

## **Appendix C**

### **Federal and State Agency Coordination**

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## Coastal Zone Documentation



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**Appendix C**  
**Coastal Zone Documentation**

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DEPARTMENT OF THE NAVY

NAVAL AIR STATION WHIDBEY ISLAND  
3730 NORTH CHARLES PORTER AVENUE  
OAK HARBOR, WASHINGTON 98278-6000

5090

Ser N44/2380

May 25, 2017

Mr. Joe Burcar  
Washington Department of Ecology  
Shorelands and Environmental Assistance Program, Northwest Region  
3190 160th Avenue SE  
Bellevue, WA 98008-5452

Dear Mr. Burcar:

**SUBJECT: COASTAL CONSISTENCY DETERMINATION FOR ENVIRONMENTAL  
IMPACT STATEMENT TO ANALYZE POTENTIAL IMPACT FOR  
PROPOSED CONTINUATION AND EXPANSION OF ELECTRONIC  
ATTACK OPERATIONS AND CAPABILITIES AT NAVAL AIR STATION  
WHIDBEY ISLAND**

The United States Department of the Navy is preparing an Environmental Impact Statement to analyze the potential impacts for the proposed continuation and expansion of electronic attack operations and capabilities at Naval Air Station (NAS) Whidbey Island. To comply with the federal Coastal Zone Management Act (CZMA) §307(c)(1), the Navy is submitting a Coastal Consistency Determination (CCD) for activities undertaken by a Federal agency.

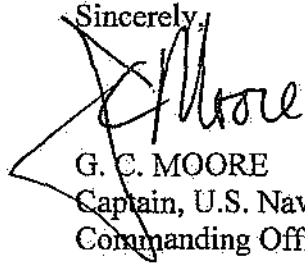
The Proposed Action is to: (1) continue and expand EA-18G Growler operations at the NAS Whidbey Island complex, which includes field carrier landing practice by Growler aircraft that occurs at Ault Field and Outlying Landing Field Coupeville; (2) increase electronic attack capabilities (provide for an increase of 35 or 36 aircraft) to support an expanded U.S. Department of Defense mission for identifying, tracking, and targeting in a complex electronic warfare environment; (3) construct and renovate facilities at Ault Field to accommodate additional Growler aircraft; and (4) station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community.

Pursuant to Section 307 of the CZMA, the Navy has determined that the Proposed Action (regardless of the alternative chosen) may result in effects to a state coastal use or resource and will be undertaken in a manner fully consistent with the enforceable policies of Washington's Coastal Resources Management Program. The Navy requests your concurrence with our finding in accordance with the CZMA and its implementing regulations.

5090  
Ser N44/ 2380  
May 25, 2017

To aid in your review, a copy of the CCD is included. Our point of contact is Mike Bianchi, who can be contacted at [michael.bianchi1@navy.mil](mailto:michael.bianchi1@navy.mil) or (360) 257-4024.

Sincerely,

A handwritten signature in black ink, appearing to read "G. C. Moore". The signature is written over a large, hand-drawn triangle that is also drawn over the typed name and title below it.

G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure 1: Coastal Consistency Determination

# COASTAL CONSISTENCY DETERMINATION FOR GROWLER AIRFIELD OPERATIONS AT NAS WHIDBEY ISLAND, WASHINGTON

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## *Introduction*

This document provides the State of Washington with the U.S. Department of the Navy's (Navy) Consistency Determination under Section 307 (c) (1) of the federal Coastal Zone Management Act (CZMA) of 1972, as amended, for the proposed continuation and expansion of electronic attack operations and capabilities at Naval Air Station (NAS) Whidbey Island. Specifically, beginning as early as 2017, the Navy proposes to:

- continue and expand existing Growler operations at the NAS Whidbey Island complex, which includes field carrier landing practice (FCLP) by Growler aircraft that occurs at Ault Field and Outlying Landing Field (OLF) Coupeville;
- increase electronic attack capabilities by adding 35 or 36 aircraft to support an expanded U.S. Department of Defense (DoD) mission for identifying, tracking, and targeting in a complex electronic warfare environment;
- construct and renovate facilities at Ault Field to accommodate additional Growler aircraft; and
- station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community.

After careful consideration of the information, data, and analysis provided in the Draft Environmental Impact Statement (DEIS), the Navy has determined that the Proposed Action (regardless of the alternative chosen) will be undertaken in a manner fully consistent with the applicable objectives and the enforceable policies of Washington's Coastal Resources Management Program.

## *Overview of NAS Whidbey Island*

The NAS Whidbey Island complex is located in Island County, Washington, on Whidbey Island, in the northern Puget Sound region (Attachment 1). The NAS Whidbey Island complex includes the main air station (Ault Field), OLF Coupeville, the Seaplane Base, and Lake Hancock. Ault Field is located in the north-central part of the island, adjacent to the City of Oak Harbor (Attachment 2). OLF Coupeville is located approximately 10 miles south of Ault Field and is used primarily for FCLP. The Seaplane Base is within the city limits of Oak Harbor and is the primary support facility for NAS Whidbey Island complex, including Navy housing, the Navy Exchange and Commissary, and administration/communications facilities. The Seaplane Base is included in this analysis because it contains housing and support facilities, which would be used by personnel and their dependents. Lake Hancock is a 423-acre site near Greenbank, Washington, that was previously used for aerial bombing training between 1943 and 1971. Lake Hancock Training Range was listed as closed for aerial bombing training in 2002. Today, the site is managed by the Navy and The Nature Conservancy as a wetlands marsh. This area is still underneath restricted airspace, and a portion of the site is currently being used by the military to monitor training in

Admiralty Bay and for other military training exercises. The Proposed Action would not impact resources at Lake Hancock; therefore, Lake Hancock will not be discussed further in this analysis.

Commissioned in 1942 as part of NAS Whidbey Island, Ault Field is the only Naval air station in the Pacific Northwest. It has supported Naval aviation for more than 70 years and served as the primary home base location for the Navy's Electronic Warfare community for more than 45 years. Ault Field and the Seaplane Base were identified as ideal locations for the rearming and refueling of Navy patrol planes and other tactical aircraft operating in defense of Puget Sound during World War II; OLF Coupeville became operational in 1943 to support practice approach/landings and emergency landings. Over a period of more than 40 years, Ault Field has evolved into the Navy's home for its Electronic Attack aircraft. OLF Coupeville, an integral part of operations at Ault Field, provides the most realistic training for FCLP, as well as training for search-and-rescue and parachute operations.

### *Proposed Federal Agency Action*

The purpose of the Proposed Action is to augment the Navy's existing Electronic Attack community at NAS Whidbey Island by operating additional Growler aircraft as appropriated by Congress. The Navy needs to effectively and efficiently increase electronic attack capabilities in order to counter increasingly sophisticated threats and provide more aircraft per squadron in order to give operational commanders more flexibility in addressing future threats and missions. The need for the Proposed Action is to maintain and expand Growler operational readiness to support national defense requirements under Title 10, United States Code (U.S.C.), Section 5062.

The Navy evaluates the No Action Alternative as well as three action alternatives for implementing the Proposed Action. The basic action alternatives assessed consist of force structure and operational changes to support an expanded DoD capacity and include variations of the following factors:

- number of aircraft assigned per squadron
- number of expeditionary squadrons
- number of personnel
- distribution of aircraft operations at Ault Field and OLF Coupeville (Scenarios A, B, and C for each action alternative)

Each force structure alternative has different facility construction needs and personnel numbers, each of which has additional impacts on the environment. Fundamental to understanding the differences in force structure between the action alternatives is understanding the three types of Electronic Attack squadrons home based at the NAS Whidbey Island complex--carrier squadrons, expeditionary squadrons, and the training squadron--and the training requirements for each squadron type. The number of FCLPs that would be conducted in the complex is dictated by the type of squadron.

- **Carrier squadrons**, which deploy on aircraft carriers and conduct periodic FCLP to requalify to land on aircraft carriers;
- **Expeditionary squadrons**, including the reserve squadron, deploy to overseas land-based locations and therefore do not normally require periodic FCLP prior to deployment; and



- the **Training squadron**, which is also known as the Fleet Replacement Squadron, or FRS. The training squadron is responsible for “post-graduate” training of newly designated Navy pilots and Naval Flight Officers, those returning to flight status after non-flying assignments, or those transitioning to a new aircraft for duty in the Fleet. The training squadron is the “schoolhouse” where pilots receive their initial FCLP training, and it fosters professional standardization and a sense of community.

The following is a summary of the squadron, aircraft, and personnel additions that are proposed under each alternative.

- **Action Alternative 1:** Expand carrier capabilities by adding three additional aircraft to each of the existing nine carrier squadrons and augmenting the FRS with eight additional aircraft (a net increase of 35 aircraft). Alternative 1 would add an estimated 371 Navy personnel and 509 dependents to the region.
- **Action Alternative 2:** Expand expeditionary and carrier capabilities by establishing two new expeditionary squadrons, adding two additional aircraft to each of the nine existing carrier squadrons, and augmenting the FRS with eight additional aircraft (a net increase of 36 aircraft). Alternative 2 would add an estimated 664 Navy personnel and 910 dependents to the region.
- **Action Alternative 3:** Expand expeditionary and carrier capabilities by adding three additional aircraft to each of the three existing expeditionary squadrons, adding two additional aircraft to each of the nine existing carrier squadrons, and augmenting the FRS with nine additional aircraft (a net increase of 36 aircraft). Alternative 3 would add an estimated 377 Navy personnel and 894 dependents to the region.

### **No Action Alternative**

The Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations 1502.14[d]) require an EIS to evaluate the No Action Alternative. The No Action Alternative provides a benchmark that typically enables decision makers to compare the magnitude of potential environmental effects of the proposed alternatives with conditions in the affected environment.

Under the No Action Alternative, the Proposed Action would not occur; this means the Navy would not operate additional Growler aircraft and would not add additional personnel at Ault Field, and no construction associated with the Proposed Action would occur. The No Action Alternative would not meet the purpose of or need for the Proposed Action; however, the conditions associated with the No Action Alternative serve as reference points for describing and quantifying the potential impacts associated with the proposed alternatives. For this EIS, the Navy analyzes 2021 as the representative year for the No Action Alternative because it represents conditions when events at Ault Field for aircraft loading, facility and infrastructure assets, personnel levels, and number of aircraft unrelated to the Growler Proposed Action are expected to be fully implemented and complete. Therefore, with these other actions complete, the analysis isolates the impacts of this Proposed Action of adding additional

Growler aircraft and personnel and associated construction. Conditions that are evaluated as implemented and fully complete prior to 2021 include the following:

- the P-3C Orion/EP-3 will be retired from the Navy in 2021
- six P-8A Poseidon squadrons will be home based at Ault Field by 2020
- projected volumes of transient and other aircraft utilizing Ault Field in 2021 based on current and historical volumes of these aircraft

### **Action Overview at NAS Whidbey Island**

The Proposed Action would require certain facilities and infrastructure to support the necessary training, maintenance, and operational requirements. New construction, renovation, and modification of facilities and infrastructure would be required for each action alternative. A general description of the facilities and infrastructure required for additional Growler aircraft and personnel, and to meet the needs of the Proposed Action, is provided below (also see Table 1).

- **Airfield Pavement**

Airfield pavement design is determined predominantly by the airfield traffic, maximum gross weight of the aircraft that the airfield must support, and environmental conditions to which the pavement will be subjected.

- **Aircraft Parking Apron**

Aircraft parking aprons consist of paved areas in proximity to maintenance hangars; they provide parking space, tie-down locations, and areas to perform maintenance for aircraft. Each parking apron provides sufficient area to allow safe separation between individual aircraft and provide taxi lanes for aircraft movement.

- **Flight Training and Briefing Building**

This building provides space for briefing rooms and classrooms, instructor pilot offices, ready rooms, flight planning rooms, flight simulators, and other support space.

- **Maintenance Hangars**

Maintenance hangars provide equipment and personnel a weather-protected shelter for inspection, servicing, and maintenance, and emergency shelter for operational aircraft as well as general administration of squadron operations.

- **Aircraft Armament Storage**

Armament storage provides space and utilities to perform maintenance on bomb racks, wing and centerline pylons, missile launchers, and adapters.

- **Mobile Maintenance Facility**

A storage area that provides space to store Mobile Maintenance Facility tactical support vans along with their major and ancillary equipment prior to and after deployment.

The figure in Attachment 3 shows the locations of all required facilities under each alternative. New Growler aircraft would be accommodated by existing Growler parking apron space. Enough space currently exists to park 103 Growler aircraft on the parking apron adjacent to Growler hangar spaces.

The completion of ongoing military construction projects in June 2018 will increase the number of aircraft parking spots to 113. New construction under all alternatives to support new Growler aircraft and personnel would include additional aircraft armament storage, hangar facilities, Mobile Maintenance Facility storage area, and expanded personnel parking areas. All planned construction activities would occur on the north end of the flight line at Ault Field. New parking areas, maintenance facilities, and armament storage would be constructed along Enterprise Road at the north end of Charles Porter Road. No construction would be required at OLF Coupeville because it is capable of supporting increased operational requirements in its current state. Details include:

- Temporary hangar facilities would be utilized throughout construction to support squadron functions until permanent facilities are completed. Once construction is complete, all temporary facilities will be removed.
- Repairs to an inactive taxiway for aircraft parking in addition to expanded hangar space.
- A two-squadron hangar would be constructed on the flight line adjacent to Hangar 5.
- Hangar 12 would be expanded to accommodate additional training squadron aircraft.

Under any of the alternatives, planned land disturbance for construction activities under all alternatives would be 10.1 acres. Once constructed, facilities and parking would add up to 2.2 acres of new impervious surface at the installation. Prior to implementation of the Proposed Action, all appropriate permits and authorizations will be obtained.

### *Coastal Zone Management and Environmental Impact Statement*

The CZMA created the National Coastal Management Program for management and control of the uses of and impacts on coastal zone resources. The program is implemented through federally approved state coastal management programs (CMPs). Federal approval of a state CMP triggers the CZMA Section 307 federal Consistency Determination requirement. The first step in the CZMA federal consistency process is to determine whether the proposed action would have a reasonably foreseeable direct, indirect, or cumulative effect on a state's coastal uses or resources (Chief of Naval Operations Instruction [OPNAVINST] M-5090.1). This is called an "effects test." After conducting an effects test, the Navy determined that the proposed action may result in reasonably foreseeable direct, indirect, or cumulative effects on Washington's coastal uses or resources; therefore, the Navy has prepared this Consistency Determination.

The coastal zone includes all lands and waters from the coastline seaward to 3 nautical miles (nm). The coastline along the inland marine waters is located at the seaward limit of rivers, bays, estuaries, or sounds. The CZMA specifically excludes from the coastal zone those lands that are subject solely by law to the discretion of, or held in trust by, the federal government (NOAA and Washington State Department of Ecology, 2001).

The State of Washington has developed and implemented a federally approved CMP describing current

coastal legislation and enforceable policies (NOAA and Washington State Department of Ecology, 2001). Under the program, this Consistency Determination is based on an evaluation of the enforceable policies of the Washington State Coastal Zone Management Program. The enforceable policies of the Washington CMP include:

- Shoreline Management Act (SMA);
- Clean Water Act (CWA);
- Clean Air Act (CAA);
- State Environmental Policy Act (SEPA);
- Energy Facility Site Evaluation Council (EFSEC) law; and
- Ocean Resources Management Act (ORMA).

*Enforceable Policies Not Applicable to the Proposed Action*

The Navy reviewed the Washington State CMP to identify enforceable policies that were relevant and applicable to the Proposed Action. Table 1 identifies and explains the Washington State CMP policies that are not applicable to the Proposed Action.

**Table 1. Enforceable Polices of the Washington Coastal Management Program Not Applicable to the Proposed Action**

Enforceable Policy	Explanation of Non-Applicability
<b>State Environmental Policy Act (SEPA), Chapter 43.21 Revised Code of Washington (RCW)</b>	Proposed Action will comply with the National Environmental Policy Act, and state and local agencies will be provided an opportunity to review and comment on the environmental impacts. Therefore, a separate Washington SEPA review is not required.
<b>Washington State Energy Facility Site Evaluation Council (EFSEC), Chapter 80.50 RCW</b>	Proposed Action would not include the addition of any new energy facilities.
<b>Ocean Resources Management Act (ORMA), Chapter 43.143 RCW</b>	Proposed Action does not include ocean uses or activities in the waters of Pacific Ocean along the coast of Washington.

*Enforceable Policies Applicable to the Proposed Action*

The Proposed Action is analyzed for consistency with the applicable CMP enforceable policies below.

*SHORELINE MANAGEMENT ACT, CHAPTER 90.58 REVISED CODE OF WASHINGTON (RCW)*

The SMA designates preferred uses for protected shorelines and provides for the protection of shoreline natural resources and public access to shoreline areas. Under the SMA, protected shorelines include the following: (1) all marine waters; (2) streams and rivers with greater than 20 cubic feet per second mean annual flow; (3) lakes larger than 20 acres; (4) upland areas called shorelands that extend 200 feet landward from the edge of these waters; and (5) biological wetlands and river deltas and some or all of the 100-year floodplain, including all wetlands within the 100-year floodplain when they are associated with the prior four areas. The SMA also designates “shorelines of statewide significance,”

which are divided into marine areas, streams and rivers, and lakes. Within the “marine areas” category, there are three delineations: (1) “the Pacific Ocean coastline,” (2) “specific estuarine areas between the ordinary high water mark and line of extreme low tide and all associated shorelands,” and (3) “all other areas of Puget Sound and the Strait of Juan de Fuca and adjacent salt water areas lying waterward of the line of extreme low tide line.” Local governments may also identify additional shoreline areas that warrant special protection; however, local government approvals are not by themselves standards for CZMA determinations, and state CZMA federal consistency decisions are not contingent upon local approvals. Local policies are only applicable for CZMA review purposes if federally approved.

While the Proposed Action would occur on federal land within a coastal county of Washington, no aspect of the Proposed Action would have a direct effect on any protected shoreline or any shoreline natural resources, as defined by the SMA. In addition, the Proposed Action would not interfere with public access to any shoreline areas. Therefore, the Proposed Action would be fully consistent with the SMA.

#### *WATER POLLUTION CONTROL ACT, CHAPTER 90.48 RCW*

The Washington Water Pollution Control Act is aimed at retaining and securing high quality for all waters of the state. In doing so, the Water Pollution Control Act works cooperatively with the federal CWA to regulate discharges to the navigable waters of the United States, including wetlands within Washington State. The Water Pollution Control Act prohibits the discharge of any polluting matter into the waters of the state. As such, the Washington State Department of Ecology (DOE) has the authority to issue National Pollutant Discharge Elimination System (NPDES) storm water permits for potential construction-related discharges. Construction activities must also implement best management practices (BMPs) as appropriate for the activity.

Because more than 1 acre would be disturbed during construction, a construction NPDES storm water permit will be obtained from the Washington State DOE through its water quality permit program. Under the permit, the Navy (NAS Whidbey Island) would submit a site-specific Storm Water Management Plan (SWMP) for new discharges that will include a site plan for managing storm water runoff and describe the BMPs to be implemented to eliminate or reduce erosion, sedimentation, and storm water pollution. With proper implementation of the SWMP, impacts on water quality from erosion and off-site sedimentation during construction would be minor. No wetlands would be disturbed by any of the construction projects proposed under any of the alternatives. Therefore, the Proposed Action would be fully consistent with the Water Pollution Control Act.

#### *WASHINGTON CLEAN AIR ACT, CHAPTER 70.94 RCW*

##### **Criteria Pollutants**

The Washington Clean Air Act, as amended, provides for protection and enhancement of the state’s air resources and implements portions of the federal Clean Air Act (CAA). The CAA designates six

pollutants as “criteria pollutants” for which National Ambient Air Quality Standards (NAAQS) have been established to protect public health and welfare. These include particulate matter less than 10 microns in diameter (PM<sub>10</sub>) and less than 2.5 microns in diameter (PM<sub>2.5</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), lead (Pb), and ozone (O<sub>3</sub>). Areas that do not meet NAAQS for criteria pollutants are designated as “nonattainment areas” for that pollutant. Areas that achieve the air quality standard after being designated nonattainment areas are re-designated as “attainment areas” following U.S. Environmental Protection Agency (USEPA) approval of a maintenance plan.

The Proposed Action would be located in Island County. Air quality within Island County is regulated by the Northwest Clean Air Agency (NWCAA), which covers Island, Skagit, and Whatcom Counties, and is one of seven regional air quality control agencies that were formed after passage of the Washington Clean Air Act in 1967. The NWCAA and the Washington State DOE are responsible for implementing and enforcing state and federal air quality regulations in Washington. Washington Administrative Code Chapters 173-476 provides details regarding ambient air pollution standards in consideration of public health, safety, and welfare in the State of Washington. Island County is classified by the USEPA as unclassified/attainment for all criteria pollutants (USEPA, 2015). Because NAS Whidbey Island is located in a region that is in attainment for all NAAQS, a conformity application analysis outlined in Section 176 (c) of the federal CAA would not be required. The NWCAA manages air quality in the region with different programs. Ault Field at the NAS Whidbey Island complex is considered a designated major source because the facility has the potential to emit more than 100 tons per year of CO, NO<sub>x</sub>, sulfur oxides, and volatile organic compounds, and more than 25 tons per year of combined hazardous air pollutants (HAPs). These air pollutants are defined as regulated air pollutants in the WAC 173-401 (NWCAA, 2013). Therefore, the NAS Whidbey Island complex has an Air Operating Permit (AOP). The Proposed Action would result in an increase in emissions from building energy use. In addition, increased maintenance and operations of aircraft may also result in an increase in painting, degreasing, and fueling operations, and fuel storage, which could increase reported emissions from these permitted sources. These emissions increases should be negligible and are within the permit’s maximum totals. Because the Proposed Action would not result in any permanent new stationary sources of air pollutant emissions or new emissions above the permitting thresholds, permit changes are not required. Temporary construction emissions would also be negligible. The NAS Whidbey Island complex produces mobile source emissions from air station operations, including aircraft operations (flight operations at Ault Field and OLF Coupeville, and maintenance at Ault Field), employee commuting, and use of other mobile equipment. Under all three action alternatives, changes to aircraft operations and personnel commuting would result in an increase in annual emissions. The NAS Whidbey Island AOP does not cover mobile emissions. Mobile emissions are not subject to permit requirements or emission thresholds; therefore, the level of impact from these emissions is inconclusive. These emissions contribute to regional emission totals and can affect compliance with NAAQS. The region is currently in attainment for all NAAQS, and the NWCAA continues to monitor ambient air emission levels to confirm continued compliance. Therefore, the Proposed Action would fully consistent with the CZMA.

### *Conclusion*

After careful consideration of the information, data, and analysis provided in the DEIS, we have

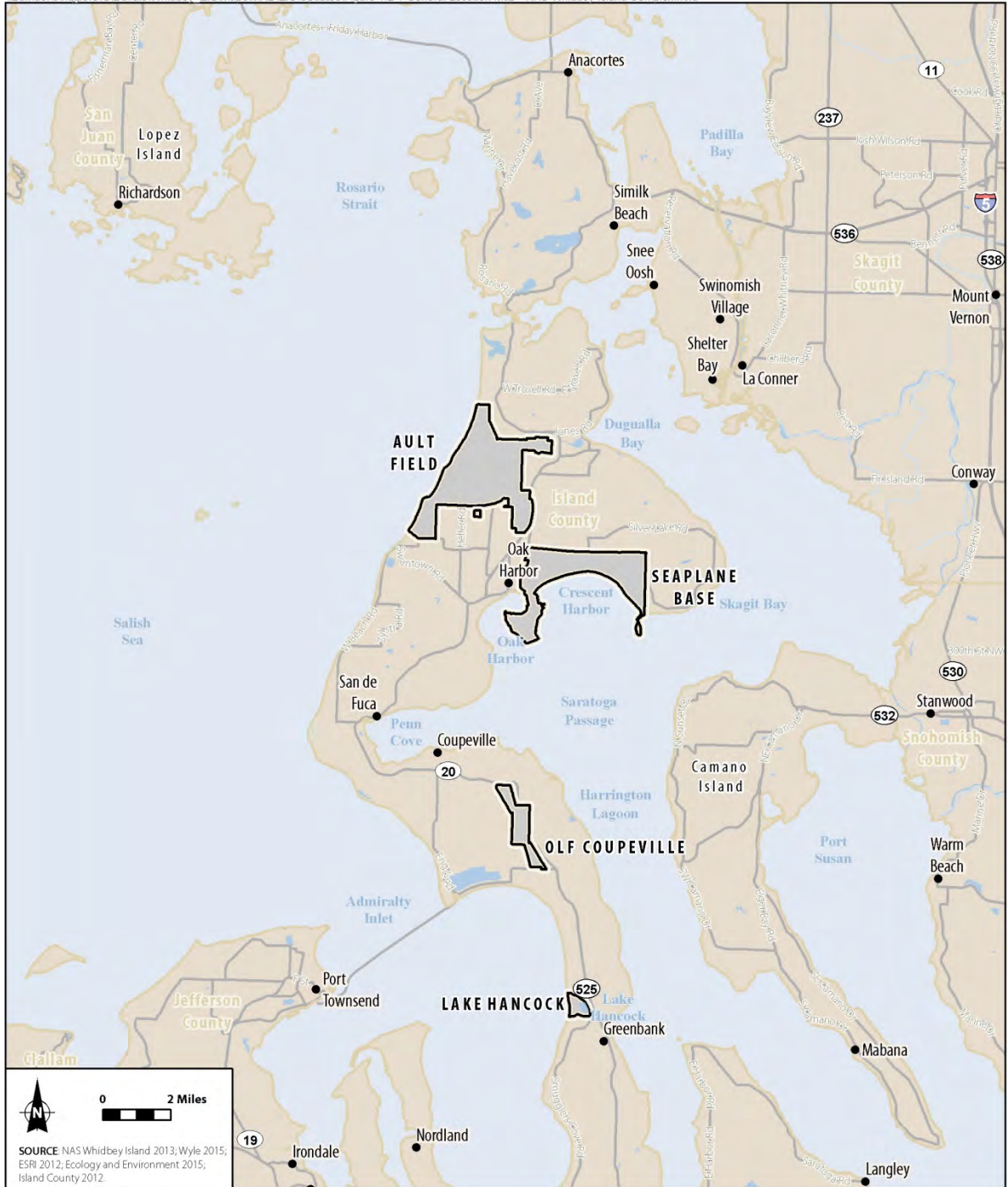
determined that the Proposed Action (regardless of the alternative chosen) will be undertaken in a manner fully consistent with the applicable objectives and the enforceable policies of Washington's Coastal Resources Management Program.

## *References*

- NOAA (National Oceanic and Atmospheric Administration) and Washington State Department of Ecology. 2001. Managing Washington's Coast – Washington State's Coastal Zone Management Program. Publication 00-06-029, February 2001. Accessed on November 5, 2015: <https://fortress.wa.gov/ecy/publications/summarypages/0006029.html>.
- NWCAA (Northwest Clean Air Agency). 2013. Air Operating Permit-Final, Naval Air Station Whidbey Island Oak Harbor, Washington. August 1, 2013. Accessed October 12, 2015: [http://www.nwcleanair.org/pdf/aqPrograms/airOperatingPermits/NAS%20Whidbey/AOP\\_Final.pdf](http://www.nwcleanair.org/pdf/aqPrograms/airOperatingPermits/NAS%20Whidbey/AOP_Final.pdf).
- USEPA (U.S. Environmental Protection Agency). 2015. Status of SIP Requirements for Designated Areas: Washington. Accessed October 12, 2015: [http://www3.epa.gov/airquality/urbanair/sipstatus/reports/wa\\_areabypoll.html](http://www3.epa.gov/airquality/urbanair/sipstatus/reports/wa_areabypoll.html).



## **Attachment 1**



0 2 Miles

SOURCE: NAS Whidbey Island 2013; Wyle 2015; ESRN 2012; Ecology and Environment 2015; Island County 2012.

- City
- County Boundary
- Major Road
- Installation Area

**Attachment 1**  
**General Location Map –**  
**NAS Whidbey Island Complex**  
 Whidbey Island, Island County, WA

## Attachment 2



**Attachment 2**  
**General Location Map, Aerial,**  
**Ault Field**  
Whidbey Island, Island County, WA

## Attachment 3





- City
- Installation Area
- MILCON Projects
- Street

**Attachment 3**  
**Ault Field**  
**Planned Facility Activities under**  
**Alternatives 1, 2, and 3**  
Whidbey Island, Island County, WA



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000  
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

July 26, 2017

Captain G. C. Moore, Commanding Officer  
Department of the Navy  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278

**RE: Continuation and Expansion of Electronic Attack Operations and Capabilities at  
Naval Air Station Whidbey Island, Island County, Washington**

Dear Captain Moore:

In order to provide additional time for Naval Air Station Whidbey Island (NAS Whidbey Island) to demonstrate compliance with the enforceable policies of Washington's Coastal Zone Management (CZM) Program review for this proposal, NAS Whidbey Island and Department of Ecology have agreed to an extension of the CZM review period until August 13, 2017.

If you have any questions regarding your application or the CZM process, please contact Rebekah Padgett at (425) 649-7129 or email [Rebekah.Padgett@ecy.wa.gov](mailto:Rebekah.Padgett@ecy.wa.gov).

Sincerely,

Joe Burcar, Section Manager  
Shorelands and Environmental Assistance Program

By certified mail: 9171 9690 0935 0163 8130 63

E-cc: Mike Bianchi, NAS Whidbey Island  
David Pater, Ecology  
Loree' Randall, Ecology









DEPARTMENT OF THE NAVY

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

5090  
Ser N44/2850  
July 26, 2017

Ms. Rebekah R. Padgett  
Federal Permit Manager  
Shorelands and Environmental Permits Program  
Washington Department of Ecology, Northwest Regional Office  
3190 160th Ave SE  
Bellevue, WA 98008-5452

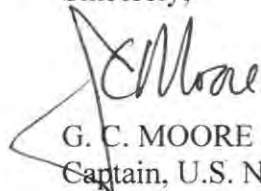
Dear Ms. Padgett,

SUBJECT: COASTAL ZONE CONSISTENCY DETERMINATION STATUS LETTER FOR  
CONTINUATION AND EXPANSION OF ELECTRONIC ATTACK  
OPERATIONS AND CAPABILITIES AT NAVAL AIR STATION WHIDBEY  
ISLAND, ISLAND COUNTY, WASHINGTON

We have received your request for information regarding our need to obtain a Construction Stormwater General Permit for construction activities not located on Federal lands. The proposed action does not contemplate construction on non-Federal lands and thus, we do not anticipate requiring said permit from the state's Department of Ecology. However, if the need to construct on non-Federal lands arises, we will submit an application to the Department of Ecology for consideration.

I trust you have received the requested mailing list from Mr. Bianchi. Please continue referring your questions or requests for additional information to Mr. Michael Bianchi at (360) 257-4024 or by email: michael.bianchi1@navy.mil.

Sincerely,

  
G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer





STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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August 14, 2017

Captain G. C. Moore, Commanding Officer  
Department of the Navy  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278

**RE: Continuation and Expansion of Electronic Attack Operations and Capabilities at  
Naval Air Station Whidbey Island, Island County, Washington**

Dear Captain Moore:

In order to provide additional time for Naval Air Station Whidbey Island (NAS Whidbey Island) to demonstrate compliance with the enforceable policies of Washington's Coastal Zone Management Program review for this proposal, NAS Whidbey Island and Department of Ecology have agreed to a second extension of the Coastal Zone Management (CZM) review period until August 20, 2017.

If you have any questions regarding your application or the CZM process, please contact Rebekah Padgett at (425) 649-7129 or email [Rebekah.Padgett@ecy.wa.gov](mailto:Rebekah.Padgett@ecy.wa.gov).

Sincerely,

Joe Burcar, Section Manager  
Shorelands and Environmental Assistance Program

By certified mail: 9171 9690 0935 0163 8131 55

E-cc: Mike Bianchi, Naval Air Station Whidbey Island  
David Pater, Ecology  
Loree' Randall, Ecology







STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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August 21, 2017

Captain G. C. Moore, Commanding Officer  
Department of the Navy  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278

**RE: Continuation and Expansion of Electronic Attack Operations and Capabilities at  
Naval Air Station Whidbey Island, Island County, Washington**

Dear Captain Moore:

In order to provide additional time for Naval Air Station Whidbey Island (NAS Whidbey Island) to demonstrate compliance with the enforceable policies of Washington's Coastal Zone Management Program review for this proposal, NAS Whidbey Island and Department of Ecology have agreed to a third extension of the Coastal Zone Management (CZM) review period until August 31, 2017.

If you have any questions regarding your application or the CZM process, please contact Rebekah Padgett at (425) 649-7129 or email [Rebekah.Padgett@ecy.wa.gov](mailto:Rebekah.Padgett@ecy.wa.gov).

Sincerely,

Joe Burcar, Section Manager  
Shorelands and Environmental Assistance Program

By certified mail: 9171 9690 0935 0163 8131 93

E-cc: Mike Bianchi, Naval Air Station Whidbey Island  
David Pater, Ecology  
Loree' Randall, Ecology





**From:** Bianchi, Michael C NAVFAC NW, PRW4  
**To:** [Padgett, Rebekah \(ECY\)](#)  
**Cc:** [Burcar, Joe \(ECY\)](#); [Padgett, Lisa M CIV USFF, N46](#); [Stallings, Sarah CIV NAVFAC Atlantic](#); [Williamson, Todd H CIV NAVFAC LANT, EV](#); [Bengtson, Melanie L CIV NAVFAC NW, PRW4](#); [FFC.RECORD](#); [FFC.RECORD](#); [FFC.RECORD](#)  
**Subject:** CZMA Comment Responses  
**Date:** Thursday, September 7, 2017 1:18:26 PM  
**Attachments:** [FINAL CZMA Comment Responses\\_090617\\_final.docx](#)  
[FINAL CZMA Comment Review\\_090617.xlsx](#)

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Rebekah,

Thank you for the opportunity to review the 184 public comments that WA Department of Ecology received on the Navy's Coastal Consistency Determination (CCD).

After extensive review of these public comments, no new information was learned that would necessitate changes to the Navy's CCD analysis.

Our review of public comments is attached. Within the excel spreadsheet, we listed each comment received, a summary of topics it covered, and a response code which corresponds to the write-ups in the attached word document. Most of the comments did not address coastal zone management related topics and did not reference the Navy's CCD analysis or Washington's Coastal Zone Management Program..

Once you have had a chance to review these documents, it may be helpful to schedule a conference call to clarify any questions you have on the Proposed Action, Draft EIS, or the CCD analysis.

As discussed with Mr. Joe Burcar, the Navy will grant an extension of two additional weeks to 21 September 2017 for completion of the consultation. Please reach out to Mike Bianchi (360-257-4024) or Lisa Padgett (757-836-8446) with further questions.

Sincerely,

Mike Bianchi  
Environmental Planner/Natural Resources Manager  
NAS Whidbey Island  
360.257.4024

GROWLER EIS PROJECT FILE  
##CODE.GROWLEREIS.PF##

## **1. Duplicative Comment**

This comment has reviewed and determined to be not related to the enforceable policies of the Washington State coastal zone. This comment is a duplicate of an exact comment received by the Navy during the public comment period of the Draft Environmental Impact Statement (Draft EIS) for EA-18G Growler Airfield Operations at NAS Whidbey Island Complex. The Navy accepted public comment on the Draft EIS from November 10, 2016, to February 24, 2017. Comments received during that time will be responded to in the Final Environmental Impact Statement.

## **2. Out of Scope**

This comment has been reviewed and determined to not be related to the enforceable policies of the Washington State coastal zone, which include: (1) Shoreline Management Act, (2) Clean Water Act, (3) Clean Air Act, (4) State Environmental Policy Act, (5) Energy Facility Site Evaluation Council law, and (6) Ocean Resources Management Act.

## **3. General Response**

The Navy has determined the information provided in the Draft Environmental Impact Statement for EA-18G Growler Airfield Operations at NAS Whidbey Island Complex (Draft EIS), including the Coastal Consistency Determination provided in Appendix G of the Draft EIS, is sufficient to support the Washington State Department of Ecology Coastal Zone Management Act Determination. After careful consideration of the information, data, and analysis provided in the Draft EIS, the Navy determined that the Proposed Action (regardless of the alternative chosen) will be undertaken in a manner fully consistent with the applicable objectives and the enforceable policies of Washington's Coastal Resources Management Program.

The Navy analyzed impacts from the Proposed Action on many natural and human resource areas. Analysis relevant to the Coastal Consistency Determination including, but is not limited to, air quality, water quality, land use impacts from construction, and climate change.

The Navy analyzed criteria pollutants and National Ambient Air Quality Standards for mobile and stationary source emissions (see Sections 3.4.1, 3.4.2, 4.4.2.1, 4.4.3.1, and 4.4.4.1 of the Draft EIS) under the Clean Air Act, Hazardous Air Pollutants (see Sections 3.4.1 of the Draft EIS), and Navy air permits (see Section 3.4.1, 3.4.2, 4.4.2.1, 4.4.3.1, and 4.4.4.1 of the Draft EIS).

The Navy analyzed impacts on water resources. Analysis includes discussion of impacts on groundwater (see Sections 3.9.2.1 and 4.9.2.1 of the Draft EIS), surface water (see Sections 3.9.2.2 and 4.9.2.1 of the Draft EIS), wetlands (see Sections 3.9.2.3 and 4.9.2.1 of the Draft EIS) floodplains (see Sections 3.9.2.4 and 4.9.2.1 of the Draft EIS) and marine waters and sediments (see Sections 3.9.2.5 and 4.9.2.1 of the Draft EIS).

The Navy included information on PFCs and AFFF under the Hazardous Wastes and Materials analysis in Sections 3.15.2.3 and 4.15.2.1.

Construction requirements from the Proposed Action are identified in Section 2.3.3.3 of the Draft EIS. While the Proposed Action would occur on federal land within a coastal county of Washington, no aspect of the Proposed Action would have a direct effect on any protected shoreline or any shoreline natural resources. In addition, the Proposed Action would not interfere with public access



to any shoreline areas. Existing conditions and potential impacts to on-station land use is described in the Draft EIS in Sections 3.5.2.1 and 4.5.2.1.

The Navy analyzed the potential impact of the Proposed Action on climate change in Sections 3.16 and 4.16 of the Draft EIS. This discussion includes Navy implemented policies and programs to reduce greenhouse gases and a discussion of the Navy’s commitments to reduction of air emissions from mobile and stationary sources.

In addition, the Navy analyzed impacts from the Proposed Action on many natural and human resource areas not directly relevant to the Coastal Consistency Determination including, but not limited to, cumulative impacts, aircraft operations and noise, public health and safety, non-auditory health effects, recreation and wilderness, cultural resources, American Indian Traditional Resources, biological resources (terrestrial and marine), socioeconomics, environmental justice communities, traffic and transportation, infrastructure, geological resources, and hazardous waste and materials. A detailed analysis of the Proposed Action as it relates to these resource areas, as well as the resource areas outlined above can be found in the Draft EIS. The Navy accepted public comment on the Draft EIS November 10, 2016, to February 24, 2017. Comments received during that time will be responded to in the Final EIS.

#### 4. CCD Process and Review

Appendix G of the Draft Environmental Impact Statement (EIS) for EA-18G Growler Airfield Operations at NAS Whidbey Island Complex provides the prepared Coastal Consistency Determination. Prepared under the Federal Coastal Zone Management Act, the Navy has coordinated consistency review with Washington State Department of Ecology. The determination is based on an evaluation of the enforceable policies of Washington State coastal management program, which include: (1) Shoreline Management Act, (2) Clean Water Act, (3) Clean Air Act, (4) State Environmental Policy Act, (5) Energy Facility Site Evaluation Council law, and (6) Ocean Resources Management Act.

The Navy reviewed the Washington State coastal management program to identify enforceable policies that were relevant and applicable to the Proposed Action. The following table identifies and explains the Washington State coastal management program policies that are not applicable to the Proposed Action.

Enforceable Policy	Explanation of Non-Applicability
<b>State Environmental Policy Act (SEPA), Chapter 43.21 Revised Code of Washington (RCW)</b>	Proposed Action will comply with the National Environmental Policy Act, and state and local agencies will be provided an opportunity to review and comment on the environmental impacts. Therefore, a separate Washington SEPA review is not required.
<b>Washington State Energy Facility Site Evaluation Council, Chapter 80.50 RCW</b>	Proposed Action would not include the addition of any new energy facilities.
<b>Ocean Resources Management Act, Chapter 43.143 RCW</b>	Proposed Action does not include ocean uses or activities in the waters of Pacific Ocean along the coast of Washington.

Some commenters raised the issue of segmentation (i.e., analyzing impacts of connected actions independently instead of collectively in the same NEPA document), feeling that this Proposed Action may be improperly segmented under NEPA from other proposed actions in the Pacific Northwest. Each NEPA document addresses a specific proposed action, separated from other actions by its purpose and need, independent utility, timing and geographic location. Some NEPA documents are stand-alone documents; others tier off of and/or expand the analyses of other existing NEPA documents. NEPA documents for at-sea training (e.g., the Northwest Training and Testing EIS/OEIS) focus on training activities occurring within a range complex or MOA and involve different types of aircraft, ships, and range complex enhancements. However, NEPA documents that analyze a specific type of aircraft operation at a military airfield (in this case, the Growler) are focused in and around that airfield and its facility needs. While the Navy has analyzed, and is currently analyzing, various proposed actions in the area, those proposed actions are not preconditions for Growler operations at the NAS Whidbey Island complex. Growler operations at the NAS Whidbey Island complex are not a precondition for larger military readiness activities on range complexes in the Pacific Northwest. Even in the absence of this Proposed Action, military training in the Pacific Northwest would continue independently from this Proposed Action as analyzed in the documents referenced in Section 1.6 of the Draft EIS. The Navy does consider the impacts from past, present, and reasonably foreseeable future actions in Chapter 5 (Cumulative Impacts).

The Navy will continue to complete required reviews with the state and provide a final consistency decision in the Final EIS.

Last Name	First Name	Date Submitted	Notes on Topics Covered	Response Code	Comment Type
A	Karen	7/20/2017	Support	Out of Scope	
Anderberg	Carol	8/4/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Anderson	David	8/6/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Anonymous	Anonymous	7/31/2017	Noise; Noise impact on Wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Anonymous	Anonymous	7/31/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Baggott	Nancy	8/8/2017	General comments on Air Quality; Noise; and Water Quality (PFCs)	General	Comment references a CZMA-based topic generally
Banerjee	Julie	8/6/2017	General comment on the Clean Water Act in relation to PFCs	General	Comment references a CZMA-based topic generally
Banks	Tom	7/20/2017	Noise; Impact on community services and housing from increased population	Out of Scope	Comment does not reference a CZMA-based topic
Barrett	Chuck	7/22/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Battalia	Julienne	7/26/2017	11 Action Form Derivative (Noise) Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	Out of Scope	Comment does not reference a CZMA-based topic
Beck	Thomas E	8/7/2017	General comments on shoreline damage; Coastal aquatic herbaceous species impacts; Impacts to bird species; Air quality; Water impacts	General	Comment references a CZMA-based topic generally
Bennett	Susan	7/24/2017	General comments on Air quality (Washington Air Quality Laws); Water quality; Risk to coastal wetlands and residential/food production lands; Fuel dumping; BASH	General	Comment references a CZMA-based topic generally
Berg	Susan	8/6/2017	coastal wetlands and residential/food production lands; Fuel dumping; BASH	General	Comment references a CZMA-based topic generally
Blair	Jerold	8/1/2017	Noise; Pollution	Out of Scope	Comment does not reference a CZMA-based topic
Boyer	Ron	8/7/2017	General comments on air quality (CO2 emissions); Impacts to Migratory Birds	General	Comment references a CZMA-based topic generally
Brown	Gail	8/8/2017	11 Action Form Derivative (General Comments on PFC water contamination and pollution) General comments on water quality (PFCs); Noise; Community services and socioeconomic impacts	General	Comment references a CZMA-based topic generally
Buehler	George	7/27/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise. Derivative pieces of the letter includes: Fuel dumping; Water quality; Air quality; Impacts to farms	General	Comment references a CZMA-based topic generally
Burchfield	Janet	8/7/2017	quality; Impacts to farms	General	Comment references a CZMA-based topic generally
Burk	Jean	7/29/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Campbell	Don and Kathy	7/29/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Cardiff	Jeanine	7/26/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Carmean	Ingrid	8/8/2017	General comments on greenhouse gases; Air quality; Impacts to migratory birds; BASH Noise; Number of airplanes; Health impacts from noise: Weaponry sales to other countries	General	Comment references a CZMA-based topic generally
Carmichael	Tory	8/1/2017	countries	Out of Scope	Comment does not reference a CZMA-based topic
Carscadden	Don	8/9/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Cedar	C	7/26/2017	11 Action Form Derivative (Noise impact on marine species)	Out of Scope	Comment does not reference a CZMA-based topic
Chadd	Ed	7/22/2017	Impacts to marine species	Out of Scope	Comment does not reference a CZMA-based topic
Cheston	Fell	7/29/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
COER	Part I Comments	8/8/2017	Segmentation of Actions; Preserve Natural Character of Shoreline; Favor Long-term over Short-term benefits; Contamination of Shoreline; Wetlands; BASH, NASWI Superfund; Increase and Protect public access to Shoreline; Increase shoreline recreation; Number of Airplanes; Water Quality (PFCs); Stormwater; Actual Noise Measurements; Economic Impacts Noise and Geography; Soil and Water Testing; Cumulative Impacts; Fuel Dumping; Air Quality (emissions and particulates) on Shoreline); Health Effects on Wildlife; Insufficient EIS; Growler Vibration and Landslides and Historic Properties; Mitigation; Greenhouse Gases; Health Impacts; Violation of SEPA	Duplicative Comment; Out of Scope; General; CCD Process and Review	Comment references a CZMA enforceable policy directly
COER	Part II Comments	8/8/2017	Supporting Documentation for COER Part I	See response to COER Part I	Comment references a CZMA-based topic generally
Colli	Janet Elizabeth	8/7/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise; property values; toursim; safety	General	Comment references a CZMA-based topic generally
Coupeville Community Allies		8/8/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Cramer	Colette	8/8/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Cramer	William	8/8/2017	and noise	General	Comment references a CZMA-based topic generally
Crandell	Maribeth	8/8/2017	Noise; Noise impact on wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Davis	Wendy	7/23/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Davis	Andrea	8/6/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Day	David	8/8/2017	General comment on air quality (CO2 emissions); Access to coastal shoreline; Wetlands; Birds; Health effects; Water quality (PFCs)	General	Comment references a CZMA-based topic generally
Dickerson	David	8/7/2017	Duplicate of EIS Comment Specific comments on NASWI meeting requirements of Clean Air/Water Acts under SEPA; General comments on air quality; Water quality; Fuel dumping; Ocean acidification;	Duplicative Comment	Comment is a true duplicate of a comment submitted on the Draft EIS
Dilling	Cynthia	8/3/2017	Climate change; Recreation	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Dobson	Larry	7/22/2017	Opposition	Out of Scope	Comment does not reference a CZMA-based topic
Dobson	Bruce	8/7/2017	Noise; Health Effects	Out of Scope	Comment does not reference a CZMA-based topic
Donanberg	Bernard	7/24/2017	Noise; Use money elsewhere	Out of Scope	Comment does not reference a CZMA-based topic
Donnelly	Lynne	7/25/2017	Noise; Impacts to wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Dubinsky	Steve	7/25/2017	11 Action Form Derivative (Noise, Recreation; Alternatives)	Out of Scope	Comment does not reference a CZMA-based topic
Duck Loudermilk	Sarah	7/23/2017	Noise; Alternatives	Out of Scope	Comment does not reference a CZMA-based topic
Dunigan	Clancy	8/8/2017	General Air Quality	Out of Scope	Comment does not reference a CZMA-based topic
Durand	M.J.	8/7/2017	General comment on water quality; Wetland impacts; Shorebird habitat impacts Specific comment on request extension of comment period; General comments on PFCs;	General	Comment references a CZMA-based topic generally
Elinterez	Fran	8/5/2017	Air quality; Safety; Recreational fishing	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Entermann	Andre	7/25/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Ewell	Thomas	8/6/2017	General comments on wildlife Impacts; Impacts on farming; Tourism Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Farm	Jenne	8/5/2017	and noise	General	Comment references a CZMA-based topic generally
Fee	Bruce	8/5/2017	General comments on PFCs; Fuel dumping; Radioactive contamination at Ault Field	General	Comment references a CZMA-based topic generally
Fee	Kari	8/7/2017	General comments on impacts to wildlife; Water quality	General	Comment references a CZMA-based topic generally

