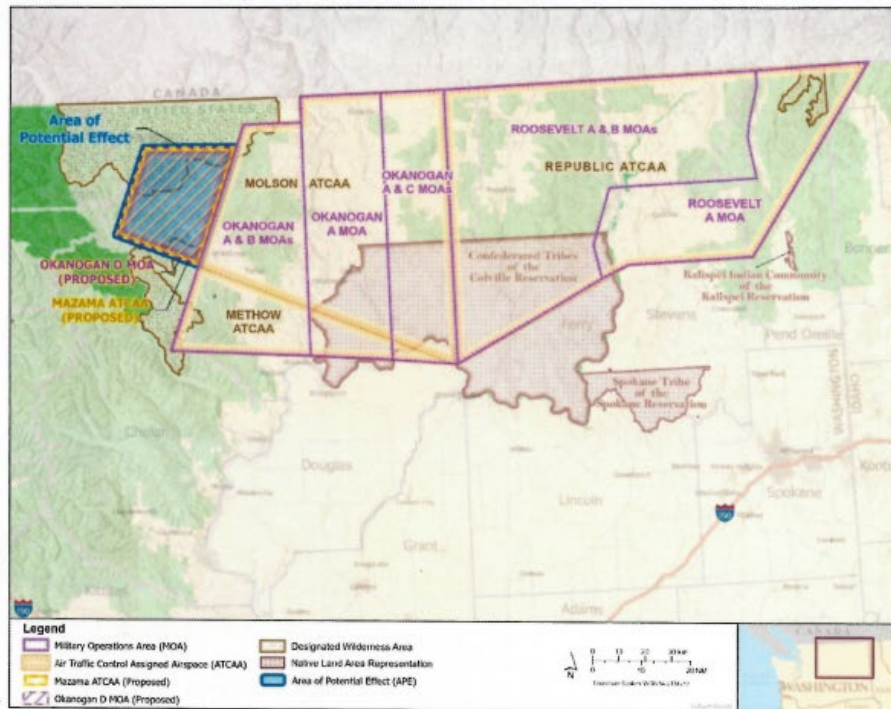
Sincerely,



E. M. HANKS  
Commanding Officer

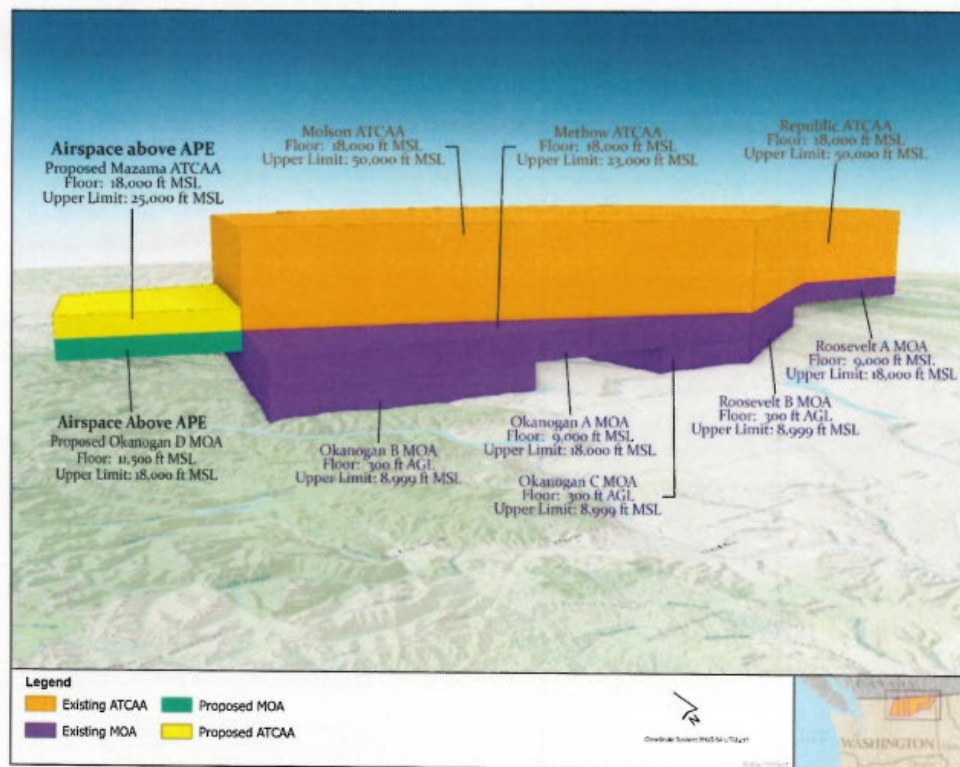
- Enclosures: 1. Graphic of existing and proposed airspace and proposed APE  
2. Three-dimensional representation of airspace and proposed APE





Graphic of existing and proposed airspace and proposed APE

Enclosure (1)



Three-dimensional representation of airspace and proposed APE

Enclosure (2)



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

5090  
Ser N00/0012  
January 4, 2024

Allyson Brooks, PhD  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
PO Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING  
PROPOSED EASTERN WASHINGTON AIRSPACE EXTENSION

The U.S. Navy (Navy) is continuing consultation under 54 U.S.C. 306108 (formerly known as and hereinafter referred to as Section 106) of the National Historic Preservation Act (NHPA) of 1966 and 36 C.F.R. § 800, its implementing regulations, to add an extension to existing airspace in northeastern Washington State (Enclosures 1 and 2). The Navy is working in cooperation with the Federal Aviation Administration (FAA) on the undertaking, and the Navy is the lead federal agency. An initial consultation letter for the undertaking was sent to your office on October 12, 2023.