Last Name	First Name	Date Submitted	Notes on Topics Covered	Response Code	Comment Type
Fessler	Cynthia	7/26/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Finley	Andrea	7/25/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Francis	Kirck	7/21/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Frost	Sheryl	7/31/2017	Property values; Noise; Impact on wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Glover	Julie	7/24/2017	Noise; Health effects	Out of Scope	Comment does not reference a CZMA-based topic
Goltz	Gary	7/30/2017	Noise; Health effects; Safety; Property values	Out of Scope	Comment does not reference a CZMA-based topic
Goodwin	Glen	8/9/2017	Noise; Public Participation	Out of Scope	Comment does not reference a CZMA-based topic
Greacen	Chris	8/5/2017	11 Action Form Derivative (Coastal resources; Noise)	General	Comment references a CZMA-based topic generally
Grimes	Karen and Watson	8/3/2017	11 Action Form Derivative (Noise)	Out of Scope	Comment does not reference a CZMA-based topic
Griskey	Michele	8/4/2017	General comments on shoreline habitats; Fuel dumping; Toxic runoff; Impacts to marine species	General	Comment references a CZMA-based topic generally
Gulick	Amy	8/8/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Haglund	George	8/3/2017	Property values; Wildlife;	General	Comment references a CZMA-based topic generally
Halas	Olivia	8/2/2017	Noise; Health Impacts from Noise	Out of Scope	Comment does not reference a CZMA-based topic
Halbakken	Vicki	8/5/2017	General comments on Air Quality; Noise; and Water quality	General	Comment references a CZMA-based topic generally
Hammer	Charles	7/22/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Harvey	Judy	7/21/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Hawdon	Neil	7/25/2017	Noise mitigation	Out of Scope	Comment does not reference a CZMA-based topic
Hays	Lynn	8/7/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Hong	Amy	7/25/2017	General comment on air, water and quality of life pollution	General	Comment references a CZMA-based topic generally
Horeth	Heide	8/2/2017	Noise; Geological Resources	Out of Scope	Comment does not reference a CZMA-based topic
Houts-Hussey	Patty	8/7/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Watson	Sue	8/7/2017	General comments on water quality (PFCs); Migratory Birds; BASH	General	Comment references a CZMA-based topic generally
Johnson	Bob	8/8/2017	General comments on air quality; Greenhouse gases; Water quality; Noise	General	Comment references a CZMA-based topic generally
Kalt	Annette	8/8/2017	General comments on air quality; Water quality; Noise; Health effects; Noise impacts to wildlife	General	Comment references a CZMA-based topic generally
Kammer	Nora	7/20/2017	Recreation; Noise impacts to wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Karen Ramsey	Don Farber	8/6/2017	General comments on air quality; Water quality	General	Comment references a CZMA-based topic generally
Keegan	Julie	7/22/2017	Noise; Alternatives	Out of Scope	Comment does not reference a CZMA-based topic
Kelly	Karen	8/8/2017	General comments on air quality; Water quality; Economic impacts	General	Comment references a CZMA-based topic generally
Kerlin	Christine	8/2/2017	11 Action Form Derivative (Air quality; Noise impacts to wildlife)	General	Comment references a CZMA-based topic generally
Kessler	Mike and Pam	7/22/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Kinch	Carolyn	7/21/2017	Noise impacts to wildlife and marine species	Out of Scope	Comment does not reference a CZMA-based topic
Knold Richardson	Mary Linda	7/25/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Knutson	Suzanne	7/23/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Koll	Gloria	8/8/2017	Noise Impacts to wildlife; Health effects	Out of Scope	Comment does not reference a CZMA-based topic
Krez	Carol	8/11/2017	General comment on air quality; Water quality; Noise	General	Comment references a CZMA-based topic generally
Kunzler	Joe	8/5/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Kunzler	Joe	8/8/2017	General Comment on Water quality/contamination	General	Comment references a CZMA-based topic generally
LaNua	Pam	8/8/2017	General comments on air and water pollution; Impacts to wildlife. The comment contains a duplicate of EIS comment after page 1.	General; Duplicative Comment	Comment references a CZMA-based topic generally
Lassegues	Dave	7/26/2017	Noise; Safety; Alternatives	Out of Scope	Comment does not reference a CZMA-based topic
Lassegues	Dave	8/7/2017	General comment on water quality; Fuel dumping; Wildlife impacts	General	Comment references a CZMA-based topic generally
Lev	Naomi	8/8/2017	General comment on air quality; Water quality; Soil contamination	General	Comment references a CZMA-based topic generally
Linehan	Pat	8/1/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Lloyd	Connie	7/29/2017	General comment on noise; Economic impacts; Housing; Shoreline access for recreational use; Wildlife impacts	General	Comment references a CZMA-based topic generally
Lobell	Robbie	8/7/2017	General comment on air quality	General	Comment references a CZMA-based topic generally
Lovell	Byrne	8/8/2017	General comments about greenhouse gases; Fuel dumping; Noise; Impacts to birds; BASH	General	Comment references a CZMA-based topic generally
Lovell	Peggy	8/8/2017	General comments on tourism; Alternatives; Air quality; Wetland impacts; Coastal resources; Marine wildlife impacts; Water quality	General	Comment references a CZMA-based topic generally
Lucas	Todd	8/2/2017	Noise; Noise impact on wildlife, ecosystems, and pets	Out of Scope	Comment does not reference a CZMA-based topic
Lundsten	Mark	8/8/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Macartney	Elke	8/4/2017	Air Quality; Fuel Dumping; Noise Impacts on Wildlife	General	Comment references a CZMA-based topic generally
MacDonald	Leslie	8/7/2017	11 Action Form	General	Comment references a CZMA-based topic generally
MacLeod	Dianna	7/30/2017	Air Quality; Water Quality; Fuel Dumping; PFOS; Erosion; Migratory Bird Impacts	General	Comment references a CZMA-based topic generally
Madrone	Sallie Rose	7/22/2017	Noise impacts on Wildlife and Plants	General	Comment references a CZMA-based topic generally
Magee	Marie	8/5/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Marx (Sierra Club; North Olympic Group)	Janet	7/25/2017	Comment Period Extension	CCD Process and Review	Comment references a CZMA enforceable policy directly
Marx (Sierra Club; North Olympic Group)	Janet	8/7/2017	Specific comments to make a determination after NEPA; Public input needed for Draft Determination Report; Segmentation and violation of NEPA/SEPA; Air quality; Greenhouse gases; Alternatives; Threatened and Endangered Species	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Matthews	Patricia	7/22/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
McCullough	Tom	8/8/2017	General comment on air quality; Aircraft emissions and WA Air Quality law	General	Comment references a CZMA-based topic generally
McIntyre-Workman	Denise	7/23/2017	Noise; Health Effects	Out of Scope	Comment does not reference a CZMA-based topic
Miller	Rhea	7/21/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Miner	Tony and Janelle	7/23/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Miranda	Dan	7/21/2017	Noise Impacts on Wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Montgomery	N.	7/25/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Myers	Kathy	7/23/2017	Noise; Economic impacts; Health effects	Out of Scope	Comment does not reference a CZMA-based topic
Myers	Suzanne	8/4/2017	Noise impacts on wildlife; Health effects	Out of Scope	Comment does not reference a CZMA-based topic
Newkirk	Garrett	8/8/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise. Derivative piece of extension of the public comment period	General; CCD Process and Review	Comment references a CZMA enforceable policy directly

Last Name	First Name	Date Submitted	Notes on Topics Covered	Response Code	Comment Type
Newkirk	Bonnie	n.d.	General comment on air quality; comment period extension; air operations; pollution; public participation	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Njilly	Billy	7/23/2017	Opposition	Out of Scope	Comment does not reference a CZMA-based topic
O'Bryant	Leah	8/7/2017	11 Action Form Derivative (inconsistency with coastal resources)	General	Comment references a CZMA-based topic generally
O'Donnell	Kristi	7/22/2017	Specific comments on shoreline resources; Electronic signaling effects on marine life; Fuel dumping; Water quality (PFCs)	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Olympic Forest Coalition	Jones, Patricia	8/14/2017	Specific comments on CCD based on flawed EIS; Shoreline resources; Air quality; Water quality; DEIS NEPA rating; Limiting project impacts on multiple resources; Water contamination; Rest of comment is a duplicate of EIS comment	General; CCD Process and Review; Duplicative Comment	Comment references a CZMA enforceable policy directly
Olsen	Vern and Marth	8/8/2017	Risk of Terrorist Attack	Out of Scope	Comment does not reference a CZMA-based topic
Olsen	Vern and Marth	8/8/2017	General comments on noise; Air quality; Water quality; Wetland impacts; Fuel dumping	General	Comment references a CZMA-based topic generally
Pedigo	Jack	8/1/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Pedigo	Jack	8/2/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Pedigo	Jack	8/2/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Peterson	Brian	7/31/2017	Noise; Airfield Operations	Out of Scope	Comment does not reference a CZMA-based topic
Peterson	Lynn	8/6/2017	General comments on water quality; Wetland impacts; Wildlife impacts; Shoreline resources	General	Comment references a CZMA-based topic generally
Pharrish	Robert	7/24/2017	General comment on wildlife impacts; Water quality	General	Comment references a CZMA-based topic generally
Piazzon	Dianna	8/8/2017	General comments on air quality; Water quality; BASH; Impacts to shoreline resources and ecosystems; Fuel dumping; Noise	General	Comment references a CZMA-based topic generally
Pohl	John	8/4/2017	11 Action Form Derivative (air quality; coastal resources)	General	Comment references a CZMA-based topic generally
Powell	Tracey	7/21/2017	Noise; Health effects	Out of Scope	Comment does not reference a CZMA-based topic
Power	LaVerne	8/8/2017	General comments on noise; Air quality; Water quality; Shoreline resources; Greenhouse gases; PFCs; Fuel dumping	General	Comment references a CZMA-based topic generally
Power	Leigh	8/8/2017	General comments on air quality; Water quality; Fuel dumping; Wildlife impacts; Ecosystem-wide impacts	General	Comment references a CZMA-based topic generally
Price	Michael	7/27/2017	Noise; Traffic	Out of Scope	Comment does not reference a CZMA-based topic
Price Johnson	Helen	8/7/2017	General comments on air quality; Water quality; Wetland impacts; (PFCs) Mitigation Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Rayne	Katlaina	8/7/2017	and noise	General	Comment references a CZMA-based topic generally
Robinson	Carl and Nancy	8/11/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Roe	Gary and Grace	8/7/2017	Noise impacts on marine species	Out of Scope	Comment does not reference a CZMA-based topic
Samuelson	Karen	8/11/2017	General comment on air quality; Noise	General	Comment references a CZMA-based topic generally
Saelens	Leslie	7/25/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Scharwat	Paula	8/7/2017	Noise; Health effects; Alternatives	Out of Scope	Comment does not reference a CZMA-based topic
Sextro	Robert	8/8/2017	Specific comments on CCD should not be accepted until NEPA complete; Impacts to estuarine environments; Impacts to areas outside immediate surroundings; Violation of NEPA; Violation of SMA; Cumulative impacts of emissions; Water contamination; Fuel dumping	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Shaffstall	Mary	8/6/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Shiner	Dianne	8/8/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Short	Brian	8/7/2017	and noise	General	Comment references a CZMA-based topic generally
Silverstein	Brian	8/2/2017	11 Action Form Derivative	Out of Scope	Comment does not reference a CZMA-based topic
Solberg	Richard	8/4/2017	General comment on air pollution; Safety	General	Comment references a CZMA-based topic generally
von Stark	Harry	8/8/2017	General comment on water quality; Fuel dumping; Quality of life; Wildlife habitat impacts; Alternatives	General	Comment references a CZMA-based topic generally
von Stark	Jan Hoy	8/8/2017	General comment on water quality; Fuel dumping; Quality of life; Wildlife habitat impacts; Alternatives	General	Comment references a CZMA-based topic generally
Stone	Shannon	7/21/2017	General comments on water quality; noise; Impact to marine mammals	General	Comment references a CZMA-based topic generally
Sward	Joyce	7/28/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Swanson	Stephen and Sandra	8/7/2017	General comment on water quality; PFO bioaccumulation in fish; Impacts to marine mammals; Superfund Site; Noise; Cleanup current contamination	General	Comment references a CZMA-based topic generally
Taylor	Lori	7/26/2017	11 Action Form Derivative (noise impacts on wildlife)	Out of Scope	Comment does not reference a CZMA-based topic
Taylor	Lori	8/8/2017	Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping, and noise	General	Comment references a CZMA-based topic generally
Tesch (National Parks Conservation Association)	Julia	8/7/2017	Analysis inadequate; incomplete analysis of cumulative impacts; improper scope of analysis; Project inconsistent with SMA; PFO contamination violates Clean Water Act	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Thomas	Thomas L.	8/7/2017	General comment on water quality; Contamination of aquifers; BASH	General	Comment references a CZMA-based topic generally
Thome	Robin	7/22/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
Thompson	Mindy	7/25/2017	Noise; Alternatives	Out of Scope	Comment does not reference a CZMA-based topic
Tinuviel	Kim	7/22/2017	General comment on noise; Water quality; Eliminate negative impacts of Navy Programs; Impacts to Canadians	General	Comment references a CZMA-based topic generally
Tivel	Robert	8/8/2017	Noise and then attached 3 comments previously submitted on Project	Out of Scope	Comment does not reference a CZMA-based topic
Toulgoat	Harry	8/7/2017	General comments on impacts to wetland and shoreline habitats; Impacts to birds; Air quality; Alternatives	General	Comment references a CZMA-based topic generally
Uhlig	Heike	7/28/2017	11 Action Form Derivative (noise impacts on wildlife and livestock)	Out of Scope	Comment does not reference a CZMA-based topic
Voorhees	Jim	7/24/2017	11 Action Form	Out of Scope	Comment does not reference a CZMA-based topic
Wagner	Rebecca	7/24/2017	Noise; Noise impacts on wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Ward Shepard (Audubon Society)	Kim	8/6/2017	Impacts to Birds; Water Quality	Duplicative Comment	Comment is a true duplicate of a comment submitted on the Draft EIS
Wechsler	Roger	7/20/2017	Opposition	Out of Scope	Comment does not reference a CZMA-based topic
Wellstein	Carl	7/23/2017	Support	Out of Scope	Comment does not reference a CZMA-based topic
West	F.	8/7/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
White	Linle	7/22/2017	General comment on noise; Air quality; Water quality; Safety	General	Comment references a CZMA-based topic generally
Whitesavage	Jean	7/22/2017	General comments on water quality; Fuel dumping	General	Comment references a CZMA-based topic generally
Whitmire	Cathy	8/6/2017	Noise; Health effects	Out of Scope	Comment does not reference a CZMA-based topic
Wiese	Deborah and Ruth Haasl-	7/29/2017	Specific comment that the project does not meet requirements of CZMA; impacts to wildlife and unique habitats	General; CCD Process and Review	Comment references a CZMA enforceable policy directly
Wilbur	Brenda	7/21/2017	Noise impacts on wildlife	Out of Scope	Comment does not reference a CZMA-based topic
Wilbur	Robert	7/21/2017	Request of additional information on the comment process	CCD Process and Review	Comment references a CZMA enforceable policy directly

Last Name	First Name	Date Submitted	Notes on Topics Covered	Response Code	Comment Type
William		7/24/2017	Noise	Out of Scope	Comment does not reference a CZMA-based topic
Winkel	Dina	7/25/2017	11 Action Form Derivative (noise)	Out of Scope	Comment does not reference a CZMA-based topic
Woodbridge	Jennifer	7/21/2017	Noise; Health Effects Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping,	Out of Scope	Comment does not reference a CZMA-based topic
Wright	Deborah	8/6/2017	and noise	General	Comment references a CZMA-based topic generally
Wubbels	Rosann	7/22/2017	Opposition Form letter for CCD comment submittal: Generally discusses air quality, water quality (PFCs), wetland impacts, BASH, decreased public access to coastal areas, fuel dumping,	Out of Scope	Comment does not reference a CZMA-based topic
Zingarelli	Dorit	8/7/2017	and noise	General	Comment references a CZMA-based topic generally
	Anna	7/31/2017	Noise; Noise impacts to wildlife and pets	Out of Scope	Comment does not reference a CZMA-based topic



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

September 20, 2017

Captain G. C. Moore  
Department of the Navy  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278

**RE: Coastal Zone Consistency for Continuation and Expansion of Electronic Attack Operations and Capabilities at Naval Air Station (NAS) Whidbey Island Project, Island County, Washington**

Dear Captain Moore:

On May 30, 2017, the U.S. Department of the Navy (Navy) submitted a Certification of Consistency with the Washington State Coastal Zone Management Program (CZMP), for the Continuation and Expansion of Electronic Attack Operations and Capabilities at NAS Whidbey Island project. The following extensions were agreed to:

- On July 26, 2017, the Navy and Department of Ecology (Ecology) agreed to extend the CZM until August 13, 2017.
- A second extension was agreed to on August 10, 2017, extending CZM until August 20, 2017.
- A third extension was agreed to on August 16, 2017, extending CZM until August 31, 2017.
- A fourth extension was agreed to on August 31, 2017, extending CZM until September 14, 2017.
- A fifth extension was agreed to on September 7, 2017, extending CZM until September 21, 2017.

The proposal includes the following:

1. Continue and expand EA-18G Growler operations at the NAS Whidbey Island complex, including field carrier landing practice by Growler aircraft at Ault Field and Outlying Landing Field Coupeville.
2. Increase electronic attack capabilities (provide for an increase of 35-36 aircraft) to support an expanded U.S. Department of Defense mission for identifying, tracking, and targeting in a complex electronic warfare environment.
3. Construction and renovation of facilities at Ault Field to accommodate additional Growler aircraft.
4. Station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community.



The project is located at NAS Whidbey Island complex, Whidbey Island, Island County, Washington, WRIA 6.

Pursuant to Section 307(c)(3) of the Coastal Zone Management Act of 1972 as amended, Ecology concurs with the Navy’s determination that the proposed work is consistent with Washington’s CZMP.

If you have any questions regarding Ecology’s consistency determination please contact Rebekah Padgett at (425) 649-7129.

**YOUR RIGHT TO APPEAL**

You have a right to appeal this consistency determination to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this consistency determination:

- File your appeal and a copy of this consistency determination with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this consistency determination on Ecology in paper form - by mail or in person. (See addresses below.) Email is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

**ADDRESS AND LOCATION INFORMATION**

Street Addresses	Mailing Addresses
<p><b>Department of Ecology</b>                      Attn: Appeals Processing Desk                      300 Desmond Drive SE                      Lacey, WA 98503</p>	<p><b>Department of Ecology</b>                      Attn: Appeals Processing Desk                      PO Box 47608                      Olympia, WA 98504-7608</p>
<p><b>Pollution Control Hearings Board</b>                      1111 Israel RD SW                      STE 301                      Tumwater, WA 98501</p>	<p><b>Pollution Control Hearings Board</b>                      PO Box 40903                      Olympia, WA 98504-0903</p>



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September 20, 2017  
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Sincerely,



Joe Burcar, Section Manager  
Shorelands and Environmental Assistance Program

Enclosure

By certified mail: 9171 9690 0935 0163 8133 22

Cc: Mike Bianchi, Naval Air Station Whidbey Island  
Brian Hooper, U.S. Army Corps of Engineers  
Hiller West, Island County Community Development  
Dennis Lefevre, Oak Harbor Development Services  
Rebecca Wagner  
Mike and Pam Kessler  
Bonnie Newkirk  
Karen and Watson Grimes  
Jack Pedigo  
Jerold Blair  
Joyce Sward  
Amy Arisco  
Andre Entermann, Sunnyfield Farm

E-cc: See attached list

### E-cc Distribution List

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Janet Marx, Sierra Club North Olympic Group  
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Captain G. C. Moore

September 20, 2017

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Captain G. C. Moore

September 20, 2017

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## Biological Consulting Documentation



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## Biological Consulting Documentation

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## National Marine Fisheries Service (NMFS)



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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 N44/1122  
April 20, 2017

Mr. Barry Thom  
West Coast Regional Administrator  
National Marine Fisheries Service  
1201 NE Lloyd Blvd.  
Portland, OR 97232-1202

Dear Mr. Thom:

The U.S. Department of the Navy (Navy) is requesting an informal consultation with the National Marine Fisheries Service (NMFS), as required under section 7(a)(2) of the Endangered Species Act (ESA), as amended, for the proposed EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island, Oak Harbor, Washington. The Navy has already been in contact with NMFS, having had pre-consultation conversations with Ms. Janet Curran (copied below) regarding this project. Enclosed is a copy of the informal consultation package for the proposed project for your review.

The Navy proposes the following project activities:

- a. Continue and expand existing Growler operations.
- b. Increase electronic attack capabilities by adding up to 36 aircraft.
- c. Construct and renovate facilities at Ault Field to accommodate additional aircraft.
- d. Station additional personnel and their family members at the Complex and in the surrounding community.

Aircraft operations will increase to levels similar to those experienced historically over the life of the airfield that has supported naval aviation for more than 70 years. Construction could begin as early as 2017 with personnel and aircraft arriving incrementally. The year 2021 represents full implementation of the proposed action.

The Navy's analysis of the potential impacts of the proposed project to ESA listed species and designated critical habitat are provided in the enclosed informal consultation package as required under Section 7(c) of the ESA. In regards to species under the jurisdiction of NMFS, the Navy concludes the proposed project "may affect, but is not likely to adversely affect" Mexico and Central America DPS humpback whales (*Megaptera novaeangliae*), and Southern Resident DPS killer whales (*Orcinus orca*).

5090  
Ser N44/1122  
April 20, 2017

With the enclosed informal consultation package, we are providing the best scientific and commercial data available concerning the impact of the proposed project on listed species. The Navy understands that informal consultation will be initiated by your receipt of this informal consultation request, and we look forward to receiving a letter from you within 30 days concurring with our effect determination. If you have any questions or concerns regarding the package, we request you contact us at your earliest convenience.

Please direct any written response and additional inquiries regarding the biological assessment for the project to Mike Bianchi, who can be contacted at [michael.bianchi1@navy.mil](mailto:michael.bianchi1@navy.mil) or (360) 257-4024.

Sincerely,



G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Informal Consultation Package

Copy To:  
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National Marine Fisheries Service  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, WA 98115

**Informal Consultation Package for  
EA-18G Growler Airfield Operations at the Naval Air Station Whidbey  
Island Complex,  
Oak Harbor, Washington**

**April 2017**

**Prepared by:**



**United States Department of the Navy**

**UNCLASSIFIED**

## EXECUTIVE SUMMARY

This consultation package was prepared in accordance with section 7(a)(2) of the Endangered Species Act (ESA) of 1973 (16 United States Code [U.S.C.] 1531-1544, as amended). The document evaluates the potential effects to species protected under the ESA from the potential increased EA-18G Growler aircraft and aircraft operations at Naval Air Station (NAS) Whidbey Island, Oak Harbor Washington. Please refer to Appendix A for a determination table for all species that could occur in the action area.

The Navy is proposing to increase electronic attack capabilities by adding additional aircraft to support an expanded U.S Department of Defense (DoD) mission; expand existing operations; renovate and construct facilities to accommodate the additional aircraft; and increase personnel and their family members at the NAS Whidbey Island complex and in the surrounding community. The proposed action would increase aircraft operations to levels similar to those experienced historically over the life of the airfield.

The purpose of the proposed action is to augment the Navy's existing electronic attack community at NAS Whidbey Island by operating additional EA-18G Growler aircraft as appropriated by Congress. The Navy needs to effectively and efficiently increase electronic attack capabilities in order to counter increasingly sophisticated threats and provide more aircraft per squadron in order to give operational commanders more flexibility in addressing future threats and missions. The need for the proposed action is to maintain and expand EA-18G Growler operational readiness to support national defense requirements under Title 10, United States Code (U.S.C.), Section 5062.

Construction of new and improved facilities could begin as early as 2017. Personnel and aircraft would arrive incrementally, as aircraft are delivered by the manufacturer, personnel are trained, and families relocate to the area, until the action is complete. The year 2021 represents full implementation of the proposed action.

This document focuses on the potential effects of the proposed action on the Mexico and Central America humpback whale distinct population segments (DPS) (*Megaptera novaeangliae*) and Southern Resident killer whale (*Orcinus orca*). Potential impacts would be related to aircraft noise.

The proposed action presents the potential for aircraft noise disturbance to humpback and Southern Resident killer whales. As part of the 2015 NWTT BO, NMFS agreed that overflights above 1,000 ft. do not cause a reaction in marine mammals. Therefore, in order for aircraft noise to potentially have an effect on humpback and Southern Resident killer whales, they would have to be at the surface of the water and be almost directly underneath a low altitude (<1,000 ft.) aircraft passing overhead. The likelihood of this occurring, and therefore effects to humpback and Southern Resident killer whales, is discountable and insignificant for the following reasons.

- The portions of flights that occur at low altitudes happen mostly over land.
- The total number of aircraft hours would be split between the two facilities (Ault Field and OLF Coupeville) and would be spread out over the course of a year.
- Humpback and killer whales that may be present in the action area are currently exposed to high levels of ambient underwater noise that could potentially drown out or lessen the sounds of aircraft overflights.
- Humpback and Southern Resident killer presence in the action area varies, and in the past two years there were limited sightings.



Pursuant to section 7(a)(2) of the ESA, the Navy has determined that the proposed action may affect, but is not likely to adversely affect the Mexico or Central America humpback whale. The Navy has determined that the proposed action may affect, but is not likely to adversely affect the Southern Resident killer. There would be no effect on designated Southern Resident killer whale critical habitat.

**Consultation Package for EA-18G “Growler” Airfield Operations at the Naval Air  
Station Whidbey Island Complex**

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## **ACRONYMNS AND ABBREVIATIONS**

AGL	Above Ground Level
dB	Decibel
DPS	Distinct Population Segment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FCLP	Field Carrier Landing Practice
FR	Federal Register
NAS	Naval Air Station
NMFS	National Marine Fisheries Service
NWTRC	Northwest Training Range Complex
NWTT	Northwest Training and Testing
OLF	Outlying Landing Field
SPL	Sound Pressure Level
USFWS	United States Fish and Wildlife Service

## **1.0 INTRODUCTION**

### **1.1 PURPOSE**

This consultation package analyzes the expansion of existing EA-18G Growler operations at the Naval Air Station (NAS) Whidbey Island complex, Oak Harbor, Washington. The US Navy proposes to expand EA-18G Growler operations by adding up to 36 additional aircraft and increasing annual operations up to 46 percent, which is a return to previous levels of airfield operations.

This consultation package was prepared in compliance with section 7(a)(2) of the federal Endangered Species Act (ESA) of 1973 (16 United States Code [U.S.C.] 1531–1544, as amended) and used the best scientific and commercial information available to assess the risks posed to the listed species and/or critical habitat(s) if the proposed action were to be implemented. The ESA requires that federal agencies “insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of designated critical habitat.”

Section 7(a)(2) of the ESA implementing regulations requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NMFS), collectively known as “the Services,” regarding species protected under this act.

This consultation package constitutes the U.S. Department of the Navy’s analysis of potential effects on species protected under the ESA within NMFS’s jurisdiction, as required by section 7(a)(2) of the ESA implementing regulations. The Navy has initiated a separate ESA section 7(a)(2) consultation for the same action with the USFWS for species under their jurisdiction.

The purpose of the consultation package is to:

- Meet the requirements of section 7(a)(2) of the ESA (50 Code of Federal Regulations [CFR] part 402).
- Evaluate the effects of the proposed action on listed species and/or their critical habitat that are known to be or could be present within the action area.
- Request concurrence from NMFS with the Navy’s effect determinations for listed species.

### **1.2 BACKGROUND**

Commissioned in 1942 as part of NAS Whidbey Island, Ault Field is the only Naval air station in the Pacific Northwest. It has supported Naval aviation for more than 70 years and served as the primary home base location for the Navy’s Electronic Warfare community for more than 45 years. Ault Field and the Seaplane Base were identified as ideal locations for the rearming and refueling of Navy patrol planes and other tactical aircraft operating in defense of Puget Sound during World War II. Outlying landing field (OLF) Coupeville became operational in 1943 to support practice approach/landings and emergency landings. Over a period of more than 40 years, Ault Field has evolved into the Navy’s home for its Electronic Attack aircraft. OLF Coupeville, an integral part of operations at Ault Field, provides the most realistic training for field carrier landing practice (FCLP) in the northwest, as well as training for search-and-rescue and parachute operations. The Navy has continuously used OLF Coupeville for field carrier landing practice since the late 1960s.

Ault Field is the home base location of the Navy's entire tactical Electronic Attack community in the U.S., including all Growler squadrons, and provides facilities and support services for nine carrier squadrons, three expeditionary squadrons, one expeditionary reserve squadron, one training squadron, and an electronic attack weapons school. The carrier and expeditionary squadrons have similar missions but differ in where they deploy and how they train before deployment.

Three types of Growler squadrons support the Airborne Electronic Attack mission for the U.S. Department of Defense (DoD):

- **Carrier squadrons** deploy on aircraft carriers and conduct periodic FCLP to requalify to land on aircraft carriers.
- **Expeditionary squadrons**, including the reserve squadron, deploy to overseas land-based locations and therefore do not normally require periodic FCLP prior to deployment.
- **The training squadron**, which is also known as the Fleet Replacement Squadron, or FRS, is the training squadron responsible for "post-graduate" training of newly designated Navy pilots and Naval Flight Officers, those returning to flight after non-flying assignments, or those transitioning to new aircraft for duty in the Fleet. The training squadron is the "schoolhouse" where pilots receive their initial FCLP, and it fosters professional standardization and a sense of community.

Electronic warfare has played a key role in combat operations since first being introduced during World War II, and its importance continues to grow as potential adversaries invest in modern threat systems. The mission of the Navy's Growler aircraft is to suppress enemy air defenses and communications systems. Additionally, Navy Growlers disrupt land-based threats in order to protect the lives of U.S. ground forces. The Secretary of Defense directed that the tactical Airborne Electronic Attack mission is the exclusive responsibility of the Navy. As a result, the Navy is the only U.S. military service to maintain a tactical airborne electronic attack capability and is required to preserve and cultivate the expertise and knowledge of the Growler community.

In spring 2014, the Navy assessed that it would need additional Growlers in order to address current and future threats, and submitted a request to Congress to purchase additional Growlers. At that time, it was unclear whether Congress would authorize the purchase of additional Growlers. Nonetheless, since there was a possibility that additional Growler aircraft could be purchased in the future, the Navy elected to revise the scope for the environmental impact statement (EIS) effort in order to be transparent with the public as to future possibilities. The revised scope for the EIS was announced in October 2014. Subsequently, Congress authorized the purchase of additional Growler aircraft in 2015 and 2016.

### **1.3 PREVIOUS CONSULTATIONS FOR US NAVY PROJECTS IN WASHINGTON**

The Navy has previously consulted with NMFS for operations occurring in the vicinity of NAS Whidbey Island. Consultations for the Northwest Training Range Complex (NWTRC) and Northwest Training and Testing (NWTT) incorporated a significantly larger action area than that of the home-basing projects at NAS Whidbey Island (exposing a larger number of humpback and Southern Resident killer whales) and, while aircraft overflights were analyzed, stressors for more extensive military activities including explosive ordnance and the use of sonar were also included (which are not included in this project). Even still, the effects of those actions were determined to be insignificant and discountable and thus not

likely to adversely affect ESA-listed marine mammals. This section discusses prior consultations that analyzed the potential impacts of aircraft noise to ESA-listed marine mammal species.

#### U.S. Pacific Fleet Northwest Training Range Complex

October 2008: The Navy submitted a biological assessment to NMFS for the Northwest Training Range Complex (NWTRC), the principal local range for surface, submarine, aviation, and explosive ordnance units located at NAS Whidbey Island, Naval Station Everett, Puget Sound Naval Station, Naval Base Kitsap-Bremerton and Naval Base Kitsap Bangor, WA. The NWTRC action area included airspace in northwest Washington, and therefore, similar activities and associated effects analyses to listed marine mammals provide relevant support for this document. In reply, NMFS issued a biological opinion to the Navy in 2010. Sonar and explosive ordnance were the most emphasized stressors addressed in the biological opinion. NMFS stated that while Southern Resident killer whales tend to spend most of their time in inland waters, exposure to NWTRC activities (including explosive ordnance and sonar) are not likely to adversely affect the behavioral ecology and social dynamics of individual Southern Resident killer whales in ways or to a degree that would reduce their longevity or reproductive success (National Marine Fisheries Service 2010). EA-18G Growler aircraft operations do not employ sonar or explosive ordnance. Aircraft noise was analyzed in the biological opinion and was determined not likely to adversely affect listed marine mammals (National Marine Fisheries Service 2010).

#### Expeditionary Transition of EA-6B Prowler Squadrons to EA-18G Growler at NAS

Analysis conducted for the Expeditionary Transition of EA-6B Prowler to EA-18G Growler Squadrons at NAS Whidbey Island as well as the addition of 11 EA-18G Growler aircraft in 2012, determined that the actions would have no effect on ESA-listed fish or marine mammals and the Navy did not initiate consultation with NMFS (U.S. Department of the Navy 2012b).

#### U.S. Pacific Fleet Northwest Testing and Training Activities

January 2015: The Navy submitted a biological assessment to NMFS for Northwest Training and Testing (NWTT) activities in the eastern North Pacific Ocean region, to include the Strait of Juan de Fuca, Puget Sound, and Western Behm Canal in southeastern Alaska. NWTT activities spanned an area substantially larger (and therefore with the potential to expose many more whales) than airspace for EA-18G Growler will require for the proposed action, including the use of helicopters, and employs actions other than just aircraft operations; however, there is relevance to this document in the NMFS analysis of fixed-wing aircraft overflight noise impacts on marine mammals.

November 9, 2015: NMFS issued a Biological Opinion and Conference Report on NWTT activities. NMFS concluded for all marine species in the action area for the project that, "In the event an ESA-listed species was exposed to aircraft noise, it would likely result in a temporary behavioral response. These behavioral responses would not increase the likelihood of injury from significantly disrupting breeding, feeding, or sheltering and would not rise to the level of take. Therefore, the effect of aircraft noise on ESA-listed species is insignificant and not likely to adversely affect them (National Marine Fisheries Service 2015)."

## **2.0 DESCRIPTION OF THE ACTION AND ACTION AREA**

The NAS Whidbey Island complex is located in Island County, Washington, on Whidbey Island, in the northern Puget Sound region (Figure 2-1). The NAS Whidbey Island complex includes the main air station (Ault Field), OLF Coupeville, the Seaplane Base, and Lake Hancock. Ault Field is located in the north-central part of the island, adjacent to the City of Oak Harbor (Figure 2-2). OLF Coupeville is located approximately 10 miles south of Ault Field (Figure 2-3) and is used primarily for field carrier landing practice (FCLP).

### **2.1 PROPOSED ACTION**

The Navy proposes to conduct the following actions:

- continue and expand existing Growler operations at the Naval Air Station (NAS) Whidbey Island complex, which includes field carrier landing practice (FCLP) at Ault Field and Outlying Landing Field (OLF) Coupeville
- increase electronic attack capabilities by adding up to 36 aircraft to support an expanded DoD mission for identifying, tracking, and targeting threats in a complex electronic warfare environment
- construct and renovate facilities at Ault Field to accommodate additional Growler aircraft
- station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community

For the purpose of this consultation, the proposed action analyzed is that which will have the greatest impact on the environment. While the draft EIS for this project presented a variety of alternatives and scenarios, a preferred alternative has not yet been chosen. This proposed action takes into account the placement of the additional aircraft into their new squadrons and focuses on how the new structure will increase field carrier landing practice events, resulting in the largest noise impact on the surrounding environment. The number of total FCLPs occurring specifically at Ault Field and OLF Coupeville would depend on how the activities are split up between the two facilities, with neither location having more than 80% of the FCLPs. For example, if 80% percent of the FCLPs would occur at Ault Field, then only 20% percent of the FCLP would occur at OLF Coupeville, which would create the greatest impacts at Ault Field. A split assigning 80% of the FCLP to OLF Coupeville and 20% to Ault Field would be the most impactful to OLF Coupeville. This assessment is based on the most impactful scenario where the split in operations would create the most significant noise impacts, and therefore assumes the higher end of operations (80%) for both Ault Field and OLF Coupeville. As increased operations will not be split evenly between Ault Field and OLF Coupeville, this consultation analyzes the maximum amount of increased activity at each facility, and is thus an overestimate of the overall increase in activity.

#### **2.1.1 Additional Military Personnel and Dependents**

Implementation of the proposed action would result in minor increases in the personnel loading at the NAS Whidbey Island Complex and in the total population for the region. Total military personnel would increase by 664 personnel. As additional military personnel are stationed at the complex, it is assumed that their dependents (e.g., spouses and children) would also move into the region. Based on data collected in 2013 by the Office of the Deputy Assistant Secretary of the Defense (Military Community and Family Policy) on the average number of dependents for Navy and DoD personnel, there would be



an additional 910 military dependents for the proposed action. No additional military-controlled housing is currently planned to be built as a result of the proposed action, and all additional personnel would be absorbed within the local community. A 2015 housing study completed for the NAS Whidbey Island Complex found a total of 2,545 housing units vacant in 2013 in the communities located directly around the complex. Based on the relatively small change in military personnel and dependents as well as no new housing needs to be constructed to accommodate this increase, military personnel and dependents will have no effect on any listed species and will not be discussed further in the document.

### **2.1.2 Facility Construction**

The proposed action would require certain facilities and infrastructure to support the necessary training, maintenance, and operational requirements. The Navy evaluated existing and planned facility resources at Ault Field to identify the types and sizes of additional and/or modified facilities and infrastructure needed to support the proposed action. The Navy developed conceptual plans for modifying existing assets (e.g., buildings) or constructing new facilities and infrastructure where needed to resolve deficiencies. The facilities and infrastructure required for additional Growler aircraft and personnel, and to meet the needs of the proposed action, include: aircraft pavement, aircraft parking apron, flight training and briefing building, maintenance hangars, armament storage, and a mobile maintenance facility.

New construction to support new Growler aircraft and personnel would include additional armament storage, hangar facilities, Mobile Maintenance Facility storage area, and expanded personnel parking areas. The proposed action would require repairs to inactive taxiways for aircraft parking in addition to expanded hangar space. Hangar 12 would be expanded to accommodate additional training aircraft. All planned construction activities would occur on the north end of the flight line at Ault Field. New parking areas, maintenance facilities, and armament storage would be constructed along Enterprise Road at the north end of Charles Porter Road. Once constructed, facilities and parking would add up to approximately 2 acres of new impervious surface at the installation. The increase in impervious surface would be less than 1 percent compared to the existing approximately 600 acres of impervious surface at NAS Whidbey Island.

No construction would be required at OLF Coupeville because it is capable of supporting increased operational requirements in its current state.

Impacts to marine waters and sediment would be minimized and avoided through implementation of BMP's, low-impact development, and green infrastructure and therefore would not be significant. Examples of BMPs for controlling non-point source pollution include but are not limited to the following:

- Activities such as vehicle maintenance, chemical or waste oil storage, or transferring potential contaminants would be conducted in covered areas so stormwater would not wash contaminants into storm drains or surface waters.
- Areas that cannot be covered should have their stormwater runoff retained and diverted to the sanitary sewer system.
- The storm drain system should not be used to dump or discharge any materials or chemicals. All departments should notify the Environmental Division before conducting any operations that may discharge materials or washes into the system. This includes water from vehicle washing. All storm drains should be labeled with "no dumping" signs.

Because more than 1 acre would be disturbed during construction at Ault Field, a construction National Pollutant Discharge Elimination System stormwater permit would be obtained through the U.S. Environmental Protection Agency through its water quality permit program. Under the permit, the Navy would develop a site-specific plan for managing stormwater runoff and describe the BMPs to be implemented to eliminate erosion, sedimentation, and stormwater pollution. The Navy does not expect facility construction to impact water quality from erosion and off-site sedimentation during construction and thus, it will have no effect on the marine environment and will not be discussed further in this document.

### **2.1.3 Airfield Operations**

Aircraft flying patterns at, arriving at, or departing from Ault Field and OLF Coupeville normally fly routes called flight tracks. Flight tracks were developed to aid in the safe and efficient flow of air traffic and were established based on community impact, obstacle clearance, civil air traffic routes and available airspace, and navigational aid coverage, as well as current operational characteristics of the aircraft operating at both airfields.

Ault Field is the home base location for the Growler community, including nine carrier squadrons, three expeditionary squadrons, one expeditionary reserve squadron, and one training squadron. The training squadron provides initial and refresher Growler qualification training, including FCLP for all first-tour Growler aircrews and refresher training for Growler aircrews returning to a squadron after non-flying assignments. FCLP events occur at Ault Field as well as at OLF Coupeville. The carrier squadrons deploy on aircraft carriers and conduct periodic FCLP to requalify to land on aircraft carriers. Expeditionary squadrons, including the reserve squadron, deploy to land-based locations and therefore do not normally require periodic FCLP prior to deployment.

Ault Field consists of two intersecting runways, Runway 07/25 and Runway 14/32 (Figure 2-2). Both runways are 8,000 feet long and 200 feet wide. Ault Field is available for use 7 days per week, 24 hours per day. Aircraft generally take off into the wind for optimum safety and performance. Prevailing surface winds are from the southeast between October and March and from the southwest between April and September. Therefore, the prevailing wind direction as well as noise-abatement procedures result in Runways 25 and 14 being the most frequently used runways at the station. Approximately 46 percent of the airfield operations are assigned to Runway 25, and 32 percent are assigned to Runway 14. Runways 07 and 32 are used less frequently; 16 percent of the airfield operations are assigned to Runway 07, and 6 percent are assigned to Runway 32.

OLF Coupeville consists of one runway, Runway 14/32 (Figure 2-3). The runway is 5,400 feet long and 200 feet wide. OLF Coupeville is available for use 7 days per week, 24 hours per day, and similar to Ault Field, runway use is determined by prevailing winds and the performance characteristics of the Growler. The runway utilization goal at OLF Coupeville has been to split FCLPs equally between Runways 14 and 32. In recent years, however, due to a non-standard pattern on Runway 14, the utilization of Runway 14 has been significantly lower. This narrower pattern requires an unacceptably steep angle of bank for the Growler due to performance differences from the former Prowler flying the pattern.

As squadrons prepare for deployment on an aircraft carrier, activity significantly increases. This high tempo of activity is then followed by periods of reduced or no operations. Use of OLF Coupeville is largely dependent on operational deployment schedules and aircraft carrier qualification detachment schedules, and, as such, the number of operations at OLF Coupeville is less than at Ault Field.

A flight operation refers to a single takeoff or landing associated with a departure or arrival of an aircraft. A flight operation also may be part of a training maneuver (e.g. arrival part of FCLP). Basic flight operations are:

### **Departure**

An aircraft departure is described as an aircraft taking off to a local or non-local training area or as part of a training maneuver (e.g. the departure part of FCLP).

### **Arrival**

An arrival can be an aircraft landing on the runway after returning from a local or non-local training range, or as part of a training maneuver (e.g., the arrival part of FCLP). The three basic types of arrivals are:

- **Straight-In/Full-Stop Arrival**  
An aircraft lines up to the runway centerline several miles away from the airfield, descends gradually, lands, comes to a full stop, and then taxis off the runway
- **Overhead Break Arrival**  
An aircraft approaches the runway approximately 500 ft. above the altitude of the landing pattern. Approximately halfway down the runway, the aircraft performs a 180-degree turn to enter the landing pattern. Once established in the pattern, the aircraft performs a second 180-degree, descending turn to land on the runway. This event is an expeditious arrival using visual flight rule.
- **Instrument Approach**  
An aircraft approach conducted under both instrument flight rule (i.e., when aircraft are flown referring only to the aircraft instrument panel for navigation) and visual flight rule conditions provides realistic training for both Navy aircrews and air traffic controllers.

### **Pattern Operation**

A pattern operation is an aircraft arrival followed by a departure. When an aircraft operation is followed by a departure, each pattern is considered two operations: the landing or approach is counted as one operation, and the takeoff is counted as another. Pattern operations that could result in brief low altitude aircraft include the following types:

- **Touch-and-Go**  
An aircraft lands on a runway and takes off without coming to a full stop. After touching down, the pilot immediately goes to full power and takes off again.
- **Field Carrier Landing Practice**  
The required flight training that immediately precedes deployment and qualifies aircrews for carrier-landing operations. Per Navy guidance, pilots must perform FCLPs before initial carrier (ship) landings or requalification landings. The first carrier landing needs to occur within ten days of completion of FCLPs. These operations are conducted on a runway that simulates an aircraft carrier flight deck. FCLP is generally flown in a left-hand, closed-loop, racetrack-shaped pattern, ending with a touch and go landing or a low approach. A typical FCLP evolution lasts approximately 45 minutes, usually with three to five aircraft conducting eight to ten landings in each evolution. Aircraft in the FCLP are usually spaced about one minute apart. FCLP schedules are dictated by training and deployment schedules, occur with concentrated periods of high-tempo operations, and are followed by periods of little to no activity. Figure 2-4 illustrates the flight elevations and patterns typical of FCLP.

- Ground Controlled Approach/Carrier Controlled Approach**  
 During Ground Controlled and Carrier Controlled approaches, aircraft land with guidance from ground-based air traffic controllers to practice and conduct arrivals under actual or simulated adverse-weather conditions. Air traffic controllers provide aircrews with verbal course and elevation information, allowing them to make an instrument landing during instrument flight rule conditions. Ground Controlled Approach training is conducted in both instrument flight rule and visual flight rule conditions to provide realistic training for both Navy aircrews and air traffic controllers. Carrier Controlled Approach training is similar to Ground Control Approach but with the Landing Signal Officer present.

Annual operations under the no action (operations not affiliated with the proposed action) include arrivals, departures, FCLPs, and other pattern operations. Under the no action, there are 68,200 total EA-18G Growler operations at Ault Field and 6,100 operations at OLF Coupeville (Table 2-1). Under the proposed action, there would be up to 106,900 annual EA-18G Growler airfield operations at Ault Field and up to 35,100 EA-18G Growler operations at OLF Coupeville, to include arrivals, departures, FCLPs, and other pattern operations. This would be an increase of 38,700 and 29,000 operations at Ault Field and OLF Coupeville, respectively.

EA-18G Growler operations would be conducted in a manner similar to the current Navy aircraft training missions conducted at the NAS Whidbey Island complex, with the exception of standardizing the FCLP pattern for Runway 14 at OLF Coupeville, utilizing the same pattern for day and night operations. This FCLP pattern standardization will result in runway utilization of 30% at Runway 14 and 70% at Runway 32.

**Table 2-1 No Action and Proposed Action EA-18G Growler Aircraft Operations Comparison**

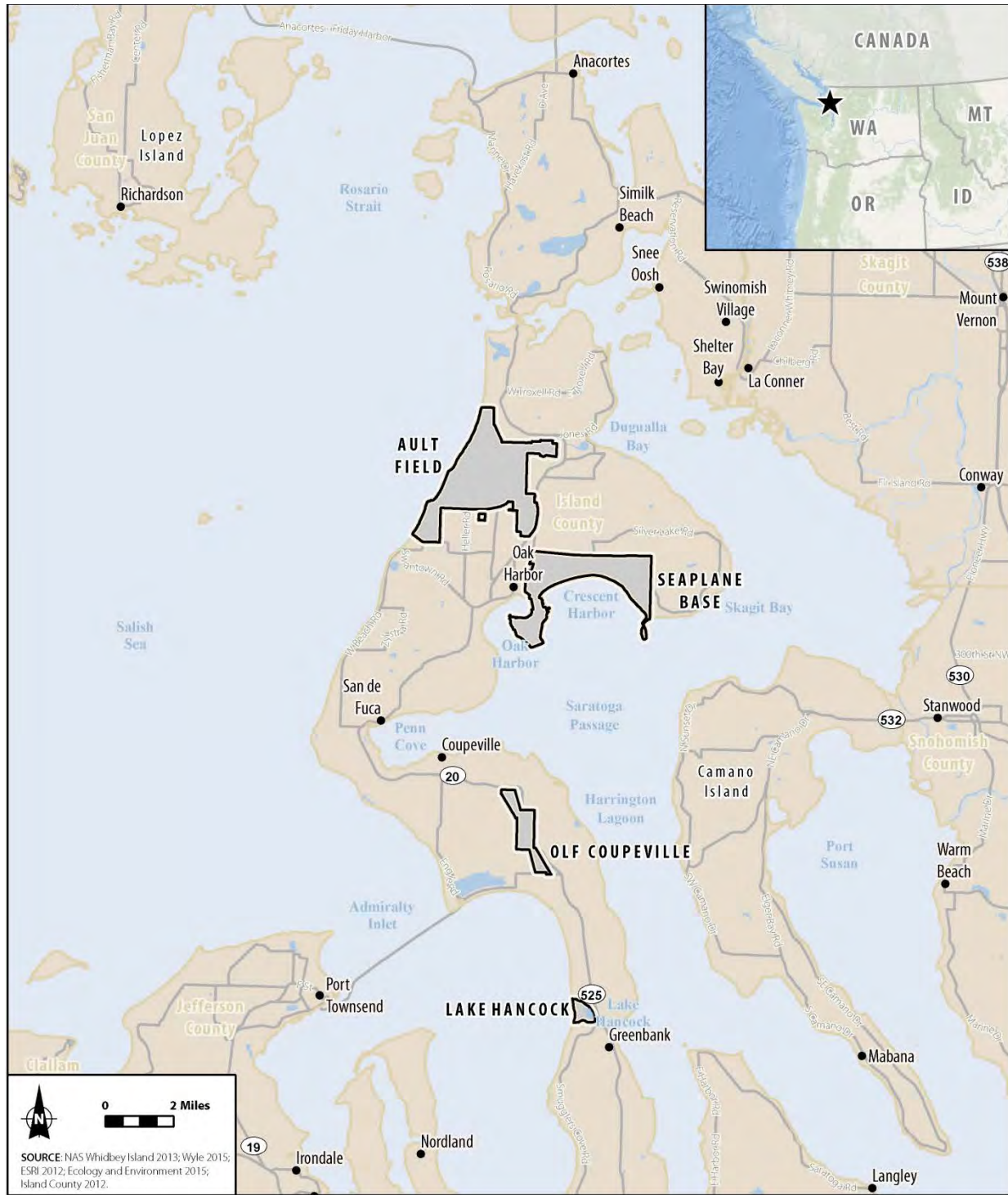
Action	FCLP	Other Operations	Total	Total Change
<b>Ault Field (Average Year)</b>				
No Action	14,700	53,500	68,200	
Proposed Action	35,100 <sup>1</sup>	71,800	106,900	+38,700
<b>OLF Coupeville (Average Year)</b>				
No Action	6,100	0	6,100	
Proposed Action	35,100 <sup>1</sup>	0	35,100	+29,000

<sup>1</sup>: These numbers are based on the most impactful scenario for each location (i.e. where the split in FCLP operations would create the most significant noise impacts. See Section 1.2 for more information.

## 2.2 ACTION AREA

The action area is defined in the ESA as all areas that could potentially be affected directly or indirectly by the federal action (50CFR § 402.02). The potential stressor associated with the proposed action is aircraft noise. As part of the 2015 NWTT BO, NMFS agreed that aircraft overflights above 1,000 feet (ft.) do not cause a reaction in marine mammals (National Marine Fisheries Service 2015). Therefore, the action area, as depicted in Figure 2-5, for this proposed action is the area where aircraft operations occur at an altitude of less than 1,000 ft.

**Figure 2-1 General Location Map – NAS Whidbey Island Complex**



**SOURCE:** NAS Whidbey Island 2013; Wyle 2015; ESRI 2012; Ecology and Environment 2015; Island County 2012.

- City
- County Boundary
- Major Road
- Installation Area

**General Location Map –  
NAS Whidbey Island Complex**  
Whidbey Island, Island County, WA



Figure 2-2 General Location Map – Ault Field



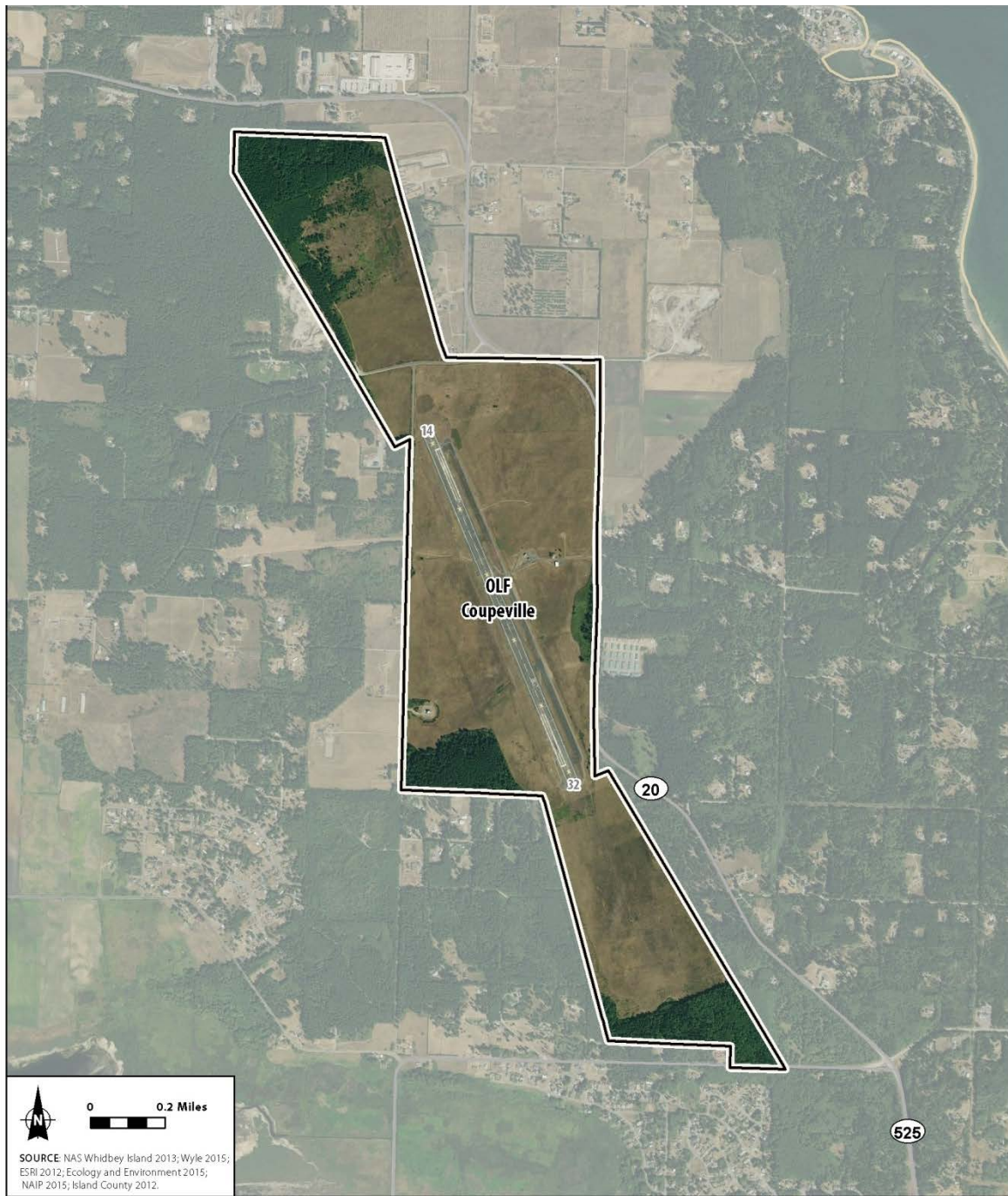
0 0.5 Miles  
 SOURCE: NAS Whidbey Island 2013; Wyle 2015; ESRI 2012; Ecology and Environment 2015; Island County 2012; NAIP 2015.

- City
- County Boundary
- Major Road
- Installation Area

General Location Map, Aerial,  
 Ault Field  
 Whidbey Island, Island County, WA



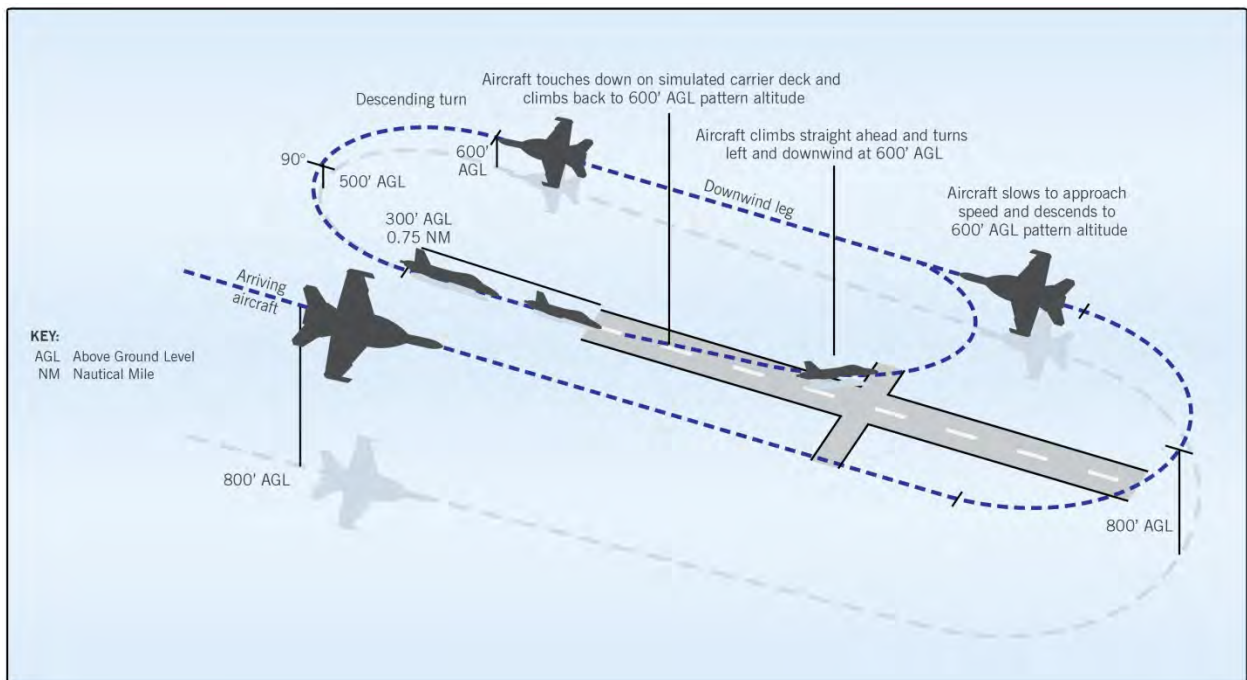
**Figure 2-3 General Location Map – OLF Coupeville**



- City
- County Boundary
- Major Road
- Installation Area

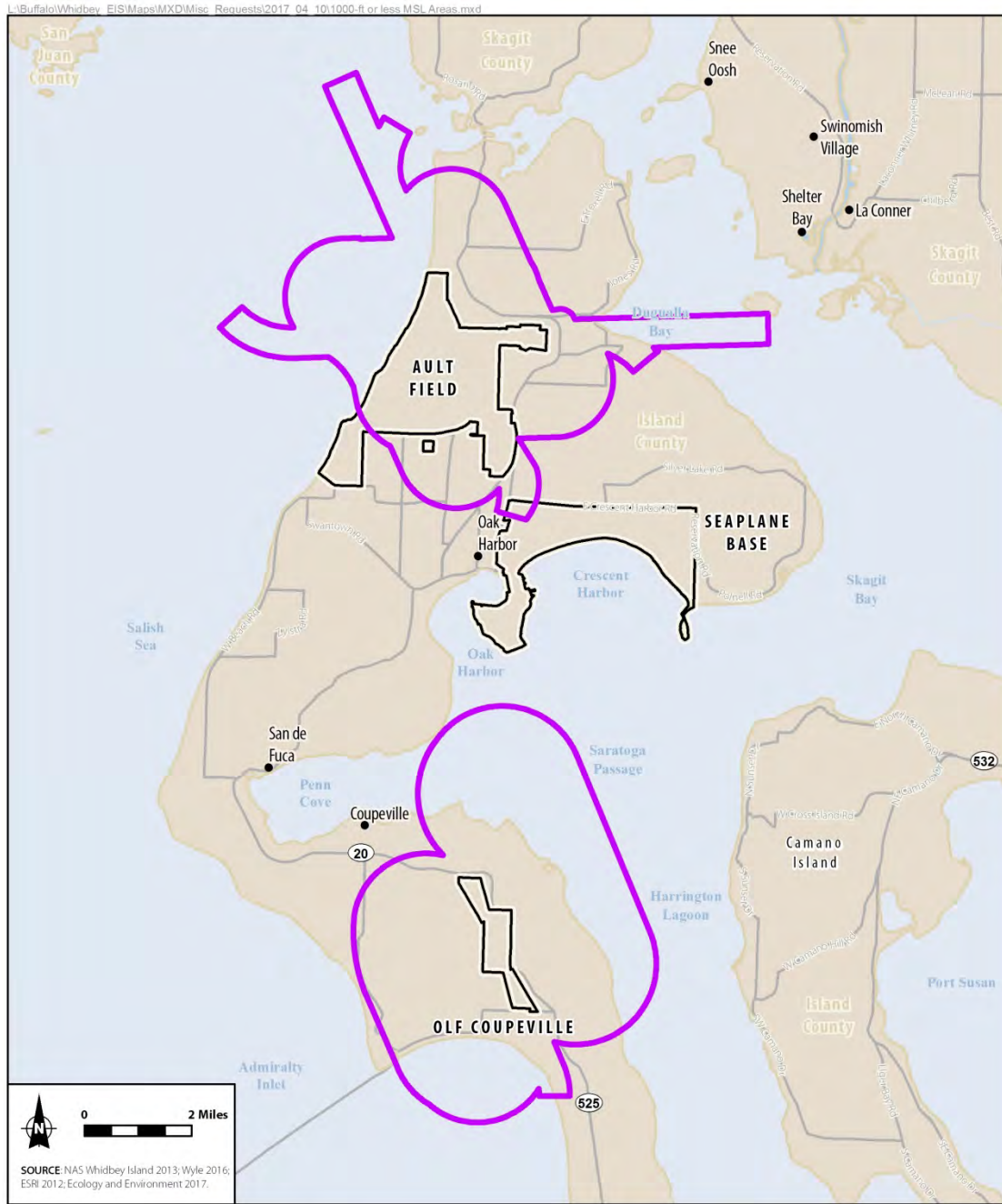
**General Location Map, Aerial –  
OLF Coupeville**  
Whidbey Island, Island County, WA

**Figure 2-4 FCLP Operation Pattern and Altitude**





**Figure 2-5 Aircraft Noise Action Area – Flights < 1,000 ft. MSL**



- City
- County Boundary
- Major Road
- ▭ Installation Area
- ▭ Approximate ≤ 1,000-ft MSL Overall Extent for Growler only Aircraft

**Figure 1**  
**Overall Extent of Approximate**  
**1,000-ft or Less Mean Sea Level (MSL)**  
**Area for Growler Only aircraft**  
 Whidbey Island, Island County, WA

## **3.0 DESCRIPTION OF THE SPECIES AND THEIR HABITAT**

### **3.1 MEXICO AND CENTRAL AMERICA DPS HUMPBACK WHALE (*Megaptera novaeangliae*)**

#### **3.1.1 Status and Management**

The humpback whale was listed as endangered under the ESA in 1970 (35 Federal Register [FR] 18319). On September 8, 2016, NMFS revised the ESA listing for humpback whales, separating the population into 14 distinct population segments (DPS). Two DPSs occur in the action area: the Mexico DPS and Central America DPS. Based on evidence of population recovery, the Central America DPS occurring in the action area remained listed as endangered, and the Mexico DPS was down-listed (to threatened) from the U.S. Endangered Species List (National Marine Fisheries Service 2016a).

#### **3.1.2 Habitat and Geographic Range**

Humpback whales are globally distributed and highly migratory, traveling great distances during migration, the farthest migration of any mammal (National Marine Fisheries Service 2015). They inhabit all of the world's major oceans, with the California/Oregon/Washington breeding stock occurring in waters off Washington (National Marine Fisheries Service 2016a). Humpback whales spend the summer months in feeding grounds at higher latitudes, and individuals have been sighted in Washington's inland waters from May to November (Orca Network 2017). Their preferred feeding grounds are shallow, cold coastal waters (National Marine Fisheries Service 2016a). The California/Oregon/Washington stock migrates to its calving grounds off the coast of Mexico and Central America for the winter (WDFW 2013, National Marine Fisheries Service 2016a).

#### **Occurrence in the Action Area**

The majority of the action area that overlaps marine waters for the proposed action is in the Strait of Juan de Fuca which extends along the northwest shores of Whidbey Island comprising the marine waters adjacent to Ault Field. Although humpback whales were common in inland Washington waters prior to the whaling period, few sightings had been reported in this area until the last 10 years (Calambokidis and Steiger 1990, Pinnell and Sandilands 2004, Scheffer and Slipp 1948b *as cited by* National Marine Fisheries Service 2015). With the creation (in 2011) of the Orca Network online forum to compile whale sighting reports, and increased public interest in reporting whale sightings, the number of reported humpback whale sightings has increased significantly. Inland water opportunistic sightings primarily occur during warmer months, but sightings are reported in every month of the year. Most sightings occur in the Strait of Juan de Fuca, which connects Puget Sound to the Pacific Ocean, and in the San Juan Island area, a group of islands with the closest extent being approximately 8 nautical miles from Ault Field. Sightings are more frequent on the western portion of the Strait de Juan de Fuca, bordering Vancouver Island; however sightings do occur in the vicinity of Whidbey Island and close to the action area. From 2015 until the present, there have been approximately 29 sightings of humpback whales in the Strait de Juan Fuca, some of which were likely the same individuals (Orca Network 2017). Of these 29 sightings, 12 were a considerable distance west of Whidbey Island approximately halfway between its borders and Vancouver Island (Orca Network 2017).

Puget Sound (defined as south of Admiralty Inlet), comprises a small portion of the action area for the proposed action as it overlaps the southern extent of airspace for operations occurring at OLF Coupeville. Calambokidis *et al.* (2002) recorded only six individuals between 1996 and 2001. However, from January 2003 through July 2012 there were over 60 sightings of humpback whales reported to Orca Network, some of which could be the same individuals (Orca Network 2012). In September 2016, there was one sighting of a humpback whale close to Admiralty Inlet which is located at the very northern extent of Puget Sound. A review of the reported sightings in Puget Sound indicates that humpback whales usually occur as individuals or in pairs (Orca Network 2012). Sightings in the Puget Sound are rare, but can occur year round.

The northern extent of the Saratoga Passage borders Whidbey Island to the east, overlapping a small portion of airspace for air operations occurring at OLF Coupeville to the north and east of the landing field. The most recent humpback whale was reported in the Saratoga Passage close to Camano Island in October 2014 (Orca Network 2017).

Given their general migration patterns, Mexican and Central America DPS humpback whales are infrequent in Washington's inland waters, but are more likely to occur in the warmer months.

### **3.1.3 Population and Abundance**

The Mexico DPS includes whales that feed across a broad geographic range from California to the Aleutian Islands, with concentrations in California, Oregon, northern Washington, southern British Columbia, northern and western Gulf of Alaska, and Bering Sea feeding grounds. The abundance estimate for the Mexico DPS is 3,264 individuals, with an unknown population trend (81 FR 62259).

The Central America DPS includes whales that feed almost exclusively offshore of California and Oregon in the eastern Pacific, with only a few individuals identified at the northern Washington-southern British Columbia feeding grounds. The abundance estimate for the Central America DPS is 411 individuals, with an unknown population trend (81 FR 62259).

The current best estimate for the California/Oregon/Washington stock of humpback whales (that occurs in waters off Washington) is 1,918 (CV=0.03) (Caretta *et al.* 2016). The growth rate of the California/Oregon/Washington stock is estimated at 6-7% (Caretta *et al.* 2016). Caretta *et al.* (2016) estimated the Northern Washington/Southern British Columbia stock at 189 individuals.

### **3.1.4 Predator/Prey Interactions and Foraging**

Humpback whales feed on a variety of invertebrates and small schooling fish. The most common invertebrate prey are krill (tiny crustaceans); the most common fish prey are herring, mackerel, sand lance, sardines, anchovies, and capelin (Clapham & Mead 1999). Feeding occurs both at the surface and in deeper waters, wherever prey is abundant. Humpback whales are the only species of baleen whale that show strong evidence of cooperation when they feed in large groups (D'Vincent *et al.* 1985). This species is known to be attacked by both killer whales and false killer whales, as evidenced by tooth rake scars on their bodies and fins (Steiger *et al.* 2008).

### **3.1.5 Critical Habitat**

There is no designated critical habitat for the humpback whale.

## **3.2 SOUTHERN RESIDENT KILLER WHALE (*ORCINUS ORCA*)**

### **3.2.1 Status and Management**

Killer whale populations of the eastern North Pacific Ocean comprise three distinct forms, all with notable morphological, ecological, genetic, and behavioral differences. The three types include resident, transient, and offshore, and they do not appear to interbreed despite partially overlapping ranges. All three forms regularly occur in Washington. This includes the Southern Resident killer whale DPS, which was listed as endangered under the ESA in 2005 (WDFW 2013; 70 FR 69903).

### **3.2.2 Habitat and Geographic Range**

Killer whales are the most widely distributed marine mammal, occurring in all of the world's oceans (National Marine Fisheries Service 2016b). Resident killer whales in the Northeast Pacific are distributed from Alaska to California, with 4 distinct communities recognized as southern, northern, southern Alaska, and western Alaska (Krahn *et al.* 2002, 2004 *as cited in* National Marine Fisheries Service, 2008). The Eastern North Pacific Southern Resident stock is a trans-boundary stock that occurs mainly within the inland waters of Washington State and southern British Columbia but extends from central California into southern Southeast Alaska (Caretta *et al.* 2016). The Southern Resident population consists of J, K, and L pods that reside in the inland waterways of Washington and British Columbia (Strait of Georgia, Strait of Juan de Fuca, and Puget Sound), mainly during late spring, summer, and fall (Bigg 1982, Ford *et al.* 2000; Krahn *et al.* 2002 *as cited in* National Marine Fisheries Service 2008). During this time period Southern Resident killer whales forage for prey, mainly Chinook salmon stocks, which have largely been genetically linked to the Fraser River system, naming it as an overall important area for their diet (DFO 2010). Southern resident killer whale occurrences generated from prey stocks originating from other river systems such as the Columbia River are also likely at certain times of the year. Movements and distribution in winter and early spring are largely unknown (National Marine Fisheries Service 2008).

### **Occurrence in the Action Area**

Southern Resident killer whales spend a significant portion of the year in the inland waterways of the Strait of Georgia, which borders the San Juan Islands to the north; Strait of Juan de Fuca, which connects Puget sound to the Pacific Ocean in waters west of Ault Field; and Puget Sound (Heimlich-Boran 1988, Felleman *et al.* 1991, Olson 1998, Osborne 1999, *as cited by* National Marine Fisheries Service 2010). In spring and summer months, the Southern Resident stock is most frequently seen in the San Juan Islands region, with intermittent sightings in the Puget Sound (Orca Network 2017). In the fall and early winter months, the Southern Residents are seen more frequently in Puget Sound, where returning chum and Chinook salmon are concentrated (Osborne *et al.* 1988). By winter, they spend progressively less time in the inland marine waters and more time off the coast of Washington, Oregon, and California (Black 2011).

Sightings reported to the Orca Network from 2015 through 2016 indicated about 23 Southern Resident killer whales in the vicinity of the action area, some of which were likely the same individuals (Orca Network 2017). As explained in the Section 3.1.2, the main overlap of the action area within marine waters occurs adjacent to Ault Field in the Strait of Juan de Fuca, an area where about half (12) of the sightings within the last two years were reported (Orca Network 2017). Four of the sightings were

located in northern extent of Puget Sound which overlaps a very small region that contains airspace for OLF Coupeville air operations to the south of the landing field. The remaining seven sightings were reported in the northern extent of the Saratoga Passage, bordering Whidbey Island to the east and OLF Coupeville to the north (Orca Network 2017). While Southern Resident killer whales are frequently sighted in the Strait of Juan de Fuca, Puget Sound, and Saratoga Passage, their presence varies and generally depends on the season (Orca Network 2017).

### **3.2.3 Population and Abundance**

Photo-identification of individual whales through the years has resulted in a substantial understanding of the Eastern North Pacific Southern Resident stock's structure. The most current abundance estimate for this stock is 81 whales (Carretta *et al.* 2016).

### **3.2.4 Predator/Prey Interactions and Foraging**

The primary source of food for the southern resident killer whale is salmonids, particularly Chinook salmon (Hanson *et al.* 2010). The killer whale has no known natural predators; it is considered to be the top predator of the oceans (Ford *et al.* 2009).

### **3.2.5 Critical Habitat**

In November 2006, NMFS designated 2,560 square miles (6,630 km<sup>2</sup>) of critical habitat for Southern Resident killer whales that includes Haro Strait and the waters around the San Juan Islands, Puget Sound, and the Strait of Juan de Fuca (71 FR 69054).

The critical habitat designation excluded the waters within the boundaries of 18 military sites in the area that were found to meet the definition of critical habitat for the Southern Resident killer whale, including the action area (US Department of the Navy 2012c). These sites include shore-based facilities, nearshore areas around docks and piers, and offshore areas in Puget Sound to cover approximately 112 square miles (71 FR 69054). While aircraft overflights do occur over portions of water designated as critical habitat, only high-altitude (>1,000 ft.) aircraft operations occur in these areas. Since NMFS agreed in the 2015 NWTT BO that overflights above 1,000 ft. do not cause a reaction in marine mammals, there would be no effect on Southern Resident killer whale designated critical habitat.

The physical and biological factors essential for conservation of the southern resident killer whale critical habitat have been identified as (1) water quality to support growth and development; (2) prey species of sufficient quantity, quality and availability to support individual growth, reproduction and development, as well as overall population growth; and (3) passage conditions to allow for migration, resting, and foraging (National Marine Fisheries Service 2006).

## 4.0 EFFECTS OF THE ACTION ON THE MEXICO AND CENTRAL AMERICA HUMPBACK WHALE AND SOUTHERN RESIDENT KILLER WHALE

### 4.1 Direct Effects -- Noise

Low-flying aircraft produce sounds that marine mammals can hear when animals occur at or near the ocean's surface. Underwater sounds from aircraft are strongest just below the surface and localized in a narrow cone directly under the aircraft. Sounds from aircraft would not have physical effects on marine mammals but represent acoustic stimuli (primarily low-frequency sounds from engines and rotors) that have been reported to affect the behavior of some marine mammals.

Thorough reviews on the behavioral reactions of marine mammals to aircraft are presented in Richardson *et al.* (1995), Efroymson *et al.* (2000), and Luksenburg and Parsons (2009b). The most common responses of cetaceans to aircraft overflights were short surfacing durations, abrupt dives, and percussive behavior (breaching and tail slapping) (Nowacek *et al.* 2007). Luksenburg and Parsons (2009a) determined that the sensitivity of whales and dolphins to aircraft noise may depend on the animals' behavioral state at the time of exposure (e.g. resting, socializing, foraging or travelling) as well as the altitude and lateral distance of the aircraft to the animals. While resting animals seemed to be disturbed the most, low flying aircraft with close lateral distances over shallow water elicited stronger disturbance responses than higher flying aircraft with greater lateral distances over deeper water ((Patenaude *et al.* 2002, Smultea *et al.* 2008) in Luksenburg and Parsons (2009a)). Other behavioral responses such as flushing and fleeing the area of the source of the noise have also been observed (Manci *et al.* 1988). Richardson *et al.* (1995) noted that marine mammal reactions to aircraft overflight largely consisted of opportunistic and anecdotal observations. These observations lack a clear distinction between reactions potentially caused by the noise of the aircraft and the visual cue an aircraft presents. In addition, it was suggested that variations in the responses noted were due to other undocumented factors associated with overflight (Richardson *et al.* 1995). These factors could include aircraft type (single engine, multi-engine, jet turbine), flight path (centered on the animal, off to one side, circling, level and slow), environmental factors such as wind speed, sea state, cloud cover, and locations where native subsistence hunting continues.

As part of the 2015 NWT BO, NMFS agreed that overflights above 1,000 ft. do not cause a reaction in marine mammals. Therefore, in order for aircraft noise to potentially have an effect on humpback and Southern Resident killer whales, they would have to be at the surface of the water and be almost directly underneath a low altitude (<1,000 ft.) aircraft passing overhead. The likelihood of this occurring, and therefore effects to humpback and Southern Resident killer whales, is discountable and insignificant for the following reasons.

First, the portions of flights that occur at low altitudes happen mostly over land. Though, for the portions of flights that do occur at low altitudes and do not happen over land, the majority of the flights are at only at low altitudes for a small amount of time (20 seconds for departures and up to 60 seconds for arrivals). For FCLP operations (which operate in a racetrack pattern and for a larger portion of time below 1,000 ft. AGL), short stretches do extend over marine waters for some these events depending on which runway and facility is being utilized. Though, on the eastern side of the island, along the Saratoga Passage, runways at Ault Field are a substantial distance from the shoreline with runway 32 and runway 25 ending 18,700 ft. and 10,000 ft., respectively, from the Passage. The closest shoreline to OLF

Coupeville runway 14 (as shown in Figure 2-3) is 8,000 ft. abeam (at a right angle to) and 11,000 ft. off of the approach end. The end at runway 32 is about 7,000 ft. from the shoreline.

Second, the total number of aircraft hours would be split between the two facilities (Ault Field and OLF Coupeville) and would be spread out over the course of a year. For example, in 2015 FCLPs (which fall under pattern operations and generate the greatest increase in hours) were only conducted a total of 110 days at Ault Field and 34 days at OLF Coupeville. On those days, only about two-three FCLP evolutions of 45 minutes each were conducted resulting in only about two-three hours of FCLPs on those days. Additionally, while other daily flights happen at Ault Field even when FCLPs aren't occurring, OLF Coupeville is primarily used for FCLPs, so inactive days represent days where no flights at OLF Coupeville will occur and thus no flights between the two locations.

Third, humpback and Southern Resident killer whales that may be present in the action area are currently exposed to high levels of ambient underwater noise. Bordering Whidbey Island to the southwest, the Admiralty Inlet connects Puget Sound to the Strait of Juan de Fuca. Basset *et al.* (2010) collected passive acoustics data for one year at the Inlet. The most significant contributors to ambient noise levels at the Inlet study site were commercial shipping and ferry traffic, with secondary contributions from rain, wind, and marine mammal vocalizations (Basset *et al.* 2010). Recorded mean total sound pressure levels (SPL) overall were found to be 117 dB SPL re 1 $\mu$ Pa, which most likely drown out or lessen the sounds of aircraft overflights.

Fourth, humpback and Southern Resident killer whale presence in the action area varies, and in the past two years there were only 29 and 23 citizen science sightings, respectively, some which could likely have been the same individuals (Orca Network 2017).

## 4.2 Indirect Effects

There were no indirect effects identified.

## 4.3 Determination of Effects

The above analysis indicates that the proposed action may affect, but is **not likely to adversely affect** the Mexico and Central America DPS humpback whale.

The above analysis indicates that the proposed action may affect, but is **not likely to adversely affect** the Southern Resident killer whale. The above analysis indicates that the proposed action would have **no effect** on Southern Resident killer whale critical habitat.

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## Appendix A

### Species Effect Determinations for the Proposed Action

SPECIES/CRITICAL HABITAT	DESIGNATION UNIT	LISTING STATUS	EFFECT DETERMINATION
<b>Fishes</b>			
Green Sturgeon ( <i>Acipenser medirostris</i> )	Southern DPS	Threatened	No effect
	Critical habitat	Designated	No effect
Eulachon ( <i>Thaleichthys pacificus</i> )	Southern DPS	Threatened	No effect
	Critical habitat	Threatened	No effect
Chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	Puget Sound ESU	Threatened	No effect
	Critical Habitat	Designated	No effect
Hood Canal summer-run chum ( <i>Oncorhynchus keta</i> )		Threatened	No effect
	Critical Habitat	Designated	No effect
Steelhead ( <i>Oncorhynchus mykiss</i> )		Threatened	No effect
	Critical Habitat	Designated	No effect
Bocaccio rockfish ( <i>Sebastes paucispinis</i> )	Puget Sound/ Georgia Basin DPS	Endangered	No effect
	Critical Habitat	Designated	No effect
Yelloweye rockfish ( <i>Sebastes ruberrimus</i> )	Puget Sound/ Georgia Basin DPS	Threatened	No effect
	Critical Habitat	Designated	No effect
<b>Marine Mammals</b>			
Humpback whale ( <i>Megaptera novaengliae</i> )	Mexico DPS	Threatened	May affect, not likely to adversely affect
Humpback whale ( <i>Megaptera novaengliae</i> )	Central America DPS	Endangered	May affect, not likely to adversely affect
Killer whale ( <i>Orcinus orca</i> )	Southern Resident	Endangered	May affect, not likely to adversely affect
	Critical Habitat	Designated	No effect





July 20, 2017

Refer to NMFS No: WCR-2017-6919

G.C. Moore  
Captain, U.S. Navy  
Naval Air Station Whidbey Island 3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter for the EA-18G Growler Aircraft Operations at Naval Air Station (NAS) Whidbey Island, Oak Harbor Washington.

Dear Captain G.C. Moore:

On April 24, 2017, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the U.S. Navy's continued and expanded Growler operations and some associated construction at the Naval Air Station (NAS) Whidbey Island under Section 7 of the Endangered Species Act (ESA) is not likely to adversely affect (NLAA) Southern Resident Killer Whales and Central American and Mexican Humpback Whales, species listed as threatened or endangered under the ESA, or SRKW critical habitats designated under the ESA. This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS' Public Consultation Tracking System [<https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts>]. A complete record of this consultation is on file at the Protected Resources Division in Seattle, WA.

### **Proposed Action and Action Area**

The proposed action can be summarized in two parts: 1) to continue and expand Growler operations at two facilities, Ault Field and Outlying Landing Field (OLF) Coupeville on the NAS Whidbey Island and add 36 aircraft to the Growler fleet; and 2) to construct and renovate the facilities at Ault Field to accommodate the increased fleet and operations.

#### *1. Continued and expanded Growler operations at NAS Whidbey Island*

Under the proposed action, EA-18G Growler operations will continue and increase by 57% at Ault Field from 68,200 to 106,900 annual operations, and by 475% at OLF Coupeville from 6,100 to 35,100 annual operations. The term "operation" here refers to a single takeoff or landing of an aircraft at the naval station. The portion of each operation that occurs at low altitude (below 1000ft mean sea level) lasts for a short period of time, between 20 and 60 seconds. Operations at NAS Whidbey Island are undertaken to deploy Growlers for electronic warfare missions as well as to train

Growler pilots for landing on aircraft carriers. Operations are spread throughout the year but are concentrated around deployments, as carrier squadron pilots must complete training within ten days of deploying on an aircraft carrier. The resulting annual schedule of Growler operations consists of long periods of inactivity between short periods of high activity, lasting up to about two weeks. Current Growler operations take place on about 50 days of the year. Operations take place both during the day and at night to simulate conditions during deployment. The majority of Growler operations take place at Ault Field, but no more than 80% will be concentrated at one of the two sites. The proposed action includes all proposed future Growler operations, which reflect past levels and anticipated increases.

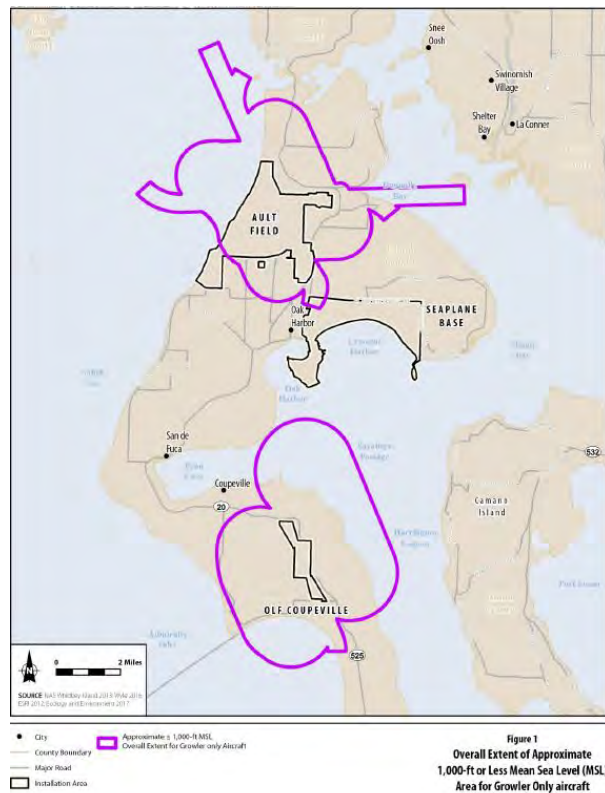
2. *Construction and renovation of the facilities at Ault Field*

In order to increase the Growler fleet and Growler operations at NAS Whidbey Island, Ault Field facilities will need to be updated and expanded to support the training, maintenance, and operational requirements associated with such an increase. Construction will begin as early as 2017 with full implementation by 2021. The increase in Growler aircraft and personnel will require additional infrastructure at Ault Field such as aircraft pavement, an aircraft parking apron, a flight training and briefing building, maintenance hangars, armament storage, expanded personnel parking areas, and a mobile maintenance facility. It will also require repairs to inactive taxiways and expanded hangar space. This construction will result in an increase of 2 acres of impervious surface, which represents a less than 1% increase in the total impervious surface at NAS Whidbey Island.<sup>1</sup>

The action area includes all areas around the NAS Whidbey Island where aircraft are expected to operate below 1,000ft mean sea level (MSL). This includes areas around Whidbey Island in the Strait of Juan de Fuca, Dugualla Bay, Admiralty Inlet, Saratoga Passage, and Harrington Lagoon (Figure 1).

**Action Agency’s Effects Determination**

The action agency has evaluated the impacts of the current and expanded EA-18G Growler Aircraft Operations at Naval Air Station as well as the construction and renovation of facilities at Ault Field and has determined that the proposed



**Figure 1.** The action area around NAS Whidbey Island for the proposed increase of Growler operations. Pink lines represent flight paths at altitudes below 1000ft.

<sup>1</sup> There is no causal relationship between the proposed action and the existing impervious surface and its effects because the surface was built, and is used, for a variety of purposes and the existence of the surface and its effects would not change irrespective of the proposed action.



action may affect, but is not likely to adversely affect, Southern Resident killer whales (*Orcinus orca*) and their critical habitat as well as the Mexico and Central America DPSs of humpback whales (*Megaptera novaeangliae*).

### **Consultation History**

On April 24, 2017, the U.S. Navy requested concurrence under Section 7 of the ESA on the proposed continuation and expansion of Growler operations and some associated construction at NAS Whidbey Island from the NMFS West Coast Region Protected Resources Division in Seattle, Washington. Additional information was requested by NMFS on May 5 and June 29, 2017 and responses were provided by the U.S. Navy on May 10<sup>th</sup> and June 30<sup>th</sup> via phone call and confirmed in a follow-up email. In addition, a Draft Environmental Impact Statement for Growler operations at NAS Whidbey Island provided additional information on the project (U.S. Navy 2016). The consultation was initiated upon the receipt of all the necessary information on June 30<sup>th</sup>.

## **ENDANGERED SPECIES ACT**

### **Effects of the Action**

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

### **Species Determinations**

Below, we discuss the likelihood of occurrence and the potential effects of the proposed action on two ESA-listed species, Southern Resident killer whales and Mexico and Central American humpback whales.

#### *Southern Resident killer whales (SRKW)*

The final rule listing Southern Resident killer whales as endangered identified several potential factors that may have caused their decline or may be limiting recovery. These are: quantity and quality of prey, toxic chemicals which accumulate in top predators, and disturbance from sound and vessel traffic. The final recovery plan includes more information on these potential threats to Southern Residents (73 FR 4176). The recent ESA 5-year review (NMFS 2016) provides an update on the status of SRKW, which currently total 78 animals.

Southern Residents spend considerable time in the Georgia Basin from late spring to early autumn, with concentrated activity in the inland waters of the state of Washington around the San Juan Islands, and then move south into Puget Sound in early autumn. While these are seasonal patterns, Southern Resident killer whales have the potential to occur throughout their

range (from Central California north to the Queen Charlotte Islands) at any time of the year. The Whale Museum manages a long-term database of SRKW sightings and geospatial locations in inland waters of Washington. While these data are predominately opportunistic sightings from a variety of sources (public reports, commercial whale watching, Soundwatch, Lime Kiln State Park land-based observations, and independent research reports), Southern Residents are highly visible in inland waters, and widely followed by the interested public and research community. The dataset does not account for level of observation effort by season or location; however, it is the most comprehensive long-term dataset available to evaluate broad scale habitat use by Southern Residents in inland waters. For these reasons, NMFS relies on the number of past sightings to assess the likelihood of SRKW presence in a proposed action area. A review of this dataset from the years 1990 to 2013 indicates that Southern Residents have been observed in the action area ranging from a total of 5 to 50 days depending on the month (Table 1).

**Table 1.** SRKW opportunistic sightings in the project vicinity from 1990 to 2013.

Month	Number of Sighting Days
January	12
February	9
March	5
April	5
May	19
June	50
July	48
August	20
September	18
October	15
November	12
December	25

The two pathways for impacts to Southern Residents include direct effects from disturbance from aircraft operations and indirect effects from infrastructure construction and potential changes in stormwater runoff and contaminants.

Wildlife viewing guidelines for marine mammals recommend that aircraft remain above 1000 feet to avoid disturbance or harassment ([http://www.nmfs.noaa.gov/pr/pdfs/education/viewing\\_northwest.pdf](http://www.nmfs.noaa.gov/pr/pdfs/education/viewing_northwest.pdf)). The proposed action includes limited operations below 1000ft that produce sound that may affect listed marine mammals. One study found that noise from aircraft flying much lower than 1000ft produced sound not unlike that produced by vessels in the area (Veirs and Veirs unpublished data). The sound produced by aircraft would not cause physical harm to Southern Residents but may result in behavioral changes. Behavioral changes observed in odontocetes in response to aircraft overflight include diving, slapping the surface of the water with the tail flukes, swimming away from the aircraft, or not visibly reacting (Richardson et al 1995). Responses to aircraft are stronger to low flying aircraft at a close lateral distances or positioned directly over an animal located at the surface (Patenaude et al. 2002; Smultea et al. 2008). Species like killer whales that show avoidance behavior in response to vessel traffic also react to aircraft, either neutrally or with a startle response (Wursig et al. 1998). The biggest concern for Southern Residents with regard to these changes in behavior is the potential for reduced foraging behavior, reduced access

to important foraging areas, and the interruption of social interactions important for foraging through acoustic masking. However, given the small geographic area of the proposed action and the sightings data in that area from 1990 to 2013, there is an extremely low likelihood that whales would be present at the surface directly under the flight path during an operation. This combined with the limited duration (20-60 seconds) of operations below 1000ft and the sporadic frequency of operations at NAS Whidbey Island indicate that the proposed action would not likely result in the long-term exposure of SRKW to aircraft noise, and therefore would not likely result in long-term behavioral changes or displacement. For these reasons, we anticipate any temporary behavioral responses that may occur in response to aircraft operations would be discountable and insignificant.

Southern Resident killer whales already have high levels of accumulated contaminants in their bodies, and those contaminants can affect their health. The addition of 2 acres of impervious surface will result in a small increase in stormwater runoff from Ault Field which could increase pollutant discharge. NAS Whidbey Island currently holds a USEPA-issued NPDES permit for stormwater discharges associated with industrial activity. This permit requires stormwater monitoring, inspections, training/awareness, documentation, reporting, and implementation of control measures, including Best Management Practices (BMPs) to reduce and/or eliminate stormwater pollutant discharge. The Navy's BMPs to avoid non-point source pollution as a result of runoff from impervious surfaces include conducting maintenance, chemical or waste oil storage, and transferring potential contaminants in covered areas to prevent stormwater runoff from washing contaminants into storm drains or surface waters. All of the runoff from uncovered areas, including the new impervious surfaces to support Growler operations, will be retained and diverted to an existing sanitary sewer system and treated as required by the Navy (U.S. Navy 2016). A stormwater runoff treatment system that meets the most current design standards is already in place to ensure that all runoff is treated before being discharged into the Strait of Juan de Fuca and Dugualla Bay. Therefore, any additional runoff from new impervious surfaces will be treated and, based on the best available information at this time<sup>2</sup>, we expect existing permit requirements and BMPs will be sufficient to ensure that any effects from increased pollutant discharge will be insignificant.

#### *Mexico and Central America humpback whales*

On September 8, 2016, NMFS published a final rule to divide the globally listed endangered humpback whale into 14 DPSs, remove the previous broad species-level listing, and place four DPSs as endangered and one as threatened (81 FR 62259). NMFS has identified three DPSs of humpback whales that may be found off the coasts of Washington, Oregon and California. Two of these, the Mexico DPS and the Central America DPS, are listed as threatened and endangered under the ESA respectively and threats for humpback whales include entanglement in fishing gear, ship strikes, vessel disturbance and habitat impacts.

The endangered Central America DPS and the threatened Mexico DPS both at times travel and feed off the U.S. west coast as do humpback whales from Hawaii that are no longer listed under the ESA. Based on data from the SPLASH (Structure of Populations, Levels of Abundance and

<sup>2</sup> We anticipate that there will be a future ESA consultation on stormwater discharges because the Navy is in the process of redesigning the current stormwater facilities for the entire facility, which will be addressed in a NPDES permit process. We do not prejudice the outcome of that consultation here. We have done an assessment here focused on the stormwater discharges that are causally related to the proposed action, and based on the best information currently available, in order to ensure a comprehensive evaluation of the effects of this proposed action.

Status of Humpback Whales) project, humpback whales off the coast of Washington primarily originate from the threatened Mexico and un-listed Hawaii DPSs with a small proportion from Central America (up to 15%) (Wade et al. 2016). These proportions may be similar in inland waters and additional data analysis is underway to provide information about habitat use of the different DPSs in inland waters. Although uncommon in the past, humpback sightings in the Strait of Georgia and Puget Sound increased during the early 2000s to include 13 individually identified whales (Falcone et al. 2005). In recent years sightings of humpback whales in inland waters have been more commonly reported by whale watchers and the public to organizations such as Orca Network.

Current estimates of abundance for the Central America DPS range from approximately 400 to 600 individuals (Bettridge et al. 2015, Wade et al. 2016). The size of this population is relatively low compared to most other North Pacific breeding populations. The population trend for the Central America DPS is unknown (Bettridge et al. 2015). The Mexico DPS, which also occurs in the action area, is estimated to be 6,000 to 7,000 from the SPLASH project (Calambokidis et al. 2008) and in the status review (Bettridge et al. 2015).

As with Southern Residents, the noise produced by aircraft does not cause physical harm to humpback whales but may provoke a behavioral response. Mysticetes have been found to ignore or occasionally dive in response to aircraft overflights, but are most likely to respond to low-flying aircraft operating at less than 1,000ft MSL at low lateral distances. Observations of the reaction of mysticetes to aircraft overflight are rare and there is no evidence that occasional aircraft overflight causes long-term displacement of baleen whales (Efroymson et al. 2000; Koski et al. 1998; Richardson et al. 1995). Although the action area falls within the potential ranges of the Mexico and Central America DPSs only a proportion of the humpback whales in the action area are likely to be from these listed populations. In addition, the sporadic frequency and short duration of the proposed aircraft operations make it extremely unlikely that humpback whales from either of these two populations would be exposed to increased noise from aircraft overflight. Furthermore, if members of these DPSs were to be present during Growler operations, the duration of flight under 1000ft MSL is short enough (20-60 seconds) and infrequent enough that it would be unlikely to cause long-term displacement of the whales. Therefore, the effects are expected to be discountable and insignificant.

Only a handful of studies have examined accumulated contaminants levels in baleen whales. Recently, Elfes et al. (2010) compared contaminant levels in biopsy samples collected from humpback whales from different feeding areas in the North Pacific and North Atlantic. These feeding areas included the coastal waters off California, Washington, and Alaska, and off the Gulf of Maine. These levels are less than that measured in Southern Resident killer whales, but are still considered a potential threat to their health. As above, the addition of 2 acres of impervious surface will result in a small increase in stormwater runoff from Ault Field which could increase pollutant discharge. However, as explained above, any additional runoff from new impervious surfaces will be treated and, based on the best available information at this time, we expect existing permit requirements and BMPs will be sufficient to ensure that any effects from increased pollutant discharge will be insignificant.

## **Critical Habitat Determination**

The proposed action area falls within the critical habitat designated for SRKW but there is no critical habitat designated for either listed DPS of humpback whales. SRKW critical habitat includes approximately 2,560 square miles of Puget Sound, excluding areas with water less than 20 feet deep relative to extreme high water. The PCEs for SR killer whale critical habitat are:

- (1) Water quality to support growth and development;
- (2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction and development, as well as overall population growth; and
- (3) passage conditions to allow for migration, resting, and foraging.

For the reasons stated above, there is a low likelihood of exposure to aircraft operations and if exposed the operations are not likely to significantly alter passage conditions (i.e., any disturbance due to noise will be short-term and localized with no lasting effects or displacement). As described above, the addition of 2 acres of impervious surface will result in increased stormwater runoff from Ault Field. However, for the reasons set out above, impacts to water quality supporting growth and development of SRKW from the increased infrastructure and associated stormwater discharge are expected to be insignificant. For the same reasons, NMFS also does not anticipate any effects on the quantity and quality of prey as a result of stormwater discharge. NMFS finds that the potential adverse effects to SRKW critical habitat are discountable and insignificant.

## **Conclusion**

Based on this analysis, NMFS concurs with the United States Navy that the proposed action is not likely to adversely affect the subject listed species and designated critical habitat.

## **Reinitiation of Consultation**

Reinitiation of consultation is required and shall be requested by the United States Navy or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) 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; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. The U.S. Navy also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1).

Please direct questions regarding this letter to Grace Ferrara, Seattle, WA at 206-526-6152 or Grace.Ferrara@noaa.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Barry Thom".

for

Barry Thom  
Regional Administrator

cc: Mike Bianchi  
Administrative File: 151422WCR2017PR00147

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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 N44/ 0986  
March 22, 2018

Mr. Barry Thom  
West Coast Regional Administrator  
National Marine Fisheries Service  
1202 NE Lloyd Blvd  
Portland, OR 97232-1202

Dear Mr. Thom:

SUBJECT: INFORMAL CONSULTATIONS FOR PROPOSED EA-18 GROWLER OPS

The Department of the Navy (DON) is requesting an informal consultation with the National Marine Fisheries Service (NMFS), in accordance with section 7(a)(2) of the Endangered Species Act (ESA), as amended, for the proposed EA-18 Growler Airfield Operations at Naval Air Station Whidbey Island, Oak Harbor, Washington.

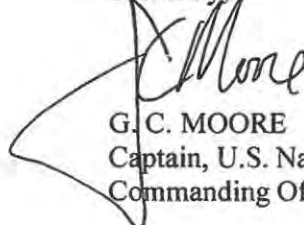
An informal consultation was requested with your office on April 20, 2017, regarding DON's determination that the proposed action may affect, but is not likely to adversely affect, Mexico and Central America Distinct Population Segment (DPS) humpback whales (*Megaptera novaeangliae*) and Southern Resident DPS killer whales (*Orcinus orca*). Your concurrence was received on July 20, 2017 (Ref # WCR-2017-6919).

The DON additionally requests concurrence that the proposed action may affect, but is not likely to adversely affect, green sturgeon (*Acipenser medirostris*), eulachon (*Thaleichthys pacificus*), Chinook salmon (*Oncorhynchus tshawytscha*), Hood Canal summer-run chum (*Oncorhynchus keta*), steelhead (*Oncorhynchus mykiss*), Bocaccio rockfish (*Sebastes paucispinis*), and yelloweye rockfish (*Sebastes ruberrimus*).

The DON provided a summary of noise and potential impacts to fish in January 2018. The DON understands that informal consultation will be initiated by your receipt of this informal consultation request, and we look forward to receiving a letter from you within 30 days concurring with our effects determination. If you have any questions or concerns regarding the package, we request you contact us at your earliest convenience.

We appreciate your continued support in helping the Navy to meet its environmental responsibilities. Please direct any written response and additional inquiries to Mike Bianchi, who can be contacted at michael.bianchi1@navy.mil or (360) 257-4024.

Sincerely,



G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Copy to: Ms. Janet Curran, NMFS





**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
West Coast Region  
1201 NE Lloyd Boulevard, Suite 1100  
Portland, OR 97232

NMFS No:  
WCR-2018-9421  
REINI 2017-6919

April 23, 2018

G.C. Moore Captain  
U.S. Navy Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

Re: Endangered Species Act Section 7(a)(2) Concurrence Letter for the EA-18G Growler Aircraft Operations at Naval Air Station (NAS) Whidbey Island, Oak Harbor Washington.

Dear Captain G.C. Moore:

On April 16, 2018, NOAA's National Marine Fisheries Service (NMFS) received your request to re-initiate the above consultation to include listed fish species. We previously completed consultation on listed whale species on the U.S. Navy's continued and expanded Growler operations and some associated construction at the Naval Air Station (NAS) Whidbey Island under Section 7 of the Endangered Species Act (ESA). The Navy has requested written concurrence that the same action is also not likely to adversely affect (NLAA) the Southern distinct population segment (DPS) of North American green sturgeon, the Pacific eulochon (*Thaleichthys pacificus*) DPS, the Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*) evolutionarily significant unit (ESU), the Hood Canal summer-run chum (*O. keta*) ESU, the Puget Sound steelhead (*O. mykiss*) DPS, the Georgia Basin (GB) bocaccio (*Sebastes paucispinus*) rockfish DPS, and the GB yelloweye (*S. ruberrimus*) rockfish DPS. This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

The NMFS also reviewed the proposed action for potential effects on Essential Fish Habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination that you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation. In this case, NMFS determined that the action would not adversely affect EFH. Thus, consultation under the MSA is not required for this action.



This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS' Public Consultation Tracking System [<https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts>]. A complete record of this consultation is on file at the Protected Resources Division in Seattle, WA.