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In accordance with 36 C.F.R. 800.4 and 800.2(c)(2), the Navy has contacted and has invited consultation with the Confederated Tribes of the Colville Reservation, Kalispel Tribe of Indians, and Spokane Tribe of Indians on the proposed undertaking. To comply with 36 C.F.R. 800.2(d), the Navy plans to use the NEPA EA public participation process to identify and involve interested members of the public in consultation for the proposed undertaking.

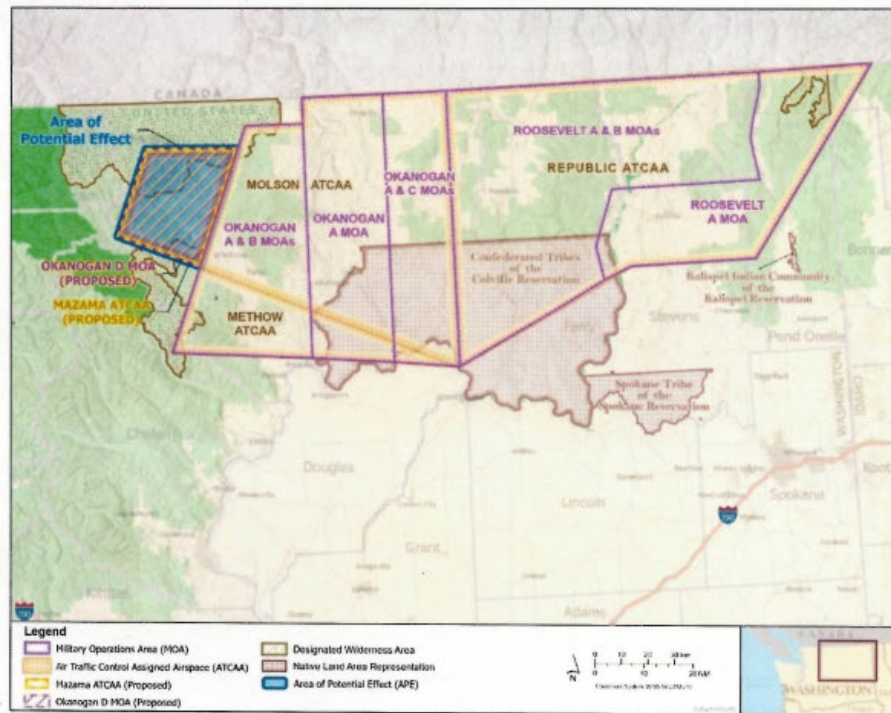
Should you have any questions or require additional information, my point of contact for the proposed undertaking is Ms. Catherine Vaughn, Archaeologist, Naval Facilities Engineering Systems Command Northwest, (360) 396-4320, or [catherine.s.vaughn2.civ@us.navy.mil](mailto:catherine.s.vaughn2.civ@us.navy.mil).

Sincerely,



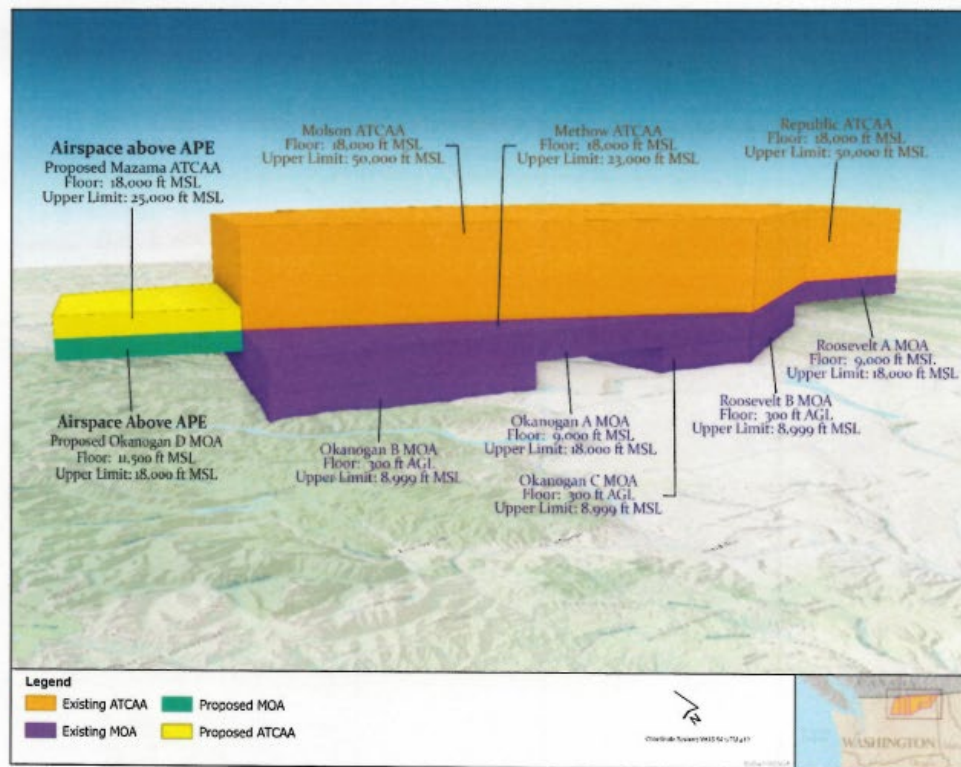
E. M. HANKS  
Commanding Officer

- Enclosures:   1. Graphic of existing and proposed airspace and proposed APE  
                  2. Three-dimensional representation of airspace and proposed APE



Graphic of existing and proposed airspace and proposed APE

Enclosure (1)



Three-dimensional representation of airspace and proposed APE

Enclosure (2)



**Spokane Tribe of Indians**  
**Tribal Historic Preservation Officer**  
PO Box 100 Wellpinit WA 99040

January 8, 2024

**To:** Kara M Kanaby, NAVFAC NW Archaeologist

**RE: Eastern Washington Airspace Extension**

Ms. Kanaby,

Thank you for contacting the Spokane Tribe's Historic Preservation Office. We appreciate the opportunity to provide a cultural consult for your project.