## **Proposed Action and Action Area**

The Navy proposes to: 1) continue and expand Growler (a type of aircraft) operations at two facilities, Ault Field and Outlying Landing Field (OLF) Coupeville on the NAS Whidbey Island and add 36 aircraft to the Growler fleet; and 2) construct and renovate the facilities at Ault Field to accommodate the increased fleet and operations.

### **1. Continued and expanded Growler operations at NAS Whidbey Island**

Under the proposed action, EA-18G Growler operations will continue and increase by 57 percent at Ault Field from 68,200 to 106,900 annual operations, and by 475 percent at OLF Coupeville from 6,100 to 35,100 annual operations. The term "operation" here refers to a single takeoff or landing of an aircraft at the Naval station. The portion of each operation that occurs at low altitude (below 1000 feet mean sea level) lasts for a short period of time, between 20 and 60 seconds. Operations at NAS Whidbey Island are undertaken to deploy Growlers for electronic warfare missions as well as to train Growler pilots for landing on aircraft carriers. Operations are spread throughout the year but are concentrated around deployments, as carrier squadron pilots must complete training within ten days of deploying on an aircraft carrier. The resulting annual schedule of Growler operations consists of long periods of inactivity between short periods of high activity, lasting up to about two weeks. Current Growler operations take place on about 50 days of the year. Operations take place both during the day and at night to simulate conditions during deployment. The majority of Growler operations take place at Ault Field, but no more than 80 percent will be concentrated at one of the two sites. The proposed action includes all proposed future Growler operations, which reflect past levels and anticipated increases.

### **2. Construction and renovation of the facilities at Ault Field**

To facilitate the increase in the Growler fleet and Growler operations at NAS Whidbey Island, Ault Field facilities will be updated and expanded to support the training, maintenance, and operational requirements associated with such an increase. Construction will begin as early as 2017 with full implementation by 2021. The increase in Growler aircraft and personnel will require additional infrastructure at Ault Field such as aircraft pavement, an aircraft parking apron, a flight training and briefing building, maintenance hangars, armament storage, expanded personnel parking areas, and a mobile maintenance facility. It will also require repairs to inactive taxiways and expanded hangar space. This construction will result in an increase of 2 acres of

impervious surface, which represents a less than 1 percent increase in the total impervious surface at NAS Whidbey Island.<sup>1</sup>

The action area includes all areas around the NAS Whidbey Island where aircraft are expected to operate below 1,000 feet mean sea level (MSL). This includes areas around Whidbey Island in the Strait of Juan de Fuca, Dugalla Bay, Admiralty Inlet, Saratoga Passage, and Harrington Lagoon (Figure 1).

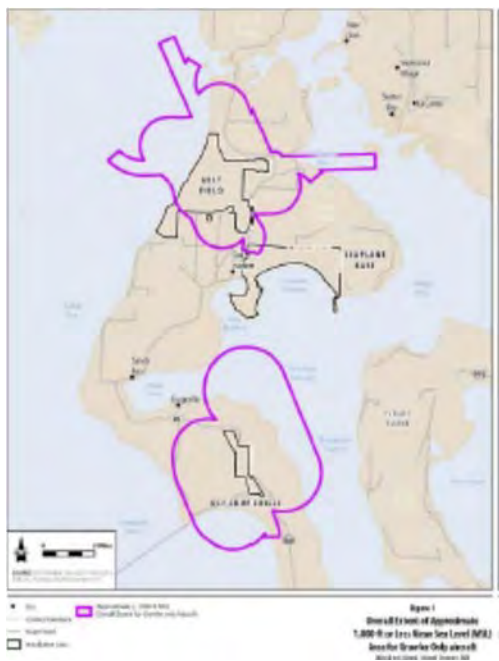


Figure 1. The action area around NAS Whidbey Island for the proposed increase of Growler operations. Pink lines represent flight paths at altitudes below 1000ft.

### Action Agency’s Effects Determination

The action agency has evaluated the impacts of the current and expanded EA-18G Growler Aircraft Operations at Naval Air Station as well as the construction and renovation of facilities at Ault Field and has determined that the proposed action may affect, but is not likely to adversely affect listed fish species that may occur in the action area.

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<sup>1</sup> There is no causal relationship between the proposed action and the existing impervious surface and its effects because the surface was built, and is used, for a variety of purposes and the existence of the surface and its effects would not change irrespective of the proposed action. We anticipate that there will be a future ESA consultation on stormwater discharges because the Navy is in the process of redesigning the current stormwater facilities for the entire facility, which will be addressed in a NPDES permit process. We do not prejudge the outcome of that consultation here. We have done an assessment here focused on the stormwater discharges that are causally related to the proposed action, and based on the best information currently available, in order to ensure a comprehensive evaluation of the effects of this proposed action.

## **Consultation History**

On April 24, 2017, the U.S. Navy requested concurrence under Section 7 of the ESA for listed whale species in the action area. Additional information was requested by NMFS on May 5 and June 29, 2017, and responses were provided by the U.S. Navy on May 10th and June 30th via phone call and confirmed in a follow-up email. In addition, a Draft Environmental Impact Statement for Growler operations at NAS Whidbey Island provided additional information on the project (U.S. Navy 2016). The consultation was initiated upon the receipt of all the necessary information on June 30<sup>th</sup> and concluded on July 20, 2017 with a written letter of concurrence from NMFS to the Navy. In January 2018, the Navy provided additional technical information on potential impacts of the action on listed fish species. On April 16, 2018, the Navy requested informal consultation on listed fish species in the action area. We initiated consultation on April 16, 2018.

## **Effects of the Action**

Under the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

### **Noise and Potential Impacts to Fish**

Potential effects to listed fish species include exposure to stormwater runoff from new impervious surfaces and exposure to sound disturbance from aircraft. The addition of 2 acres of impervious surface will result in a small increase in stormwater runoff from Ault Field which could increase pollutant discharge. NAS Whidbey Island currently holds a USEPA-issued NPDES permit for stormwater discharges associated with industrial activity. This permit requires stormwater monitoring, inspections, training/awareness, documentation, reporting, and implementation of control measures, including Best Management Practices (BMPs) to reduce and/or eliminate stormwater pollutant discharge. The Navy’s BMPs to avoid non-point source pollution as a result of runoff from impervious surfaces include conducting maintenance, chemical or waste oil storage, and transferring potential contaminants in covered areas to prevent stormwater runoff from washing contaminants into storm drains or surface waters. All of the runoff from uncovered areas, including the new impervious surfaces to support Growler operations, will be retained and diverted to an existing sanitary sewer system and treated as required by the Navy (U.S. Navy 2016). A stormwater runoff treatment system that meets the most current design standards is already in place to ensure that all runoff is treated before being discharged into the Strait of Juan de Fuca and Dugualla Bay. Therefore, any additional runoff from new impervious surfaces will be treated and, based on the best available information at this time, including analysis in the

Navy's Environmental Assessment for the project, we expect existing permit requirements and BMPs will be sufficient to ensure that any effects to listed fish species from exposure to stormwater runoff will be insignificant.

ESA-listed fish species could be exposed to aircraft noise wherever aircraft overflights occur in the project area, though the potential for sound to enter the water is low. Transmission of sound from a moving airborne source to a receptor underwater is influenced by numerous factors. Due to the difference in acoustic properties of air and water, most of the acoustic energy generated from the aircraft would be reflected away from the water column, preventing noises from atmospheric sources from maintaining original sound qualities as they transmit through the air-water interface (Richardson *et al.* 1995). A sound wave propagating from an aircraft must enter the water at an angle of incidence of 13 degrees or less from the vertical for the wave to continue to propagating under the water's surface (Richardson *et al.* 1995). Therefore, sound is primarily transferred into the water from the air in a narrow cone under the aircraft and strongest just below the surface. At greater angles of incidence, the water acts as a reflector of the sound wave and allows very little penetration below the water (Urlick 1983). For low-altitude flights, sound levels reaching the water surface would be higher, but the transmission area would be smaller. As an aircraft gains altitude, sound reaching the water surface diminishes, but the possible transmission area increases (Eller and Cavanagh 2000).

ESA-listed fish species that may be present in the action area are currently exposed to high levels of ambient underwater noise. Bordering Whidbey Island to the southwest, the Admiralty Inlet connects Puget Sound to the Strait of Juan de Fuca. Basset *et al.* (2010) collected passive acoustics data for one year at the Inlet. The most significant contributors to ambient noise levels at the Inlet study site were commercial shipping and ferry traffic, with secondary contributions from rain, wind, and marine mammal vocalizations (Basset *et al.* 2010). Recorded mean total sound pressure levels (SPL) overall were found to be 117 dB SPL re 1 $\mu$ Pa, which most likely drown out or lessen the sounds of aircraft overflights.

Direct injury is not likely due to the non-impulsive nature of the sound. Noise from aircraft takeoff and landings and overflights lack the duration and intensity of the type of sounds (like pile driving) known to harm fish (FHWG 2008). Disturbance-level sound is likely to occur from rumbling-type noise of aircraft. There is a lack of studies that have investigated the behavioral reactions of unrestrained fish to man-made sound, especially in the natural environment. Studies of caged fish have identified three basic behavioral reactions to sound: startle, alarm, and avoidance (McCauley *et al.*, 2000; Pearson *et al.*, 1992; Scripps Institution of Oceanography and Foundation, 2008). Changes in sound intensity may be more important to a fish's behavior than the maximum sound level. Sounds that fluctuate in level tend to elicit stronger responses from fish than even stronger sounds with a continuous level (Schwartz, 1985). Responses of fish to rumbling sound would likely include temporary changes in normal behavior patterns (ICF Jones and Stokes and Illingworth and Rodkin, Inc., 2012). The extent to which fish react likely varies among species, their life stage, and with other environmental conditions. In general, these impacts would be short-term and minimal (lasting for only tens of seconds during a Growler landing, for example). A fish may briefly startle, and then return to normal behavior with seconds. Overall, long-term impacts for individual fish are unlikely because acoustic exposures are of short duration (tens of seconds) and intermittent, and unlikely to repeat over short periods.

Auditory masking refers to the presence of a noise that interferes with a fish's ability to hear biologically relevant sounds. Fish use sounds to detect predators and prey, and for schooling, mating, and navigating, among other uses (Myrberg, 1980; Popper et al., 2003). Masking of sounds associated with these behaviors could have impacts to fish by reducing their ability to perform these biological functions. Any noise (i.e., unwanted or irrelevant sound, often of an anthropogenic nature) detectable by a fish can prevent the fish from hearing biologically important sounds including those produced by prey or predators (Myrberg, 1980; Popper et al., 2003). Auditory masking may take place whenever the noise level heard by a fish exceeds ambient noise levels, the animal's hearing threshold, and the level of a biologically relevant sound. Masking is found among all vertebrate groups, and the auditory system in all vertebrates, including fish, is capable of limiting the effects of masking noise, especially when the frequency range of the noise and biologically relevant signal differ (Fay, 1988; Fay and Megela-Simmons, 1999). The frequency of the sound is an important consideration for masking (Amoser and Ladich, 2005). Because sound generated at takeoff and landing is brief, only lasting for seconds, the masking effect of the sound is insignificant. Overall, long-term impacts for individual fish are unlikely because acoustic exposures will be of short in duration (tens of seconds) and intermittent, and unlikely to repeat over short periods.

## **Conclusion**

Based on this analysis, we concur with the Navy's determination that the proposed action is not likely to adversely affect the subject listed species.

## **Reinitiation of Consultation**

Reinitiation of consultation is required and shall be requested by the Federal agency, or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) 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; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Please direct questions regarding this letter to Janet Curran of the Oregon Washington Coastal Office at (206) 526-4452, or by electronic mail at [janet.curran@noaa.gov](mailto:janet.curran@noaa.gov).

Sincerely,



Barry A. Thom  
Regional Administrator



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## United States Fish and Wildlife Service (USFWS)



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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 N44/1121  
April 20, 2017

Mr. Eric Rickerson  
Washington Fish and Wildlife Office Supervisor  
Western Washington Field Office  
510 Desmond Drive SE, Suite 102  
Lacey, WA 98503-1273

Dear Mr. Rickerson:

The U.S. Department of the Navy (Navy) is requesting an informal consultation with the U.S. Fish and Wildlife Service (USFWS), as required under Section 7(a)(2) of the Endangered Species Act (ESA), as amended, for the proposed EA-18G Growler Airfield Operations at Naval Air Station Whidbey Island, Oak Harbor, Washington. Enclosed is a copy of the informal consultation package for the proposed project for your review.

The Navy proposes to conduct the following actions:

- a. Continue and expand existing Growler operations.
- b. Increase electronic attack capabilities by adding up to 36 aircraft.
- c. Construct and renovate facilities at Ault Field to accommodate additional aircraft.
- d. Station additional personnel and their family members at the Complex and in the surrounding community.

Aircraft operations will increase to levels similar to those experienced historically over the life of the airfield that has supported naval aviation for more than 70 years. Construction could begin as early as 2017 with personnel and aircraft arriving incrementally. The year 2021 represents full implementation of the proposed action.


The Navy's analysis of the potential impacts of the proposed project to ESA listed species and designated critical habitat are provided in the enclosed informal consultation package as required under Section 7(c) of the ESA. In regards to species under the jurisdiction of USFWS, the Navy concludes that the project "may affect, but is not likely to adversely affect" marbled murrelets (*Brachyramphus marmoratus*).

5090  
Ser N44/1121  
April 20, 2017

With the enclosed informal consultation package, we are providing the best scientific and commercial data available concerning the impact of the proposed project on listed species. The Navy understands that informal consultation will be initiated by your receipt of this informal consultation request, and we look forward to receiving a letter from you within 30 days concurring with our effect determination. If you have any questions or concerns regarding the package, we request you contact us at your earliest convenience.

Please direct any written response and additional inquiries regarding the biological assessment for the project to Mike Bianchi, who can be contacted at [michael.bianchi1@navy.mil](mailto:michael.bianchi1@navy.mil) or (360) 257-4024.

Sincerely,



G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Informal Consultation Package

Copy:

Mr. Jim Muck, USFWS Lacey

Mr. Lee Corum, USFWS Lacey

**Informal Consultation Package for  
EA-18G “Growler” Airfield Operations at the Naval Air Station  
Whidbey Island Complex,  
Oak Harbor, Washington**

**April 2017**

**Prepared by:**



**United States Department of the Navy**

**UNCLASSIFIED**

## EXECUTIVE SUMMARY

This consultation package was prepared in accordance with section 7(a)(2) of the Endangered Species Act (ESA) of 1973 (16 United States Code [U.S.C.] 1531-1544, as amended). The document evaluates the potential effects to species protected under the ESA from the potential increased EA-18G Growler aircraft and aircraft operations at Naval Air Station (NAS) Whidbey Island, Oak Harbor Washington. Please refer to Appendix A for a determination table for all species that could occur in the action area.

The Navy is proposing to increase electronic attack capabilities by adding additional aircraft to support an expanded U.S Department of Defense (DoD) mission; expand existing operations; renovate and construct facilities to accommodate the additional aircraft; and increase personnel and their family members at the NAS Whidbey Island complex and in the surrounding community. The proposed action would increase aircraft operations to levels similar to those experienced historically over the life of the airfield.

The purpose of the proposed action is to augment the Navy's existing electronic attack community at NAS Whidbey Island by operating additional EA-18G Growler aircraft as appropriated by Congress. The Navy needs to effectively and efficiently increase electronic attack capabilities in order to counter increasingly sophisticated threats and provide more aircraft per squadron in order to give operational commanders more flexibility in addressing future threats and missions. The need for the proposed action is to maintain and expand EA-18G Growler operational readiness to support national defense requirements under Title 10, United States Code (U.S.C.), Section 5062.

Construction of new and improved facilities could begin as early as 2017. Personnel and aircraft would arrive incrementally, as aircraft are delivered by the manufacturer, personnel are trained, and families relocate to the area, until the action is complete. The year 2021 represents full implementation of the proposed action.

This document focuses on the potential effects of the proposed action on the marbled murrelet (*Brachyramphus marmoratus*) because air operations would overlap with foraging murrelets. Nesting occurrences of marbled murrelets have not been documented in upland areas of the proposed action area; however, foraging habitat is associated with the marine environment located adjacent to NAS Whidbey Island.

The proposed action presents the potential for aircraft strikes to the marbled murrelet. Given the very short duration aircraft spend below 500 ft. and the small percentage of time aircraft spend below 500 ft. over the course of a year, effects to marbled murrelets due to airstrikes would be discountable. Given that Runways 25 and 32 at Ault Field (where arrivals and departures below 500 ft. are over land) are utilized 52% of the time, and no aircraft at OLF Coupeville spend time below 500 ft. over marine waters, the likelihood of a collision is reduced even further. Finally, the most recent bird/aircraft strike hazard data reports that, to-date, there have been no strikes of marbled murrelets or any alcids recorded at NAS Whidbey Island (NAS Whidbey Island, pers. comm).

Foraging marbled murrelets could be exposed to aircraft noise within the action area. Though, due to the fact the aircraft spend a small amount of time each year at 92 dBA SEL or greater, time spent by aircraft at 92 dBA SEL is spread out over the course of a year, the estimated population density of marbled murrelets within the action area is low (ranges from >1 to 1-3 birds/km<sup>2</sup>), and habituation is most likely occurring given marbled murrelets have been exposed to aircraft since the installation was



first developed in the 1940s and are currently exposed to 74,300 EA-18G Growler aircraft operations a year, effects to marbled murrelets would be discountable and insignificant.

Pursuant to section 7(a)(2) of the ESA, the Navy has determined that the proposed action may affect, but is not likely to adversely affect the marbled murrelet (*Brachyramphus marmoratus*).

# Consultation Package for EA-18G “Growler” Airfield Operations at the Naval Air Station Whidbey Island Complex

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## **ACRONYMNS AND ABBREVIATIONS**

AGL	Above Ground Level
BO	Biological Opinion
dB	Decibel
dBA	A-weighted sound level
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FCLP	Field Carrier Landing Practice
NAS	Naval Air Station
NMFS	National Marine Fisheries Service
NWTRC	Northwest Training Range Complex
NWTT	Northwest Training and Testing
OLF	Outlying Landing Field
SEL	Single Event Sound Level
USFWS	United States Fish and Wildlife Service

## **1.0 INTRODUCTION**

### **1.1 PURPOSE**

This consultation package analyzes the expansion of existing EA-18G Growler operations at the Naval Air Station (NAS) Whidbey Island complex, Oak Harbor, Washington. The US Navy proposes to expand EA-18G Growler operations by adding up to 36 additional aircraft and increasing annual operations up to 46 percent, which is a return to previous levels of airfield operations.

This consultation package was prepared in compliance with section 7(a)(2) of the federal Endangered Species Act (ESA) of 1973 (16 United States Code [U.S.C.] 1531–1544, as amended) and used the best scientific and commercial information available to assess the risks posed to the listed species and/or critical habitat(s) if the proposed action were to be implemented. The ESA requires that federal agencies “insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat.”

Section 7(a)(2) of the ESA implementing regulations requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NMFS), collectively known as “the Services,” regarding species protected under this act.

This consultation package constitutes the U.S. Department of the Navy’s analysis of potential effects on species protected under the ESA within USFWS’s jurisdiction, as required by section 7(a)(2) of the ESA implementing regulations. The Navy has initiated a separate ESA section 7(a)(2) consultation for the same action with the National Marine Fisheries Service (NMFS) for species under their jurisdiction.

The purpose of the consultation package is to:

- Meet the requirements of section 7(a)(2) of the ESA (50 Code of Federal Regulations [CFR] part 402).
- Evaluate the effects of the proposed action on listed species and/or their critical habitat that are known to be or could be present within the action area.
- Request concurrence from the USFWS with the Navy’s effect determinations for listed species

### **1.2 BACKGROUND**

Commissioned in 1942 as part of NAS Whidbey Island, Ault Field is the only Naval air station in the Pacific Northwest. It has supported Naval aviation for more than 70 years and served as the primary home base location for the Navy’s Electronic Warfare community for more than 45 years. Ault Field and the Seaplane Base were identified as ideal locations for the rearming and refueling of Navy patrol planes and other tactical aircraft operating in defense of Puget Sound during World War II. Outlying landing field (OLF) Coupeville became operational in 1943 to support practice approach/landings and emergency landings. Over a period of more than 40 years, Ault Field has evolved into the Navy’s home for its Electronic Attack aircraft. OLF Coupeville, an integral part of operations at Ault Field, provides the most realistic training for field carrier landing practice (FCLP) in the northwest, as well as training for search-

and-rescue and parachute operations. The Navy has continuously used OLF Coupeville for field carrier landing practice (FCLP) since the late 1960s.

Ault Field is the home base location of the Navy's entire tactical Electronic Attack community in the U.S., including all Growler squadrons, and provides facilities and support services for nine carrier squadrons, three expeditionary squadrons, one expeditionary reserve squadron, one training squadron, and an electronic attack weapons school. The carrier and expeditionary squadrons have similar missions but differ in where they deploy and how they train before deployment.

Three types of Growler squadrons support the Airborne Electronic Attack mission for the U.S. Department of Defense (DoD):

- **Carrier squadrons** deploy on aircraft carriers and conduct periodic FCLP to requalify to land on aircraft carriers.
- **Expeditionary squadrons**, including the reserve squadron, deploy to overseas land-based locations and therefore do not normally require periodic FCLP prior to deployment.
- **The training squadron**, which is also known as the Fleet Replacement Squadron, or FRS, is the training squadron responsible for "post-graduate" training of newly designated Navy pilots and Naval Flight Officers, those returning to flight after non-flying assignments, or those transitioning to new aircraft for duty in the Fleet. The training squadron is the "schoolhouse" where pilots receive their initial FCLP, and it fosters professional standardization and a sense of community.

Electronic warfare has played a key role in combat operations since first being introduced during World War II, and its importance continues to grow as potential adversaries invest in modern threat systems. The mission of the Navy's Growler aircraft is to suppress enemy air defenses and communications systems. Additionally, Navy Growlers disrupt land-based threats in order to protect the lives of U.S. ground forces. The Secretary of Defense directed that the tactical Airborne Electronic Attack mission is the exclusive responsibility of the Navy. As a result, the Navy is the only U.S. military service to maintain a tactical airborne electronic attack capability and is required to preserve and cultivate the expertise and knowledge of the Growler community.

In spring 2014, the Navy assessed that it would need additional Growlers in order to address current and future threats, and submitted a request to Congress to purchase additional Growlers. At that time, it was unclear whether Congress would authorize the purchase of additional Growlers. Nonetheless, since there was a possibility that additional Growler aircraft could be purchased in the future, the Navy elected to revise the scope for the environmental impact statement (EIS) effort in order to be transparent with the public as to future possibilities. The revised scope for the EIS was announced in October 2014. Subsequently, Congress authorized the purchase of additional Growler aircraft in 2015 and 2016.

### **1.3 PREVIOUS CONSULTATIONS FOR US NAVY PROJECTS IN WASHINGTON**

The Navy has previously consulted with the USFWS for operations occurring on or in the vicinity of NAS Whidbey Island. Previous consultations for NAS Whidbey Island incorporated a limited action area and stressors analyzed focused on impacts from aircraft overflights. Consultations for the Northwest Training Range Complex (NWTRC) and Northwest Training and Testing (NWTT) incorporated a

significantly larger action area than that of the home-basing projects at NAS Whidbey Island (exposing a larger number of marbled murrelets) and, while stressors for aircraft overflights were analyzed, they were discounted. This section discusses prior consultations that analyzed the stressors associated with aircraft operations on marbled murrelets.

#### Expeditionary Transition of EA-6B Prowler Squadrons to EA-18G Growler at NAS Whidbey

December 2, 2010: Representatives from the Navy met with representatives from the USFWS to discuss the replacement of EA-6B Prowler aircraft with EA-18G Growler aircraft on NAS Whidbey Island. The USFWS identified acoustic impacts and air strike risk as potential stressors of concern to the marbled murrelet.

The USFWS identified the need to evaluate marbled murrelet use of water, land/water, and land. The USFWS indicated that the risk of an aircraft strike could be greater during approach than departure, with the greatest likelihood of a strike at 500 feet or below, over marine waters. The USFWS referred to the U.S. Pacific Fleet's Northwest Training Range Complex (NWTRC) 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 Biological Opinion (BO) (US Fish and Wildlife Service 2010) as a source of information on approximate aircraft flight elevations to and from Whidbey Island, and the (potential) interaction aircraft may have with murrelets in the area.

December 8, 2011: Representatives from the Navy met again with the USFWS to provide an updated description of the proposed action for the EA-6B Prowler to EA-18G Growler transition. The USFWS agreed that, due to the short duration of aircraft operations below 500 feet above ground level (AGL), the bird strike hazard due to the proposed action could be discounted. The supporting analysis for this finding is detailed in the NWTRC BO (US Fish and Wildlife Service 2010).

The USFWS also explained that historically 92 decibels (dBA) sound exposure level (SEL) has been established as the disturbance threshold for airborne noise for the marbled murrelet (US Fish and Wildlife Service 2010, 2011) and requested the Navy submit an analysis of sound at these levels with their assessment. Though, USFWS did acknowledge that there are no known studies or data available that evaluate the response of marbled murrelets (or other alcids) to elevated in-air sound in the marine environment.

March 2012: The Navy submitted a biological assessment to the USFWS for Expeditionary Electronic Attack Squadron Realignment and Transition at NAS Whidbey Island along with a sound analysis of the frequency and duration of aircraft operations at >92 dBA single noise event levels. On May 25, 2012, the USFWS sent a letter of concurrence to the Navy concluding that the proposed action in the Expeditionary Electronic Attack Realignment and Transition, NAS Whidbey Island was "not likely to adversely affect" the marbled murrelet based on the following justifications (see Appendix B) (US Fish and Wildlife Service 2012):

- The project is more than 0.25 mile from suitable marbled murrelet nesting habitat and does not include blasting, low-elevation (<500 ft.) aircraft operations, impact pile driving, or other activities that could produce sound above 92 dB. Thus, nesting marbled murrelets and their young are extremely unlikely to be exposed to project stressors (sound and visual disturbance) while on the nest or in the nest stand. Therefore, the effects of the proposed action to nesting marbled murrelets would be insignificant and discountable.

- The project is not expected to result in sound pressure levels that would measurably affect marbled murrelets. Therefore, effects to marbled murrelets would be insignificant.
- The project is not expected to release or introduce environmental contaminants into or adjacent to the aquatic environment in concentrations that would measurably effect marbled murrelets. Therefore, effects to marbled murrelets via direct exposure or uptake of contaminants will be insignificant.
- The indirect effects associated with operation of the completed action and use of the facility are not expected to result in sound pressure levels above background; therefore disturbance of marbled murrelets is not expected to be measurable.
- Operation of the proposed action and the use of the facility are not expected to release or introduce contaminants into the aquatic environments at concentrations that may result in measurable effects to marbled murrelets via their prey species.

#### U.S. Pacific Fleet Northwest Training Range Complex

August 12, 2010: The USFWS issued a BO for the Navy's NWTRC activities. The NWTRC action area included areas of the Pacific Ocean off the coasts of Washington, Oregon, and northern California, airspace, land, and waters of Coastal/Puget Sound, and airspace and lands across the northern tier of Washington and extending to Idaho. Stressors associated with aircraft overflights were analyzed, including arrivals and departures to Ault Field at NAS Whidbey Island. The USFWS considered the murrelet aircraft strike risk to be discountable based on bird strike data as well as the flight altitudes and rapid flight behavior characteristic to both the aircraft and the murrelets. The USFWS analyzed exposure to aircraft sound and based on the short exposure duration of murrelets to elevated sound pressure levels, concluded that the likelihood of injury is discountable.

#### U.S. Pacific Fleet Northwest Testing and Training Activities

July 21, 2016: The USFWS issued a BO for the Navy's NWTT activities. The NWTT action area encompassed offshore areas of northern California, Oregon, and Washington, the inland waters of Puget Sound, portions of the Olympic Peninsula, and part of Western Behm Canal in southeast Alaska. While the action area for NWTT activities is vastly larger (and therefore exposes many more birds) than that of the proposed action, which includes only a localized area around Whidbey Island, the main concerns of aircraft noise were related to the effects on nesting marbled murrelets. The USFWS concluded that exposure to aircraft noise from NWTT activities may adversely affect marbled murrelets, but they did not anticipate the effects would result in a significant disruption of nesting behaviors or result in direct injury to marbled murrelets. The USFWS considered the aircraft strike risk for NWTT activities to be discountable, given the altitudes with which training aircraft occur (US Fish and Wildlife Service, 2016a).



## 2.0 DESCRIPTION OF THE ACTION AND ACTION AREA

The NAS Whidbey Island complex is located in Island County, Washington, on Whidbey Island, in the northern Puget Sound region (Figure 2-1). The NAS Whidbey Island complex includes the main air station (Ault Field), OLF Coupeville, the Seaplane Base, and Lake Hancock. Ault Field is located in the north-central part of the island, adjacent to the City of Oak Harbor (Figure 2-2). OLF Coupeville is located approximately 10 miles south of Ault Field (Figure 2-3) and is used primarily for field carrier landing practice (FCLP).

### 2.1 PROPOSED ACTION

The Navy proposes to conduct the following actions:

- continue and expand existing Growler operations at the Naval Air Station (NAS) Whidbey Island complex, which includes field carrier landing practice (FCLP) at Ault Field and Outlying Landing Field (OLF) Coupeville
- increase electronic attack capabilities by adding up to 36 aircraft to support an expanded DoD mission for identifying, tracking, and targeting threats in a complex electronic warfare environment
- construct and renovate facilities at Ault Field to accommodate additional Growler aircraft
- station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community

For the purpose of this consultation, the proposed action analyzed is that which will have the greatest impact on the environment. While the draft EIS for this project presented a variety of alternatives and scenarios, a preferred alternative has not yet been chosen. This proposed action takes into account the placement of the additional aircraft into their new squadrons and focuses on how the new structure will increase field carrier landing practice events, resulting in the largest noise impact on the surrounding environment. The number of total FCLPs occurring specifically at Ault Field and OLF Coupeville would depend on how the activities are split up between the two facilities, with neither location having more than 80% of the FCLPs. For example, if 80% percent of the FCLPs would occur at Ault Field, then only 20% percent of the FCLP would occur at OLF Coupeville, which would create the greatest impacts at Ault Field. A split assigning 80% of the FCLP to OLF Coupeville and 20% to Ault Field would be the most impactful to OLF Coupeville. This assessment is based on the most impactful scenario where the split in operations would create the most significant noise impacts, and therefore assumes the higher end of operations (80%) for both Ault Field and OLF Coupeville. As increased operations will not be split evenly between Ault Field and OLF Coupeville, this consultation analyzes the maximum amount of increased activity at each facility, and is thus an overestimate of the overall increase in activity.

#### 2.1.1 Additional Military Personnel and Dependents

Implementation of the proposed action would result in minor increases in the personnel loading at the NAS Whidbey Island Complex and in the total population for the region. Total military personnel would increase by 664 personnel. As additional military personnel are stationed at the complex, it is assumed that their dependents (e.g., spouses and children) would also move into the region. Based on data collected in 2013 by the Office of the Deputy Assistant Secretary of the Defense (Military Community and Family Policy) on the average number of dependents for Navy and DoD personnel, there would be

an additional 910 military dependents for the proposed action. No additional military-controlled housing is currently planned to be built as a result of the proposed action, and all additional personnel would be absorbed within the local community. A 2015 housing study completed for the NAS Whidbey Island Complex found a total of 2,545 housing units vacant in 2013 in the communities located directly around the complex. Based on the relatively small change in military personnel and dependents as well as no new housing needs to be constructed to accommodate this increase, military personnel and dependents will have no effect on any listed species and will not be discussed further in the document.

### **2.1.2 Facility and Infrastructure Requirements**

The proposed action would require certain facilities and infrastructure to support the necessary training, maintenance, and operational requirements. The Navy evaluated existing and planned facility resources at Ault Field to identify the types and sizes of additional and/or modified facilities and infrastructure needed to support the proposed action. The Navy developed conceptual plans for modifying existing assets (e.g., buildings) or constructing new facilities and infrastructure where needed to resolve deficiencies. The facilities and infrastructure required for additional Growler aircraft and personnel, and to meet the needs of the proposed action, include: aircraft pavement, aircraft parking apron, flight training and briefing building, maintenance hangars, armament storage, and a mobile maintenance facility (as illustrated in Figure 2-4).

New construction to support new Growler aircraft and personnel would include additional armament storage, hangar facilities, Mobile Maintenance Facility storage area, and expanded personnel parking areas. The proposed action would require repairs to inactive taxiways for aircraft parking in addition to expanded hangar space. Hangar 12 would be expanded to accommodate additional training aircraft. All planned construction activities would occur on the north end of the flight line at Ault Field. New parking areas, maintenance facilities, and armament storage would be constructed along Enterprise Road at the north end of Charles Porter Road. Once constructed, facilities and parking would add up to approximately 2 acres of new impervious surface at the installation. The increase in impervious surface would be less than 1 percent compared to the existing approximately 600 acres of impervious surface at NAS Whidbey Island.

No construction would be required at OLF Coupeville because it is capable of supporting increased operational requirements in its current state.

Impacts to marine waters and sediment would be minimized and avoided through implementation of BMP's, low-impact development, and green infrastructure. Examples of BMPs for controlling non-point source pollution include but are not limited to the following:

- Activities such as vehicle maintenance, chemical or waste oil storage, or transferring potential contaminants would be conducted in covered areas so stormwater would not wash contaminants into storm drains or surface waters.
- Areas that cannot be covered should have their stormwater runoff retained and diverted to the sanitary sewer system.
- The storm drain system should not be used to dump or discharge any materials or chemicals. All departments should notify the Environmental Division before conducting any operations that may discharge materials or washes into the system. This includes water from vehicle washing. All storm drains should be labeled with "no dumping" signs.

Because more than 1 acre would be disturbed during construction at Ault Field, a construction National Pollutant Discharge Elimination System stormwater permit would be obtained through the U.S. Environmental Protection Agency through its water quality permit program. Under the permit, the Navy would develop a site-specific plan for managing stormwater runoff and describe the BMPs to be implemented to eliminate erosion, sedimentation, and stormwater pollution. The Navy does not expect facility construction to impact water quality from erosion and off-site sedimentation during construction.

Non-native grassland and landscaped vegetation occupy the proposed construction areas at Ault Field. This vegetation is regularly maintained as part of the airfield management program. No unique or regionally significant vegetation communities occur in these areas, and all areas are previously disturbed. Since no suitable habitat exists for any listed species in this area and water quality degradation from erosion and off-site sedimentation is not anticipated, facility construction will have no effect on any listed species and will not be discussed further in this document.

### **2.1.3 Airfield Operations**

Aircraft flying patterns at, arriving at, or departing from Ault Field and OLF Coupeville normally fly routes called flight tracks. Flight tracks were developed to aid in the safe and efficient flow of air traffic and were established based on community impact, obstacle clearance, civil air traffic routes and available airspace, and navigational aid coverage, as well as current operational characteristics of the aircraft operating at both airfields.

Ault Field is the home base location for the Growler community, including nine carrier squadrons, three expeditionary squadrons, one expeditionary reserve squadron, and one training squadron. The training squadron provides initial and refresher Growler qualification training, including FCLP for all first-tour Growler aircrews and refresher training for Growler aircrews returning to a squadron after non-flying assignments. FCLP events occur at Ault Field as well as at OLF Coupeville. The carrier squadrons deploy on aircraft carriers and conduct periodic FCLP to requalify to land on aircraft carriers. Expeditionary squadrons, including the reserve squadron, deploy to land-based locations and therefore do not normally require periodic FCLP prior to deployment.

Ault Field consists of two intersecting runways, Runway 07/25 and Runway 14/32 (Figure 2-2). Both runways are 8,000 feet long and 200 feet wide. Ault Field is available for use 7 days per week, 24 hours per day. Aircraft generally take off into the wind for optimum safety and performance. Prevailing surface winds are from the southeast between October and March and from the southwest between April and September. Therefore, the prevailing wind direction as well as noise-abatement procedures result in Runways 25 and 14 being the most frequently used runways at the station. Approximately 46 percent of the airfield operations are assigned to Runway 25, and 32 percent are assigned to Runway 14. Runways 07 and 32 are used less frequently; 16 percent of the airfield operations are assigned to Runway 07, and 6 percent are assigned to Runway 32.

OLF Coupeville consists of one runway, Runway 14/32 (Figure 2-3). The runway is 5,400 feet long and 200 feet wide. OLF Coupeville is available for use 7 days per week, 24 hours per day, and similar to Ault Field, runway use is determined by prevailing winds and the performance characteristics of the Growler. The runway utilization goal at OLF Coupeville has been to split FCLPs equally between Runways 14 and 32. In recent years, however, due to a non-standard pattern on Runway 14, the utilization of Runway 14

has been significantly lower. This narrower pattern requires an unacceptably steep angle of bank for the Growler due to performance differences from the former Prowler flying the pattern.

As squadrons prepare for deployment on an aircraft carrier, activity significantly increases. This high tempo of activity is then followed by periods of reduced or no operations. Use of OLF Coupeville is largely dependent on operational deployment schedules and aircraft carrier qualification detachment schedules, and, as such, the number of operations at OLF Coupeville is less than at Ault Field.

A flight operation refers to a single takeoff or landing associated with a departure or arrival of an aircraft. A flight operation also may be part of a training maneuver (e.g. arrival part of FCLP). Basic flight operations are:

### **Departure**

An aircraft departure is described as an aircraft taking off to a local or non-local training area or as part of a training maneuver (e.g. the departure part of FCLP).

### **Arrival**

An arrival is described as an aircraft landing on the runway after returning from a local or non-local training range, or as part of a training maneuver (e.g. the arrival part of FCLP). The three basic types of arrivals are:

- **Straight-In/Full-Stop Arrival**  
An aircraft lines up to the runway centerline several miles away from the airfield, descends gradually, lands, comes to a full stop, and then taxis off the runway.
- **Overhead Break Arrival**  
An aircraft approaches the runway approximately 500 ft. above the altitude of the landing pattern. Approximately halfway down the runway, the aircraft performs a 180-degree turn to enter the landing pattern. Once established in the pattern, the aircraft performs a second 180-degree, descending turn to land on the runway. This event is an expeditious arrival using visual flight rule.
- **Instrument Approach**  
An aircraft approach conducted under both instrument flight rule (i.e., when aircraft are flown referring only to the aircraft instrument panel for navigation) and visual flight rule conditions provides realistic training for both Navy aircrews and air traffic controllers.

### **Pattern Operation**

A pattern operation is an aircraft arrival followed by a departure. When an aircraft operation is followed by a departure, each pattern is considered two operations: the landing or approach is counted as one operation, and the takeoff is counted as another. Pattern operations include the following types:

- **Touch-and-Go**  
An aircraft lands on a runway and takes off without coming to a full stop. After touching down, the pilot immediately goes to full power and takes off again.
- **Field Carrier Landing Practice**  
The required flight training that immediately precedes deployment and qualifies aircrews for carrier-landing operations. Per Navy guidance, pilots must perform FCLPs before initial carrier (ship) landings or requalification landings. The first carrier landing needs to occur within ten days of completion of FCLPs. These operations are conducted on a runway that simulates an

aircraft carrier flight deck. FCLP is generally flown in a left-hand, closed-loop, racetrack-shaped pattern, ending with a touch and go landing or a low approach. A typical FCLP evolution lasts approximately 45 minutes, usually with three to five aircraft participating in the training conducting eight to ten landings in each evolution. Aircraft in the FCLP are usually spaced about one minute apart. FCLP schedules are dictated by training and deployment schedules, occur with concentrated periods of high-tempo operations, and are followed by periods of little to no activity. Figure 2-5 illustrates the flight elevations and patterns typical of FCLP.

- Ground Controlled Approach/Carrier Controlled Approach**  
 During Ground Controlled and Carrier Controlled approaches, aircraft land with guidance from ground-based air traffic controllers to practice and conduct arrivals under actual or simulated adverse-weather conditions. Air traffic controllers provide aircrews with verbal course and elevation information, allowing them to make an instrument landing during instrument flight rule conditions. Ground Controlled Approach training is conducted in both instrument flight rule and visual flight rule conditions to provide realistic training for both Navy aircrews and air traffic controllers. Carrier Controlled Approach training is similar to Ground Controlled Approach but with the Landing Signal Officer present.

Annual operations under the no action (operations not affiliated with the proposed action) include arrivals, departures, FCLPs, and other pattern operations. Under the no action, there are 68,200 total EA-18G Growler operations at Ault Field and 6,100 operations at OLF Coupeville (Table 2-1). Under the proposed action, there would be up to 106,900 annual EA-18G Growler airfield operations at Ault Field and up to 35,100 EA-18G Growler operations at OLF Coupeville, to include arrivals, departures, FCLPs, and other pattern operations. This would be an increase of 38,700 and 29,000 operations at Ault Field and OLF Coupeville, respectively.

EA-18G Growler operations would be conducted in a manner similar to the current Navy aircraft training missions conducted at the NAS Whidbey Island complex, with the exception of standardizing the FCLP pattern for Runway 14 at OLF Coupeville, utilizing the same pattern for day and night operations. This FCLP pattern standardization will result in runway utilization of 30% at Runway 14 and 70% at Runway 32.

**Table 2-1 No Action and Proposed Action EA-18G Growler Aircraft Operations Comparison**

Action	FCLP	Other Operations	Total	Total Change
<b>Ault Field (Average Year)</b>				
No Action	14,700	53,500	68,200	
Proposed Action	35,100 <sup>1</sup>	71,800	106,900	+38,700
<b>OLF Coupeville (Average Year)</b>				
No Action	6,100	0	6,100	
Proposed Action	35,100 <sup>1</sup>	0	35,100	+29,000

<sup>1</sup>: These numbers are based on the most impactful scenario for each location (i.e. where the split in FCLP operations would create the most significant noise impacts. See Section 1.2 for more information.

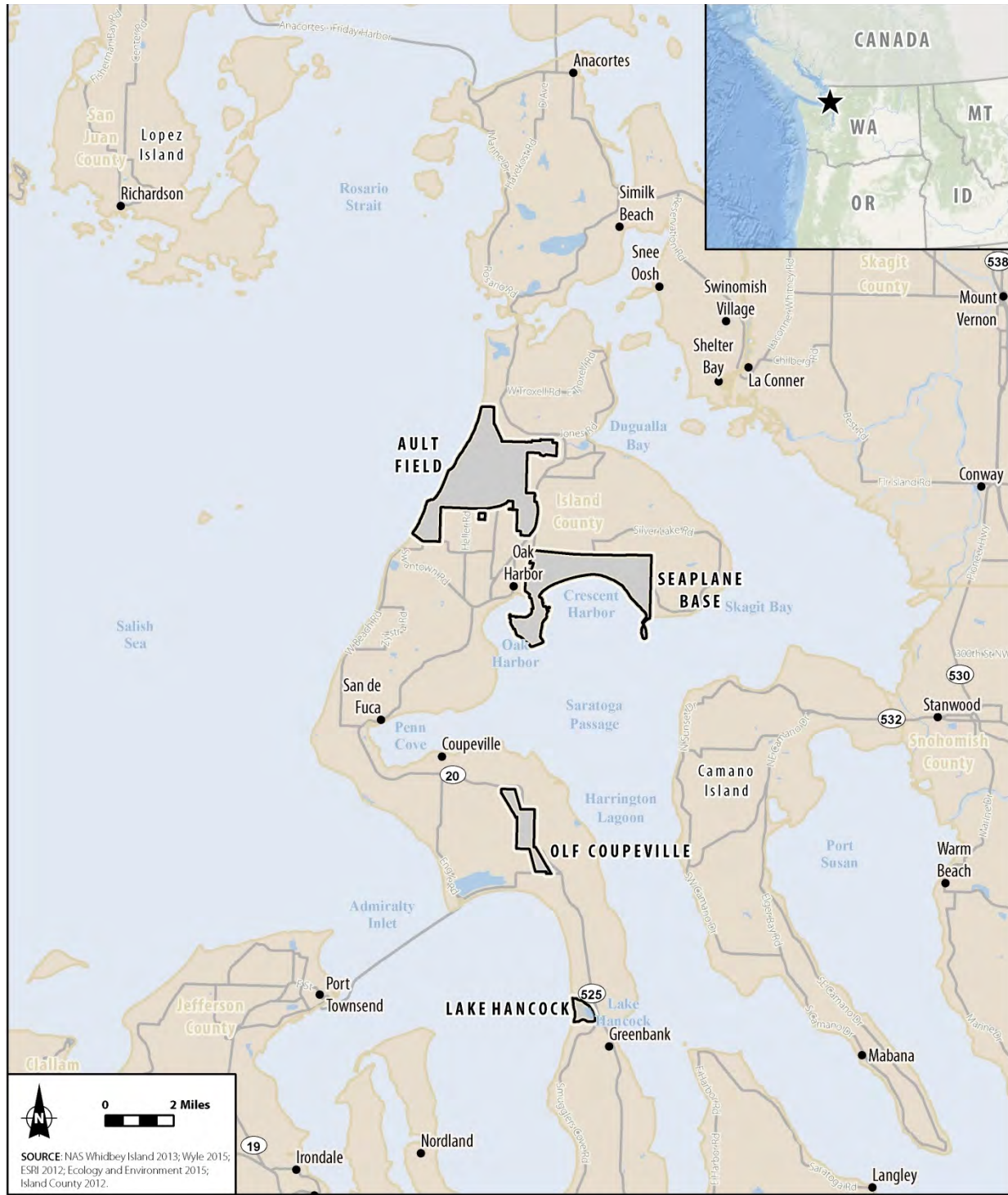
## 2.2 ACTION AREA

The action area is defined in the ESA as all areas that could potentially be affected directly or indirectly by the federal action (50CFR § 402.02). The potential stressors associated with the proposed action to marbled murrelets are aircraft noise and aircraft strike.

During discussion for the Expeditionary Transition of EA-6B Prowler Squadrons to EA-18G Growler consultation, the USFWS established 92 decibels (dBA) sound exposure level (SEL) as the disturbance threshold for airborne noise for the marbled murrelet (US Fish and Wildlife Service, 2010). Therefore, the Navy has prepared a 92 dBA SEL contour for air operations associated with the proposed action. Figure 2-6 represents the action area for aircraft noise related the proposed action.

The USFWS also indicated the greatest likelihood of a marbled murrelet aircraft strike to occur at 500 feet or below over marine waters (US Fish and Wildlife Service 2010). Figure 2-7 represents the action area for aircraft strike risk highlighting areas with flights altitudes occurring at 500 feet or below. The action area for aircraft strikes as illustrated in Figure 2-7 is also contained within the action area for aircraft noise (Figure 2-6).

**Figure 2-1 General Location Map – NAS Whidbey Island Complex**



- City
- County Boundary
- Major Road
- Installation Area

**General Location Map –  
NAS Whidbey Island Complex**  
Whidbey Island, Island County, WA



**Figure 2-2 General Location Map – Ault Field**

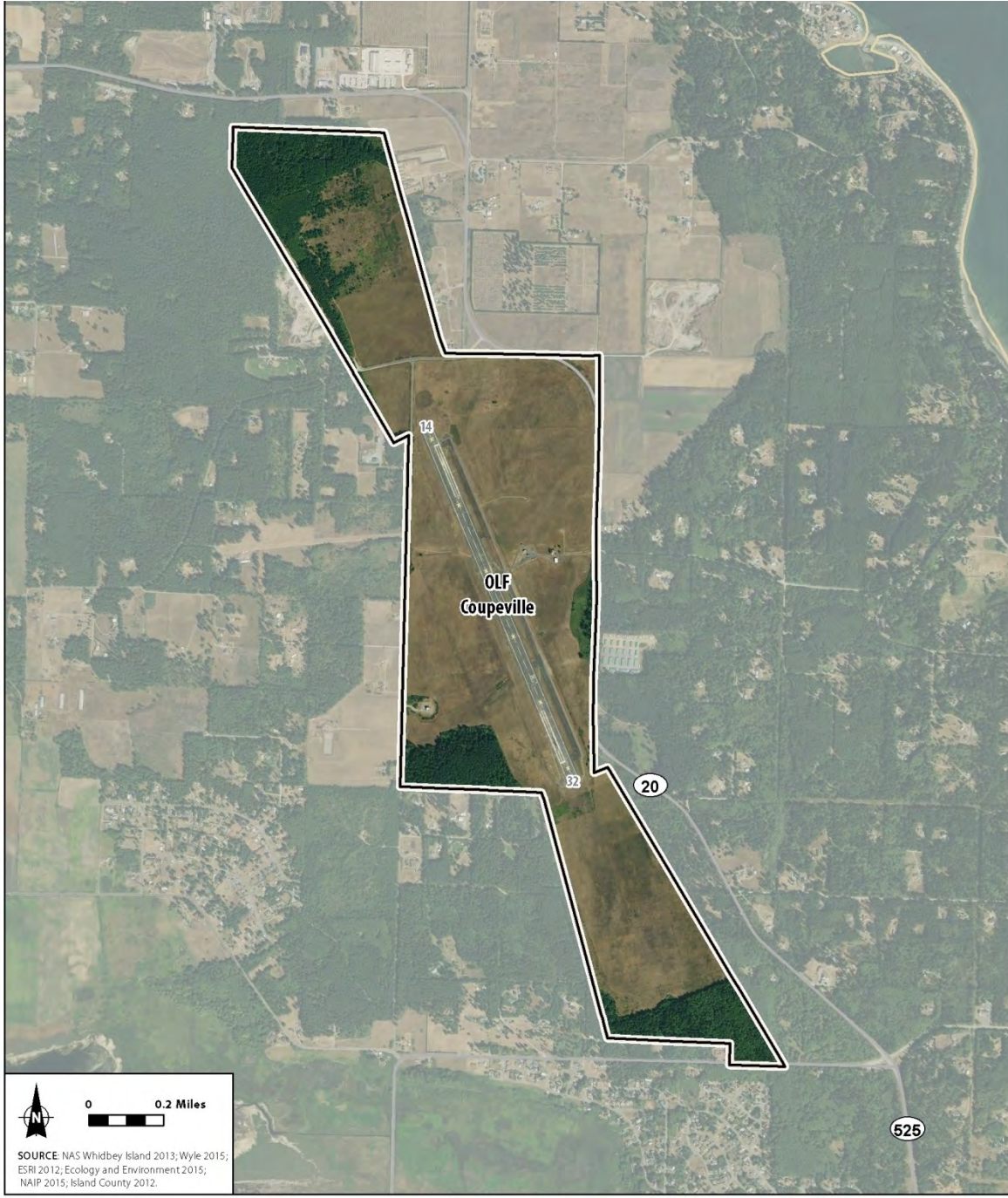


- City
- County Boundary
- Major Road
- Installation Area

**General Location Map, Aerial,  
Ault Field**  
Whidbey Island, Island County, WA



Figure 2-3 General Location Map – OLF Coupeville



- City
- County Boundary
- Major Road
- Installation Area

General Location Map, Aerial –  
OLF Coupeville  
Whidbey Island, Island County, WA



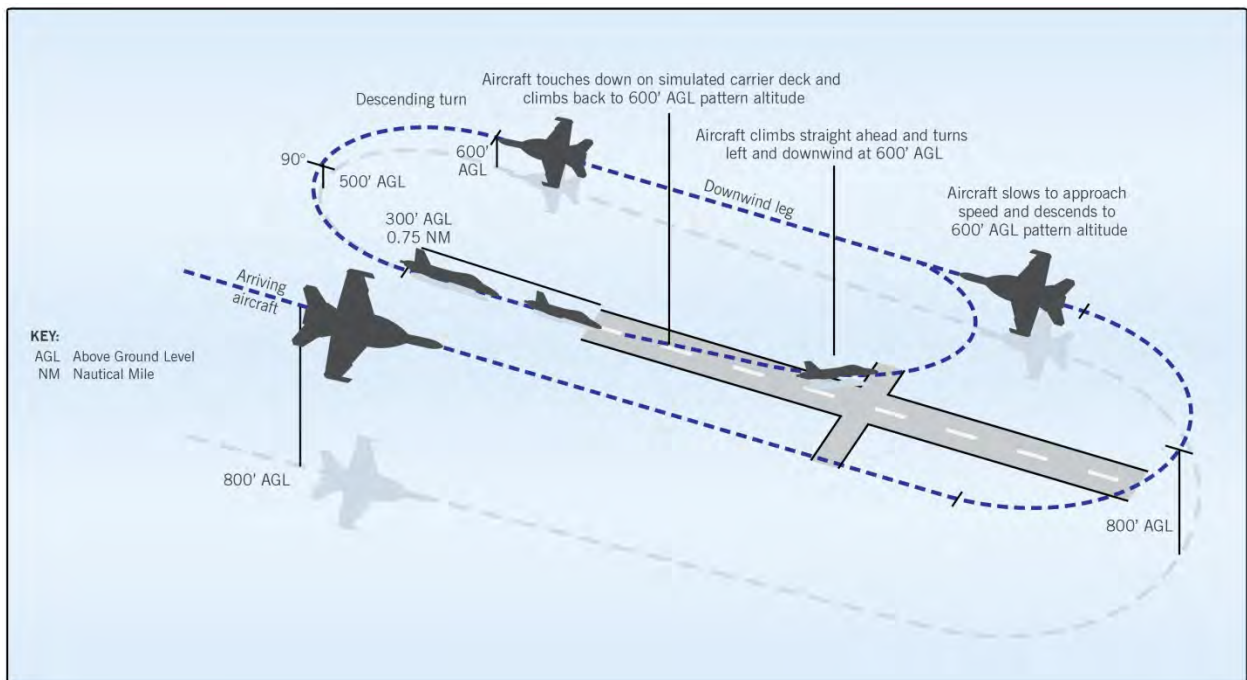
**Figure 2-4 Proposed Construction Locations at Ault Field**



- City
- ▭ Installation Area
- ▭ Proposed Construction
- Street

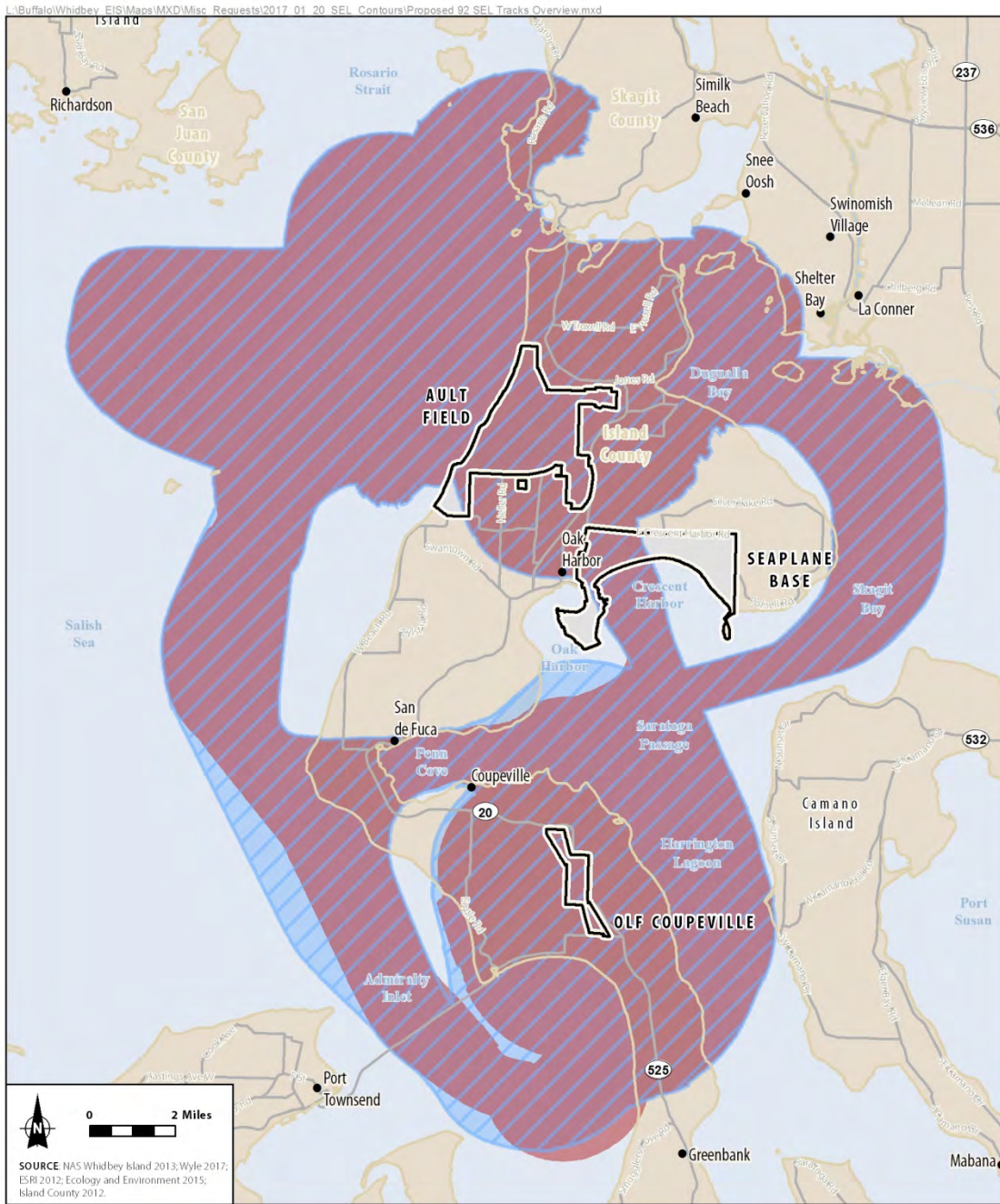
**Ault Field**  
**Planned Construction under**  
**Alternatives 1, 2, and 3**  
 Whidbey Island, Island County, WA

**Figure 2-5 FCLP Operation Pattern and Altitude**





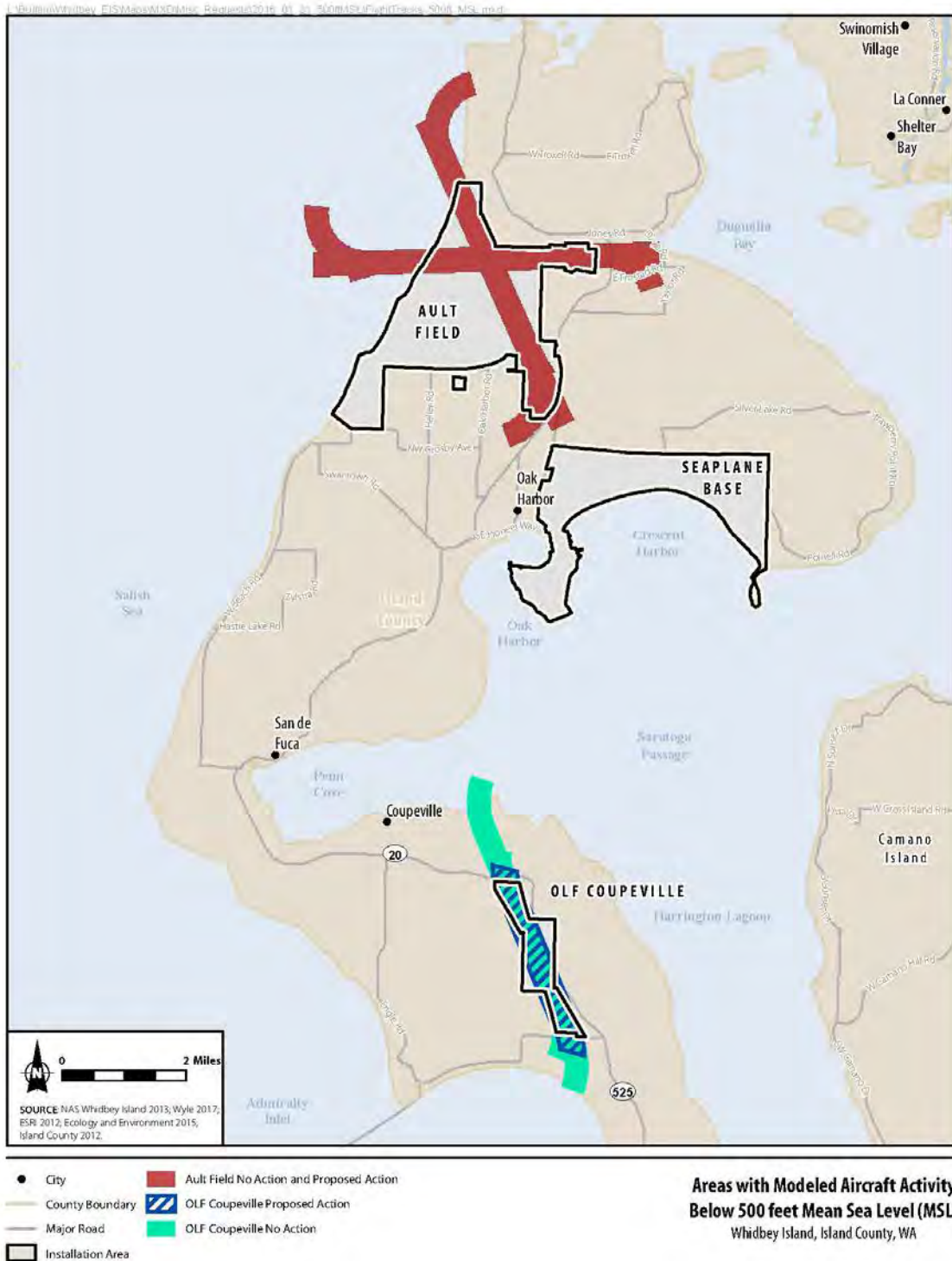
**Figure 2-6 Aircraft Noise Action Area  
92 dB SEL Sound Contour**



- City
- County Boundary
- Major Road
- Installation Area
- 92 dB SEL No Action Noise Contour (162,686 Acres)
- 92 dB SEL Proposed Action Noise Contour (157,859 Acres)

**No Action and Proposed Action  
92 dB SEL Noise Contours for the  
NAS Whidbey Island Complex**  
Whidbey Island, Island County, WA

**Figure 2-7 Aircraft Airstrike Action Area**  
**Aircraft Altitudes < 500 Feet Mean Sea Level**



## **3.0 DESCRIPTION AND HABITAT OF THE MARBLED MURRELET** *(Brachyramphus marmoratus)*

### **3.1 Status and Management**

The marbled murrelet was listed as a threatened species on September 28, 1992, in Washington, Oregon, and northern California (57 FR 45328 [October 1, 1992]). The USFWS completed a species recovery plan for the marbled murrelet in 1997 (US Fish and Wildlife Service 1997), and a 5-year review status update in 2009 (US Fish and Wildlife Service 2009). Critical habitat was designated for the marbled murrelet in 1996 (61 FR 26256 [May 24, 1996]), to include approximately 1.5 million acres in Washington State; however, no lands on or waters near Ault Field or OLF Coupeville are designated as critical habitat. The USFWS revised the critical habitat designation for marbled murrelet in 2011, removing approximately 189,671 acres from northern California and southern Oregon from the 1996 designation that did not meet the definition of critical habitat (76 FR 61599 [October 5, 2011]). A final determination was posted by USFWS in 2016 upon the reassessment of designated critical habitat listed in 2011 after it was confirmed to meet the statutory definition of critical habitat (81 FR 51348 [August 4, 2016]).

### **3.2 Habitat and Geographic Range**

Marbled murrelets range from Alaska to western central California (Santa Cruz County), occurring mainly within 3 miles of shore. Distribution can vary due to coastline topography, river plumes, the presence of coastal forest, and season (Falxa *et al.* 2009). Presence of these birds within Washington State decreases with increasing stand elevation, distance inland, lichen cover, and canopy cover (Nelson 1997).

In Washington State, the marbled murrelet breeds exclusively in forested habitats within 55 miles of marine waters. Important components of nest trees in Washington State include (USFWS 2012b):

- Old-growth, mature, or younger coniferous forests with appropriate structure for platforms that are at least 4 inches wide (Hamer and Nelson 1995)
- Vertical and horizontal cover for platforms to protect chicks and adults from predation (USFWS 2012b)
- Tree accessibility attributed to variable canopy structure (Hamer and Nelson 1995)
- Platform altitude at least 33 feet above the ground (USFWS 2012b)

Marbled murrelets are distributed throughout the inland marine waters of Washington during the summer, with higher concentrations in the San Juan Islands, north Hood Canal, and the south coast of the Strait of Juan de Fuca. In the winter, there is a shift in concentration toward the more protected waters of the San Juan Islands, Hood Canal, Discovery Bay, Saratoga Passage, and Port Townsend (Strachan *et al.* 1995) where marbled murrelets forage in nearshore areas.

### **3.3 Population and Abundance**

The Washington, Oregon, and California marbled murrelet population is split into six monitoring areas, or conservation zones, from the Canadian border to approximately San Francisco Bay. The proposed

action is located within Conservation Zone 1, which encompasses all of Puget Sound and the Strait of Juan de Fuca, collectively known as the Salish Sea which surrounds Whidbey Island to the south and west. Within this area, marbled murrelets tend to forage in well-defined areas along the coast in relatively shallow marine waters during the breeding season (Carter and Sealy 1990 *as cited by* US Fish and Wildlife Service 2016a) while during the non-breeding season they are less concentrated in the immediate nearshore coastal waters and are found much farther offshore (Menza *et al.* 2015 *as cited by* US Fish and Wildlife Service 2016a).

At-sea population surveys performed from 2001 through 2012 estimated the population density around Ault Field and OLF Coupeville to be from >1 to 1-3 birds/km<sup>2</sup> (Falxa *et al.* 2013 *as cited in* Desimone 2016). Marbled murrelets are found in the highest densities in the nearshore waters of the San Juan Islands and Rosario Strait, both located to the northwest outside of the action area; the Strait of Juan de Fuca, west of the action area; Admiralty Inlet, bordering Whidbey Island to the southwest; and Hood Canal, located to the southwest of Admiralty Inlet outside of the action area (US Fish and Wildlife Service 2016a). They are more sparsely distributed elsewhere in Puget Sound. Seasonal movements and redistribution of marbled murrelets occurs during the fall and winter months. In Puget Sound, there is evidence that marbled murrelet densities increase as they move from the outer coasts of Washington and British Columbia into the protected, inland waters of Puget Sound (Speich and Wahl 1995 *as cited by* US Fish and Wildlife Service 2016a). The Service assumes the density of marbled murrelets in Conservation Zone 1 increases by a factor of 1.83 during the non-breeding season (US Fish and Wildlife Service 2016a). In the most southern end of Puget Sound, they occur in extremely low numbers (US Fish and Wildlife Service 2016a).

The annual rate of decline in marbled murrelet density in Washington between 2001 and 2015 was -4.4 percent (Lance and Pearson 2016 *as cited in* Desimone 2016). For 2015, the population estimate for the Salish Sea was 4,290 birds, with a -5.3% average annual rate of decline for the 2001-2015 period (Lance and Pearson 2016 *as cited in* Desimone 2016). Population estimates for the outer coast of Washington declined at a rate of -2.8%, with an estimated total population in Washington (Salish Sea and outer coast combined) of 7,492 birds.

### **3.4 Predator/Prey Interactions and Foraging**

Marbled murrelets are considered to be opportunistic feeders on available prey within certain size classes (US Fish and Wildlife Service 1997). Adults, sub-adults, and hatching-year birds feed primarily on larval and juvenile fish, whereas nestlings are most commonly fed larger second-year fish (US Fish and Wildlife Service 1997). Sand lance, a small marine fish, is the most common food of the marbled murrelet across its range and appears to be the most important prey species in the chick's diet (US Fish and Wildlife Service 1997). It is believed that their diet north of Washington is dominated by sand lance, herring, and capelin. (McShane *et al.* 2004; *as cited by* US Fish and Wildlife Service 2016a).

The USFWS expects marbled murrelet presence in marine waters is driven by prey availability (US Fish and Wildlife Service 2016a). Prey availability varies depending on a variety of factors, but especially upwelling conditions created by seawater temperature changes and seafloor topography. The foraging habits of marbled murrelets change depending on whether they are nesting and provisioning young (US Fish and Wildlife Service 2016a). When breeding, they tend to forage closer to shore, primarily on small fish. This allows them to efficiently provision young. During non-breeding they disperse and can be found much farther offshore foraging on both small fish and crustaceans (US Fish and Wildlife Service 2016a).

Marbled murrelets nesting platforms are highly vulnerable to predation. Potential nest predators include jays, crows, owls, hawks, raccoons, martens, chipmunks, and squirrels. Nesting platforms near forest edges are most susceptible to predation (US Fish and Wildlife Service 1997).

Marbled murrelet adults have been observed to be preyed upon by peregrine falcons (*Falco peregrinus*) and remains of marbled murrelets have been observed in peregrine eyries (Campbell *et al.* 1978 *as cited by* US Fish and Wildlife Service 1997). Adults have also been observed to be killed by sharp-shinned hawks (*Accipiter striatus*) (Marks and Naslund 1994; *as cited by* US Fish and Wildlife Service 1997) and northern goshawks (*Accipiter gentilis*) (N. Naslund, pers. comm. to US Fish and Wildlife Service 1997). Peregrine falcons and common ravens have been observed to chase marbled murrelets just above and within the forest canopy (Nelson and Hamer 1995; *as cited by* US Fish and Wildlife Service 1997).

### **3.5 Critical Habitat**

There is no marbled murrelet designated critical habitat within the action area. The nearest marbled murrelet designated critical habitat occurs approximately 15 miles to the southwest of the furthest extent of the action area (US Fish and Wildlife Service 2016b).



## 4.0 EFFECTS OF THE ACTION ON THE MARBLED MURRELET

The proposed action area is within the Puget Sound encompassed by the marbled murrelet recovery zone (Conservation Zone 1), as designated and described in the *Recovery Plan for the Marbled Murrelet* (US Fish and Wildlife Service 1997). Potential stressors to marbled murrelets from the proposed action could include aircraft strikes and disturbance from aircraft noise.

The marbled murrelets preferred habitat type, old-growth coniferous forests near coastal areas, only occurs in small patches with the action area. None of these small patches have been identified as supporting marbled murrelet nesting. As commented by the WDFW in email correspondence with the Navy in October 2016, “No nesting birds have been found on Whidbey Island and no nests have been documented on any islands in the northern Puget Sound (Milner 2016, Appendix C),” although no surveys have been completed since the 1990s. The WDFW also explained that old growth trees that would typically be considered suitable habitat in Deception Pass Park are impacted by prevailing winds that prevent moss coverage from developing on defective limbs to the extent that would be necessary for nesting platforms (Milner 2016, Appendix C). The Hamer Environmental (1995) effort supports this assessment, where by performing surveys of potential nest habitat it was found that the majority of marbled murrelet nests were located on moss and that moss presence may increase the number of platforms within a stand as it creates a multitude of nest platform choices by providing substrate on many locations throughout a single limb. Prevailing winds along the western shoreline of Whidbey Island are largely influenced by exposure to the Pacific Ocean via the Strait of Juan de Fuca (Washington Dept. of Ecology 2012). These prevailing surface winds, which are generally from the southeast between October and March and from the southwest between April and September, could discourage moss spores from propagating on exposed tree limbs due to stress and disturbance. Grime (1977) identified stress (low light, insufficient water or nutrients, or suboptimal temperature) and disturbance (wind damage, humans, frost, etc.) as the two external factors that limit plant biomass (Grime 1977 *as cited by* Glime 2008).

The USFWS confirmed during the 2012 EA-6B Prowler Squadrons to EA-18G Growler at NAS Whidbey Island consultation that the project was more than 0.25 miles from suitable marbled murrelet nesting habitat. More recently, the Navy contacted the Washington Department of Fish and Wildlife to ensure the most up-to-date information on marbled murrelet nesting occurrence in the action area. They responded that small patches in the action area could be considered suitable nesting habitat, but that none of these small patches have been identified as supporting marbled murrelet nesting and that no nesting birds have been found on Whidbey Island (Milner 2016, Appendix C).

Marbled murrelets are found year-round in marine waters adjacent to Whidbey Island (eBird 2017, Seattle Audubon Society 2017), and individuals make daily, year-round flights between different foraging areas (Nelson 1997, WDFW, 2013). Marbled murrelet nesting areas have not been documented in Island County (Opperman *et al.* 2006, WDFW 2013), nor have marbled murrelets been documented in terrestrial areas of the proposed action area (WDFW 2011 *as cited in* US Department of the Navy 2012a), so it is assumed that potential impacts to marbled murrelets in the action area would be associated with foraging activities within marine waters.

## 4.1 Direct Effects

### 4.1.1 Aircraft Strike

The height at which marbled murrelets fly and the speed of the aircraft are considered risk factors when assessing the likelihood of aircraft collision with marbled murrelets. It can be inferred from previous studies that marbled murrelets generally fly lower and at slower speeds in foraging/courtship habitat, where they are often flying closer to the water surface compared to transiting to nesting habitat over land (Nelson and Hamer 1995, Hamer Environmental 2009, *as cited in* US Fish and Wildlife Service 2010). Therefore, marbled murrelet flight altitudes over marine waters next to Ault Field and OLF Coupeville would be low. Stumpf *et al.* 2011 found inland flight heights of marbled murrelets to range from 643 feet to 938 feet above ground level, however, the data were compiled from a single location on the Olympic Peninsula when analyzing flight heights of marbled murrelets transiting between foraging areas in the open ocean and inland nesting sites. Sanzenbacher *et al.* 2014, observed significant differences in flight altitudes between 2 sights near coastal waters in comparison to a single site further inland away from the water indicating that marbled murrelets may fly at higher altitudes over sites located farther inland than at sites closer to the coast. Alcid flight patterns in the marine environment are often closely associated with the surface of the water (US Fish and Wildlife Service 2010), likely to optimize energy expenditure (increased lift from the interaction of air currents and wave action) or to escape from aerial predators by diving. For both the NWTRC and the Expeditionary Transition of EA-6B Prowler to EA-18G Growler Squadrons consultations, USFWS indicated that the greatest likelihood of a strike would be at 500 ft. or below and over marine waters.

As such, the likelihood of collision between marbled murrelet and an EA-18G Growler on any given flight is largely determined by the aircraft's speed and the duration of the flight below 500 feet when over water. Aircraft departing from Ault Field typically require a rapid ascent at takeoff, with aircraft spending little time (up to approximately 10 seconds) in the 0 to 500 ft. range. Under the proposed action, the total percent of time all aircraft will spend below 500 ft. over the course of a year for departures at Ault Field and OLF Coupeville is only 1.7% and 0.55%, respectively. Approaching aircraft spend more time below 500 ft. than departing aircraft as they descend on approach to Ault Field and OLF Coupeville. Descending aircraft maintain lower flight altitudes and a more horizontal trajectory, resulting in a longer duration below 500 ft. (up to 60 seconds). The total percent of time all aircraft will spend below 500 ft. over the course of a year for arrivals at Ault Field and OLF Coupeville is only 10.2% and 3.3 %, respectively. Given the very short duration aircraft spend below 500 ft. and the small percentage of time aircraft spend below 500 ft. over the course of a year, effects to marbled murrelets due to airstrikes would be discountable.

To support this conclusion further, as explained in Section 2.1.3, Runways 25 and 32 at Ault Field are utilized 52% of the time, which means all arrivals and departures to and from those runways are below 500 ft. over land. Additionally, no aircraft at OLF Coupeville spend time below 500 ft. over marine waters. This means that the likelihood of a collision is reduced even further.

Additionally, to reduce the potential for collisions between aircraft and birds or other animals, NAS Whidbey Island has prepared and implemented a BASH plan (US Department of the Navy 2013). The BASH plan establishes a Bird Hazard Working Group and outlines roles and responsibilities for implementation of the plan, as well as provides guidance to minimize bird/animal strike hazards to military aircraft operating at NAS Whidbey Island, including OLF Coupeville. The plan includes procedures to decrease the attractiveness of the airfield to birds as well as operational procedures to

avoid high-hazard situations. To reduce the attractiveness of the runway area to birds, the area is kept clear of most vegetation, except grasses. In addition, the grass is mowed periodically. Birds occurring in the runway area are dispersed from the flight line area by U.S. Department of Agriculture (USDA) Wildlife Services staff, under permits from the U.S. Fish and Wildlife Service (USFWS). The natural resources manager secures the appropriate permits from USFWS, and the NAS Whidbey Island airfield manager ensures compliance by USDA Wildlife Services staff.

BASH plans are developed for military airfields to reduce the potential for collisions between aircraft and birds or other animals. BASH plans account for seasonal migration patterns, when BASH risks to aircraft can increase. To reduce the potential for BASH, the FAA and the military recommend that land uses that attract birds (e.g., agricultural fields, landfills) be located at least 10,000 feet from an airfield. All bird strikes are recorded and samples of deceased birds are sent to the Smithsonian for positive identification. The most recent bird/aircraft strike hazard data reports that, to-date, there have been no strikes of marbled murrelets or any alcids recorded at NAS Whidbey Island (NAS Whidbey Island, pers. comm).

Finally, for both the NWTRC and the Expeditionary Transition of EA-6B Prowler to EA-18G Growler Squadrons consultations, USFWS concurred that similar aircraft strike hazards could be discounted due to the short duration of aircraft operations below 500 feet above ground level (AGL) and the aircraft flight behavior characteristics (see Section 1.3).

#### **4.1.2 Noise**

Currently, there are no studies documenting behavioral responses of marbled murrelets to aircraft noise or if they are habituated to such noise. Studies assessing habituation of birds to aircraft noise have typically shown limited response of the birds to aircraft overflights. In the early 1980s, the effect of low-altitude military training flights on the establishment, size, and reproductive success of wading bird colonies in Florida was assessed. Based on indirect evidence of distribution and turnover rates of wading birds in relation to jet training routes (<500 feet above ground level) and military operations areas, military activity had no demonstrated effect on colony establishment or size on a statewide basis (Black *et al.* 1984 as cited in Mancini *et al.* 1988).

In most cases, exposure to aircraft noise is expected to result in only minor behavioral responses, such as head turning, a sudden movement such as flattening, or short periods of increased vigilance which USFWS consider to be insignificant effects (US Fish and Wildlife Service 2016a). Aircraft noise could potentially affect marbled murrelet foraging behavior. However, the response is not expected to affect the overall foraging success of marbled murrelets. Data from Washington show that marbled murrelets exhibit considerable seasonal and daily variation in their use of specific foraging areas (Speich and Wahl 1995). Marbled murrelets have the ability to fly long distances to reach suitable habitat or areas with high productivity, even during the breeding season (Ralph *et al.* 1995), commuting up to 145.5 km from nest to sea in northeastern Washington but averaging a mean distance of 53.5 km (Lorenz *et al.* 2016). This data suggests that foraging areas for the marbled murrelet are not static and that, while noise disturbance during aircraft operations could cause temporary displacement, marbled murrelets are opportunistic and adapted to seek out productive feeding areas and are likely to return when air operations cease. Additionally, while focused studies of aircraft disturbances on marbled murrelets have not been conducted, studies of other waterbird species in relation to boating activities may provide some indication as to how marbled murrelets may respond to overflights. Existing research indicates that most individuals would not respond to aircraft overflights, and those that do may return to normal

foraging and loafing activities relatively soon after the disturbances end (Speckman *et al.* 2004; Hentz 2006; Bellefleur *et al.* 2009).

The USFWS has established a 92 dBA SEL as the airborne noise disturbance threshold for the marbled murrelet (US Fish and Wildlife Service 2010, 2011). The noise contour for this threshold, also defined as the action area for this sound analysis, is depicted in Figure 2-6. The frequency, duration, and intensity of the marbled murrelets exposure to the acoustic signature of the EA-18G Growler aircraft depends upon the flight profile being performed. Locations that are exposed to 92 dBA SEL or greater typically experience elevated sound levels for up to 20 seconds for departures and up to 60 seconds for arrivals and pattern operations (e.g. FCLPs). This duration is same for the no action and the proposed action. As depicted in Figure 2-6 the 92 dBA SEL contour does not change much from the no action to the proposed action. Total acres exposed to 92 dBA SEL or greater would actually decrease by 4,827 acres. While total acreage exposed would decrease, the total number of hours aircraft spend at 92 dBA SEL or greater would increase.

Total annual departure, arrival, and pattern operation hours aircraft spend at 92 dBA SEL or greater would increase under the proposed action by 0.3%, 0.8%, and 2.9%, respectively, at Ault Field. Total annual departure, arrival, and pattern operation hours aircraft spend at 92 dBA SEL or greater would increase under the proposed action by 0.1%, 0.3%, and 2.3%, respectively, at OLF Coupeville. Additionally, the total number of hours aircraft spend at 92dBA SEL or greater would be spread out over the course of a year as described in Section 2.1.3. For example, in 2015 FCLPs (which fall under pattern operations and generate the greatest increase in hours) were only conducted a total of 110 days at Ault Field and 34 days at OLF Coupeville. On those days, only about two-three FCLP evolutions of 45 minutes each were conducted resulting in only about two-three hours of FCLPs on those days. Additionally, while other daily flights happen at Ault Field even when FCLPs aren't occurring, OLF Coupeville is primarily used for FCLPs so inactive days represent days where no flights at OLF Coupeville will occur and thus no flights between the two locations.

Behavioral and physiological responses of marbled murrelets to noise from aircraft overflights could occur. Potential behavioral responses could include alert postures, mild startling, or a brief disruption of activities. Potential physiological responses could include change in heart rate, blood pressure, and gastrointestinal activity (Buchanan 2000, McEwen and Wingfield 2003, and Korte *et al.* 2005) as well as the release of adrenal hormones, neurotransmitters, or immuno-cytokines in response to this stressor.

However, due to the fact the aircraft spend a small amount of time each year at 92 dBA SEL or greater, time spent by aircraft at 92 dBA SEL is spread out over the course of a year, the estimated population density of marbled murrelets within the action area is low (ranges from >1 to 1-3 birds/km<sup>2</sup>), and habituation is most likely occurring given marbled murrelets have been exposed to aircraft noise since they were born (the installation was first developed in the 1940s) and are currently exposed to 74,300 EA-18G Growler aircraft operations a year, effects to marbled murrelets would be discountable and insignificant.

## **4.2 Indirect Effects**

The increase in aircraft operations of the proposed action would not be expected to measurably change the existing underwater environment in the action area, so therefore no effect is anticipated on marbled murrelet prey stocks. Transmission of sound from a moving airborne source to a receptor underwater is influenced by numerous factors. Due to the difference in acoustic properties of air and water, most of

the acoustic energy generated from the aircraft would be reflected away from the water column, preventing noises from atmospheric sources from maintaining original sound qualities as they transmit through the air-water interface (Richardson *et al.* 1995). A sound wave propagating from an aircraft must enter the water at an angle of incidence of 13 degrees or less from the vertical for the wave to continue to propagating under the water's surface (Richardson *et al.* 1995). At greater angles of incidence, the water acts as a reflector of the sound wave and allows very little penetration below the water (Urick 1983). For low-altitude flights, sound levels reaching the water surface would be higher, but the transmission area would be smaller. As an aircraft gains altitude, sound reaching the water surface diminishes, but the possible transmission area increases (Eller and Cavanagh 2000). Therefore, as there is little potential for sound to enter the water and effect marbled murrelet prey, there would be no indirect effect on foraging habitat or reduction in the primary food stocks of marbled murrelets.

#### **4.3 Determination of Effects**

The above analysis indicates that the project may affect, but is not likely to adversely affect the threatened marbled murrelet within the action area.

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## Appendix A

### Species Effect Determinations for the Proposed Action

SPECIES/CRITICAL HABITAT	DESIGNATION UNIT	LISTING STATUS	EFFECT DETERMINATION
<b>Plants</b>			
Golden paintbrush ( <i>Castilleja levisecta</i> )		Threatened	No effect
<b>Invertebrates</b>			
Taylor's checkerspot butterfly ( <i>Euphydryas editha taylori</i> )		Endangered	No effect
	Critical Habitat	Designated	No effect
<b>Birds</b>			
Marbled murrelet ( <i>Brachyramphus marmoratus</i> )		Threatened	May affect, not likely to adversely affect
	Critical habitat	Designated	No effect
Northern spotted owl ( <i>Strix occidentalis caurina</i> )	Threatened	Threatened	No effect
Streaked horned lark ( <i>Eremophila alpestris strigata</i> )		Threatened	No effect
Yellow-billed cuckoo ( <i>Coccyzus americanus</i> )		Threatened	No effect
<b>Reptiles and Amphibians</b>			
Oregon Spotted frog		Threatened	No effect
<b>Mammals</b>			
North American Wolverine ( <i>Gulo gulo luscus</i> )		Proposed Threatened	No effect
<b>Fishes</b>			
Bull Trout ( <i>Salvelinus confluentus</i> )		Threatened	No effect
	Critical Habitat	Designated	No effect
Dolly Varden ( <i>Salvelinus malma</i> )		Proposed – Similarity of Appearance (Threatened)	No effect

## **Appendix B**

### **US Fish and Wildlife Service Letter of Concurrence**

Expeditionary Electronic Attack Squadron Realignment and Transition, Naval Air  
Station Whidbey Island, Oak Harbor, Washington  
May 25, 2012



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office  
510 Desmond Dr. SE, Suite 102  
Lacey, Washington 98503



In Reply Refer To:  
**01EWF00-2012-1-0188**

MAY 25 2012

Allison Crain, Installation Environmental Program Director  
Department of the Navy  
Naval Base Whidbey Island  
ATTN: Jackie Queen  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98278

Dear Ms. Crain:

Subject: Expeditionary Electronic Attack Squadron Realignment and Transition, Naval Air Station Whidbey Island, Oak Harbor, Washington

This is in response to your April 4, 2012, letter requesting our concurrence with your determination that the proposed action in Oak Harbor, Island County, Washington, would "not likely adversely affect" federally listed species. A photocopy from your transmittal document(s) describing the proposed action is enclosed.

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.*) for the federally listed species identified below (only those species that have been checked are addressed in this consultation request (See Enclosure).

Marbled murrelet (*Brachyramphus marmoratus*)

Based on the information provided in and/or with your cover letter and any additional information, we have concluded that effects of the proposed action to the above-identified federally listed resources would be insignificant and/or discountable. Therefore, for the reasons identified in the enclosures to this letter, we concur with your determination that the proposed action is "not likely to adversely affect" the above-identified federally listed resources. This letter and its enclosures constitute a complete response of the U.S. Fish and Wildlife Service to your request for informal consultation.

This concludes consultation pursuant to the regulations implementing the Endangered Species Act (50 CFR 402.13). This project should be re-analyzed if 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. The project should also be re-analyzed 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 a new species is listed or critical habitat is designated that may be affected by this project.

Our review and concurrence with your effect determination is based on the implementation of the project as described. It is the responsibility of the Federal action agency to ensure that projects that they authorize or carry out are in compliance with the regulatory permit and/or the ESA, respectively. 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).

If you have any questions about this letter or our joint responsibilities under the Endangered Species Act, please contact the consultation biologist identified below, of this office.

U.S. Fish and Wildlife Service Consultation Biologist(s):

Nancy Brennan-Dubbs (360 / 753-5835)

Sincerely,



*ds* Ken S. Berg, Manager  
Washington Fish and Wildlife Office

Enclosures  
Appendix 1 Checklist(s)

cc:  
 WDOE, Bellevue, WA (R. Padgett)

**U.S. FISH AND WILDLIFE SERVICE  
WASHINGTON FISH AND WILDLIFE OFFICE**

**MARBLED MURRELET AND MARBLED MURRELET CRITICAL HABITAT  
ENDANGERED SPECIES ACT  
SECTION 7 INFORMAL CONSULTATION CONCURRENCE RATIONALE**

Project Name: Expeditionary Electronic Attack Squadron Realignment and Transition, Naval Air Station Whidbey Island,

**MARBLED MURRELET CRITICAL HABITAT**

- The proposed project, including indirect effects, will not occur within marbled murrelet critical habitat.

**DIRECT EFFECTS**

Nesting Marbled Murrelets

The project will not result in the destruction or modification of suitable marbled murrelet nesting habitat and

- The project is more than 0.25 mile from suitable marbled murrelet nesting habitat and does not include blasting, low-elevation (< 500 ft) aircraft operations, impact pile driving, or other activities that could produce sound above 92 dB. Thus, nesting marbled murrelets and their young are extremely unlikely to be exposed to project stressors (sound and visual disturbance) while on the nest or in the nest stand. Therefore, the effects of the proposed action to nesting marbled murrelets would be insignificant and discountable.

Foraging

- The proposed project is not expected to result in sound pressure levels that would measurably affect marbled murrelets. Therefore, effects to marbled murrelets would be insignificant.

Turbidity and Other Environmental Contaminants

- The proposed project is not expected to release or introduce environmental contaminants into or adjacent to the aquatic environment in concentrations that would measurably effect marbled murrelets. Therefore, effects to marbled murrelets via direct exposure or uptake of contaminants will be insignificant.

**INDIRECT EFFECTS**

Disturbance (Foraging)

- The indirect effects associated with operation of the completed action and use of the facility are not expected to result in sound pressure levels above background; therefore, disturbance of marbled murrelets is not anticipated to be measurable. Thus, effects to marbled murrelets would be insignificant.

Contaminants

- Operation of the proposed action and use of the facility are not expected to release or introduce contaminants into the aquatic environments at concentrations that may result in measurable effects to marbled murrelets via their prey species. Therefore, these effects to marbled murrelets are insignificant.

---

Consulting Biologist: Nancy Brennan-Dubbs  
FWS Project Biologist

Date: May 23, 2012

Concurrence approved by: Marna L. Jensen  
Federal Activities Branch  
Supervisor

Date: 5/25/12

Note: The rationale expressed in this informal section 7 checklist represents our current understanding of the effects of some commonly permitted federal actions to marbled murrelet. This document does not express all possible rationale for insignificant or discountable effects to marbled murrelet. This document is subject to change at any time due to the collection of new information or the need to clarify our rationale. However, any future changes to this concurrence rationale document would not be expected to necessitate reinitiation on previously completed consultations. Please see the "reinitiation" paragraph of the cover letter for a discussion of reinitiation triggers.



### **1.3 Project Description**

NAS Whidbey Island is located in Island County, Washington, on Whidbey Island in northern Puget Sound (Figure 1-1). The air station is in the north-central part of the island, adjacent to the town of Oak Harbor, and is divided into four distinct parcels: Ault Field, Lake Hancock, Outlying Landing Field Coupeville, and the Seaplane Base. The proposed action would occur at Ault Field, the training and operational center of NAS Whidbey Island. The remaining three parcels would not be affected by the proposed action and are therefore not discussed further.

NAS Whidbey Island has supported the expeditionary VAQ community for more than 30 years. It is currently home to VAQ squadrons operating the EA-6B Prowler and EA-18G Growler, maritime patrol squadrons and a reserve squadron operating the P-3 ("Orion"), fleet air reconnaissance squadrons operating the EP-3E ("Aries"), a C-9 squadron, and H-60 search-and-rescue helicopters.

The Navy proposes to realign and transition up to four expeditionary VAQ squadrons from EA-6B Prowler aircraft to EA-18G Growler aircraft; add up to 11 EA-18G Growler aircraft to the fleet replacement squadron (FRS); increase the number of aircrew, officers, and enlisted personnel stationed at the installation; and modify certain facilities at Ault Field to provide more space for the new personnel and proper configuration for the new aircraft.

The EA-18G Growler is a variant of the F/A-18F ("Super Hornet") strike-fighter aircraft, equipped with the same electronic weapons systems as the EA-6B Prowler. The primary types of mission training and readiness requirements for the EA-18G Growler are nearly identical to those for the EA-6B Prowler.

The EA-6B Prowler airframe is approaching the end of its service life. Failure to replace the EA-6B Prowler legacy aircraft by 2015 would affect combat readiness, potentially resulting in interruptions to operations and accruing costs for service-life extension of the aircraft. The proposed action is needed to provide sustainable and rapidly deployable electronic attack capability to overseas land bases in the interest of national security. The EA-18G are airborne electronic attack aircraft capable of suppressing enemy air defenses in support of strike aircraft and ground troops by interrupting enemy electronic activity and obtaining tactical electronic intelligence within the combat area. As the nation's only operational airborne electronic attack assets, these very unique Navy aircraft and their highly trained flight crews are low-density-high demand strategic national assets that have and continue to provide an essential umbrella of protection to U.S. and coalition ground forces while on deployment.

#### **Building Facilities**

The proposed action would provide the facilities and functions necessary to retain the expeditionary VAQ mission at NAS Whidbey Island and to realign and transition up to four expeditionary VAQ squadrons from EA-6B Prowler aircraft to EA-18G Growler aircraft. Each expeditionary VAQ EA-18G Growler squadron would consist of five aircraft; each existing EA-6B Prowler squadron includes four aircraft. In addition, the existing FRS (VAQ-129) would gain additional aircraft. In order to maintain expeditionary VAQ capability, the squadrons must transition to the EA-18G Growler by 2015. To achieve this, the Navy is proposing that the EA-6B squadrons continue to operate at NAS Whidbey Island and transition to the EA-18G beginning in 2012 at a rate of about one squadron per year through 2014.

NAS Whidbey Island does not currently have adequate hangar space, flight line electrical distribution systems, or capacity in the flight simulators to support up to four EA-18G Growler squadrons. An environmental assessment (EA) is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969; the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508); Navy procedures for implementing NEPA (32 CFR 775); and the Chief of Naval

## **Appendix C**

### **Washington Department of Fish and Wildlife Email Correspondence**

Marbled Murrelet Nesting on Whidbey Island  
October 17, 2016

**Stallings, Sarah CIV NAVFAC Atlantic**

---

**From:** Bianchi, Michael C NAVFAC NW, PRW4  
**Sent:** Monday, October 17, 2016 17:31  
**To:** Stallings, Sarah CIV NAVFAC Atlantic  
**Subject:** FW: Marbled Murrelets  
**Signed By:** michael.bianchi1@navy.mil

FYSA

-----Original Message-----

From: Milner, Ruth L (DFW) [mailto:Ruth.Milner@dfw.wa.gov]  
Sent: Monday, October 17, 2016 2:20 PM  
To: Bianchi, Michael C NAVFAC NW, PRW4  
Subject: [Non-DoD Source] RE: Marbled Murrelets

Hi Michael,

No surveys have done since the 1990's to my knowledge. No nesting birds have been found on Whidbey, which is consistent with what we know about nesting in the San Juans - no nests documented on any islands in northern Puget Sound. There are small amounts of suitable habitat in Deception Pass Park, but the general conclusion was (in the 1990's) that although there are old growth trees there, the winds prevent the moss covered defective limbs that create platforms from developing to any large extent.

Ruth Milner  
WDFW District Wildlife Biologist  
PO Box 1100  
La Conner, WA 98257  
360-466-4345 ext 265

-----Original Message-----

From: Bianchi, Michael C NAVFAC NW, PRW4 [mailto:michael.bianchi1@navy.mil]  
Sent: Monday, October 17, 2016 1:48 PM  
To: Milner, Ruth L (DFW)  
Subject: Marbled Murrelets

Ruth,

Do you know of any recent surveys for nesting marbled murrelets on Whidbey Island? If so, were there any detections or was any suitable nesting habitat identified?

Michael Bianchi  
NAS Whidbey Island  
360.257.4024





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

11015  
Ser N46/ 2780  
July 19, 2017

Mr. Erik V. Rickerson  
State Supervisor  
Washington Fish and Wildlife Office  
510 Desmond Dr SE, Suite 102  
Lacey, WA 98503

Dear Mr. Rickerson,

Subj: REQUESTED INFORMATION REGARDING ENDANGERED SPECIES ACT  
SECTION 7 CONSULTATION FOR EA-18G "GROWLER" AIRFIELD OPERATIONS  
AT NAVAL AIR STATION WHIDBEY ISLAND COMPLEX  
(FWS REF# 01EWF00-2017-I-0826)

Thank you for your response to our request for consultation. The information provided is our initial response to your request for additional information regarding Growler Operations.

Regarding your inquiry on the duration of the proposed action, similar to our previous actions, 2008 (Final Environmental Impact Statement for the Introduction of the P-8A Multi-Mission Maritime Aircraft Into the U.S. Navy Fleet), 2012 (Environmental Assessment for the Expeditionary Transition of EA-6B Prowler Squadrons to EA-18G Growler at Naval Air Station Whidbey Island, Oak Harbor, WA), and 2014 Final Supplemental Environmental Impact Statement for the Introduction of the P-8A Multi-Mission Aircraft into the U.S. Navy Fleet), that underwent Endangered Species Act (ESA) section 7 consultation, the Navy's proposed action is for the foreseeable future, or until re-initiation of ESA section 7 consultation is triggered per 50 CFR Part 402.16. The Navy is frequently engaged with the United States Fish and Wildlife Service (USFWS) regarding the potential for our activities to adversely affect ESA-listed species. Further, we meet with your office annually in our Sikes Act coordination meetings where we discuss the ongoing commitments and execution of projects the Navy undertakes for the conservation of species and habitat. These activities include our Bird and Animal Airstrike Hazard program that mitigates the risk of bird-aircraft interactions. If there is a concern, or the USFWS believes that re-initiation of ESA section 7 consultation is warranted, we believe there will be ample opportunity to communicate that issue with Navy staff.

It was noted that you would like to know the preferred alternative so that you may analyze the action as it is "reasonably certain to occur." Unfortunately, this request cannot be accommodated since a preferred alternative has not been selected. Additionally, if one were selected, the endorsing official for the Record of Decision has the discretion to select something

Subj: REQUESTED INFORMATION REGARDING ENDANGERED SPECIES ACT-  
SECTION 7 CONSULTATION FOR EA-18G "GROWLER" AIRFIELD OPERATIONS  
AT NAVAL AIR STATION WHIDBEY ISLAND COMPLEX  
(FWS REF# 01EWF00-2017-I-0826)

other than the preferred alternative. Thus, we request you analyze the action as described in our previous letter. The proposed action would escalate airfield operations to levels consistent with historical use.

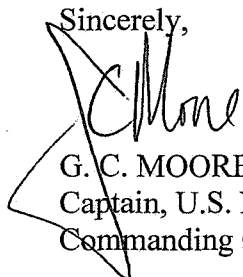
Your letter also requested information that would describe the various arrivals, departures, and inter-facility flight tracks and information describing the A-weighted sound exposure level (SEL) associated with each. Enclosed are figures and tables that we believe best presents the information you're seeking. Please note that these are modeled estimates and do not constitute an absolute or limit to these types of operations.

You also ask, "Whether aircraft will perform other activities not previously addressed by another consultation between departures and arrivals." The Navy is required to comply with all applicable laws and regulations. As such, we review our activities and evaluate which activities require ESA section 7 consultations. To our knowledge, our activities are compliant with the relevant laws and regulations, including the ESA. In addition to those listed above, we have completed recent ESA consultations for Northwest Training and Testing Range Environmental Impact Statement and the Electronic Warfare Range Environmental Assessment.