Pursuant to compliance with 54 U.S.C. we are hereby in consultation for this project.

This project has been determined to be in the Colville Tribe area, therefore I will defer this project to Colville Tribe, and have no further concerns on the project.

Again, thank you for the opportunity to comment, if questions arise contact me at 509-258-4222.

Sincerely,

Randy Abrahamson  
THPO for the Spokane Tribe

**DEPARTMENT OF THE NAVY**

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

5090  
Ser N00/0181  
March 12, 2024

Allyson Brooks, PhD  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
PO Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING PROPOSED  
EASTERN WASHINGTON AIRSPACE EXTENSION**

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The Navy defined the APE for the proposed undertaking to be only the extension area to the existing airspace per 36 C.F.R. § 800.16(d). The APE is immediately west of the existing airspace and consists of two parts, the Okanogan D Military Operations Area (MOA) and the Mazama Air Traffic Control Assigned Airspace (ATCAA). The Okanogan D MOA would have a lower altitude limit (floor) of 11,500 feet above mean sea level (MSL) and an upper altitude limit (ceiling) of 18,000 feet MSL. The Mazama ATCAA would be directly above the Okanogan D MOA, extending from 18,000 feet to 25,000 feet MSL. The total area of the proposed airspace is 393 square nautical miles.

The purpose of this undertaking is to enhance training and operational readiness of Navy aircrew. The FAA reduced a portion of the airspace in 2020; therefore, the current airspace dimensions do not meet training and readiness requirements. In addition to the airspace extension, the proposal includes a slight decrease in the current frequency of aircraft flights in the airspace, as well as a minor redistribution of where training flights occur within the overall airspace. The Navy is preparing an Environmental Assessment (EA) for the Eastern Washington Airspace Extension in accordance with the National Environmental Policy Act (NEPA).

There are no historic properties within the APE, which includes only the airspace extension. A Navy archaeologist conducted a records search and literature review of the Washington Information System Architectural and Archaeological Records Database to identify known and



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potential historic properties under the APE. The Navy evaluated the visual, auditory, and atmospheric effects of the project on the resources located under the APE. The following historic properties and unevaluated sites are under the APE (Enclosure 2 and 3) and the project will have no direct effects on them. There are three National Register of Historic Places- (NRHP-) eligible sites under the APE, a trash dump associated with a homestead, a road, and a historic debris scatter. Two resources under the APE are listed on the Washington Heritage Register (WHR) at the state level, a lookout tower and a cookhouse. In addition to these historic properties, there are 26 cultural resources sites (18 historic and 8 precontact) under the APE that have not been evaluated for inclusion in the NRHP; therefore, must be treated as eligible. Historic sites include six debris scatters, three ditches, three sites associated with mining, two cabin ruins, one homestead, one possible burial site, one tree stump, and one modified tree site. Precontact sites include five lithic scatters, one habitation site, one pictograph boulder, and one thermal feature. The elevation of the sites ranges from 1,850 feet above MSL to 7,000 feet above MSL. The proposed airspace and APE have a lower altitude limit of 11,500 feet above MSL. The Eastern Washington Airspace undertaking will not affect any of the seven aspects of integrity that contribute to the significance of the historic properties eligible for the NRHP, the properties on the WHR, or the unevaluated sites.


The Navy consulted with three tribes (Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians) for the project and received responses from each. The Kalispel Tribe of Indians has declined to consult on the project. The Spokane Tribe of Indians deferred to the Confederated Tribes of the Colville Reservation. The Confederated Tribes of the Colville Reservation agreed with the APE and preemptively stated they agree there will be no impact to historic properties; however, they expressed concerns about auditory impacts potentially affecting places of traditional significance. The Navy extended an invitation to the Confederated Tribes of the Colville Reservation to discuss their concerns and intends to address these concerns through continued government-to-government consultation and the NEPA process, with consideration for the potential sensitivity of any information provided.

As there are no historic properties within APE, the Navy analyzed potential effects of visual, auditory, or atmospheric nature to historic properties in the area under the APE. The Navy has made a reasonable and good faith effort to identify historic properties that may be affected by the proposed undertaking. As a result of our research and analysis, and in consideration of information available to date, the Navy finds the proposed undertaking will result in "no historic properties affected" consistent with C.F.R. §§ 800.4(d)(1).

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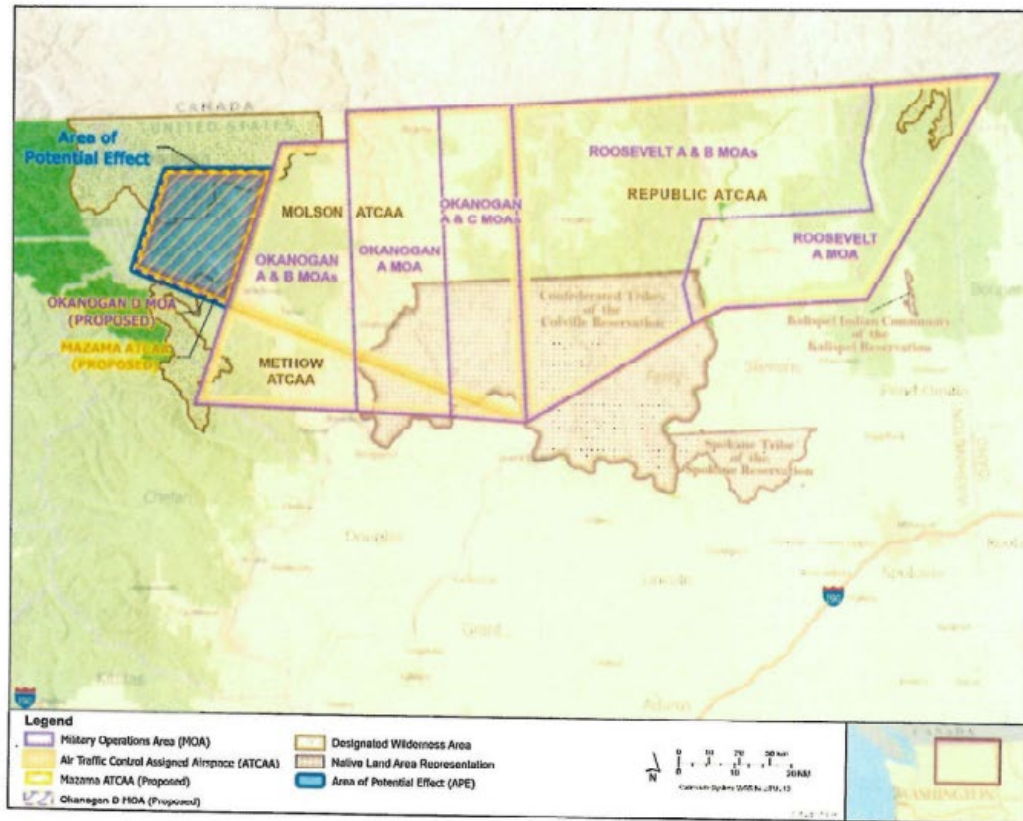
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Sincerely,

  
E/M. HANKS  
Commanding Officer

Enclosures: 1. Graphic of existing and proposed airspace and APE  
2. Table of eligible and unevaluated sites under the Eastern Washington  
Airspace Extension APE





Graphic of existing and proposed airspace and proposed APE

Enclosure 1



<b>Eligible and Unevaluated Sites Under the East Washington Airspace Extension APE</b>				
<b>Site Number</b>	<b>Site Name</b>	<b>Site Type</b>	<b>NRHP Status/ Criteria</b>	<b>WHR Status</b>
464364	Mini Goat Prospect-Small Structure	Historic Structure	Unevaluated	Unevaluated
646365	Mini Goat Prospect-Large Structure	Historic Structure	Unevaluated	Unevaluated
727093	Billy Goat Mine Cook House and Dining Hall	Historic Structure	Unevaluated	Eligible
OF00026	Cabin Remains	Historic Structure	Unevaluated	Unevaluated
OF00029	Cabin Remains	Historic Structure	Unevaluated	Unevaluated
OF00100	Mine	Historic Structure	Determined Not Eligible	Does Not Concur
OF00101	Lookout Tower	Historic Structure	Determined Not Eligible	Eligible
OK00082		Precontact Pictograph	Unevaluated	Unevaluated
OK00416		Precontact Hearth	Unevaluated	Unevaluated
OK00586		Historic Tree Stump	Unevaluated	Unevaluated
OK00587		Precontact Lithic Scatter	Unevaluated	Unevaluated
OK00588		Precontact Lithic Scatter	Unevaluated	Unevaluated
OK00589		Possibly Modern Rockshelter/Camp	Unevaluated	Unevaluated
OK00590		Precontact Lithic Scatter	Unevaluated	Unevaluated
OK00607		Precontact Pit Houses	Unevaluated	Unevaluated
OK00849		Historic Possible Burial	Unevaluated	Unevaluated
OK01125		Historic Modified Trees	Unevaluated	Unevaluated
OK01128	Hart's Pass Narrow Gauge Road	Historic Structure	Determined Eligible/A, C, D	Eligible
OK01266	Big Valley Site	Precontact Lithic Scatter	Unevaluated	Unevaluated
OK01361	Bowers Dump	Historic Debris Scatter	Eligible/D	Eligible
OK01552		Homestead Dump	Eligible/D	Eligible
OK02073		Historic Debris Scatter	Unevaluated	Unevaluated
OK02074		Historic Debris Scatter	Unevaluated	Unevaluated
OK02075		Historic Debris Scatter	Unevaluated	Potential
OK02076		Historic Ditch	Unevaluated	Potential

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OK02100		Historic Ditch	Unevaluated	Potential
OK02105		Historic Debris Scatter	Unevaluated	Unevaluated
OK02251	Two Rivers Lithics	Precontact Lithic Scatter	Unevaluated	Unevaluated
OK02252	Yellowjacket Homestead	Historic Homestead	Unevaluated	Potential
OK02253	Lost River Refuse Scatter	Historic Debris Scatter	Unevaluated	Potential
OK02254	Mini Goat Prospect	Historic Debris Scatter	Unevaluated	Potential
OK02594		Historic Ditch	Unevaluated	Potential