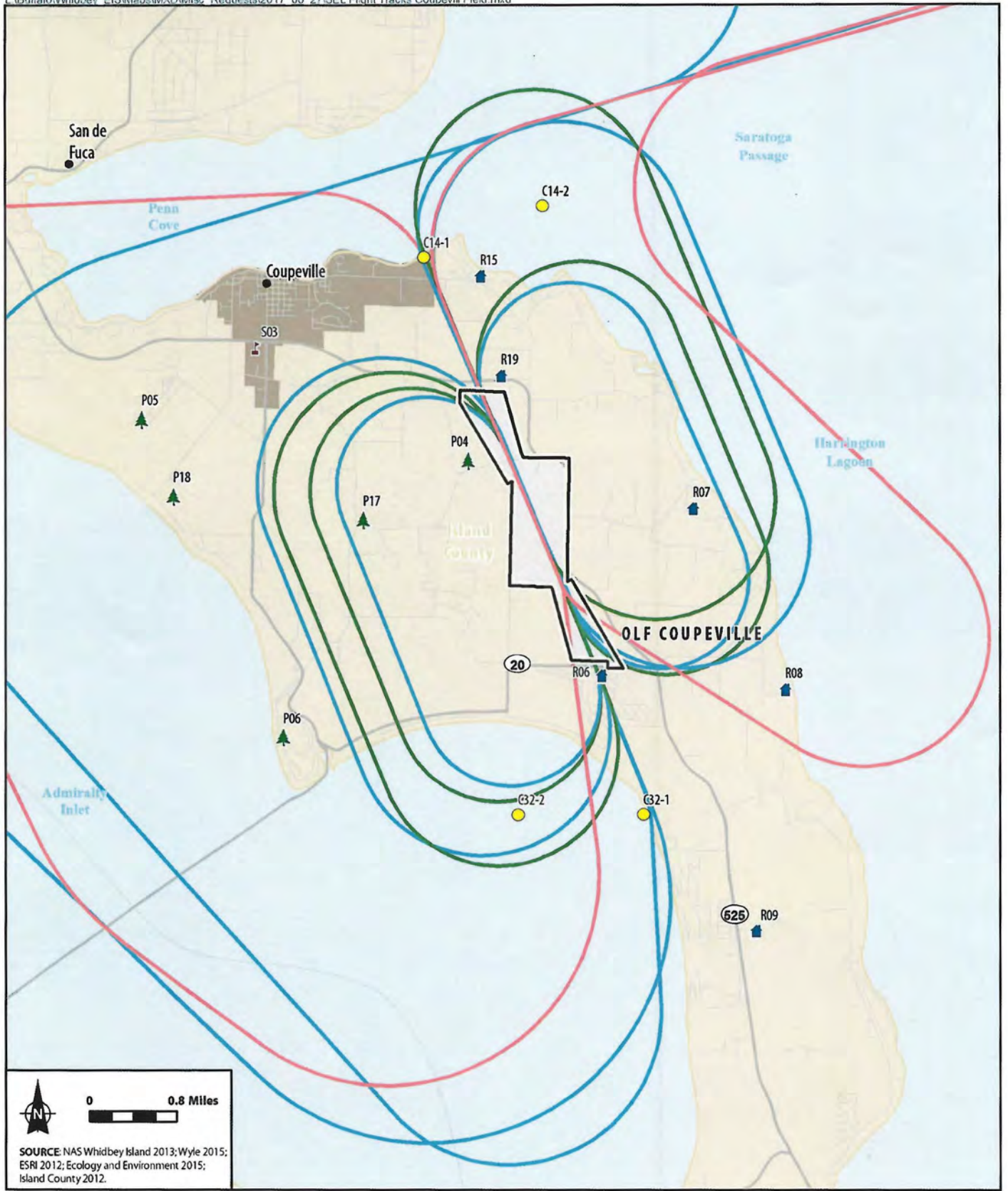
Lastly, your letter requested information regarding stormwater. While the designs are preliminary, we anticipate approximately 2.5 acres of new impervious surface as a result of the proposed action. The Unified Facilities Criteria (UFC) 3-210-10 requires new impervious surfaces to be treated using Low Impact Development (LID) technologies and design standards. Additionally, Navy Region Northwest is currently engaged in the development of our Municipal Stormwater (MS4) permit with the Environmental Protection Agency (EPA). The MS4 permit will require we utilize the most effective practicable technologies to treat stormwater runoff from the installation. The EPA-issued permit will undergo ESA section 7 consultation with National Marine Fisheries Service and USFWS to ensure the action will not jeopardize the continued existence of ESA-listed species and the incidental take of ESA-listed species are avoided and/or minimized.

Please refer your questions or requests for additional information to Mr. Michael Bianchi at (360) 257-4024 or by email at michael.bianchi1@navy.mil.

Sincerely,



G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

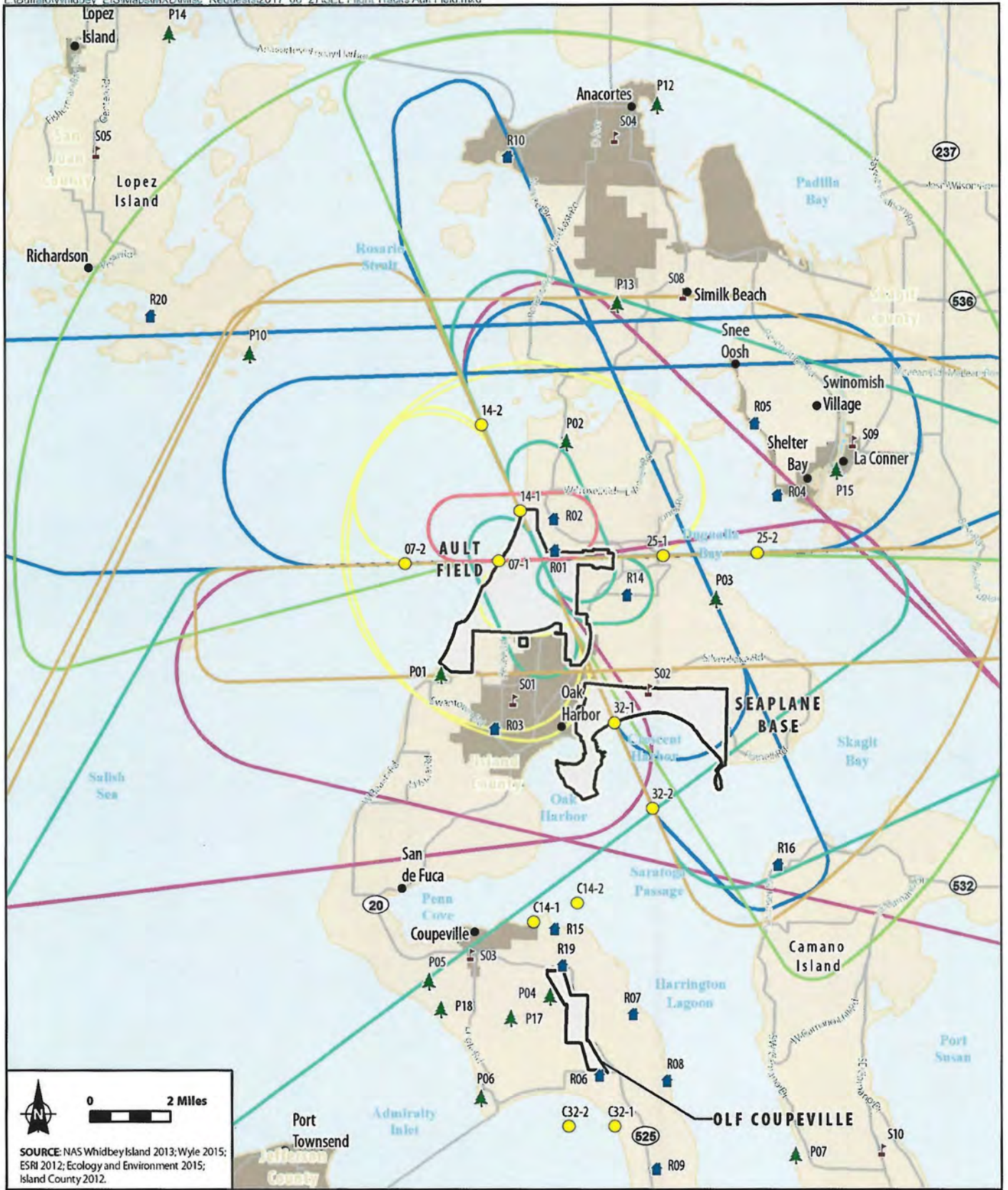


SOURCE: NAS Whidbey Island 2013; Wyle 2015; ESRI 2012; Ecology and Environment 2015; Island County 2012.

- City
- County Boundary
- City/Town Boundary
- Major Road
- Minor Road
- Installation Area
- Points of Interest (POI)
- ▲ Park
- Residential
- School
- NASWI-SEL Points of Interest
- Flight Tracks
- Interfacility Arrival
- Interfacility Departure
- FCLP

**Figure**  
**SEL Points of Interest and**  
**Flight Tracks for OLF Coupeville**  
 Whidbey Island, Island County, WA





**Figure**  
**SEL Points of Interest and**  
**Flight Tracks for Ault Field**  
 Whidbey Island, Island County, WA



**SEL and Annual Events along Runway 07 Approach and Rwy 25 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events									
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No. Action	1A	1B	1C	2A	2B	2C	3A	3B	3C
Departure	25D1C	107	500	111	1300	7409	9348	9638	8904	9586	9882	9125	9561	9954	9113
VFR non-break Arrival	07A3A	127	190	119	950	938	1187	1101	1107	1222	1138	1144	1218	1141	1145
HI TACAN	07AHT	127	170	109	850	110	173	125	169	163	110	155	164	132	170
Overhead Break Arrival	07O2C	126	170	104	1500	1413	1808	1697	1702	1864	1755	1752	1858	1746	1733
FCLP & T&G	07FU1	126	160	99	500	2405	1879	2691	3689	1862	2630	3575	1863	2615	3566
GCA Pattern	07G3	126	150	122	500	977	1377	1261	1223	1372	1257	1207	1376	1248	1213
Depart and Re-enter	07PL	126	150	103	2000	219	350	333	343	363	342	360	357	345	350

Notes: 1) Point 07-1, at shoreline along runway heading  
2) Point 07-2, 2nm over water beyond shoreline

**SEL and Annual Events along Runway 25 Approach and Rwy 07 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events									
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No. Action	1A	1B	1C	2A	2B	2C	3A	3B	3C
Departure	07D1C	109	1500	103	3500	2470	3178	2966	2968	3259	3041	3042	3251	3063	3038
VFR non-break Arrival	25A3C	116	830	108	1300	2814	3422	3511	3320	3524	3628	3432	3512	3637	3434
HI TACAN	25AHT	117	910	112	1450	377	573	584	497	538	515	457	544	614	501
Overhead Break Arrival	25O2B	106	1500	99	1500	4240	5317	5516	5213	5482	5705	5364	5465	5676	5307
GCA Pattern	25G2	119	630	114	1000	2713	3749	4020	3996	3736	4006	3942	3745	3977	3963
Depart and Re-enter	25PR	105	2000	87	2000	725	1028	1060	968	1069	1091	1017	1050	1099	987

Notes: 1) Point 25-1, at shoreline along runway heading  
2) Point 25-2, 2nm over water beyond shoreline

**SEL and Annual Events along Runway 14 Approach and Rwy 32 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events									
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No. Action	1A	1B	1C	2A	2B	2C	3A	3B	3C
Departure	32D1A	114	600	110	2100	726	561	741	927	575	760	951	574	766	949
VFR non-break Arrival	14A2A	124	300	118	1150	1490	2095	1928	2213	2157	1992	2288	2150	1997	2290
HI TACAN	14AHT	126	250	117	1000	165	292	271	278	274	239	256	277	285	280
Overhead Break Arrival	14O1C	124	230	103	1750	2245	3084	2970	3298	3180	3072	3394	3170	3056	3357
FCLP & T&G	14FU1	107	200	96	800	3792	2842	4768	7905	2824	4662	7653	2826	4635	7634
GCA Pattern	14G1	125	220	122	700	1465	2295	2286	2610	2287	2278	2574	2293	2261	2588
Depart and Re-enter	14PR	126	210	102	2000	355	596	603	625	620	620	657	609	625	637

Notes: 1) Point 14-1, at shoreline along runway heading  
2) Point 14-2, 2nm over water beyond shoreline

**SEL and Annual Events along Runway 32 Approach and Rwy 14 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events									
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No. Action	1A	1B	1C	2A	2B	2C	3A	3B	3C
Departure	14D2A	102	2800	99	4800	3923	5609	5190	5750	5752	5321	5893	5737	5360	5886
VFR non-break Arrival	32A1B	108	1400	106	2050	276	279	344	277	288	356	286	287	357	286
HI TACAN	32AHT	108	1150	100	1800	34	43	63	50	41	55	46	41	66	50
Overhead Break Arrival	32O1C	101	2000	91	2500	416	425	424	426	439	439	438	437	437	433
GCA Pattern	32G1	116	770	111	1300	271	230	315	326	229	314	322	229	312	324
Depart and Re-enter	32PL	89	2000	81	2000	68	82	83	81	85	86	85	84	86	82

Notes: 1) Point 32-1, at shoreline along runway heading  
2) Point 32-2, 2nm over water beyond shoreline

Table XX presents estimated SELs at the shoreline threshold along the runway centerline and at 2 nm out to sea. Arrival operations on Runway 07 and Departures from Runway 25 generate the greatest SELs near along the coastline due to the close proximity (approximately 1,200 ft) to the shoreline. All arrival operation types generate similar SELs of 126 to 127 dBA at the shoreline, when landing on Runway 07 due to similar altitudes of 150 to 200 ft MSL. SELs at the point of interest 2nm from the shoreline along Runway 07 approaches vary from 99 to 122 dBA with altitudes of 500 to 2,000 ft MSL. Departures to the east taking off from Runway 25 climb to 500 ft at the shoreline and approximately 1,300 ft MSL by 2nm out to sea.

Approaches to Runway 14 and Departures from Runway 32 generate SELs of 107 to 126 dBA at the shoreline approximately 2,600 ft from the runway with aircraft altitudes between 200 and 600 ft MSL. Along a runway centerline 2 nm out to sea, aircraft generate SELs of 96 to 122 dBA at aircraft altitudes of 800 to 2,100 ft MSL.

Approaches to Runway 25 and Departures from Runway 07 generate SELs at the shoreline, approximately 14,000 ft from the runway, of 105 to 117 dBA at aircraft altitudes from 630 to 2,000 ft MSL. Along the runway centerline 2 nm out to sea, aircraft generate SELs of 87 to 114 with aircraft operating at 1,000 to 3,500 ft MSL. The FCLP and T&G patterns to Runway 25 are not included in Table XX because the approach portion remains over land.

Approaches to Runway 32 and Departures from Runway 14 generate SELs of 89 to 116 dB at the shoreline due to aircraft operating at 770 to 2,800 ft MSL and SELs of 81 to 111 dB 2 nm out to sea with aircraft operating at 1,300 to 4,800 ft MSL. The FCLP and T&G patterns to Runway 32 are not included in Table XX because the approach portion remains over land.

The Proposed scenarios utilize the same flight tracks and flight profiles as the No Action scenario at Ault Field so SELs for all Proposed scenarios would remain unchanged from No Action. However, all Proposed scenarios would increase the number of annual Growler flight events for all operation types by 10 to 100 percent.

Table YY presents estimated SELs at the shoreline along the OLF runway centerlines along with two additional POI located approximately at the middle of the FCLP crosswind turn to final. The greatest SEL offshore are caused by the arrival portion of FCLP patterns as well as the approach portion of interfacility arrivals to the OLF generating SELs of 95 to 117 dBA at the shoreline with aircraft operating between 500 and 2,500 ft MSL. The Proposed scenarios would modify and tighten the OLF patterns. This Proposed tightening of the flight tracks moves a larger portion of the flight path over land resulting in reduced SELs of 68 to 114 dBA reported in Table YY at altitudes of 500 to 2,500. However, the flight tracks are merely shifted closer to land and away from the POI used for analysis, proposed SELs would remain very similar to existing but affect 10 to 30 percent less offshore area.

The increase in annual flight FCLP flight events at OLF would vary from a factor of 2 for scenarios 1C, 2C and 3C to as much as an 8 fold increase for 1A, 2A, and 3A.

**From:** Bianchi, Michael C NAVFAC NW, PRW4  
**To:** [Corum, Lee](#)  
**Cc:** [Fleming, Kimberly H CIV USFF N46](#); [Stallings, Sarah CIV NAVFAC Atlantic](#); [Padgett, Lisa M CIV USFF, N46](#); [FFC.RECORD](#); [FFC.RECORD](#); [FFC.RECORD](#)  
**Subject:** Updated Growler Operations Information  
**Date:** Tuesday, January 9, 2018 2:26:20 PM  
**Attachments:** [USFWS\\_SELcompute2017-12-20.xlsx](#)  
[USFWS SELs 2017-12-20.docx](#)

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Lee,

Good news! We have some preliminary noise modeling for the updated proposed action. Please give it a look and let me know if you have any thoughts on the information provided. I'm happy to work with our team to get the consultation ramped back up.

Regards,

Michael Bianchi  
NAS Whidbey Island  
360.257.4024

GROWLER EIS PROJECT FILE  
##CODE.GROWLEREIS.PF##

Table XX presents estimated SELs at the shoreline threshold along the runway centerline and at 2 nm out to sea. Arrival operations on Runway 07 and Departures from Runway 25 generate the greatest SELs near along the coastline due to the close proximity (approximately 1,200 ft) to the shoreline. All arrival operation types generate similar SELs of 126 to 127 dBA at the shoreline, when landing on Runway 07 due to similar altitudes of 150 to 200 ft MSL. SELs at the point of interest 2nm from the shoreline along Runway 07 approaches vary from 99 to 122 dBA with altitudes of 500 to 2,000 ft MSL. Departures to the east taking off from Runway 25 climb to 500 ft at the shoreline and approximately 1,300 ft MSL by 2nm out to sea.

Approaches to Runway 14 and Departures from Runway 32 generate SELs of 107 to 126 dBA at the shoreline approximately 2,600 ft from the runway with aircraft altitudes between 200 and 600 ft MSL. Along a runway centerline 2 nm out to sea, aircraft generate SELs of 96 to 122 dBA at aircraft altitudes of 800 to 2,100 ft MSL.

Approaches to Runway 25 and Departures from Runway 07 generate SELs at the shoreline, approximately 14,000 ft from the runway, of 105 to 117 dBA at aircraft altitudes from 630 to 2,000 ft MSL. Along the runway centerline 2 nm out to sea, aircraft generate SELs of 87 to 114 with aircraft operating at 1,000 to 3,500 ft MSL. The FCLP and T&G patterns to Runway 25 are not included in Table XX because the approach portion remains over land.

Approaches to Runway 32 and Departures from Runway 14 generate SELs of 89 to 116 dB at the shoreline due to aircraft operating at 770 to 2,800 ft MSL and SELs of 81 to 111 dB 2 nm out to sea with aircraft operating at 1,300 to 4,800 ft MSL. The FCLP and T&G patterns to Runway 32 are not included in Table XX because the approach portion remains over land.

The Proposed scenarios utilize the same flight tracks and flight profiles as the No Action scenario at Ault Field so SELs for all Proposed scenarios would remain unchanged from No Action. However, all Proposed scenarios would increase the number of annual Growler flight events of each op type up to 80 percent. The only exception would be the A scenarios which would experience decreases in the FCLP and T&G ops category by up to 15 percent (only the FCLPs decrease).

Table YY presents estimated SELs at the shoreline along the OLF runway centerlines along with two additional POI located approximately at the middle of the FCLP crosswind turn to final. The greatest SEL offshore are caused by the arrival portion of FCLP patterns as well as the approach portion of interfacility arrivals to the OLF generating SELs of 95 to 117 dBA at the shoreline with aircraft operating between 500 and 2,500 ft MSL. The Proposed scenarios would modify and tighten the OLF patterns. This Proposed tightening of the flight tracks moves a larger portion of the flight path over land resulting in reduced SELs of 68 to 114 dBA reported in Table YY at altitudes of 500 to 2,500. However, the flight tracks are merely shifted closer to land and away from the POI used for analysis, proposed SELs would remain very similar to existing but affect 10 to 30 percent less offshore area.

The change in annual flight FCLP flight events at OLF would vary from a decrease of approximately 15 percent for the C scenarios to as much as an 3 fold increase for the A scenarios.

**SEL and Annual Events along Runway 07 Approach and Rwy 25 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events															
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	3C	
		Departure	25D1C	107	500	111	1300	7409	8450	8712	8048	8112	8048	8708	8977	8289	8359	8289	8678	9034	8271
VFR non-break Arrival	07A3A	127	190	119	950	938	1073	996	1000	1010	1000	1110	1033	1039	1045	1039	1106	1035	1039	1041	1039
HI TACAN	07AHT	127	170	109	850	110	157	113	153	166	153	148	100	141	157	141	149	120	155	158	155
Overhead Break Arrival	07O2C	126	170	104	1500	1413	1634	1534	1539	1538	1539	1694	1595	1591	1594	1591	1686	1585	1573	1587	1573
FCLP & T&G	07FU1	126	160	99	500	2042	1745	2194	2814	1642	2581	1720	2135	2728	1616	2506	1716	2130	2722	1613	2500
GCA Pattern	07G3	126	150	122	500	977	1313	1167	1094	1094	1094	1295	1151	1079	1079	1079	1303	1158	1086	1086	1086
Depart and Re-enter	07PL	126	150	103	2000	219	311	292	311	311	311	328	309	328	328	328	317	298	317	317	317

Notes: 1) Point 07-1, at shoreline along runway heading  
2) Point 07-2, 2nm over water beyond shoreline

**SEL and Annual Events along Runway 25 Approach and Rwy 07 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events															
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	3B	3C
		Departure	07D1C	109	1500	103	3500	2470	2873	2681	2683	2704	2683	2961	2762	2763	2786	2763	2951	2780	2757
VFR non-break Arrival	25A3C	116	830	108	1300	2814	3092	3174	3000	3029	3000	3200	3294	3117	3134	3117	3188	3300	3116	3123	3116
HI TACAN	25AHT	117	910	112	1450	377	519	527	450	490	450	489	469	416	461	416	494	558	456	466	456
Overhead Break Arrival	25O2B	106	1500	99	1500	4240	4807	4986	4713	4710	4713	4982	5183	4873	4882	4873	4960	5152	4816	4860	4816
GCA Pattern	25G2	119	630	114	1000	2713	3574	3719	3574	3574	3574	3526	3670	3526	3526	3526	3548	3692	3548	3548	3548
Depart and Re-enter	25PR	105	2000	87	2000	725	913	932	877	877	877	965	984	926	926	926	932	951	895	895	895

Notes: 1) Point 25-1, at shoreline along runway heading  
2) Point 25-2, 2nm over water beyond shoreline

**SEL and Annual Events along Runway 14 Approach and Rwy 32 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events															
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	3B	3C
		Departure	32D1A	114	600	110	2100	726	507	670	838	845	838	522	691	863	871	863	521	695	862
VFR non-break Arrival	14A2A	124	300	118	1150	1490	1893	1742	2000	2019	2000	1959	1809	2078	2090	2078	1952	1812	2077	2082	2077
HI TACAN	14AHT	126	250	117	1000	165	264	245	252	274	252	249	218	233	258	233	252	259	255	261	255
Overhead Break Arrival	14O1C	124	230	103	1750	2245	2788	2685	2982	2980	2982	2889	2791	3083	3089	3083	2877	2774	3047	3075	3047
FCLP & T&G	14FU1	107	200	96	800	3204	2704	3898	6001	3422	5489	2669	3796	5813	3366	5323	2663	3786	5798	3359	5310
GCA Pattern	14G1	125	220	122	700	1465	2188	2115	2334	2334	2334	2159	2087	2303	2303	2303	2172	2100	2317	2317	2317
Depart and Re-enter	14PR	126	210	102	2000	355	530	530	566	566	566	560	560	598	598	598	541	541	578	578	578

Notes: 1) Point 14-1, at shoreline along runway heading  
2) Point 14-2, 2nm over water beyond shoreline

**SEL and Annual Events along Runway 32 Approach and Rwy 14 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events															
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	3B	3C
		Departure	14D2A	102	2800	99	4800	3923	5070	4691	5198	5239	5198	5225	4834	5353	5399	5353	5207	4865	5342
VFR non-break Arrival	32A1B	108	1400	106	2050	276	252	311	250	252	250	261	323	260	261	260	324	260	260	260	260
HI TACAN	32AHT	108	1150	100	1800	34	39	56	45	49	45	37	50	42	46	42	37	60	46	47	46
Overhead Break Arrival	32O1C	101	2000	91	2500	416	385	384	385	385	385	399	399	398	399	398	397	396	393	397	393
GCA Pattern	32G1	116	770	111	1300	271	219	292	292	292	292	216	288	288	288	288	217	290	290	290	290
Depart and Re-enter	32PL	89	2000	81	2000	68	73	73	73	73	73	77	77	77	77	77	75	75	75	75	75

Notes: 1) Point 32-1, at shoreline along runway heading  
2) Point 32-2, 2nm over water beyond shoreline

SEL and Annual Events along Runway 14 Approach and Rwy 32 Departure at OLF

Operation Type	No Action					Propose Scenarios																				
	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events														
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)			SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	3B	3C
FCLP	14FCN1	116	850	101	1,000	448	14FCP3	68	800	104	800	3,045	2,040	790	2,759	1,185	2,907	1,947	754	2,635	1,131	2,900	1,943	752	2,628	1,128
Interfacility Arrival	07WC14N	117	2,500	106	2,500	66	07WC14P	99	2,500	99	2,500	446	299	115	401	172	426	285	109	383	165	426	284	109	382	164
Interfacility Departure	32CW14	101	2,000	95	2,000	356	32CW14	101	2,000	95	2,000	1,120	680	278	966	419	1,068	650	265	922	398	1,065	648	263	920	396

Notes: 1) Point C14-1, at shoreline along runway heading  
 2) Point C14-2, over water at crosswind turn to final

SEL and Annual Events along Runway 32 Approach and Rwy 14 Departure at OLF

Operation Type	No Action					Propose Scenarios																				
	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events														
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)			SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	1A	1B	1C	1D	1E	2A	2B	2C	2D	2E	3A	3B	3C	3B	3C
FCLP	32FCN1	108	500	116	600	2,189	32FCP3	100	500	114	625	7,830	4,759	1,933	6,756	2,900	7,475	4,544	1,846	6,451	2,770	7,457	4,533	1,841	6,434	2,762
Interfacility Arrival	32WC32DN	106	2,500	112	650	356	34WC32P	104	1,800	107	650	1,105	673	275	957	414	1,055	642	262	914	394	1,053	641	261	913	392
Interfacility Departure	14CW07	100	2,000	99	2,000	68	14CW07	100		99		435	292	114	395	171	415	278	108	376	163	414	278	108	376	162

Notes: 1) Point C32-1, at shoreline along runway heading  
 2) Point C32-2, over water at crosswind turn to final

**From:** Bianchi, Michael C NAVFAC NW, PRW4  
**To:** [Corum, Lee](#)  
**Cc:** [Curtis Tanner](#); [emily\\_teachout@fws.gov](mailto:emily_teachout@fws.gov); [Fleming, Kimberly H CIV USFF N46](#); [Padgett, Lisa M CIV USFF, N46](#); [Stallings, Sarah CIV NAVFAC Atlantic](#)  
**Subject:** FW: NPS Ebey's Noise Study and updated data tables  
**Date:** Tuesday, January 30, 2018 5:48:20 PM  
**Attachments:** [ebeyslanding.pdf](#)  
[Additional USFWS Growler Information Update\\_30 January 2018.docx](#)  
[SEL Information\\_30 January 2018.docx](#)

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Lee,

Attached are tables showing the revised proposed action (13 pilots/squadron & implementing the Precision Landing Mode) and the NPS Ebey's Noise Study (Pipkin A. 2016. Ebey's Landing National Historical Reserve: Acoustical monitoring report. Natural Resource Report. NPS/ELBA/NRR-2016/1299. National Park Service. Fort Collins, Colorado ). The attached NPS report can be found at this site.

<http://www.nature.nps.gov/publications/nrpm/>

I think that the most germane table in the attached NPS report is Table 7 (also Table 3 of the Executive Summary) which outlines how infrequently the SPL are above 60dBA. The take home message being that although there are a number of high noise events, they are infrequent and short in duration. Also note that EBLA001 and EBLA002 are ~100' above MSL. The Growler team is of the opinion that, in general, at both airfields, but the OLF in particular, our activities are intermittent and generally of short-duration. Below is a breakdown of the data in the NPS report that we thought might also be useful to you.

$10.5 \text{ hrs} / 731 = 1.44174\% = 1.44\%$  aircraft noise is heard from OLF  
 $29 \text{ hrs} / 741 = 3.91363\% = 3.91\%$  aircraft noise is heard from OLF and Ault Field

Let me know if you have any questions or concerns, or you'd like me to be available to answer technical questions during your internal meeting that is coming up.

Michael Bianchi  
Natural Resources Manager  
NAS Whidbey Island  
360.257.4024



**Informal Consultation Package for EA-18G "Growler" Airfield Operations at  
Naval Air Station Whidbey Island Complex, Oak Harbor, Washington  
-- Supplemental Data/Information --  
UPDATE – 30 JAN 2018**

**ALL UPDATES FROM ORIGINAL DOCUMENT IN RED**

\*\*The following data reflects the 50/50 split discussion that  
took place with USFWS on 11 August 2017\*\*

\*\* The following data reflects reduction in non-FCLP Growler Operations due to the decrease in two pilots per  
squadron\*\*

\*\* The following data reflects reduction in FCLPs due to the inclusion of Precision Landing Mode\*\*

**Table 2-1 No Action and Proposed Action EA-18G Growler Aircraft Operations Comparison**

Action	FCLP	Other Operations	Total	Total Change
<b>Ault Field (Average Year)</b>				
No Action	14,700	53,500	68,200	
Proposed Action	15,500	65,600	81,100	+12,900
<b>OLF Coupeville (Average Year)</b>				
No Action	6,100	0	6,100	
Proposed Action	15,500	0	15,500	+9,400

\*12% and 17% of EA-18G Growler aircraft operations at Ault Field and OLF Coupeville, respectively, to occur at nighttime (2200-0700)

<b>Time Spent Below 500 Feet Per Year</b>					
		Operation Type*	Total Hours Spent Below 500 Feet Per Year	Percentage Of Time Spent Below 500 feet Per Year (((total hours/total hours in a year)*100))	% Change From No Action to Proposed Action
Proposed Action	AULT Field	Departures	113	1.29	0.21
		Arrivals	676	7.72	1.27
	OLF	Departures	22	0.25	0.14
		Arrivals	130	1.48	0.81
No Action	AULT Field	Departures	94	1.07	
		Arrivals	565	6.45	
	OLF	Departures	10	0.11	
		Arrivals	58	0.67	

**PERCENT CHANGE FROM NO ACTION IS <1.3%**



**Clarifying Information**

- Aircraft spend approximately 10 seconds below 500 feet for each departure, and approximately 60 seconds below 500 feet for each arrival.
- Pattern Operations are split between departures and arrivals since pattern operations count as two operations (one arrival and one departure).
- At OLF Coupeville, time spent below 500 feet only occurs over land.

Time Spent Within 92 dBA Per Year					
		Operation Type	Total Hours Spent Within 92 dBA Per Year	Percentage Of Time Spent Within 92 dBA Per Year (((total hours/total hours in a year)*100))	% Change From No Action to Proposed Action
Proposed Action	AULT Field	Departures	98	1.12	0.2
		Arrivals	295	3.37	0.5
		Pattern Operations*	381	4.34	0.7
	OLF	Departures	5	0.06	0.0
		Arrivals	16	0.18	0.1
		Pattern Operations*	113	1.29	0.7
No Action	AULT Field	Departures	83	0.95	
		Arrivals	249	2.84	
		Pattern Operations*	315	3.60	
	OLF	Departures	2	0.03	
		Arrivals	7	0.08	
		Pattern Operations*	51	0.58	

**PERCENT CHANGE FROM NO ACTION IS <1.0%**

**Clarifying Information**

- Locations that are exposed to 92 dBA or greater typically experience elevated sound levels for up to 20 seconds for departures and up to 60 seconds for arrivals and pattern operations.
- Pattern operations include touch and gos, field carrier landing practices (FCLP), and ground/carrier controlled approaches.
- Total acres exposed to 92 dBA or greater would decrease by 4,827 acres.
- Total hours spent at 92 dBA or greater would be spread out over the course of a year.
  - For example, as discussed at our in-person meeting, in 2015 FCLPs (which fall under pattern operations and generate the greatest increase in hours) were only conducted a total of 110 days at Ault Field and 34 days at OLF Coupeville.
  - On those days, only about two-three FCLP evolutions of 45 minutes each were conducted resulting in only about two-three hours of FCLPs on those days.

- Additionally, while other daily flights happen at Ault Field even when FCLPs aren't occurring, OLF Coupeville is primarily used for FCLPs so inactive days represent days where no flights at OLF Coupeville will occur and thus no flights between the two locations.
- FCLPs are the required flight training that immediately precedes deployment and qualifies aircrews for carrier-landing operations.
- Per Navy guidance, pilots must perform FCLPs before initial carrier (ship) landings or requalification landings.
- The first carrier landing needs to occur within ten days of completion of FCLPs. These operations are conducted on a runway that simulates an aircraft carrier flight deck. FCLP is generally flown in a left-hand, closed-loop, racetrack-shaped pattern, ending with a touch and go landing or a low approach.
- A typical FCLP evolution lasts approximately 45 minutes, usually with three to five aircraft participating in the training conducting eight to ten landings in each evolution.
- Aircraft in the FCLP are usually spaced about one minute apart.
- Actual FCLP schedules are dictated by training and deployment schedules, occur with concentrated periods of high-tempo operations, and are followed by periods of little to no activity.
- While the specific number of aircraft operations for each flight profile that contribute to the 92 dBA can't be broken out at this time, the associated PDF shows the flight profiles along with distance from runway, altitude, power setting, and speed. It is important to note that for some of the flight profiles, the entire flight profile may not contribute to the 92 dBA.

**SEL Information**  
**30 Jan 2018**

Tables 1 -4 present estimated SELs at the shoreline threshold along the runway centerline and at 2 nm out to sea at Ault Field. Flight tracks and flight profiles remain the same for both the no action and the proposed action; therefore, the SELs would be the same for both.

Arrival operations on Runway 07 and Departures from Runway 25 generate the greatest SELs near along the coastline due to the close proximity (approximately 1,200 ft) to the shoreline. All arrival operation types generate similar SELs of 126 to 127 dBA at the shoreline, when landing on Runway 07 due to similar altitudes of 150 to 200 ft MSL. SELs at the point of interest 2nm from the shoreline along Runway 07 approaches vary from 99 to 122 dBA with altitudes of 500 to 2,000 ft MSL. Departures to the east taking off from Runway 25 climb to 500 ft at the shoreline and approximately 1,300 ft MSL by 2nm out to sea.

Approaches to Runway 25 and Departures from Runway 07 generate SELs at the shoreline, approximately 14,000 ft from the runway, of 105 to 117 dBA at aircraft altitudes from 630 to 2,000 ft MSL. Along the runway centerline 2 nm out to sea, aircraft generate SELs of 87 to 114 with aircraft operating at 1,000 to 3,500 ft MSL. The FCLP and T&G patterns to Runway 25 are not included because the approach portion remains over land.

Approaches to Runway 14 and Departures from Runway 32 generate SELs of 107 to 126 dBA at the shoreline approximately 2,600 ft from the runway with aircraft altitudes between 200 and 600 ft MSL. Along a runway centerline 2 nm out to sea, aircraft generate SELs of 96 to 122 dBA at aircraft altitudes of 800 to 2,100 ft MSL.

Approaches to Runway 32 and Departures from Runway 14 generate SELs of 89 to 116 dB at the shoreline due to aircraft operating at 770 to 2,800 ft MSL and SELs of 81 to 111 dB 2 nm out to sea with aircraft operating at 1,300 to 4,800 ft MSL. The FCLP and T&G patterns to Runway 32 are not included because the approach portion remains over land.

Tables 5 and 6 present estimated SELs at the shoreline along the OLF runway centerlines over water approximately at the middle of the FCLP crosswind turn to final. The greatest SEL offshore are caused by the arrival portion of FCLP patterns as well as the approach portion of interfacility arrivals to the OLF generating SELs of 95 to 117 dBA at the shoreline with aircraft operating between 500 and 2,500 ft MSL. The Proposed scenarios would modify and tighten the OLF patterns. This Proposed tightening of the flight tracks moves a larger portion of the flight path over land resulting in reduced SELs of 68 to 114 dBA at altitudes of 500 to 2,500.

**Table 1. SEL and Annual Events along Runway 07 Approach and Rwy 25 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events	
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	Proposed Action
Departure	25D1C	107	500	111	1300	7409	8712
VFR non-break Arrival	07A3A	127	190	119	950	938	996
HI TACAN	07AHT	127	170	109	850	110	113
Overhead Break Arrival	07O2C	126	170	104	1500	1413	1534
FCLP & T&G	07FU1	126	160	99	500	2042	2194
GCA Pattern	07G3	126	150	122	500	977	1167
Depart and Re-enter	07PL	126	150	103	2000	219	292

Notes: 1) Point 07-1, at shoreline along runway heading  
2) Point 07-2, 2nm over water beyond shoreline

**Table 2. SEL and Annual Events along Runway 14 Approach and Rwy 32 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events	
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	Proposed Action
Departure	32D1A	114	600	110	2100	726	670
VFR non-break Arrival	14A2A	124	300	118	1150	1490	1742
HI TACAN	14AHT	126	250	117	1000	165	245
Overhead Break Arrival	14O1C	124	230	103	1750	2245	2685
FCLP & T&G	14FU1	107	200	96	800	3204	3898
GCA Pattern	14G1	125	220	122	700	1465	2115
Depart and Re-enter	14PR	126	210	102	2000	355	530

Notes: 1) Point 14-1, at shoreline along runway heading  
2) Point 14-2, 2nm over water beyond shoreline

**Table 3. SEL and Annual Events along Runway 25 Approach and Rwy 07 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events	
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	Proposed Action
Departure	07D1C	109	1500	103	3500	2470	2681
VFR non-break Arrival	25A3C	116	830	108	1300	2814	3174
HI TACAN	25AHT	117	910	112	1450	377	527
Overhead Break Arrival	25O2B	106	1500	99	1500	4240	4986
GCA Pattern	25G2	119	630	114	1000	2713	3719
Depart and Re-enter	25PR	105	2000	87	2000	725	932

Notes: 1) Point 25-1, at shoreline along runway heading  
2) Point 25-2, 2nm over water beyond shoreline

**Table 4. SEL and Annual Events along Runway 32 Approach and Rwy 14 Departure at Ault Field**

Operation Type	Flight Track	Shoreline <sup>(1)</sup>		2nm Beyond <sup>(2)</sup>		Annual Events	
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	No Action	Proposed Action
Departure	14D2A	102	2800	99	4800	3923	4691
VFR non-break Arrival	32A1B	108	1400	106	2050	276	311
HI TACAN	32AHT	108	1150	100	1800	34	56
Overhead Break Arrival	32O1C	101	2000	91	2500	416	384
GCA Pattern	32G1	116	770	111	1300	271	292
Depart and Re-enter	32PL	89	2000	81	2000	68	73

Notes: 1) Point 32-1, at shoreline along runway heading  
2) Point 32-2, 2nm over water beyond shoreline

**Table 5. SEL and Annual Events along Runway 14 Approach and Rwy 32 Departure at OLF**

Operation Type	No Action						Proposed Action					
	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)			SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	
FCLP	14FCN1	116	850	101	1,000	448	14FCP3	68	800	104	800	2,040
Interfacility Arrival	07WC14N	117	2,500	106	2,500	66	07WC14P	99	2,500	99	2,500	299
Interfacility Departure	32CW14	101	2,000	95	2,000	356	32CW14	101	2,000	95	2,000	680

Notes: 1) Point C14-1, at shoreline along runway heading

2) Point C14-2, over water at crosswind turn to final

**Table 6. SEL and Annual Events along Runway 32 Approach and Rwy 14 Departure at OLF**

Operation Type	No Action						Proposed Action					
	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events	Flight Track	Shoreline <sup>(1)</sup>		Water <sup>(2)</sup>		Annual Events
		SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)			SEL	Altitude (ft MSL)	SEL	Altitude (ft MSL)	
FCLP	32FCN1	108	500	116	600	2,189	32FCP3	100	500	114	625	4,759
Interfacility Arrival	32WC32DN	106	2,500	112	650	356	14WC32P	104	1,800	107	650	673
Interfacility Departure	14CW07	100	2,000	99	2,000	68	14CW07	100		99		292

Notes: 1) Point C32-1, at shoreline along runway heading

2) Point C32-2, over water at crosswind turn to final



**From:** Bianchi, Michael C NAVFAC NW, PRW4  
**To:** [Corum, Lee](#)  
**Cc:** [emily\\_teachout@fws.gov](mailto:emily_teachout@fws.gov); [Curtis Tanner](#); [Padgett, Lisa M CIV USFF, N46](#); [Stallings, Sarah CIV NAVFAC Atlantic](#); [FFC.RECORD](#); [FFC.RECORD](#); [FFC.RECORD](#)  
**Subject:** Growler Consultation and Bull Trout  
**Date:** Tuesday, January 30, 2018 6:00:26 PM  
**Attachments:** [Noise and Potential Impacts to Fish.docx](#)

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Lee,

As we discussed, the Navy would like to update thoughts regarding ESA-listed bull trout.

As recap, the Navy's Draft Environmental Impact Statement noted that Growler operations may affect ESA-listed fish species. During preparation of our Final EIS, we decided the science actually supported a "no effect" determination as we concluded in our previous consultations. As I'm sure you recall, we had conversations regarding surrounding the potential for impacts to ESA-listed salmonids as well as our determination of no effect for any ESA-listed fish species.

As we continued development of the FEIS, we (the Navy) came to recognize that there are practical considerations to revert back to our original determination in the DEIS, considerations not necessarily related to the science. For example, we wanted to avoid a situation where we created confusion with the public over the change in finding.

Even though we believe there will be no impacts from aircraft noise on fish as part of this action, there is at least a theoretical potential for ESA-listed bull trout to intersect aircraft noise. We believe any such potential effect would be inconsequential for the following reasons (see attached document for more information on noise and impacts to fish):

- There is a very narrow window where any meaningful sound will enter the water;
- ESA-listed bull trout that may be present in the action area are currently exposed to high levels of ambient underwater noise unrelated to our proposed action;
- There would be no direct injury or loss of hearing, no noticeable behavioral responses, and no auditory masking.

Consistent with the above, and as documented in other Navy consultation documents regarding noise effects on ESA-listed bull trout, our proposed action would not adversely affect ESA-listed bull trout. Please let me know your thoughts on this issue.

Regards,

Michael Bianchi  
NAS Whidbey Island  
360.257.4024

GROWLER EIS PROJECT FILE  
##CODE.GROWLEREIS.PF##

## Noise and Potential Impacts to Fish

ESA-listed fish species could be exposed to aircraft noise wherever aircraft overflights occur in the project area, though the potential for sound to enter the water is low. Transmission of sound from a moving airborne source to a receptor underwater is influenced by numerous factors. Due to the difference in acoustic properties of air and water, most of the acoustic energy generated from the aircraft would be reflected away from the water column, preventing noises from atmospheric sources from maintaining original sound qualities as they transmit through the air-water interface (Richardson *et al.* 1995). A sound wave propagating from an aircraft must enter the water at an angle of incidence of 13 degrees or less from the vertical for the wave to continue to propagating under the water's surface (Richardson *et al.* 1995). Therefore, sound is primarily transferred into the water from the air in a narrow cone under the aircraft and strongest just below the surface. At greater angles of incidence, the water acts as a reflector of the sound wave and allows very little penetration below the water (Urick 1983). For low-altitude flights, sound levels reaching the water surface would be higher, but the transmission area would be smaller. As an aircraft gains altitude, sound reaching the water surface diminishes, but the possible transmission area increases (Eller and Cavanagh 2000).

Additionally, ESA-listed fish species that may be present in the action area are currently exposed to high levels of ambient underwater noise. Bordering Whidbey Island to the southwest, the Admiralty Inlet connects Puget Sound to the Strait of Juan de Fuca. Basset *et al.* (2010) collected passive acoustics data for one year at the Inlet. The most significant contributors to ambient noise levels at the Inlet study site were commercial shipping and ferry traffic, with secondary contributions from rain, wind, and marine mammal vocalizations (Basset *et al.* 2010). Recorded mean total sound pressure levels (SPL) overall were found to be 117 dB SPL re 1 $\mu$ Pa, which most likely drown out or lessen the sounds of aircraft overflights. Also, aircraft noise has been occurring since the installation was developed in the 1940s resulting most likely in habituation of ESA-listed fish species to aircraft noise.

While currently there are no studies documenting the responses of fish to aircraft noise, if aircraft noise affects surface waters, is louder than the ambient noise, and the fish is not habituated to aircraft noise already, then aircraft overflights have the potential to expose ESA-listed fish species occupying those upper portions of the water column to sound and general disturbance. Direct injury or loss of hearing are not likely due to the non-impulsive nature of the sound. Noise sources such as vessel movement and aircraft overflights lack the duration and intensity to cause hearing loss. Though, short-term impacts of underwater sound on fish would likely include behavioral changes and auditory masking (ICF Jones and Stokes and Illingworth and Rodkin, Inc., 2012). The extent to which fish react varies among species, their life stage, and with other environmental conditions. In general, these impacts would be short-term and minimal.

Behavioral effects to fish could include disruption or changes in natural activities, such as swimming, schooling, feeding, breeding, and migrating. Sudden changes in sound level can cause fish to dive, rise, or change swimming direction. There is a lack of studies that have investigated the behavioral reactions of unrestrained fish to man-made sound, especially in the natural environment. Studies of caged fish have identified three basic behavioral reactions to sound: startle, alarm, and avoidance (McCauley *et al.*, 2000; Pearson *et al.*, 1992; Scripps Institution of Oceanography and Foundation, 2008). Changes in sound intensity may be more important to a fish's behavior than the maximum sound level. Sounds that fluctuate in level tend to elicit stronger responses from fish than even stronger sounds with a continuous level (Schwartz, 1985). In addition, sound can induce generalized stress responses in fish, particularly a startle response during initial activity, which can in turn induce behavioral changes, such as



site avoidance of the Project area throughout the remainder of pile-driving activities (Wysocki, Dittami, and Ladich, 2006). The majority of fish species exposed to non-impulsive sources would likely have no reaction or mild behavioral reactions. Overall, long-term impacts for individual fish are unlikely in most cases because acoustic exposures are of short duration (tens of seconds) intermittent, and unlikely to repeat over short periods.

Auditory masking refers to the presence of a noise that interferes with a fish's ability to hear biologically relevant sounds. Fish use sounds to detect predators and prey, and for schooling, mating, and navigating, among other uses (Myrberg, 1980; Popper et al., 2003). Masking of sounds associated with these behaviors could have impacts to fish by reducing their ability to perform these biological functions. Any noise (i.e., unwanted or irrelevant sound, often of an anthropogenic nature) detectable by a fish can prevent the fish from hearing biologically important sounds including those produced by prey or predators (Myrberg, 1980; Popper et al., 2003). Auditory masking may take place whenever the noise level heard by a fish exceeds ambient noise levels, the animal's hearing threshold, and the level of a biologically relevant sound. Masking is found among all vertebrate groups, and the auditory system in all vertebrates, including fish, is capable of limiting the effects of masking noise, especially when the frequency range of the noise and biologically relevant signal differ (Fay, 1988; Fay and Megela-Simmons, 1999). The frequency of the sound is an important consideration for masking for fish because many marine fish are limited to detection of the particle motion component of low frequency sounds at relatively high sound intensities (Amoser and Ladich, 2005). The frequency of the acoustic stimuli must first be compared to the animal's known or suspected hearing sensitivity to establish if the animal can potentially detect the sound. Overall, long-term impacts for individual fish are unlikely in most cases because acoustic exposures are of short duration (tens of seconds) intermittent, and unlikely to repeat over short periods.



## Kondak, Tegan

---

**From:** Bianchi, Michael C NAVFAC NW, PRW4 <michael.bianchi1@navy.mil>  
**Sent:** Thursday, March 1, 2018 4:18 PM  
**To:** 'Corum, Lee'  
**Cc:** Stallings, Sarah CIV NAVFAC Atlantic; Farak, Amy M CIV USFF, N46; Padgett, Lisa M CIV USFF, N46  
**Subject:** 20180228 Average Growler Flight Operations - Current and Proposed.xlsx  
**Attachments:** 20180228 Average Growler Flight Operations - Current and Proposed.xlsx

Lee,

Please see the attached table for the data you requested. As always, email or call if you have any questions.

Regards,

Mike Bianchi  
NAS Whidbey Island  
360.257.4024

Proposed Action

Airfield	Aircraft	Departure			Arrival				Interfacility				Closed Pattern																							
					VFR SI/Non-break			Overhead Break			IFR			Departure to OLF			Break Arrival from OLF			FCLP			Touch-and-go				ReEnter			GCA/CCA						
														Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)	Total	Day (0700-2200)	Night (2200-0700)
		DL	DK	DK	DL	DK	DK	DL	DK	DK	DL	DK	DK	DL	DK		DK	DL		DK	DK		DL	DK		DK	DL		DK	DK						
Ault Field	EA18	15,777	977	16,754	5,787	436	6,223	8,426	322	841	9,589	892	49	941	490	244	238	972	810	0	162	972	8,148	4,050	3,341	15,539	8,341	1,395	2,145	11,881	3,509	144	3,653	10,466	4,120	14,586
OLF	EA18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,834	4,486	3,221	15,541	0	0	0	0	0	0	0	0	0	0

<b>AULT FIELD TOTALS</b>			
Departures:	16,754	FCLP:	15,539
Arrivals:	16,753	Other Operations:	63,627
Closed Patterns:	45,659		
	FCLP: 15,539		
	Other Patterns: 30,120		
Interfacility:	1,944		

<b>OLF COUPEVILLE TOTALS</b>			
Departures:	0	FCLP:	15,541
Arrivals:	0	Other Operations:	0
Closed Patterns:	15,541		
	FCLP: 15,541		
	Other Patterns: 0		
Interfacility:	0		



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office  
510 Desmond Dr. SE, Suite 102  
Lacey, Washington 98503

MAR - 5 2018

In Reply Refer to:  
01EWF00-2017-I-0826

Captain G.C. Moore  
U.S. Navy  
Commanding Officer  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98270-5000

Dear Captain Moore:

Subject: Non-concurrence for Section 7 consultation on EA-18G "Growler" Airfield Operations at the Naval Air Station Whidbey Island Complex

This letter is in response to your request for informal consultation under Section 7 of the Endangered Species Act (ESA) of 1973, as amended. Your letter and accompanying biological assessment was received in our office on April 26, 2017. In your letter and subsequent correspondence, you state that continuing and expanding Growler operations, adding additional aircraft, constructing and renovating facilities at Ault Field and stationing additional personnel and their family members at the Complex and in the surrounding community are "not likely to adversely affect" the marbled murrelet (*Brachyramphus marmoratus*) and the bull trout (*Salvelinus confluentus*). The U.S. Fish and Wildlife Service (Service) does not concur with the U.S. Navy's (Navy) determination for the marbled murrelet.

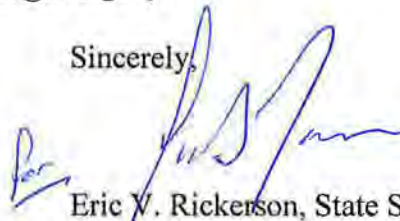
The biological assessment does not contain adequate justification that exposure of marbled murrelets to the effects of the proposed action is either discountable or insignificant. Based on information in the biological assessment and other documents provided by the Navy, we expect that marbled murrelets will be exposed to noise levels that could result in the disruption of their normal behavior while they are utilizing marine habitats in the action area. Per the Preamble to the implementing regulations for Section 7 of the ESA (51 FR 19817:19949 [June 3, 1986]), the burden is on the Federal agency to show the absence of likely, adverse effects to listed species or critical habitat as a result of its proposed action in order to be excepted from the formal consultation obligation. After review of the biological assessment, we conclude that the Navy has not shown the absence of likely, adverse effects to marbled murrelets, and as such, the proposed action is not excepted from the obligation for formal consultation. We recommend that the U.S. Navy request formal consultation for the proposed action.