**DEPARTMENT OF THE NAVY**

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

5090  
Ser N00/0182  
March 12, 2024

Honorable Jarred-Michael Erickson, Chairman  
Confederated Tribes of the Colville Reservation  
21 Colville Street  
Nespelem, WA 99155

Dear Chairman Erickson:

SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING PROPOSED  
EASTERN WASHINGTON AIRSPACE EXTENSION

The U.S. Navy (Navy) is continuing consultation under 54 U.S.C. § 306108 (formerly known as Section 106) of the National Historic Preservation Act (NHPA) of 1966 and 36 C.F.R. § 800, its implementing regulations, to add an extension to existing airspace in northeastern Washington State (Enclosure 1). The Navy is working in cooperation with the Federal Aviation Administration (FAA) on the proposed undertaking, and the Navy is the lead federal agency. An initial consultation letter for the undertaking was sent on October 12, 2023, and a letter defining the area of potential effects (APE) was sent to your office on January 5, 2024.

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There are no historic properties within the APE, which includes only the airspace extension. A Navy archaeologist conducted a records search and literature review of the Washington Information System Architectural and Archaeological Records Database to identify known and

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The Navy consulted with the Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians for the undertaking and received responses from each. The Kalispel Tribe of Indians has declined to consult on the project through email dated January 23, 2024. The Spokane Tribe of Indians deferred to the Confederated Tribes of the Colville Reservation via email on January 8, 2024. The Confederated Tribes of the Colville Reservation responded via email on January 7, 2024, in which you agreed with the APE and preemptively agreed there will be no impact to historic properties; however, concerns were raised regarding auditory impacts potentially affecting places of traditional significance. The Navy offered a meeting with your Tribe to discuss potential concerns. The Navy will take into consideration for the potential sensitivity of any information the Tribe chooses to provide.

As there are no historic properties within APE, the Navy analyzed potential effects of visual, auditory, or atmospheric nature to historic properties in the area under the APE. The Navy has made a reasonable and good faith effort to identify historic properties that may be affected by the proposed undertaking. As a result of our research and analysis, and in consideration of information available to date, the Navy finds the proposed undertaking will result in "no historic properties affected" consistent with C.F.R. §§ 800.4(d)(1).

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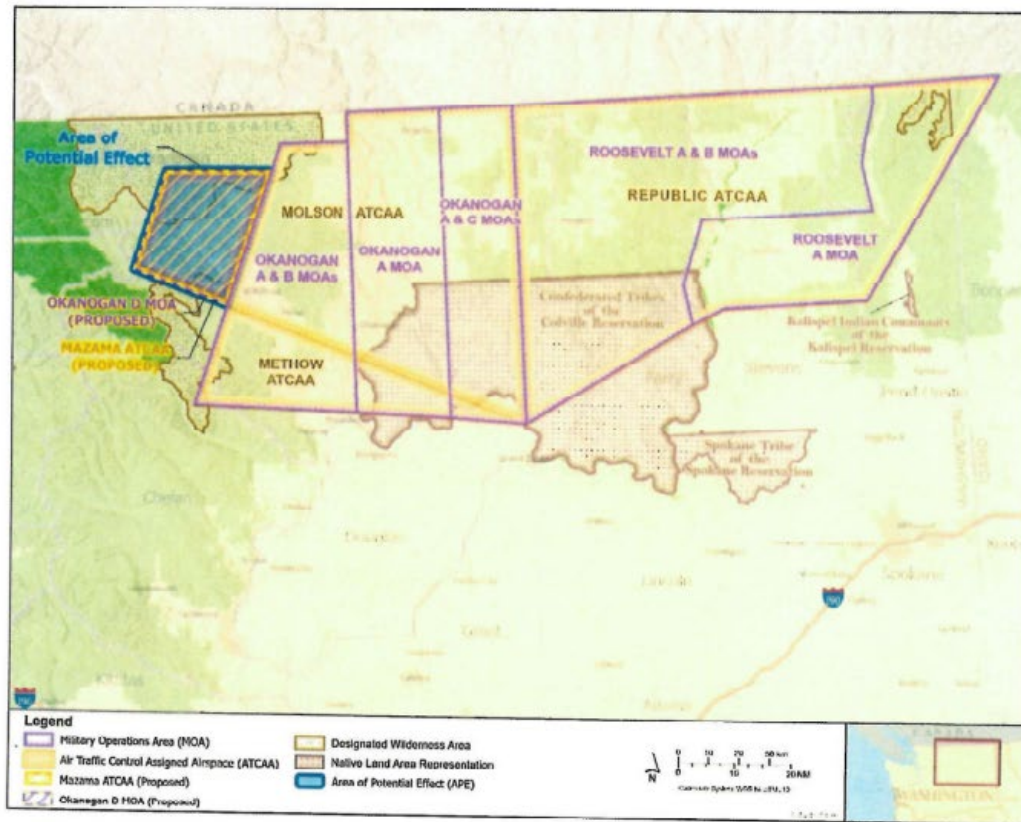


E. M. HANKS  
Commanding Officer

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Graphic of existing and proposed airspace and proposed APE

Enclosure 1

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OK02105		Historic Debris Scatter	Unevaluated	Unevaluated
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**DEPARTMENT OF THE NAVY**

NAVAL AIR STATION WHIDDEY ISLAND  
3730 NORTH CHARLES PORTER AVENUE  
OAK HARBOR, WASHINGTON 98278-5000

5090  
Ser N00/0184  
March 12, 2024

Mr. Guy Moura, Tribal Historic Preservation Officer  
Confederated Tribes of the Colville Reservation  
21 Colville Street  
Nespelem, WA 99155

Dear Mr. Moura:

**SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING PROPOSED  
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The purpose of this undertaking is to enhance training and operational readiness of Navy aircrew. The FAA reduced a portion of the airspace in 2020; therefore, the current airspace dimensions do not meet training and readiness requirements. In addition to the airspace extension, the proposal includes a slight decrease in the current frequency of aircraft flights in the airspace, as well as a minor redistribution of where training flights occur within the overall airspace. The Navy is preparing an Environmental Assessment (EA) for the Eastern Washington Airspace Extension in accordance with the National Environmental Policy Act (NEPA).