The Service believes that sufficient information to initiate formal consultation on the project was provided through the combination of the biological assessment, emails, phone conversations, and in-person meetings through January 30, 2018, and we can proceed upon receipt of a letter requesting formal consultation. However, while we believe there is sufficient information to initiate formal consultation, our staff may have additional questions for Navy personnel that will improve and expedite our analysis of the effects of the proposed action.

We are prepared to initiate formal consultation as of January 30, 2018. Our statutory timeline for completing consultation is 135 days later on June 14, 2018. We will provide your staff updates through the course of the consultation and provide an opportunity for you to review a draft Biological Opinion.

If you have any questions, please contact Lee Corum (360-753-5835; lee\_corum@fws.gov) or Emily Teachout (360-753-9583; emily\_teachout@fws.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric V. Rickerson". The signature is stylized and written over the printed name below it.

Eric V. Rickerson, State Supervisor  
Washington Fish and Wildlife Office



DEPARTMENT OF THE NAVY

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

5090  
Ser N44/0938  
March 16, 2018

Mr. Eric Rickerson  
Washington Fish and Wildlife Office Supervisor  
Western Washington Field Office  
510 Desmond Drive SE, Suite 102  
Lacey, WA 98503-1273

Dear Mr. Rickerson:

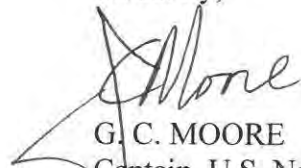
In accordance with section 7 of the Endangered Species Act (ESA), the United States Navy requests formal consultation on EA-18 Growler Airfield Operations at Naval Air Station Whidbey Island, Oak Harbor, Washington.

An informal consultation was requested with your office on April 26, 2017, regarding the Navy's determination that the proposed action is not likely to adversely affect the marbled murrelet (*brachyramphus marmoratus*) and the Bull trout (*salvelinus confluentus*). The Navy received a response dated March 5, 2018, which declares the United States Fish and Wildlife Services (USFWS) does not concur with the determination for concerning marbled murrelet (Reference 01EWF00-2017-I-0826).

As identified in your letter, the package was complete and formal consultation began on January 30, 2018. Prior to completion of the formal consultation period of 90 days per 50 CFR 402.14, the Navy requests any Reasonable and Prudent Measures or Terms and Conditions be identified and discussed with us prior to delivery of the draft Biological Opinion. Keep in mind, 45-days of the allotted time provides sufficient time to determine feasibility of those measures. The Navy also requests any supporting documentation (e.g., white papers) that USFWS is using to support its analysis.

We appreciate your continued support in helping the Navy to meet its environmental responsibilities. Please direct any written response and additional inquiries to Mike Bianchi, who can be reached at michael.bianchi1@navy.mil or (360) 257-4024.

Sincerely,

  
G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Copy to:  
Mr. Jim Muck, USFWS Lacey  
Mr. Lee Corum, USFWS Lacey





## Kondak, Tegan

---

**From:** Bianchi, Michael C NAVFAC NW, PRW4 <michael.bianchi1@navy.mil>  
**Sent:** Monday, July 2, 2018 12:13 PM  
**To:** Stallings, Sarah CIV NAVFAC Atlantic  
**Cc:** Farak, Amy M CIV USFF, N46  
**Subject:** FW: Updated 92dB SEL  
**Attachments:** Proposed 92 SEL Tracks Overview April 2018.jpg

Sarah,

I had to forward this email as it would not attach to my prior email.

Regards,

Mike Bianchi  
360.257.4024

-----Original Message-----

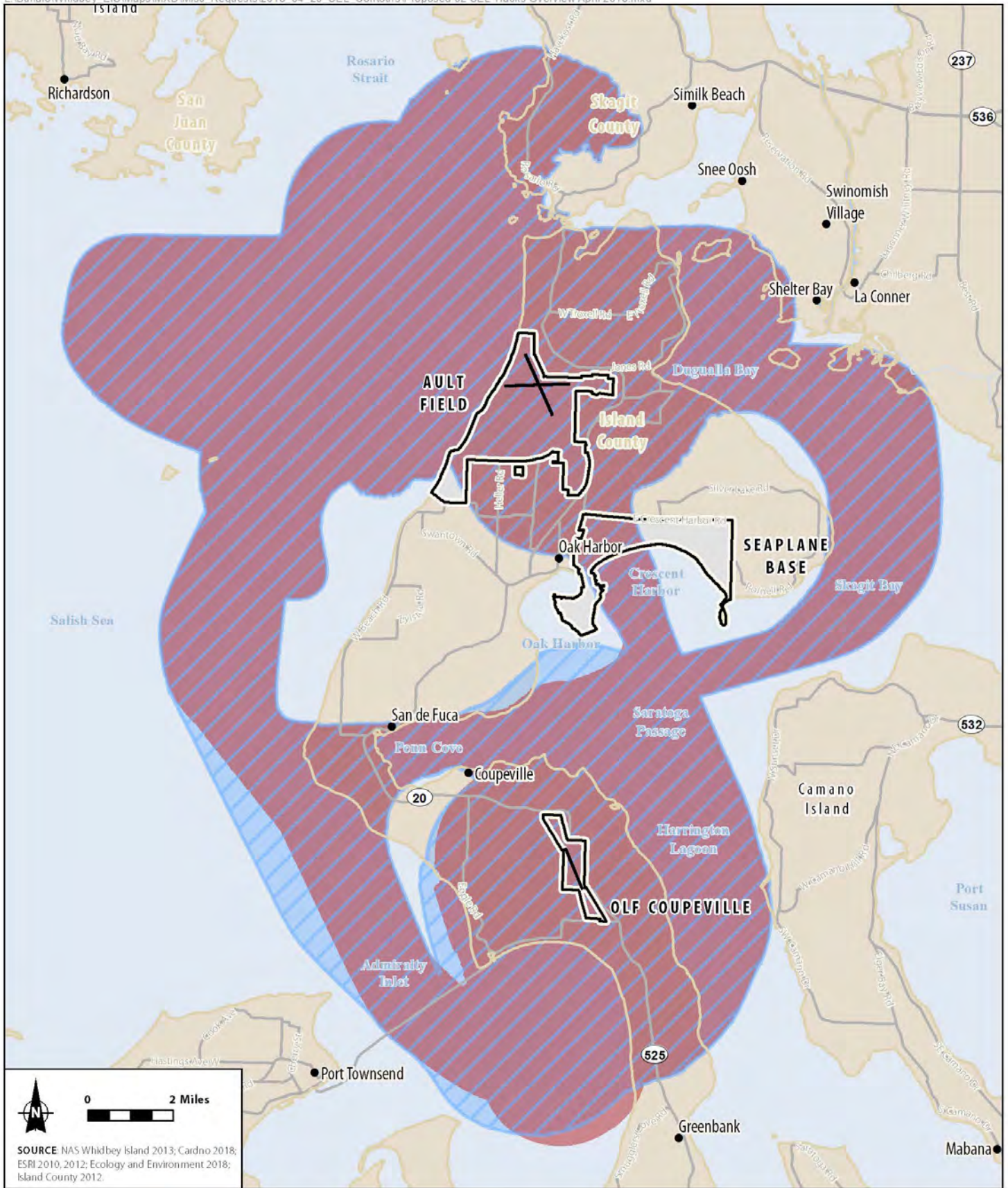
**From:** Bianchi, Michael C NAVFAC NW, PRW4  
**Sent:** Wednesday, May 02, 2018 10:08 AM  
**To:** 'Corum, Lee' <lee\_corum@fws.gov>  
**Cc:** Stallings, Sarah CIV NAVFAC Atlantic <sarah.stallings@navy.mil>; Padgett, Lisa M CIV USFF, N46 <Lisa.Padgett@navy.mil>; Farak, Amy M CIV USFF, N46 <amy.farak@navy.mil>; Bengtson, Melanie L CIV NAVFAC NW, PRW4 <melanie.l.bengtson@navy.mil>  
**Subject:** Updated 92dB SEL

Lee,

Attached is the most up to date information on the 92dB SEL. Give me a call if you have any questions or concerns.

Regards,

Michael Bianchi  
NAS Whidbey Island  
360.257.4024



- City
- County Boundary
- Major Road
- ▭ Installation Area
- ▬ Runway
- ▨ 92 dB SEL No Action Noise Contour (165,778 Acres)
- ▨ 92 dB SEL Proposed Action Noise Contour (160,978 Acres)

**No Action and Proposed Action  
92 dB SEL Noise Contours for the  
NAS Whidbey Island Complex**  
Whidbey Island, Island County, WA



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Washington Fish and Wildlife Office  
510 Desmond Dr. SE, Suite 102  
Lacey, Washington 98503

JUN 14 2018

In Reply Refer To:  
01EWF00-2017-F-0826

Captain G.C. Moore  
U.S. Navy  
Commanding Officer  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98270-5000

Dear Captain Moore:

This letter transmits the U. S. Fish and Wildlife Service's Biological Opinion on the proposed Naval Air Station Whidbey Island Complex EA-18G "Growler" Airfield Operations Project. Formal consultation on the proposed action was conducted in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act). Your March 16, 2018 request for formal consultation was received on May 31, 2018. The enclosed Biological Opinion assesses impacts of the proposed action for the subsequent 30 years, ending in 2048.

The enclosed Biological Opinion is based on information provided in the April 2017, Biological Assessment, the draft Environmental Impact Statement, emails, telephone conversations, and other information cited in the Biological Opinion. The Incidental Take Statement accompanying the Biological Opinion provides an exemption for incidental take of the marbled murrelet caused by the proposed action. A complete record of this consultation is on file at the Washington Fish and Wildlife Office in Lacey, Washington.

If you have any questions regarding the enclosed Biological Opinion, our response to your concurrence request(s), or our shared responsibilities under the Act, please contact Lee Corum at 360-753-5835, or Emily Teachout at 360-753-9583.

Sincerely,

A handwritten signature in blue ink that reads "Eric V. Rickerson". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Eric V. Rickerson, State Supervisor  
Washington Fish and Wildlife Office

Enclosure

cc:

NAVFAC NW, Oak Harbor, WA (M. Bianchi)  
US Fleet Forces, Norfolk, VA (L. Padgett)  
US Fleet Forces, Norfolk, VA (A. Farak)



Endangered Species Act - Section 7 Consultation

# BIOLOGICAL OPINION

U.S. Fish and Wildlife Service Reference:  
01EWF00-2017-F-0826

Naval Air Station Whidbey Island Complex EA-18G “Growler”  
Airfield Operations Project

Island County, Washington

Federal Action Agency:

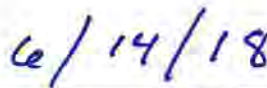
United States Department of the Navy

Consultation Conducted By:

U.S. Fish and Wildlife Service  
Washington Fish and Wildlife Office  
Lacey, Washington



Eric V. Rickerson, State Supervisor  
Washington Fish and Wildlife Office



Date

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## ACRONYMS AND ABBREVIATIONS

Act	Endangered Species Act of 1973, as amended (16 U.S.C. 1531 <i>et seq.</i> )
AGL	Above Ground Level
CFR	Code of Federal Regulations
CI	confidence interval
dB	decibel
dBA	A-weighted decibel level
DEIS	Draft Environmental Impact Statement
ENSO	El Niño-Southern Oscillation
EPA	U.S. Environmental Protection Agency
FCLP	field carrier landing practice
FEIS	Final Environmental Impact Statement
FMO	Foraging, Migration and Overwintering
FR	Federal Register
ft <sup>2</sup>	square feet
GHG	greenhouse gas
INRMP	Integrated Natural Resources Management Plans
IPCC	Intergovernmental Panel on Climate Change
km <sup>2</sup>	square kilometers
MSL	mean sea level
Navy	U.S. Navy
NPDES	National Pollutant Discharge Elimination System
NWFPEM	Northwest Forest Plan's Effectiveness Monitoring Program
OEIS	Overseas Environmental Impact Statement
OLF	Outlying Field
Opinion	Biological Opinion
PBDE	polybrominated diphenyl ethers
PCBs	Polychlorinated Biphenyls
PDO	Pacific Decadal Oscillation
PMO	Pacific Multidecadal Oscillation
RPM	Reasonable and Prudent Measures
SEL	Sound Exposure Level
Service	U.S. Fish and Wildlife Service
SL	sound level
T&G	touch-and-go

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## 1 INTRODUCTION

This document represents the U. S. Fish and Wildlife Service's (Service) Biological Opinion (Opinion) based on our review of the proposed Naval Air Station (NAS) Whidbey Island complex EA-18G “Growler” Airfield Operations located in Island County, Washington, and its effects on bull trout (*Salvelinus confluentus*) and marbled murrelet (*Brachyramphus marmoratus*), in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act). Your April 20, 2017, request for formal consultation was received on April 26, 2017.

This Opinion is based on information provided in the April 2017, “Consultation Package,” the November 2016, draft Environmental Impact Statement, emails, telephone conversations, field investigations, and other sources of information as detailed below. A complete record of this consultation is on file at the Washington Fish and Wildlife Office in Lacey, Washington.

## 2 CONSULTATION HISTORY

The following is a summary of important events associated with this consultation:

- The Consultation Package was received on April 26, 2017.
- A site visit was conducted on August 11, 2017.
- The U.S. Navy (Navy) informed the Service that the Navy was reanalyzing the proposed action with a reduced number of pilots and a decrease in projected operations on September 28, 2017.
- The Navy provided the Service with preliminary information about the updated proposed action on January 9, 2018 and further details about the updated proposed action on January 30, 2018.
- The Navy informed the Service that they had changed their effect determination for bull trout from “no effect” to “not likely to adversely affect” and requested informal consultation on January 30, 2018.
- The Navy provided information to the Service on the number of expected annual Growler flight operations on March 1, 2018.
- The Service sent a letter to the Navy on March 5, 2018 stating that the Service did not concur with the Navy determination that the proposed action is not likely to adversely affect marbled murrelet. The Service recommended that the Navy request formal consultation for the proposed action. The Service’s letter indicated that information received on January 30, 2018 was sufficient to initiate consultation.
- Formal consultation was requested by the Navy in a letter dated March 16, 2018, and formal consultation initiated as beginning January 30, 2018.
- The Navy provided an updated map showing their analysis of the extent of areas that would be exposed to sound exceeding 92 dBA<sub>SEL</sub> from Growler flights from the NAS Whidbey Island Complex on May 2, 2018.

### 3 CONCURRENCE

The Service concurs with the Navy's determination that the proposed action may affect, but is not likely to adversely affect bull trout. The nearshore marine areas around Whidbey Island provide foraging, migrating, and overwintering (FMO) habitat for bull trout which is essential to maintaining connectivity between core areas and local populations as well as providing foraging and overwintering opportunities. Adult and subadult bull trout may be present in the FMO habitat throughout the year. Therefore, bull trout may be present in the action area (refer to Section 5.4 of this Opinion) during the proposed action.

The additional impervious surfaces that will be created by expanding parking areas and constructing new storage facilities will increase stormwater runoff at Ault Field (refer to Figure 2). These actions will require a National Pollutant Discharge Elimination System (NPDES) stormwater permit from the U.S. Environmental Protection Agency (EPA). An NPDES stormwater permit requires implementation of site-specific best management practices to eliminate erosion, sedimentation, and discharge of pollutants in runoff and we therefore expect the impacts of increased stormwater runoff to bull trout and their habitat to be insignificant.

The Navy's Growlers will produce elevated sound levels (SLs) as they are flown through their training operations. Loud noise can disrupt the normal sheltering, feeding, and breeding behavior of bull trout and excessively loud noises can injure bull trout. However, we expect that the majority of sound from Growlers will reflect off the surface of the water and that little sound energy will be transmitted into the water. We therefore expect the impacts of increased SLs from Growler operations to be insignificant to bull trout.

Based on the conclusions stated above, the Service concurs with the Navy's conclusion that the proposed action may affect, but is not likely to adversely affect bull trout.

## 4 BIOLOGICAL OPINION

### 5 DESCRIPTION OF THE PROPOSED ACTION

A federal action means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies in the United States or upon the high seas (50 CFR 402.02).

The Navy proposes to conduct the following actions:

1. Construct and renovate facilities at Ault Field to accommodate additional Growler aircraft.
2. Station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community.
3. Add additional Growler aircraft to the squadrons currently stationed at the NAS Whidbey Island complex.
4. Continue and expand existing EA-18G (“Growler”) operations at the NAS Whidbey Island complex (Figure 1), to include field carrier landing practice (FCLP) at Ault Field and Outlying Field (OLF) Coupeville.

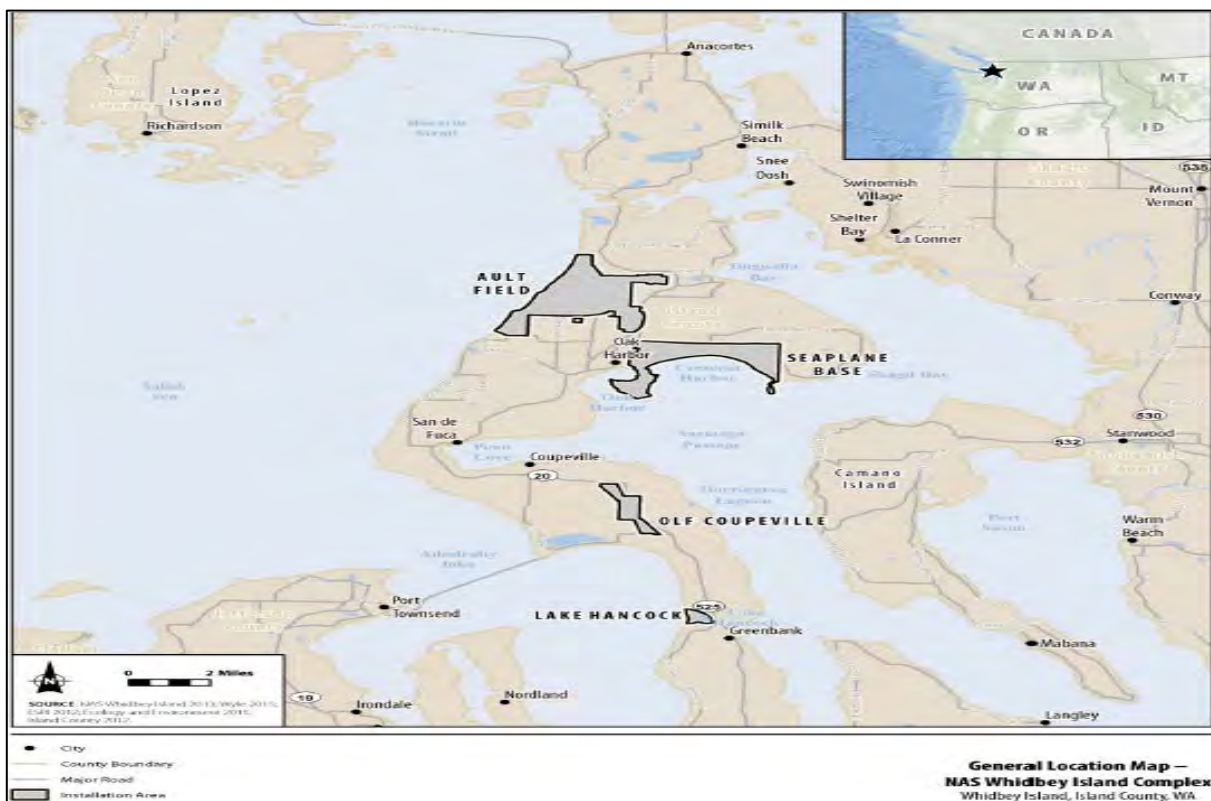


Figure 1. General location - NAS Whidbey Island complex

## 5.1 Facility Construction and Renovation

The proposed action includes modifying existing buildings and constructing new facilities and infrastructure. These efforts include construction and/or repair of aircraft pavement, aircraft parking apron, flight training and briefing building, maintenance hangars, armament storage, a mobile maintenance facility, repair to inactive taxiways, and expanded personnel parking (Figure 2). All of the construction and repair work will occur at Ault Field. In total, the new facilities and parking will add approximately 2 acres of impervious surfaces to the complex.

### 5.1.1 Facility Construction and Renovation Conservation Measures

1. Activities such as vehicle maintenance, chemical or waste oil storage, or transferring potential contaminants will be conducted in covered areas so contaminants will not wash into storm drains or surface waters.
2. Stormwater from uncovered areas will be retained and diverted to the sanitary sewer system.
3. Storm drains will not be used to dump or discharge any materials or chemicals. All storm drains will be labeled with “no dumping” signs.
4. As required for a NPDES stormwater permit from the EPA, the Navy will develop a site-specific plan for managing stormwater runoff and describe the best management practices to be implemented to eliminate erosion, sedimentation, and stormwater pollution.

## 5.2 Continued and Expanded Growler Operations

The proposed action includes Growler operations within the airspace control of the NAS Whidbey Island complex. Growlers leaving the NAS Whidbey Island complex to train in a Military Operations Area further away (such as the Olympic Peninsula, Okanogan, or Boardman) will not be within the airspace controlled by the NAS Whidbey Island complex after they climb above 4,000 ft in altitude or leave the area around the north Puget Sound. Growlers performing training operations in the north Puget Sound and beginning and ending their flights at the NAS Whidbey Island complex are included in the proposed action.

Growler operations will occur year round, any day of the week, and at any time of day or night. The proposed action includes Growler flight operations for the next 30 years (until 2048), as that is the amount of time the Navy expects to continue flying Growlers (Bianchi, M., in litt. 2018a). The typical pace and frequency of operations will be punctuated by periods of relatively high activity when pilots are preparing for deployment, which can occur at any time of the year. Growler operations will include departures (aircraft taking off), pattern operations, arrivals (aircraft landing), and interfacility flights. Many different typical flight paths will be used for each departure, pattern operation, and arrival. Each airstrip at the NAS Whidbey Island complex will be used from either direction. For example, aircraft can depart and arrive on the 07/25 airstrip by travelling east (runway 07) or by travelling west (runway 25). There are four runways

at Ault Field (07, 25, 14, and 32) and two runways at OLF Coupeville (14 and 32). Each flight operation (departure, pattern operation, arrival, or interfacility flights) has one to six different typical flight paths for every runway used for the flight operation.



Figure 2. Proposed construction and renovations at Ault Field

Multiple operations are likely to be accomplished within training events. After one or multiple Growlers depart from Ault Field for training, each aircraft may perform multiple pattern operations before landing (arriving) back at Ault Field. Pattern operations are defined as an aircraft arrival followed by a departure. To avoid confusion, from this point forward, this Opinion will refer to the elements of pattern operations as pattern maneuvers. Therefore, one pattern operation (defined as an arrival followed by a departure) will consist of two pattern maneuvers (one arrival and one departure). Figure 3 below illustrates how the components of flight operations relate to each other.

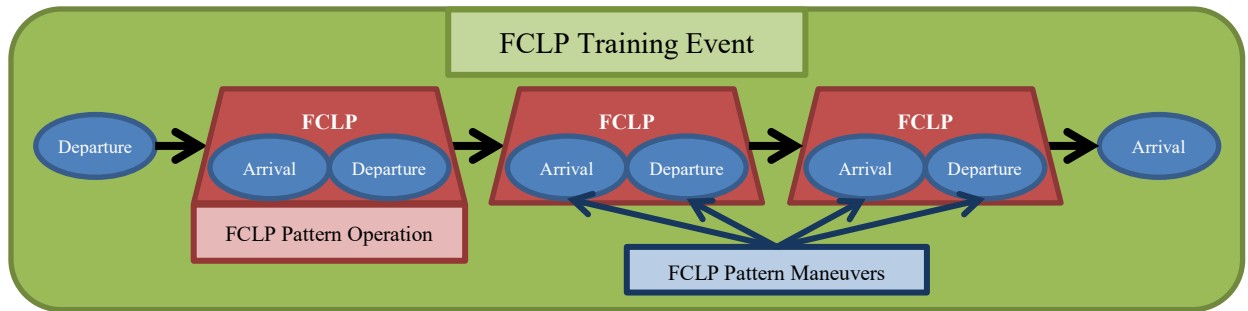


Figure 3. Graphic of terminology used for an example flight operation

### 5.2.1 Departures

Departures are simply aircraft taking off to a local or non-local training area. In an average year of the proposed action, there will be around 16,750 Growler departures from Ault Field.

### 5.2.2 Pattern Operations

The pattern operations included in the proposed action are: touch-and-go (T&G), field carrier landing practice (FCLP), ground-controlled approach, and depart and re-enter patterns. Touch-and-go and FCLP operations both involve aircraft landing on the runway, going to full power, and taking off again without coming to a full stop (one FCLP/T&G operation with two pattern maneuvers: one arrival and one departure). In an average year, about 11,900 T&G maneuvers will be conducted at Ault Field. Typical FCLP training events will each accomplish multiple operations and will entail three to five aircraft conducting a total of eight to ten landings and take offs and last for approximately forty-five minutes. Ten landings and ten take offs during an FCLP training event will count as ten FCLP operations or twenty FLCP maneuvers. Aircraft participating in FCLP events are usually paced about one minute apart. In an average year, about 31,100 FCLP maneuvers will be conducted at Ault Field and OLF Coupeville, with approximately fifty percent occurring at each location (Bianchi, M., in litt. 2018b). Growlers following typical FCLP flight paths will not travel more than three nautical miles laterally (about 3.5 miles) from the runway (Navy 2016, pp. A-279 – A-280, A-294). Ground-controlled approaches are arrivals performed by the pilots with additional guidance from ground-based air traffic controllers to practice or conduct arrivals under adverse weather conditions and will only be conducted at Ault Field. On average, each year, about 14,600 ground-controlled approaches will be conducted at Ault Field. Compared with FCLP operations, typical flight paths for ground-controlled approaches have much larger flight paths. Growlers following typical flight paths for ground-controlled approaches will stay within 14.5 nautical miles laterally (about 16.7 miles) of Ault field (Navy 2016, p. A-287). In depart and re-enter patterns, Growlers make a wide lateral arc around one side of the runway before performing an overhead break arrival. In an average year, about 3,650 depart and re-enter patterns will be conducted at Ault Field. Flight paths for depart and re-enter patterns do not typically extend more than 3.75 nautical miles (about 4.3 miles) from the runway.



### 5.2.3 Arrivals

There are several types of arrivals included in the proposed action. Straight-in/full-stop arrivals, overhead break arrivals, and instrument approaches all conclude with the aircraft landing but each type of arrival has a different typical flight path. In an average year of the proposed action, about 6,200 straight-in/full-stop arrivals, 9,600 overhead break arrivals, and 950 instrument approaches will be conducted at Ault Field.

### 5.2.4 Interfacility Flights

Growlers begin and end their training at Ault Field, so to conduct FCLP operations at OLF Coupeville Growlers must fly from Ault Field to OLF Coupeville and back. In an average year, Growlers will depart Ault Field for OLF Coupeville, then return to Ault Field and perform an overhead break arrival about 975 times.

### 5.2.5 Summary

The exact number of flight operations in a year will depend on the Navy's training needs. The expected total number of flight operations over the term of the proposed action is the average number of flight operations for a single year multiplied by the number of years of the proposed action. The annual averages and expected total number of flight operations over thirty years are summarized below in Table 1. Flight operations normally follow routes called flight tracks. In maps, single lines depict the predominant path that aircraft follow, but the actual paths of flight may be several miles from the mapped track depending on aircraft performance, pilot technique, air traffic, and weather conditions (Navy 2016, p. 3-7). Refer to Appendix A for maps of typical flight tracks for the flight operations included in the proposed action.

## 5.3 **Conservation Measures**

The Navy has implemented Precision Landing Mode technology known as Maritime Augmented Guidance with Integrated Controls for Carrier Approach and Recovery Precision Enabling Technologies (or MAGIC CARPET). The technology makes aircraft carrier approaches and landings more automated and reduces the training required of pilots. The operational changes of the Precision Landing Mode and pilot reductions reduce the number of increased FCLPs by 29 percent, and reduce the proposed increase in total airfield operations by 13 percent (Farak, A. in litt. 2018).

Table 1. Summary of Growler flight operations included in the proposed action

Flight Operation		Annual Average Number of Pattern Maneuvers	Expected Total Number of Pattern Maneuvers over 30 years
<b>AULT FIELD</b>			
Departures		16,754	502,620
Arrivals	Straight-in/Full-stop	6,223	186,690
	Overhead Break	9,589	287,670
	Instrument Approach	941	28,230
Pattern Operations	FCLP	15,539	466,170
	T&G	11,881	356,430
	Ground-controlled Approach	14,586	437,580
	Depart and Re-enter	3,653	109,590
<b>OLF COUPEVILLE</b>			
Pattern Operations	FCLP	15,541	466,230
Interfacility Flights	Ault Field to OLF Coupeville	972	29,160
	OLF Coupeville to Ault Field	972	29,160
<b>TOTAL</b>		<b>96,651</b>	<b>2,899,530</b>

#### 5.4 Action Area

The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR 402.02). In delineating the action area, we evaluated the farthest reaching physical, chemical, and biotic effects of the action on the environment. The action area for this proposed federal action is based on the geographic extent of increased in-air sound levels above ambient conditions resulting from Growler operations. Growlers fly miles away from airfields during flight operations and Growler flights along flight tracks will extend the physical, chemical, and biotic effects of the action to their greatest extent. At a power setting that Growlers will commonly operate near along flight tracks in the proposed action (85%, Navy 2016, pp. A-299 – A-391), the sound level produced by Growlers will be 111 dBA<sub>Lmax</sub> re: 20µPa measured at 400 ft from the jet (Navy 2015, p. 3.6-60).

The farthest extent of the action area will be where the loudest noise from Growlers (dBA<sub>Lmax</sub>) will not be noticeable above ambient sound levels. The practical spreading loss model predicts that in-air sound will attenuate at a rate of 6 dB for every doubling of distance<sup>1</sup>. At that attenuation rate, noise from Growlers will attenuate to ambient sound levels (65 dBA) approximately fifteen miles from the aircraft, and flight tracks with the farthest geographical

<sup>1</sup> 6 dB attenuation per doubling of distance is the rate for hard sites (which includes open water). Sounds have a higher attenuation rate in areas with vegetation (7.5 dB per doubling of distance). Since much of Growler flight operations will occur over water we used the lower attenuation rate to determine the action area.

extent (ground-controlled arrivals and interfacility flights) define the farthest extent of where noise will originate. Therefore, the action area for the proposed action is defined as fifteen miles from the farthest flight tracks followed for Growler operations as depicted in Figure 4.

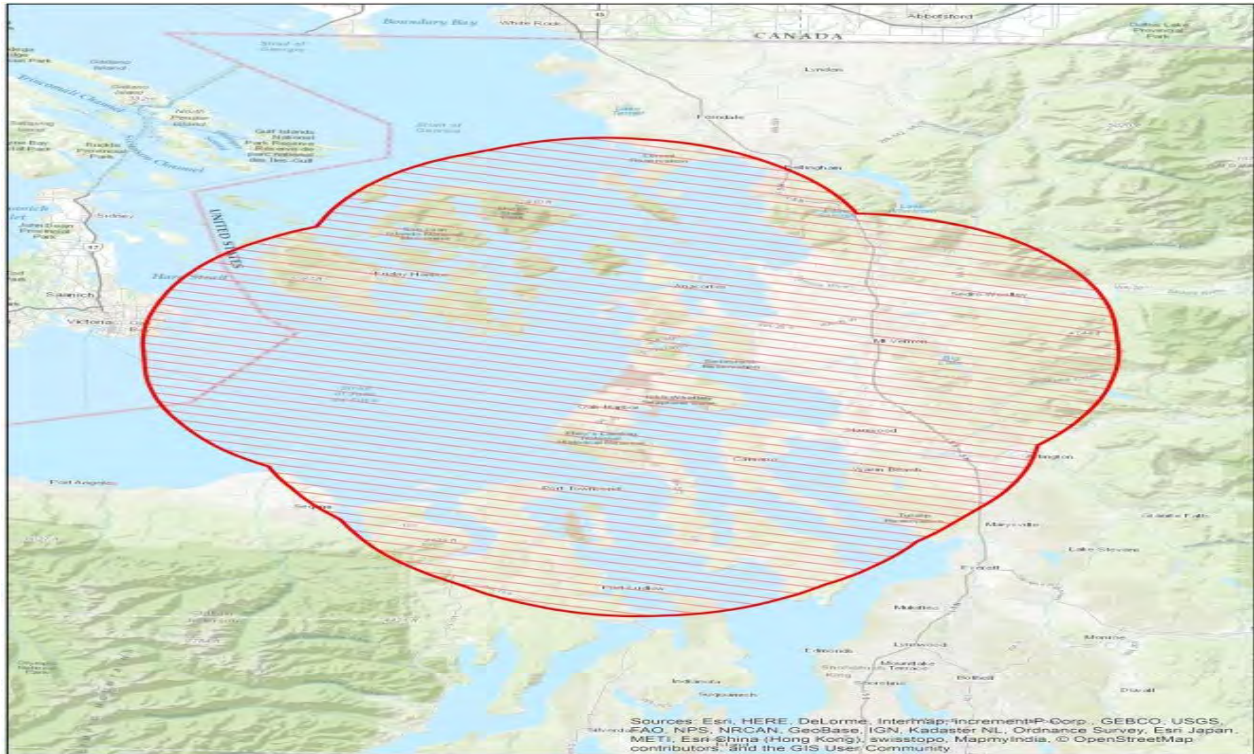


Figure 4. Action area of the proposed action

## 6 ANALYTICAL FRAMEWORK FOR THE JEOPARDY DETERMINATION

The following analysis relies on four components: (1) the *Status of the Species*, which evaluates the rangewide condition of the listed species addressed, the factors responsible for that condition, and the species' survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed federal action and the effects of any interrelated or interdependent activities on the species; and (4) *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed federal action in the context of the species' current status, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of listed species in the wild.

The jeopardy analysis in this Opinion emphasizes the rangewide survival and recovery needs of the listed species and the role of the action area in providing for those needs. It is within this context that we evaluate the significance of the proposed Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

## **7 STATUS OF THE SPECIES: Marbled Murrelet**

For a detailed account of marbled murrelet biology, life history, threats, demography, and conservation needs, refer to Appendix B: Status of the Species: Marbled Murrelet.

## **8 ENVIRONMENTAL BASELINE: Marbled Murrelet**

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the past and present impacts of all federal, state, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed federal projects in the action area that have undergone section 7 consultation, and the impacts of state and private actions which are contemporaneous with the consultation in progress.

### **8.1 Current Condition of the Marbled Murrelet in the Action Area**

#### **8.1.1 Marbled Murrelet Population and Distribution in the Action Area**

The action area covers the marine waters of northern Puget Sound, the eastern end of the Strait of Juan de Fuca, and the southern end of the Strait of Georgia (refer to Figure 4), and falls within Conservation Zone 1 as defined in the Marbled Murrelet Recovery Plan (Figure 5). Zone 1 extends south from the U.S.-Canadian border along the east shore of Puget Sound to the southern end of Puget Sound, then turning westward along the north shore of the Olympic Peninsula to Koitlah Point, just northeast of Cape Flattery. Zone 1 includes all of Puget Sound and most waters of the Strait of Juan de Fuca. Zone 1 extends inland a distance of 50 miles from eastern Puget Sound and includes the northern and eastern section of the Olympic Peninsula.

The Service considers the Northwest Forest Plan's Effectiveness Monitoring Program (NWFPEM) to be the best available information on the population status and trends of marbled murrelets in Puget Sound. Surveys conducted as part of the NWFPEM for marbled murrelets resulted in a population estimate of 4,614 marbled murrelets (95 % confidence interval [CI] of 2,298 – 7,571) in Conservation Zone 1 in 2016, the last year for which an estimate is available (Pearson et al. 2018, p. 13). Since 2001, the NWFPEM-estimated population size for Conservation Zone 1 has ranged from a low of 2,822 marbled murrelets in 2014 to a high of 9,758 in 2002 (Pearson et al. 2018, pp. 10-13). Between 2001 and 2016, the estimated average marbled murrelet density in Conservation Zone 1 has ranged from 0.81 to 2.79 marbled murrelets per km<sup>2</sup> (Pearson et al. 2018, pp. 10-13). The estimated marbled murrelet population in Conservation Zone 1 has fluctuated from year to year; for example, it increased between 2014 and 2016 (Figure 6). Overall, however, the population in Conservation Zone 1 has been generally declining over the history of Northwest Forest Plan (NWFP) effectiveness monitoring, decreasing at around 4.9 percent per year (Lynch et al. 2017, p. 3).

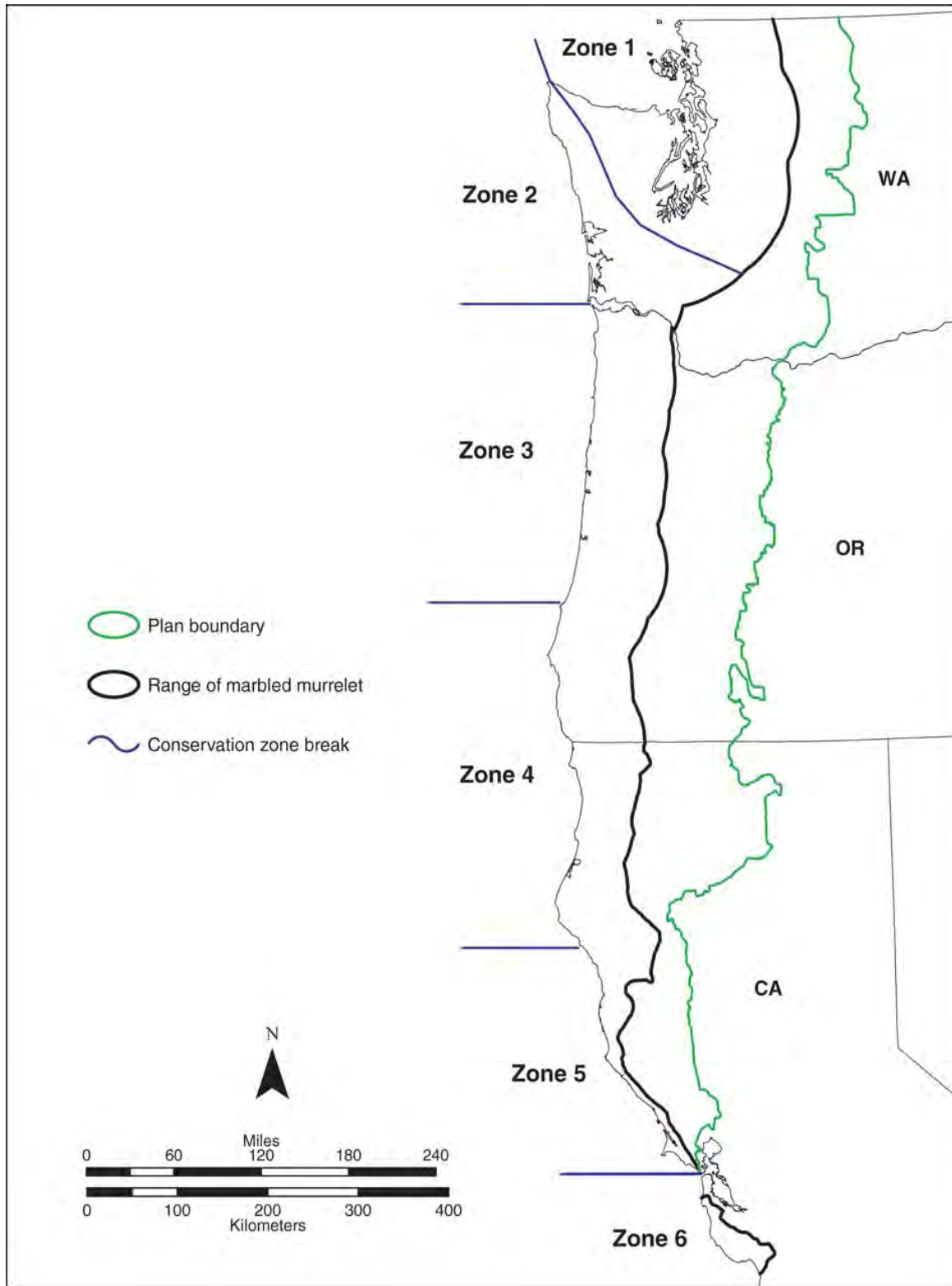


Figure 5. Marbled Murrelet Conservation Zones (USFWS 1997, p. 114)

Year	Population Estimate	Confidence Intervals		Density (birds/km <sup>2</sup> )
		Lower 95%	Upper 95%	
2001	8,936	5,740	11,896	2.55
2002	9,758	5,954	14,149	2.79
2003	8,495	5,795	11,211	2.43
2004	5,465	2,921	7,527	1.56
2005	7,956	4,900	11,288	2.28
2006	5,899	4,211	8,242	1.69
2007	6,985	4,148	10,639	2.00
2008	4,699	3,000	6,314	1.34
2009	5,623	3,786	8,497	1.61
2010	4,393	2,719	6,207	1.26
2011	7,187	4,807	9,595	2.06
2012	8,442	5,090	12,006	2.41
2013	4,395	2,298	6,954	1.26
2014	2,822	1,688	3,836	0.81
2015	4,290	2,783	6,492	1.23
2016	4,614	2,298	7,571	1.32

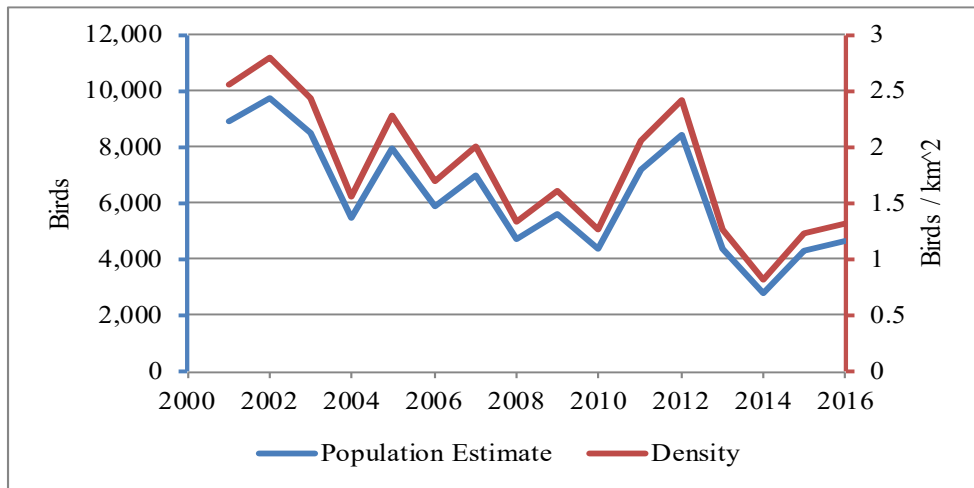


Figure 6. NWFPEM marbled murrelet population estimates and densities in Conservation Zone 1 (Pearson et al. 2018, pp. 10-13)

Within Conservation Zone 1, which encompasses all of Puget Sound and the Strait of Juan de Fuca, marbled murrelets tend to forage in well-defined areas during the breeding season. They are found in the highest densities in the nearshore waters of the San Juan Islands, Rosario Strait, the Strait of Juan de Fuca, Admiralty Inlet, and Hood Canal. They are more sparsely distributed elsewhere in Puget Sound, with smaller numbers observed during different seasons within the Nisqually Reach, Possession Sound, Skagit Bay, Bellingham Bay, and along the eastern shores of Georgia Strait. In the most southern end of Puget Sound, they occur in extremely low numbers. During the non-breeding season, they typically disperse and are found farther from shore (Strachan et al. 1995).

In fall and winter marbled murrelets from British Columbia and from Conservation Zone 2 move into more sheltered waters in Puget Sound and the Strait of Georgia, which contributes to increased numbers of marbled murrelets in Puget Sound during those seasons (Burger 1995; Ralph et al. 1995, p. 9; Speich and Wahl 1995, p. 325; Beauchamp et al. 1999, entire).

#### 8.1.2 Factors Responsible for the Condition of Marbled Murrelets in the Action Area

Marbled murrelets were listed as threatened in 1992 due, in large part, to habitat loss and predation in the terrestrial environment, and oil spills and net fisheries entanglement in the marine environment (57 FR 45333-45336 [October 1, 1992]). In 2012, the Service convened the marbled murrelet Recovery Implementation Team which concluded that the primary cause of the continued population decline is sustained low recruitment (USFWS 2012). That conclusion was supported in the recent Periodic Status Review for the Marbled Murrelet from the Washington Department of Fish and Wildlife, which recommended changing the State's designation of the species from threatened to endangered (Desmonie 2016, pp. iii-iv, 9, 14). Sustained low recruitment can be caused by nest failure, low numbers of nesting attempts, and/or low juvenile survival rates due to 1) terrestrial habitat loss, 2) nest predation, 3) changes in marine forage base which reduce prey resources, and 4) cumulative effects of multiple smaller impacts. The Service's latest 5-year review (USFWS 2009, pp. 27-67) identified the following additional threats in marine waters:

- Exposure to marine polychlorinated biphenyls in prey;
- Changes in prey abundance, availability and quality;
- Harmful algal blooms, biotoxins, and dead zones;
- Derelict fishing gear that causes entanglement;
- Energy development projects (wave, tidal, and on-shore wind energy projects) leading to mortality;
- Disturbance, injury, and mortality in the marine environment from exposures to elevated sound levels (caused by pile-driving, underwater detonations, and potentially by vessel traffic); and
- Climate change in the Pacific Northwest that may exacerbate many of the marine-related threats, as described above.

Within Washington, marine threats have generally been considered "lower priority" mechanisms of continued marbled murrelet population decline, as compared with terrestrial threats, in part due to a lack of clear information about the marine environment (USFWS 1997, p. 3; USFWS 2012, pp. 12-15). Recent evidence affirms the importance of both terrestrial nesting habitat and marine foraging habitat, as well as the spatial juxtaposition of the two habitat types. For example, in the action area (but not in the rest of the listed range), the marine human footprint is second only to the quantity of nearby nesting habitat in determining the abundance of marbled murrelets in a given marine location (Falxa and Raphael 2016, pp. 106-110). Since 1993, Washington has lost more nesting habitat than have Oregon or California, but a smaller

proportion of the remaining habitat is used in Washington than in other portions of the range, suggesting that other factors are also limiting the marbled murrelet population in Washington (Falxa and Raphael 2016, p. 71; Lorenz et al. 2017, p. 318).

Throughout the listed range of the marbled murrelet, sustained low recruitment appears to be the primary cause of continuing population declines (USFWS 2012, p. 3). In the action area, the proportion of adult marbled murrelets attempting to breed is lower than in any other area of the species range where breeding propensity has been measured (Lorenz et al. 2017, p. 316). The low breeding propensity of marbled murrelets in Washington is likely due in part to high energetic costs associated with breeding. Nesting adult marbled murrelets in the action area have the longest commuting distances between nest and sea, compared with marbled murrelets that have been studied elsewhere in the species range (Lorenz et al. 2017, p. 317). Elsewhere in the range, breeding marbled murrelets forage in marine areas close to their nesting habitat, which minimizes energetic costs associated with the commute between nest and sea (Peery et al. 2009, pp. 127, 130). Within the action area, long commuting distances were associated both with the distance of nesting habitat from the coast, and the distance of foraging habitat from the shore (Lorenz et al. 2017, pp. 314, 317-318). This pattern suggests that marbled murrelet breeding attempts are stymied not only by a lack of high-quality coastal nesting habitat, but also by poor or poorly-distributed foraging habitat. In, and adjacent to, the action area, marbled murrelet diet quality has decreased over the last 150 years, and the associated declines in marbled murrelet productivity suggest that diet quality may now be a limiting factor for marbled murrelet populations (Norris et al. 2007, pp. 878-880; Gutowsky et al. 2009, pp. 249-250).

Post-fledging mortality also contributes to sustained low recruitment in the action area, but less information is available about the relative contribution of the causes of this mortality to the population declines. Sources of post-fledging mortality in the marine environment include entanglement in gillnets, purse seines, and derelict gear; oil spills; and impulsive underwater sound from impact pile driving and underwater detonations (USFWS 2012, p. 13).

Some efforts are being made to ameliorate these threats. Numerous state, tribal, and federal agencies participate in nearshore restoration efforts, which are intended in part to improve and protect habitat for forage fish (WDFW 2015). Between 2002 and 2016, the Northwest Straits Initiative's Derelict Fishing Gear Program removed 5,667 old derelict fishing nets from Puget Sound (NWSF 2016b; Wilson, A. in litt. 2016). However, it is unknown whether these efforts will be effective in restoring high-quality marine habitat, much less slow or reverse the decline of the marbled murrelet population in the action area. For example, the prevalence of unpermitted shoreline armoring calls into question reported progress on shoreline restoration (Kinney et al. 2015, pp. 8-13; Dunagan 2016). Other trends may magnify these threats. For example, we expect climate change may further exacerbate the decline in foraging habitat quality (refer to Section 7.4).

The Navy implements Integrated Natural Resources Management Plans (INRMPs) within the action area. These INRMPs may benefit the marbled murrelet. At Naval Air Station Whidbey Island, two restoration projects have increased habitat for forage fish. The Crescent Harbor Salt Marsh Restoration Project restored approximately 300 acres and the Maylor Beach Restoration Project restored approximately 2,000 feet of beach area.



## 8.2 Conservation Role of the Action Area

The final Recovery Plan for the marbled murrelet (USFWS 1997, entire) outlines the conservation strategy for the species. Of the primary recovery plan recommendations, the most pertinent to the needs of marbled murrelets within the action area are 1) protect the quality of the marine environment essential for marbled murrelet recovery, and 2) reduce adult and juvenile mortality in the marine environment. Marbled murrelets are declining due to habitat loss and degraded marine conditions which lead to low reproductive success. The loss of individuals through death or injury in the marine environment is also a major threat. Conservation Zone 1 is identified as the main Zone in the three-state listed range where net fisheries may result in considerable mortality to marbled murrelets (USFWS 1997, pp. 125, 140).