There are no historic properties within the APE, which includes only the airspace extension. A Navy archaeologist conducted a records search and literature review of the Washington Information System Architectural and Archaeological Records Database to identify known and

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potential historic properties under the APE. The Navy evaluated the visual, auditory, and atmospheric effects of the project on the resources located under the APE. The following historic properties and unevaluated sites are under the APE (Enclosure 2 and 3) and the project will have no direct effects on them. There are three National Register of Historic Places- (NRHP-) eligible sites under the APE, a trash dump associated with a homestead, a road, and a historic debris scatter. Two resources under the APE are listed on the Washington Heritage Register (WHR) at the state level, a lookout tower and a cookhouse. In addition to these historic properties, there are 26 cultural resources sites (18 historic and 8 precontact) under the APE that have not been evaluated for inclusion in the NRHP; therefore, must be treated as eligible. Historic sites include six debris scatters, three ditches, three sites associated with mining, two cabin ruins, one homestead, one possible burial site, one tree stump, and one modified tree site. Precontact sites include five lithic scatters, one habitation site, one pictograph boulder, and one thermal feature. The elevation of the sites ranges from 1,850 feet above MSL to 7,000 feet above MSL. The proposed airspace and APE have a lower altitude limit of 11,500 feet above MSL. The Eastern Washington Airspace undertaking will not affect any of the seven aspects of integrity that contribute to the significance of the historic properties eligible for the NRHP, the properties on the WHR, or the unevaluated sites.


The Navy consulted with the Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians for the undertaking and received responses from each. The Kalispel Tribe of Indians has declined to consult on the project through email dated January 23, 2024. The Spokane Tribe of Indians deferred to the Confederated Tribes of the Colville Reservation via email on January 8, 2024. The Confederated Tribes of the Colville Reservation responded via email on January 7, 2024, in which you agreed with the APE and preemptively agreed there will be no impact to historic properties; however, concerns were raised regarding auditory impacts potentially affecting places of traditional significance. The Navy offered a meeting with your Tribe to discuss potential concerns. The Navy will take into consideration for the potential sensitivity of any information the Tribe chooses to provide.

As there are no historic properties within APE, the Navy analyzed potential effects of visual, auditory, or atmospheric nature to historic properties in the area under the APE. The Navy has made a reasonable and good faith effort to identify historic properties that may be affected by the proposed undertaking. As a result of our research and analysis, and in consideration of information available to date, the Navy finds the proposed undertaking will result in "no historic properties affected" consistent with C.F.R. §§ 800.4(d)(1).

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If you have any questions or concerns regarding this undertaking, please contact Ms. Catherine Vaughn, Archacologist, Naval Facilities Systems Engineering Command Northwest, (360) 396-4320, or [catherine.s.vaughn2.civ@us.navy.mil](mailto:catherine.s.vaughn2.civ@us.navy.mil).

Sincerely,

  
E. M. HANKS  
Commanding Officer

Enclosures: 1. Graphic of existing and proposed airspace and APE  
2. Table of eligible and unevaluated sites under the Eastern Washington  
Airspace Extension APE







<b>Eligible and Unevaluated Sites Under the East Washington Airspace Extension APE</b>				
<b>Site Number</b>	<b>Site Name</b>	<b>Site Type</b>	<b>NRHP Status/ Criteria</b>	<b>WHR Status</b>
464364	Mini Goat Prospect-Small Structure	Historic Structure	Unevaluated	Unevaluated
646365	Mini Goat Prospect-Large Structure	Historic Structure	Unevaluated	Unevaluated
727093	Billy Goat Mine Cook House and Dining Hall	Historic Structure	Unevaluated	Eligible
OF00026	Cabin Remains	Historic Structure	Unevaluated	Unevaluated
OF00029	Cabin Remains	Historic Structure	Unevaluated	Unevaluated
OF00100	Mine	Historic Structure	Determined Not Eligible	Does Not Concur
OF00101	Lookout Tower	Historic Structure	Determined Not Eligible	Eligible
OK00082		Precontact Pictograph	Unevaluated	Unevaluated
OK00416		Precontact Hearth	Unevaluated	Unevaluated
OK00586		Historic Tree Stump	Unevaluated	Unevaluated
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OK00590		Precontact Lithic Scatter	Unevaluated	Unevaluated
OK00607		Precontact Pit Houses	Unevaluated	Unevaluated
OK00849		Historic Possible Burial	Unevaluated	Unevaluated
OK01125		Historic Modified Trees	Unevaluated	Unevaluated
OK01128	Hart's Pass Narrow Gauge Road	Historic Structure	Determined Eligible/A, C, D	Eligible
OK01266	Big Valley Site	Precontact Lithic Scatter	Unevaluated	Unevaluated
OK01361	Bowers Dump	Historic Debris Scatter	Eligible/D	Eligible
OK01552		Homestead Dump	Eligible/D	Eligible
OK02073		Historic Debris Scatter	Unevaluated	Unevaluated
OK02074		Historic Debris Scatter	Unevaluated	Unevaluated
OK02075		Historic Debris Scatter	Unevaluated	Potential
OK02076		Historic Ditch	Unevaluated	Potential

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OK02105		Historic Debris Scatter	Unevaluated	Unevaluated
OK02251	Two Rivers Lithics	Precontact Lithic Scatter	Unevaluated	Unevaluated
OK02252	Yellowjacket Homestead	Historic Homestead	Unevaluated	Potential
OK02253	Lost River Refuse Scatter	Historic Debris Scatter	Unevaluated	Potential
OK02254	Mini Goat Prospect	Historic Debris Scatter	Unevaluated	Potential
OK02594		Historic Ditch	Unevaluated	Potential

**DEPARTMENT OF THE NAVY**

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

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Ser N00/0185  
March 12, 2024

Mr. Randy Abrahamson, Tribal Historic Preservation Officer  
Spokane Tribe of Indians  
6195 Ford-Wellpinit Rd  
PO Box 100  
Wellpinit, WA 99040

Dear Mr. Abrahamson:

**SUBJECT: DAHP PROJECT NO. 2023-08-04885: CONTINUATION OF NATIONAL  
HISTORIC PRESERVATION ACT CONSULTATION REGARDING PROPOSED  
EASTERN WASHINGTON AIRSPACE EXTENSION**

The U.S. Navy (Navy) is continuing consultation under 54 U.S.C. § 306108 (formerly known as Section 106) of the National Historic Preservation Act (NHPA) of 1966 and 36 C.F.R. § 800, its implementing regulations, to add an extension to existing airspace in northeastern Washington State (Enclosure 1). The Navy is working in cooperation with the Federal Aviation Administration (FAA) on the proposed undertaking, and the Navy is the lead federal agency. An initial consultation letter for the undertaking was sent on October 12, 2023, and a letter defining the area of potential effects (APE) was sent to your office on January 5, 2024.

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The purpose of this undertaking is to enhance training and operational readiness of Navy aircrew. The FAA reduced a portion of the airspace in 2020; therefore, the current airspace dimensions do not meet training and readiness requirements. In addition to the airspace extension, the proposal includes a slight decrease in the current frequency of aircraft flights in the airspace, as well as a minor redistribution of where training flights occur within the overall airspace. The Navy is preparing an Environmental Assessment (EA) for the Eastern Washington Airspace Extension in accordance with the National Environmental Policy Act (NEPA).

There are no historic properties within the APE, which includes only the airspace extension. A Navy archaeologist conducted a records search and literature review of the Washington Information System Architectural and Archaeological Records Database to identify known and

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The Navy consulted with the Confederated Tribes of the Colville Reservation, the Kalispel Tribe of Indians, and the Spokane Tribe of Indians for the undertaking and received responses from each. The Kalispel Tribe of Indians has declined to consult on the project through email dated January 23, 2024. The Spokane Tribe of Indians deferred to the Confederated Tribes of the Colville Reservation via email on January 8, 2024. The Confederated Tribes of the Colville Reservation responded via email on January 7, 2024, in which they agreed with the APE and preemptively stated they agree there will be no impact to historic properties; however, concerns were raised regarding auditory impacts potentially affecting places of traditional significance. The Navy offered a meeting with the Confederated Tribes of the Colville Reservation to discuss potential concerns.

As there are no historic properties within APE, the Navy analyzed potential effects of visual, auditory, or atmospheric nature to historic properties in the area under the APE. The Navy has made a reasonable and good faith effort to identify historic properties that may be affected by the proposed undertaking. As a result of our research and analysis, and in consideration of information available to date, the Navy finds the proposed undertaking will result in "no historic properties affected" consistent with C.F.R. §§ 800.4(d)(1).



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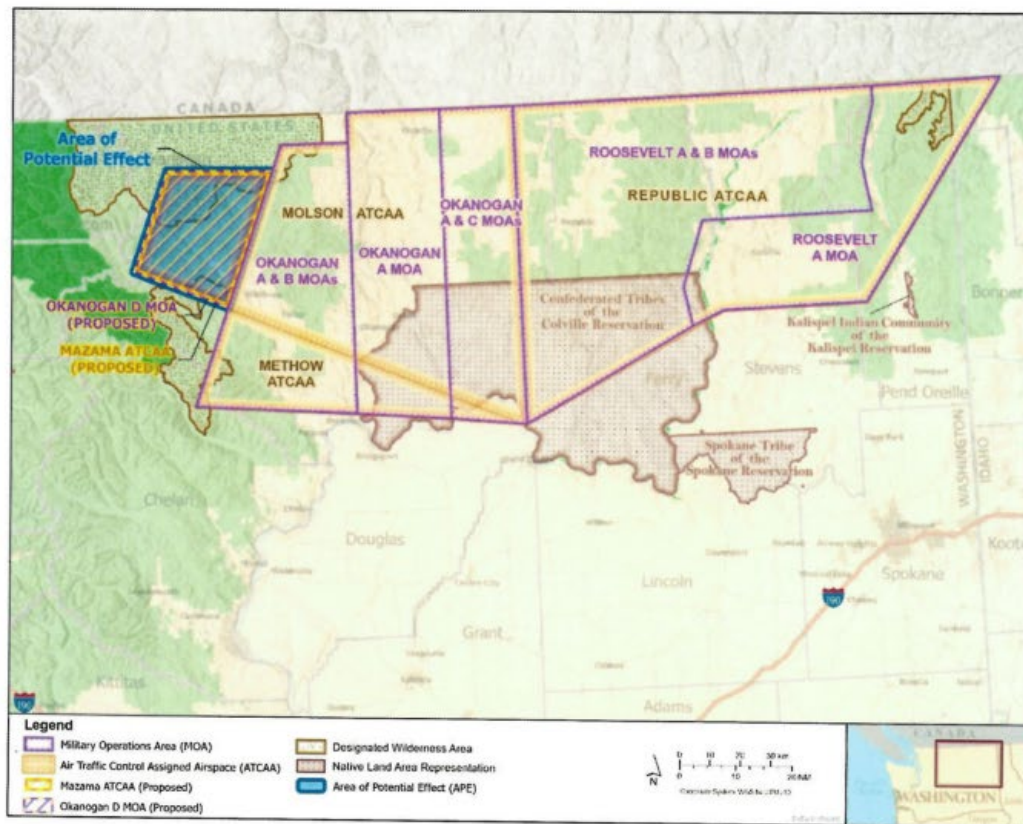
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Sincerely,

  
E/M. HANKS  
Commanding Officer

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Graphic of existing and proposed airspace and proposed APE

Enclosure 1

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**DEPARTMENT OF THE NAVY**

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

5090  
Ser N00/0183  
March 12, 2024

Honorable Greg Abrahamson, Chairman  
Spokane Tribe of Indians  
6195 Ford-Wellpinit Rd  
PO Box 100  
Wellpinit, WA 99040

Dear Chairman Abrahamson:

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HISTORIC PRESERVATION ACT CONSULTATION REGARDING PROPOSED  
EASTERN WASHINGTON AIRSPACE EXTENSION**

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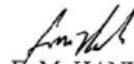
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As there are no historic properties within APE, the Navy analyzed potential effects of visual, auditory, or atmospheric nature to historic properties in the area under the APE. The Navy has made a reasonable and good faith effort to identify historic properties that may be affected by the proposed undertaking. As a result of our research and analysis, and in consideration of information available to date, the Navy finds the proposed undertaking will result in "no historic properties affected" consistent with C.F.R. §§ 800.4(d)(1).

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March 12, 2024

If you have any questions or concerns regarding this undertaking, please contact Ms. Catherine Vaughn, Archaeologist, Naval Facilities Systems Engineering Command Northwest, (360) 396-4320, or [catherine.s.vaughn2.civ@us.navy.mil](mailto:catherine.s.vaughn2.civ@us.navy.mil).

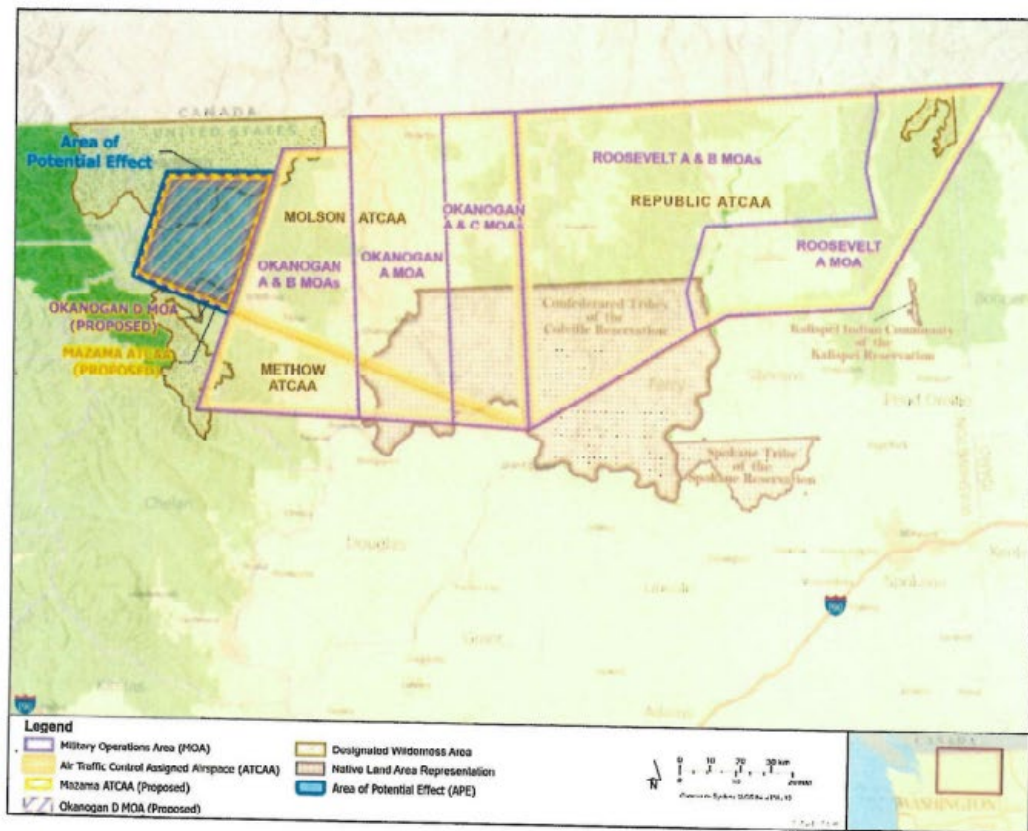
Sincerely,



E. M. HANKS  
Commanding Officer

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Graphic of existing and proposed airspace and proposed APE

Enclosure 1



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