The action area provides foraging habitat that is essential to marbled murrelet survival and recovery. All waters of Puget Sound and the Strait of Juan de Fuca, including the waters of the San Juan Islands and river mouths, are considered to be concentration areas of breeding marbled murrelets essential for foraging and loafing (USFWS 1997, p. 135). During the nesting season adult marbled murrelets depend on the action area as foraging habitat for themselves and their nestlings. Outside of the nesting season the action area provides foraging habitat for a mixed population of marbled murrelets that originate from both British Columbia and Conservation Zones 1 and 2 in Washington.

As outlined by the Recovery Plan (USFWS 1997, pp. 112), increasing habitat quantity and quality in the marine environment is essential to the conservation and recovery of the marbled murrelet. Marbled murrelet presence in marine waters is linked with tidal activity (Speich and Wahl 1995, p. 323) and prey availability, which can vary depending on upwelling conditions created by seawater temperature changes and seafloor topography (Becker and Beissinger 2003, pp. 251-252). Marbled murrelet foraging habits change depending on whether or not they are nesting and provisioning young. When nesting, marbled murrelets tend to forage closer to shore, primarily on small pelagic fish allowing them to efficiently feed their young. During non-breeding seasons they disperse and can be found much farther offshore foraging on both small fish and crustaceans. The Recovery Plan recommends protection of nearshore waters extending two kilometers (1.2 miles) from shore, to include estuaries, river mouths, and the ocean floor (USFWS 1997, p. 136).

Decreasing adult mortality in the marine environment is also a key element of the strategy to conserve and recover the marbled murrelet (USFWS 1997, pp. 112, 122, 125, 140-141, 154). Net fisheries and oil spills are the primary threats known to lead to marbled murrelet mortality in the marine environment, especially in Conservation Zone 1 (USFWS 1997, pp. 125, 140-141, 154). Impulsive underwater sound and harmful algal blooms are additional sources of mortality in the action area (USFWS 2012, pp. 13-14). Other factors, such as marine pollution, low food availability, and disturbance from boat traffic, may lead to lower survivorship, injury, or increased energy expenditure by marbled murrelets, but these effects are less clear (USFWS 1997, pp. 155-156; USFWS 2012a, p. 13).

A well-distributed, viable population must be maintained in Conservation Zone 1 to allow for the long-term survival and recovery of the species throughout the listed range (USFWS 1997, pp. 115-122). Marbled murrelets spend the majority of their time in the marine environment, so most feeding and mortality events also happen in the marine environment (USFWS 1997, p. 120).

### 8.3 Previously consulted-upon effects

Within Puget Sound, Hood Canal, and the Strait of Juan de Fuca, the Service has consulted on the effects of many projects including:

- harbor expansions
- shoreline armoring
- ferry terminal upgrades
- military training activities, including an annual average of 73,895 Growler Pattern Maneuvers at NAS Whidbey Island Complex (Bianchi, M., in litt. 2018c)
- aquaculture activities
- discharges from wastewater treatment plants
- construction of piers, ramps, and floats
- bridge, road, pier, and wharf maintenance and upgrades

The effects to marbled murrelets associated with most of these projects are similar and are related to exposure to increased sound pressure levels from pile driving, decreased water quality due to increased turbidity as well as the introduction and circulation of contaminants, and adverse impacts to forage fish populations.

The Service has recently consulted on the effects of the Navy's Northwest Training and Testing activities (which affect marbled murrelets directly through the use of aircraft and explosives) (USFWS 2016), and the continued Treaty and non-Treaty salmon fisheries throughout Puget Sound (which affect marbled murrelets directly through net entanglements) (USFWS 2017).

## 8.4 Climate Change

### 8.4.1 Global Climate Change

Our analyses under the Act include consideration of ongoing and projected changes in climate. The term "climate" refers to the mean and variability of different types of weather conditions over time, with 30 years being a typical period for such measurements, although shorter or longer periods also may be used (IPCC 2014a, pp. 119-120). The term "climate change" thus refers to a change in the mean or variability of one or more measures of climate (e.g., temperature or precipitation) that persists for an extended period, typically decades or longer, whether the change is due to natural variability, human activity, or both (IPCC 2014a, p. 119).

Measurements spanning several decades demonstrate that changes in climate are occurring, and that the rate of change since the 1950s is unprecedented (IPCC 2014a, p. 40). Examples include warming of the atmosphere and the oceans, melting of glaciers and sea ice, and substantial increases in precipitation in some regions of the world with decreases in other regions (e.g., Solomon et al. 2007, pp. 35–54, 82–85; IPCC 2014a, pp. 40-42). Analyses presented by the Intergovernmental Panel on Climate Change (IPCC) show that most of the observed increase in global average temperature since the mid-20th century cannot be explained by natural variability in climate, and is “extremely likely” (defined by the IPCC as 95 percent or higher probability) due to the observed increase in greenhouse gas (GHG) concentrations in the atmosphere as a result of human activities, particularly carbon dioxide emissions from use of fossil fuels (Solomon et al. 2007, pp. 21–35; IPCC 2014a, pp. 47-49). Further confirmation of the role of GHGs comes from analyses by Huber and Knutti (2011, p. 4), who concluded it is extremely likely that approximately 75 percent of global warming since 1950 is caused by human activities.

Scientists use a variety of climate models, which include consideration of natural processes and variability, as well as various scenarios of potential levels and timing of GHG emissions, to evaluate the causes of changes already observed and to project future changes in temperature and other climate conditions (e.g., Meehl et al. 2007, entire; Ganguly et al. 2009, pp. 11555, 15558; Prinn et al. 2011, pp. 527, 529; van Vuuren et al. 2011, entire). All combinations of models and emissions scenarios yield very similar projections of increases in the most common measure of climate change, average global surface temperature (commonly known as global warming), until about 2035. After 2035, model projections diverge depending on initial assumptions about greenhouse gas emissions (Collins et al. 2013, p. 1093; Kirtman et al. 2013, pp. 978-980, 1004-1012). Although projections of the magnitude and rate of warming differ after about 2035, the overall trajectory of all the projections is one of increased global warming through the end of this century, even for the projections based on scenarios that assume that GHG emissions will stabilize or decline. Thus, there is strong scientific support for projections that warming will continue through the 21st century, and that the magnitude and rate of change will be influenced substantially by the amount of GHG emissions (Meehl et al. 2007, pp. 760–764 and 797–811; Ganguly et al. 2009, pp. 15555–15558; Prinn et al. 2011, pp. 527, 529; IPCC 2014a, pp. 56-63). Other changes in the global climate are likely to include longer and more frequent heat waves, extreme precipitation events over mid-latitude land masses, intensified precipitation variability related to El Niño-Southern Oscillation (ENSO), reductions in spring snow cover and summer sea ice, sea level rise, ocean acidification, and decreases in the dissolved oxygen content of the ocean (IPCC 2014a, pp. 60-62).

Various changes in climate may have direct or indirect effects on listed species. These effects may be positive, neutral, or negative, and they may change over time. Identifying likely effects involves aspects of climate change vulnerability analysis. Vulnerability refers to the degree to which a species (or system) is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the type, magnitude, and rate of climate change and variation to which a species is exposed, its sensitivity, and its adaptive capacity (IPCC 2007, p. 89; see also Glick et al. 2011, pp. 19–22). There is no single method for conducting such analyses that applies to all situations (Glick et al. 2011, p. 3). We use our expert judgment and appropriate analytical approaches to weigh relevant information, including uncertainty, in our consideration of various aspects of climate change. In

general, many species are projected to face increased extinction risk as the climate changes in the future, especially when climate changes are combined with other factors like habitat modification; but this risk can be reduced through management actions, including those that reduce the impacts of non-climate change stressors (IPCC 2014b, pp. 14-15).

#### 8.4.2 Regional and Local Climate Projections

Global climate projections are informative, and in some cases, the only or the best scientific information available for us to use. However, projected changes in climate and related impacts can vary substantially across and within different regions of the world (e.g., IPCC 2007, pp. 8-12). We therefore use “downscaled” projections when they are available, and have been developed through appropriate scientific procedures, because such projections provide higher resolution information that is more relevant to spatial scales used for analyses of a given species (see Glick et al. 2011, pp. 58–61, for a discussion of downscaling). With regard to our analysis of the action area, downscaled projections are available in some cases. The spatial scales addressed by the climate studies reviewed here range from the entire Northeast Pacific to specific areas of Puget Sound.

Many of the reports discussing downscaled or regional projections of climate change for the action area use a suite of climate models along with one or more scenarios for anthropogenic carbon emissions over time. The exact suite of models and scenarios varies among reports, but the climate models generally encompass a range of sensitivities to climate scenarios, and the emissions scenarios typically include a lower-emissions scenario and a higher-emissions scenario. A few studies report results of projections for the 2030s, within the timeframe of the proposed action. However, most are reported in terms of a range of potential outcomes by the mid- or late 21<sup>st</sup> century, outside of the timeframe of the proposed action. These projections indicate the direction of various environmental changes (i.e., increases vs. decreases), but are not informative about the magnitude of the expected change within the timeframe of the proposed action, because some changes may accelerate over time, while others may approach a new equilibrium during the timeframe of the projections.

##### *8.4.2.1 Projected Changes in the Physical Environment*

Projected changes to the climate within the action area include air and sea surface temperature increases, changes in precipitation seasonality, and increases in the frequency and intensity of extreme rainfall events (Mauger et al. 2015, pp. 2-1 – 2-18). Air temperature warming is already underway, and is expected to continue, with the mid-21<sup>st</sup> century projected to be approximately four to six degrees Fahrenheit (°F) (2.2 to 3.3 degrees Celsius [°C]) warmer than the late 20<sup>th</sup> century (Mauger et al. 2015, p. 2-5). Similarly, sea surface temperatures are already rising and the warming is expected to continue, with an increase of 2.2 °F (1.2 °C) projected for Puget Sound between the late 20<sup>th</sup> century and mid-21<sup>st</sup> century (Mote and Salathé 2010, p. 16). For the Strait of Georgia, projections suggest an increase of between 2.7 and 5.4 °F (1.5-3 °C) by the end of the 21<sup>st</sup> century (Riche et al. 2014, p. 41). Summer precipitation is expected to decrease by 22 percent (averaged across models, relative to the late 20<sup>th</sup> century) by the mid-21<sup>st</sup> century, while winter precipitation is expected to increase (Mauger et al. 2015, p. 2-7). In particular,

heavy rainfall events are projected to occur approximately three times as frequently and to be about 19 percent more intense, on average, in the late 21<sup>st</sup> century than they were during the late 20<sup>th</sup> century (Warner et al. 2015, pp. 123-124).

The warming trend and trends in rainfall may be masked by naturally-occurring climate cycles, such as the ENSO and the Pacific Decadal Oscillation (PDO) (Reeder et al. 2013, p. 76). These oscillations have similar effects in the Pacific Northwest, with relatively warm coastal water and warm, dry winter conditions during a “positive” warm phase, followed by cooler coastal water and cooler, wetter winter conditions during the cool “negative” phase (Moore et al. 2008, p. 1747). They differ in that one phase of the ENSO cycle typically lasts between 6 and 18 months (one to three years for a full cycle), whereas, during the 20<sup>th</sup> century, each phase of the PDO cycle lasted approximately 20 to 30 years (approximately 40 to 60 years for a full cycle) (Mantua and Hare 2002, p. 36). Some studies break the PDO into two components, one with a full cycle length between 16 and 20 years and the other with a 50 to 70 year period, with the longer component referred to as the Pacific Multidecadal Oscillation (PMO) (Steinman et al. 2015, p. 988). Another recent study has identified a 60-year cycle separate from the longer-term component of the PDO, also referring to this as the PMO (Chen et al. 2016, p. 319). An additional pattern, the North Pacific Gyre Oscillation, is associated with changes in the alongshore winds that drive upwelling, and appears to complete approximately one cycle per decade (Di Lorenzo et al. 2008, pp. 2-3).

The overall warming projections described above for the action area will be superimposed over the natural climate oscillations. The climate models used to project future trends account for naturally occurring cycles (IPCC 2014a, p. 56). Therefore, the projected trend combined with the existing cycles mean that temperatures during a cool phase will be less cool than they would be without climate change, and warm phases will be warmer. During the winter of 2014-2015, the climate shifted from a negative cool phase of the PDO to a positive warm phase (Peterson et al. 2016, p. 46). Additionally, one study predicts that the PMO will enter a positive warm phase around the year 2025 (Chen et al. 2016, p. 322). The phases of these long-term climate cycles in addition to the projected warming trend imply that we should expect sea surface temperatures during the period from 2017 through 2036 to be especially warm. However, climate change may also alter the patterns of these oscillations, for example, by shortening the cycle length of the PDO (Zhang and Delworth 2016, pp. 6007-6008). Many studies of climate effects to marine species and ecosystems use indices of these climate oscillations, rather than individual climate variables such as sea surface temperature, as their measures of the climatic state (e.g. Becker and Beissenger 2006, p. 473). Therefore, if climate factors that covary with a given oscillation become decoupled, the relationships inferred from these studies may no longer be valid in the future.

These changes in temperature and the seasonality of precipitation affect the freshwater inflows to Puget Sound. Spring and summer freshwater inflows are expected to be warmer and reduced in volume, whereas winter freshwater inflows are expected to increase (Mote et al. 2003, p. 56; Lee and Hamlet 2011, p. 110; Mauger et al. 2015, p. 3-8; Moore et al. 2015, p. 6). Many watersheds draining to Puget Sound have historically been fed by a mix of rain and snowmelt, but are expected to be increasingly dominated by rainfall, which will cause the timing of peak flows to shift from spring to winter (Hamlet et al. 2001, pp. 9-11; Elsner et al. 2010, pp. 248-249; Hamlet

et al. 2013, pp. 401-404; Mauger et al. 2015, pp. 3-4 – 3-5). With winter warming and increases in heavy rainfall events, flooding has increased, and this increase is expected to continue (Hamlet and Lettenmaier 2007, pp. 25-16; Lee and Hamlet 2011, p. 113; Mauger et al. 2015, pp. 3-6 – 3-7). Increased winter freshwater inflows, in combination with melting glaciers, are expected to bring increased sediments to Puget Sound; however, it is uncertain whether these sediments are more likely to enter the Sound or to be deposited in estuaries (Czuba et al. 2011, p. 2; Lee and Hamlet 2011, pp. 129-134; Mauger et al. 2015, pp. 5-7 – 5-10).

These changes in seasonal freshwater inflows are expected to alter water circulation and stratification within the action area, and to affect the rate and timing of exchange of waters through the Strait of Juan de Fuca between the action area and the North Pacific Ocean (Babson et al. 2006, pp. 29-30; Riche et al. 2014, pp. 37-39, 44-45, 49-50; Mauger et al. 2015, p. 6-2; MacCready and Banas 2016, p. 13). This exchange occurs in two layers, with fresh water at the surface flowing toward the ocean, and denser, saltier ocean waters flowing from the ocean at greater depths (Babson et al. 2006, p. 30). With the projected changes in timing of freshwater inflows, the rate of exchange is expected to increase during winter and decrease during summer (Mauger et al. 2015, pp. 6-2 – 6-3). The effect of changes in freshwater inflow on stratification is likely to vary by location within the action area, with greater potential for effect in, for example, Possession Sound than in well-mixed channels like Admiralty Inlet (Newton et al. 2003, p. 721-722).

If changes in upwelling occur along the outer coast of Washington, these changes will also affect the interchange of waters through the Strait of Juan de Fuca (Newton et al. 2003, p. 718; Babson et al. 2006, p. 30). It has been hypothesized that as climate change accentuates greater warming of air over land areas than of air over the ocean, alongshore winds will intensify, which will lead to an increase in upwelling (Bakun 1990, entire). Historical records show that these winds have intensified over the past several decades (Bylhouwer et al. 2013, p. 2572; Sydeman et al. 2014, p. 78-79). Projections for future changes in upwelling offer some support for this hypothesis, but are more equivocal (Mote and Mantua 2002, p. 53-3; Wang et al. 2010, pp. 263, 265; Foreman et al. 2011, p. 10; Moore et al. 2015, p. 5; Rykaczewski et al. 2015, p. 6426). Some studies indicate a trend toward a later, shorter (but in some cases, more intense) upwelling season (Bograd et al. 2009, p. 2; Foreman et al. 2011, p. 8; Bylhouwer et al. 2013, p. 2572). Within the action area, upwelling leads to an influx of waters rich in nutrients such as nitrates, phosphates, and silicates, but that are also acidic (due to high dissolved carbon dioxide content) and low in dissolved oxygen (Krembs 2012, p. 109; Sutton et al. 2013, p. 7191; Johannessen et al. 2014, p. 220; Riche et al. 2014, pp. 45-46, 48).

Regardless of potential changes in the timing or intensity of upwelling, the dissolved oxygen content of the waters in the action area is expected to decrease. The solubility of oxygen in water decreases with increasing temperature, so as the climate becomes warmer, the dissolved oxygen content of the marine environment is expected to decrease (IPCC 2014a, p. 62; Mauger et al. 2015, pp. 7-3, 7-8). The oxygen content in the North Pacific Ocean outside of the action area has declined significantly since measurements began in 1987 (Whitney et al. 2007, p. 184), and this decline is projected to continue (Whitney et al. 2013, p. 2204). As these waters flow into the action area, they drive down the oxygen content of action area waters, although there is considerable variation over time, space, and depth, due to patterns of circulation and mixing

within the action area (Bassin et al. 2011, Section 3.2; Johannessen et al. 2014, pp. 214-220). Increased stratification, as is expected during winter with the larger freshwater inflows, can lead to hypoxic conditions in deeper waters (Whitney et al. 2007, p. 189; Mauger et al. 2015, p. 6-3). On the other hand, weaker stratification, as expected in the summer, may decrease the probability of low oxygen due to greater mixing, or increase the probability of low oxygen due to slower circulation (Newton et al. 2003, p. 725). If upwelling does increase in intensity, the effect would likely be to further reduce the oxygen content of action area waters, but these changes are not likely to be consistent throughout the action area or throughout the year. Changes in oxygen content, or in the timing of low-oxygen periods, may have important biological consequences (refer to section 7.4.2.2 below). Oxygen content also responds to biological activity. In addition to climate change-induced effects, some locations will likely experience reductions in oxygen content stemming from biological responses to eutrophication in areas that receive (and do not quickly flush) nutrient inputs from human activities (Mackas and Harrison 1997, p. 14; Cope and Roberts 2013, pp. 20-23; Sutton et al. 2013, p. 7191; Roberts et al. 2014, pp. 103-104, 108).

Similarly, acidification of waters in the action area is expected to increase, regardless of any changes in upwelling. Acidification results when carbon dioxide in the air dissolves in surface water, and is the direct consequence of increasing carbon dioxide emissions (IPCC 2014a, pp. 41, 49). Marine waters are projected to continue becoming more acidic, although if carbon emissions are stringently and immediately curtailed, this trend may reverse during the late 21<sup>st</sup> century (IPCC 2014a, pp. 8-9, 49). Both the surface and upwelled waters of North Pacific Ocean just outside of the action area have become more acidic due to carbon dioxide emissions (Feely et al. 2008, pp. 1491-1492; Murray et al. 2015, pp. 962-963), and this trend is expected to continue (Byrne et al. 2010, p. L02601; Feely et al. 2009, pp. 40-46). These waters contribute to acidification of the action area as they flow in through the Strait of Juan de Fuca (Feely et al. 2010, p. 446; Murray et al. 2015, p. 961), and any changes in upwelling intensity or seasonality would respectively increase acidification or change the timing of pH changes in the action area. It is unknown whether regional carbon dioxide emissions cause additional localized acidification within the action area (Newton et al. 2012, p. 36), but it is likely that other products of fossil fuel combustion, such as sulfuric acid, do contribute (Doney et al. 2007, pp. 14582-14583). Linked to reductions in dissolved oxygen (Riche et al. 2014, p. 49), acidification has important biological consequences (see below), and also responds to biological activity. For example, local areas of eutrophication are likely to experience additional acidification beyond that caused directly or indirectly by carbon dioxide emissions (Newton et al. 2012, pp. 32-33).

Sea level rise is also expected to affect the action area. Sea level rise is a consequence of the melting of glaciers and ice sheets combined with the expansion of water as it warms (IPCC 2014a, p. 42). At regional and local scales, numerous factors affect sea level rise, including ocean currents, wind patterns, and plate tectonics (Dalrymple 2012, p. 81; Mauger et al. 2015, p. 4-1; Petersen et al. 2015, p. 21). Sea level is rising at most locations in the action area (Shaw et al. 1998, p. 37; Dalrymple 2012, pp. 79-81; Mauger et al. 2015, p. 4-2). These increases in sea level are likely to continue and may accelerate in the near future (Mote et al. 2008, p. 10; Bromirski et al. 2011, pp. 9-10; Dalrymple 2012, p. 71; Mauger et al. 2015, pp. 4-3 – 4-5; Petersen et al. 2015, pp. 21, 29).

## 8.4.2.2 Projected Biological Consequences of Climate Change

### 8.4.2.2.1 Primary Productivity

Changes in temperature, carbon dioxide, and nutrient levels are likely to affect primary productivity by phytoplankton, macroalgae, kelp, eelgrass, and other marine photosynthesizers (Mauger et al. 2015, p. 11-5). In general, warmer temperatures, higher carbon dioxide concentrations, and higher nutrient levels lead to greater productivity (Thom 1996, pp. 386-387; Newton and Van Voorhis 2002, p. 10; Gao and Campbell 2014, pp. 451, 454; Roberts et al. 2014, pp. 11, 22, 108), but these effects vary by species and other environmental conditions, such as sunlight levels or the ratios of different nutrients (Low-Décarie et al. 2011, p. 2530; Krembs 2012, p. 109; Gao and Campbell 2014, pp. 451, 454). In particular, phytoplankton species that form calcium carbonate shells, such as coccolithophores, show weaker shell formation and alter their physiology in response to acidification (Feely et al. 2004, pp. 365-366; Kendall 2015, pp. 26-46). Due to changes in the seasonality of nutrient flows associated with upwelling and freshwater inputs, there may also be alterations in the timing, location, and species composition of bursts of primary productivity, for example, earlier phytoplankton blooms (Allen and Wolfe 2013, pp. 6, 8-9; Mauger et al. 2015, p. 6-3; MacCready and Banas 2016, p. 17). Changes in primary productivity are not expected to occur in every season: during winter, sunlight is the major limiting factor through most of the action area (Newton and Van Voorhis 2002, pp. 9, 12), and climate change is not expected to alter winter sunlight. Changes in primary productivity are also likely to vary across the action area; for example, primary productivity in Possession Sound is more sensitive to nutrient inputs than other areas within Puget Sound (Newton and Van Voorhis 2002, pp. 10-11). In sum, we expect an overall increase in primary productivity, but there are likely to be changes in the timing, location, and species dominance of primary producers.

Eelgrass (*Zostera marina*) is a particularly important primary producer in the action area. In some areas, such as Padilla Bay, sea level rise is expected to lead to larger areas of suitable depth for eelgrass meadows. In such areas, eelgrass cover, biomass, and net primary production are projected to increase during the next 20 years (Kairis 2008, pp. 92-102), but these effects will depend on the current and future topography of the tidal flats in a given area. In addition, eelgrass photosynthetic rates increase with increasing dissolved carbon dioxide concentrations (Thom 1996, pp. 385-386; Short and Neckles 1999, pp. 184-186). However, increasing temperatures are not likely to be beneficial for eelgrass, and in combination with increased nutrients, could favor algal competitors (Short and Neckles 1999, pp. 172, 174; Thom et al. 2014, p. 4). Between 1999 and 2013, eelgrass growth rates in Sequim Bay have increased, but at Clinton on Whidbey Island, shoot density over a similar time period was too variable to detect trends (Thom et al. 2014, pp. 5-6). Taken together, these studies indicate that climate change may benefit eelgrass over the next 20 years, particularly at some sites within the action area, but there is the potential for negative effects to dominate at other sites (Thom et al. 2014, pp. 7-9).



Kelp forests also make important contributions to primary productivity in the action area, but are less well studied than eelgrass. Like eelgrass, bull kelp (*Nereocystis luetkeana*) responds to higher carbon dioxide concentrations with greater productivity (Thom 1996, pp. 385-386). Outside of the action area, warming waters (among other factors) have reduced the range of giant kelp (*Macrocystis pyrifera* [Agardh]) (Edwards and Estes 2006, pp. 79, 85; Ling 2008, p. 892), but it is not clear that the giant kelp populations within the action area will be negatively affected by the projected increase in temperature here. Along the western portion of the Strait of Juan de Fuca, bull kelp and giant kelp canopy area increased between 1989 and 2004, but this increase is likely due to factors unrelated to climate change, such as harvesting of sea urchins, which graze on kelp (Berry et al. 2005, p. 4). It is unclear what the future effects of climate change might be on kelp in the action area.

In contrast, increases in toxic algae (also known as red tides or harmful algal blooms) have been documented over the past several decades, and these changes may be due to climate change (Trainer et al. 2003, pp. 216, 222). Future conditions are projected to favor higher growth rates and longer bloom seasons for these species. In the case of one species, *Alexandrium catanella*, increases in the length of bloom season are projected primarily due to increases in sea surface temperature (Moore et al. 2015, pp. 7-9). As with other climate change effects discussed above, increases in the length of the toxic algae bloom season is likely to vary across the action area. In the eastern end of the Strait of Juan de Fuca and the inlets of southern Puget Sound, the *A. catanella* bloom season is projected to increase by 30 days per year by 2069, in contrast with Whidbey basin, where little or no change in season length is projected (Moore et al. 2015, p. 8). In another species of toxic algae, *Pseudo-nitzschia fraudulenta*, toxin concentrations increase with increasing acidification of the water, especially in conditions in which silicic acid (used to construct the algal cell walls) is limiting (Tatters et al. 2012, pp. 2-3). This species also exhibits higher growth rates with higher carbon dioxide concentrations (Tatters et al. 2012, pp. 3-4). These results indicate that with future climate change, toxic algae blooms are likely to be more frequent, larger, and more toxic.

#### 8.4.2.2.2 Higher Trophic Levels

There are several pathways by which climate change may affect species at higher trophic levels (i.e., consumers). Changing physical conditions, such as increasing temperatures, hypoxia, or acidification will have direct effects on some species. Other consumers will be affected via changes in the abundance, distribution, or other characteristics of their competitors or prey species. Changes in the timing of seasonal events may lead to mismatches in the timing of consumers' life history requirements with their habitat conditions (including prey availability as well as physical conditions) (Mackas et al. 2007, p. 249). The combination of these effects is likely to cause changes in community dynamics (e.g. competitive interactions, predator-prey relationships, etc.), but the magnitude of these effects cannot be predicted with confidence (Busch et al. 2013, pp. 827- 831).

A wide variety of marine species are directly affected by ocean acidification. Like their phytoplankton counterparts, foraminiferans and other planktonic consumers that form calcium carbonate shells are less able to form and maintain their shells in acidified waters (Feely et al. 2004, pp. 356-366). Similarly, chemical changes associated with acidification interfere with

shell development or maintenance in pteropods (sea snails) and marine bivalves (Busch et al. 2014, pp. 5, 8; Waldbusser et al. 2015, pp. 273-278). These effects on bivalves can be exacerbated by hypoxic conditions (Gobler et al. 2014, p. 5), or ameliorated by very high or low temperatures (Kroeker et al. 2014, pp. 4-5), so it is not clear what the effect is likely to be in a future that includes acidification, hypoxia, and elevated temperatures. Acidification affects crustaceans, for example, slowing growth and development in Pacific krill (*Euphausia pacifica*) and Dungeness crabs (*Cancer magister*) (Cooper et al. 2016, p. 4; Miller et al. 2016, pp. 118-119). Salmon are also negatively affected by acidification, including negative growth rates and reduced metabolic rates in juvenile pink salmon (*Oncorhynchus gorbuscha*) at carbon dioxide concentrations comparable to those recently observed in the Strait of Georgia (Ou et al. 2015, pp. 951, 954).

Climate effects are expected to alter interactions within the marine food web. When prey items decrease in abundance, their consumers are also expected to decrease, and this can also create opportunities for other species to increase. In California's Farallon Islands, the recently increasing variance of climate drivers is leading to increased variability in abundance of prey species such as euphausiids and juvenile rockfish (*Sebastes* spp.), associated with corresponding variability in the demography of predators such as seabirds and salmon (Sydeman et al. 2013, pp. 1662, 1667-1672). In future scenarios with strong acidification effects to benthic prey in the California Current, euphausiids and several fish species are expected to decline, while other species are expected to increase (Kaplan et al. 2010, pp. 1973-1976). An investigation of the planktonic food web off of Oregon shows that sea surface temperature has contrasting effects on different types of zooplankton, and competitive interactions are much more prevalent during warm phases of ENSO or PDO than during cool phases (Francis et al. 2012, pp. 2502, 2505-2506). A food web model of Puget Sound shows that moderate or strong acidification effects to calcifying species are expected to result in reductions in fisheries yield for several species, including salmon and Pacific herring (*Clupea pallasii*), and increased yield for others (Busch et al. 2013, pp. 827-829). Additionally, the same model shows that these ocean acidification effects are expected to cause reductions in forage fish biomass, which are in turn expected to lead to reductions in diving bird biomass (Busch et al. 2013, p. 829). While Busch and coauthors (2013, p. 831) express confidence that this model is accurate in terms of the nature of ocean acidification effects to the Puget Sound food web of the future, they are careful to note that there is a great deal of uncertainty when it comes to the magnitude of the changes. The model also illustrates that some of the effects to the food web will dampen or make up for other effects to the food web, so that changes in abundance of a given prey species will not always correspond directly to changes in the abundance of their consumers (Busch et al. 2013, pp. 827, 830).

Changes in seasonality at lower trophic levels may lead to changes in population dynamics or in interactions between species at higher trophic levels. For example, just outside of the action area in British Columbia, earlier spring phytoplankton blooms are associated with lower pink salmon productivity, likely mediated by zooplankton grazers, and this effect is likely to apply to the action area as well (Malick et al. 2015, pp. 703-706). Similarly, if salmon hatchery release dates are not adjusted to account for changes in peak timing of phytoplankton blooms, this can lead to a mismatch between release dates and marine productivity peaks, which has been shown to reduce smolt-to-adult survival in the Strait of Georgia (Chittenden et al. 2010, pp. 8-9). At Triangle Island in British Columbia, Cassin's auklet (*Ptychoramphus aleuticus*) breeding success

is reduced during years when the peak in copepod prey availability comes earlier than the birds' hatch date, and this mismatch is associated with warm sea surface temperatures (Hipfner 2008, pp. 298-302). However, piscivorous seabirds (i.e., tufted puffins [*Fratercula cirrhata*], rhinoceros auklets [*Cerorhinca monocerata*], and common murrens [*Uria aalge*]) breeding at the same Triangle Island site have, at least to some extent, been able to adjust their breeding dates according to ocean conditions (Bertram et al. 2001, pp. 292-293; Gjerdrum et al. 2003, p. 9379), as have Cassin's auklets breeding in the Farallon Islands of California (Abraham and Sydeman 2004, p. 240). Because of the changes in tufted puffin, rhinoceros auklet, and common murre hatch dates at Triangle Island, the breeding periods of these species have converged to substantially overlap with one another and with that of Cassin's auklet (Bertram et al. 2001, pp. 293-294), but studies have not addressed whether this overlap has consequences for competitive interactions among the four species. Note that all four of these bird species are in the family Alcidae, which also contains marbled murrelets. All these species also breed in, or near, the action area and forage within the action area. However, we did not locate any studies addressing these types of effects within the action area.

Several studies have suggested that climate change is one of several factors allowing jellyfish to increase their ecological dominance, at the expense of forage fish (Parsons and Lalli 2002, pp. 117-118; Purcell et al. 2007, pp. 154, 163, 167-168; Richardson et al. 2009, pp. 314-216). Many (though not all) species of jellyfish increase in abundance and reproductive rate in response to ocean warming, and jellyfish are also more tolerant of hypoxic conditions than fish are (Purcell 2005, p. 472; Purcell et al. 2007, pp. 160, 163; see Suchman et al. 2012, pp. 119-120 for a Northeastern Pacific counterexample). Jellyfish may also be more tolerant of acidification than fish are (Atrill et al. 2007, p. 483; Lesniewski et al. 2015, p. 1380). Jellyfish abundance in southern and central Puget Sound has increased since the 1970s (Greene et al. 2015, p. 164). Over the same time period, herring abundance has decreased in south and central Puget Sound, and surf smelt (*Hypomesus pretiosus*) abundance has also decreased in south Puget Sound, although other Puget Sound forage fish populations have been stable or increasing (Greene et al. 2015, pp. 160-162). Forage fish abundance and jellyfish abundance were negatively correlated within Puget Sound and Rosario Strait (Greene et al. 2015, p. 164). It is not clear whether there is a causal relationship between forage fish and jellyfish abundance, or whether the two groups are simply responding in opposite ways to climate and other anthropogenic factors.

Many species of forage fish are expected to fare poorly in the changing climate, regardless of any competitive effects of jellyfish. In the Gulf of Alaska, Anderson and Piatt (1999, pp. 119-120) documented the crash of capelin (*Mallotus villosus*), Pacific herring, and species of Irish lord (*Hemilepidotus* spp.), prickleback (Stichaeidae family), greenlings and mackerel (*Hexagrammos* and *Pleurogrammus* spp.), as well as several shrimp species, as part of a major community reorganization following a climate regime shift from a cool phase to a warm phase in the 1970s. In the northeastern Pacific Ocean, capelin, sand lance (Ammodytidae family), and rockfish abundance are all negatively correlated with seasonal sea surface temperatures (Thayer et al. 2008, p. 1616). A model of multiple climate change effects (e.g., acidification and deoxygenation) to marine food webs in the Northeast Pacific consistently projects future declines in small pelagic fish abundance (Ainsworth et al. 2011, pp. 1219, 1224). Within the action area, abundance of surf smelt and Pacific herring in the Skagit River estuary are positively associated with coastal upwelling during the spring and early summer, likely because nutrient-rich upwelled

water increases food availability (Reum et al. 2011, pp. 210-212). If projections of later, shorter upwelling seasons are correct (see above), the delays may lead to declines in these stocks of herring and surf smelt, as happened in 2005 (Reum et al. 2011, p. 212). Similarly, delayed upwelling in 2005 led to reduced growth rates, increased mortality, and recruitment failure of juvenile northern anchovies (*Engraulis mordax*) off of the Oregon and Washington coasts (Takahashi et al. 2012, pp. 397-403). In the northeastern Pacific, Chavez and coauthors (2003, pp. 217-220) have described a shift between an “anchovy regime” during the cool negative phase of the PDO and a “sardine regime” during the warm positive phase, where the two regimes are associated with contrasting physical and biological states. However, global warming may disrupt the ecological response to the naturally-occurring oscillation, or alter the pattern of the oscillation itself (Chavez et al. 2003, p. 221; Zhang and Delworth 2016, entire).

#### 8.4.2.2.3 Marbled Murrelets

Marbled murrelets are likely to experience changes in foraging and breeding ecology as the climate continues to change. Within the action area, there is no research attempting to measure or project the effects of climate change on the marbled murrelet. However, several related studies have been conducted outside of the action area, and the results are likely to be applicable to marbled murrelets within the action area as well. Additionally, numerous studies of other alcids from Mexico to British Columbia indicate that alcids as a group are vulnerable to climate change in the northeastern Pacific.

These studies suggest that the effects of climate change will be to reduce marbled murrelet reproductive success, likely mediated through climate change effects to prey. In British Columbia, there is a strong negative correlation between sea surface temperature and the number of marbled murrelets observed at inland sites displaying behaviors associated with nesting (Burger 2000, p. 728). In central California, marbled murrelet diets vary depending on ocean conditions, and there is a trend toward greater reproductive success during cool water years, likely due to the abundant availability of prey items such as euphausiids and juvenile rockfish (Becker et al. 2007, pp. 273-274). In the Georgia Basin, just north of the action area, much of the yearly variation in marbled murrelet abundance from 1958 through 2000 can be explained by the proportion of fish (as opposed to euphausiids or amphipods) in the birds’ diet (Norris et al. 2007, p. 879). If climate change leads to further declines in forage fish populations (see above), those declines are likely to be reflected in marbled murrelet populations.

The conclusion that climate change is likely to reduce marbled murrelet breeding success via changes in prey availability is further supported by several studies of other alcid species in British Columbia and California. Common murrelets, Cassin’s auklets, rhinoceros auklets, and tufted puffins in British Columbia; pigeon guillemots (*Cephus columba*), common murrelets, and Cassin’s auklets in California; and even Cassin’s auklets in Mexico all show altered reproductive rates, altered chick growth rates, or changes in the timing of the breeding season, depending on sea surface temperature or other climatic variables, prey abundance, prey type, or the timing of peaks in prey availability (Ainley et al. 1995, pp. 73-77; Bertram et al. 2001, pp. 292-301; Gjerdrum et al. 2003, pp. 9378-9380; Abraham and Sydeman 2004, pp. 239-243; Hedd et al. 2006, pp. 266-275; Albores-Barajas 2007, pp. 85-96; Borstad et al. 2011, pp. 291-299). The abundance of Cassin’s auklets and rhinoceros auklets off southern California declined by 75 and

94 percent, respectively, over a period of ocean warming between 1987 and 1998 (Hyrenbach and Veit 2003, pp. 2546, 2551). Although the details of the relationships between climate variables, prey, and demography vary between bird species and locations, the consistent demonstration of such relationships indicates that alcids as a group are sensitive to climate-related changes in prey availability, prompting some researchers to consider them indicator species for climate change (Hedd et al. 2006, p. 275; Hyrenbach and Veit 2003, p. 2551).

In addition to effects on foraging ecology and breeding success, climate change may expose adult marbled murrelets to health risks. For example, it is likely that they will experience more frequent domoic acid poisoning, as this toxin originates from harmful algae blooms that are expected to become more prevalent in the action area (see above). In central California, domoic acid poisoning was determined to be the cause of death for at least two marbled murrelets recovered during a harmful algae bloom in 1998 (Peery et al. 2006, p. 84). During this study, which took place between 1997 and 2003, the mortality rate of radio-tagged marbled murrelets was highest during the algae bloom (Peery et al. 2006, p. 83). Domoic acid poisoning has previously been shown to travel through the food chain to seabirds via forage fish that feed on the toxic algae (Work et al. 1993, p. 59). A different species of harmful algae produces a foam that led to plumage fouling and subsequent mortality of common murres and other seabird species off of Oregon and Washington during October of 2009, and similar events may become more frequent with climate change (Phillips et al. 2011, pp. 120, 122-124). Climate change may also promote conditions in which alcids become exposed to novel pathogens, as occurred in Alaska during 2013, when crested auklets (*Aethia cristatella*) and thick-billed murres (*Uria lomvia*) washed ashore after dying of avian cholera (Bodenstein et al. 2015, p. 935). Counterintuitively, in the 1997-2003 study of radio tagged marbled murrelets in California, marbled murrelet adult survival was higher during warm-water years and lower during cold-water years, likely because they did not breed and therefore avoided the associated physiological stresses and additional predator risk (Peery et al. 2006, pp. 83-85).

## **9 EFFECTS OF THE ACTION: Marbled Murrelet**

The effects of the action refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline (50 CFR 402.02). Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.

The aircraft operations of the proposed action will create stressors to marbled murrelets. The stressors created by aircraft operations are collisions between aircraft and birds (aircraft strike), and increased sound pressure levels. Adverse effects to marbled murrelets may occur when the proposed action creates stressors in the same time and place as marbled murrelets.

As described in section 4.2, pattern operations will consist of two maneuvers, an arrival and a departure. It would overestimate the effects if the proposed action was analyzed as each maneuver being a discrete opportunity for marbled murrelet exposure to stressors. We therefore considered each pattern operation as an opportunity for exposure. Since pattern operations are

defined by two maneuvers, the total number of pattern operations for FCLPs, T&Gs, ground-controlled approaches, and depart and re-enter patterns are the number of maneuvers for these activities divided by two (refer Table 2).

Table 2. Growler flight operations compared with opportunities for marbled murrelet exposure

Flight Operation		Annual Average Number of Pattern Maneuvers	Annual Average Number of Incidents of Marbled Murrelet Exposure to Stressors
<b>AULT FIELD</b>			
Departures		16,754	16,754
Arrivals	Straight-in/Full-stop	6,223	6,223
	Overhead Break	9,589	9,589
	Instrument Approach	941	941
Pattern Operations	FCLP	15,539	7,770
	T&G	11,881	5,941
	Ground-controlled Approach	14,586	7,293
	Depart and Re-enter	3,653	1,827
<b>OLF COUPEVILLE</b>			
Pattern Operations	FCLP	15,541	7,771
Interfacility Flights	Ault Field to OLF Coupeville	972	972
	OLF Coupeville to Ault Field	972	972
<b>TOTAL FLIGHT OPERATIONS</b>		<b>96,651</b>	<b>66,053</b>

## 9.1 Aircraft Strike

To determine the effects of aircraft strikes to marbled murrelets resulting from the proposed we examined the potential for marbled murrelets to be exposed to aircraft strikes and the expected response of marbled murrelets to an aircraft strike.

### 9.1.1 Marbled Murrelet Exposure to Aircraft Strike

Flight operations and marbled murrelets overlap. Growlers will perform operations within the action area year-round and marbled murrelets will be present in the marine waters of the action area year-round.

There are areas and times where and when marbled murrelets are extremely unlikely to be exposed to aircraft strikes. Marbled murrelets typically fly close to the surface when flying over water. Growlers typically fly at least 800 ft above mean sea level (MSL) when they are more than two miles from a runway and many flight operations cause Growlers to be around 2,500 ft MSL when over water away from shore (Navy 2016, pp. A-299 – A-320). Therefore, for much of the area where Growlers are operating, the aircraft will be far above the typical flight altitude

for marbled murrelets. Adult marbled murrelets also go through two molting periods. Murrelets go through a molt before the breeding season (typically from mid-March through April) and a second molt which lasts for around sixty-five days (typically occurring between early August and late November) after they conclude chick-rearing (Carter and Stein 1995, p. 104). During the post-breeding molt, marbled murrelets replace their primary flight feathers and are flightless for a time (Carter and Stein 1995, pp. 104, 106). When marbled murrelets are either flying low and close to the water surface or flightless due to molting we expect aircraft strikes to be extremely unlikely.

Aircraft strikes are possible over land, close to shore, and during the breeding season. Near shorelines and over land, Growlers will fly at low altitudes (down to the ground) when they are arriving to or departing from Ault Field or OLF Coupeville. Marbled murrelets fly from foraging areas and the forests where they rear their hatchlings, and may fly over land when moving between marine foraging areas separated by land. We do not have information about marbled murrelet flights between marine areas, so we assume that marbled murrelet flights between marine areas are similar to inland flights to nesting sites. During the breeding season, nestlings are dependent on prey deliveries from parents, and breeding adults must make flights from marine foraging areas to their nests inland. Inland flights are higher than flights solely over water; in studies using radar to measure marbled murrelet flight, mean altitudes ranged from are likely to range from 93 m (300 ft; Sanzenbacher et al. 2014, p. 169) to 308 m (1,010 ft; Hamer Environmental 2009, p. 37). The flight altitudes of Growlers and marbled murrelets will therefore overlap as Growlers descend toward or climb away from runways and marbled murrelets climb away from the water toward their inland flight altitudes. However, even with the overlap in altitudes not all marbled murrelets will be exposed to potential aircraft strikes.

There is no known nesting habitat on Whidbey Island, and only a small percentage of marbled murrelets flying from the marine water of the action area to inland nesting sites are likely to fly through the Growler approach or departure flight tracks. A study conducted from 2004 to 2008 found that only small proportion (no more than twenty percent) of adult marbled murrelets foraging in Washington waters attempted to breed (Lorenz et al. 2017, p. 312). Therefore, only about one-fifth of the adult marbled murrelets in the action area fly from marine waters to inland nesting sites during the breeding season. Only a portion of that fraction will be flying in the general direction to expose themselves to aircraft strikes. Marbled murrelets foraging west of Whidbey Island that nest on the Olympic Peninsula or Vancouver Island will fly away from the NAS Whidbey Island complex, as will marbled murrelets foraging east of Whidbey Island that nest near the Cascades. However, we do not know how many breeding adults will fly over the NAS Whidbey Island complex to travel between marine foraging and nesting areas. Some marbled murrelets may fly over Whidbey Island to travel from one marine foraging area to another. It is unclear how many marbled murrelets are likely to fly close enough to the NAS Whidbey Island complex runways to be struck by a Growler. The Navy monitors bird strikes at NAS Whidbey Island and, if possible, identifies the species of bird that was struck. In the last ten years the Navy has not identified any struck birds to be marbled murrelets (Bianchi, M., in litt. 2018d). Based on the locations of suitable nesting habitat in relation to the marine action area, it is extremely unlikely that marbled murrelets will cross the path of a Growler during the small and intermittent windows of time when Growlers are flying at low altitudes taking off or landing.

### 9.1.2 Aircraft Strike Conclusion

While it is possible that marbled murrelets will be affected by aircraft strikes, best available information indicates that exposure is extremely unlikely. Based on the lack of suitable nesting habitat in the immediate vicinity, combined with the relatively small and intermittent windows of time when Growlers are flying at low altitude we expect that the potential for aircraft strike of marbled murrelets is discountable.

## 9.2 Aircraft Overflights

The acoustic components of aircraft overflights have the potential to elicit responses from marbled murrelets. Increased Sound Levels (SLs) can have a range of effects on marbled murrelets. Aspects of sound that are important to determining the effects of the increased SL on marbled murrelets include the:

- intensity of the sound
- frequency of the sound (in units of hertz [Hz] or kilohertz [kHz])
- frequency of exposures (in units of occurrences over time)
- duration of the sound

The intensity of the sound, or loudness, is a measure of the pressure difference exerted by a sound wave. Sound intensity is important because it provides a gauge for the amount of force an animal, organ, or tissue will be subjected to when exposed to a sound. The Service uses several sound intensity thresholds for determining potential effects to marbled murrelets. We expect exposure to sounds exceeding 140 dBA<sub>Peak</sub> re:20μPa to cause auditory injury in marbled murrelets. We do not expect that marbled murrelets will be close enough to Growlers to be exposed to SLs that would cause injury. Exposure to SLs from aircraft that are greater than 92 dBA<sub>SEL</sub> re:20μPa<sup>2</sup>s may disrupt the normal behavior of marbled murrelets (Teachout 2015, pp. 1-5, 13-14; responses to noise exposure are discussed further in section 8.2.2). For the remainder of this Opinion, unless stated otherwise, sound measurements will have the same reference pressure as the Service thresholds (re:20μPa for dBA<sub>Peak</sub> and re:20μPa<sup>2</sup>s for dBA<sub>SEL</sub>).

The frequency of the sound is important for two reasons. First, marbled murrelets regularly communicate with each other while foraging in the marine environment and sounds at a similar frequency can interfere with, or “mask,” marbled murrelet calls. The sound energy of most common type of marbled murrelet call (“keer”) is centered around 3 kHz (Sanborn et al. 2005). Second, one possible effect of increased SLs is auditory injury. Hair cells are tuned to a range of frequencies of sound that in total define the range of frequencies an individual is capable of hearing. We expect that damage to hair cells to be most likely to result from exposure to high-intensity sound that individuals are capable of hearing. We assume that marbled murrelets can hear sounds ranging from 480 Hz to 12.5 kHz, based on the frequencies of their calls (Nelson 1997, p. 10; Sanborn et al. 2005). Based on site visits and observations of Growler operations, the sounds produced by Growlers are not a pure tone, but rather made up of a range of frequencies. We assume that there is overlap in the frequencies of Growler sounds and marbled murrelet calls and that marbled murrelets are capable of hearing Growlers.



There is evidence that even species that appear to be relatively tolerant of aircraft disturbance have a stronger reaction to multiple overflights (Smit and Visser 1993, pp. 12-13). The Service's disturbance threshold is in terms of Sound Exposure Level, which measures the total sound energy of an event, and longer-duration sounds can result in higher Sound Exposure Level (SELs).

#### 9.2.1 Marbled Murrelet Exposure to Elevated Sound Levels

The area exposed to elevated SLs by each Growler flight will depend primarily on the Growler's power setting, altitude, and flight path. Environmental conditions can add a suite of variables that can influence the SLs that marbled murrelets will be exposed to. Wind can raise ambient noise levels and may mask some of the noise from Growlers, as well as disturbing the surface of the water and thereby changing how sound will reflect off the water. However, wind can create complex sonic situations – such as upward sound refraction and shadow zones that can reduce transmission of aircraft noise at low altitudes (Ward et al. 199, p. 370). Landforms can also cause sound to behave differently in different locations. Tall trees can absorb sound waves and increase the sound attenuation rate, while large cliffs may reflect and focus sound waves. We do not have sufficient information to accurately incorporate the variability of environmental conditions into our exposure analysis. Because environmental factors can both increase and decrease exposure, it is reasonable to assume that the aggregate influence of environmental conditions will be neutral.

Power settings are a measure of the thrust generated by the jet's engines; higher power settings are louder than lower power settings (Navy 2015, p. 3.6-60). Based on the flight profiles presented in the draft Environmental Impact Statement, Growlers will spend very short periods of time at 65 percent power, the large majority of flight time Growlers will operate at above 80 percent power. When Growlers are not directly over the runway, power settings are between 80 and 85 percent power (Navy 2016, pp. A-299 – A-319). The Final Environmental Impact Statement/Overseas Environmental Impact Statement for the Navy's Northwest Training and Testing Activities (NWTT FEIS/OEIS) stated that birds at the ocean surface would be exposed to noise from Growlers, that the noise levels would decrease with increasing distance from the flight track centerline, and provided single-event SLs (with accompanying SELs) for Growlers at three different power settings. The sound information provided in the NWTT FEIS/OEIS is described as pertaining to a single event and continues to discuss bird exposure to overflights (Navy 2015, pp. 3.6-59 – 3.6-60). Based on the information provided in the NWTT FEIS/OEIS, we treat the SEL data provided as relating to a single overflight which takes the duration of the exposure into account. For the analysis of this proposed action, we will therefore use the SEL information from the NWTT FEIS/OEIS for analyzing the sound exposure from overflights. A Growler operating at 85 percent power will produce SLs of 114 dBA<sub>SEL</sub> when measured 400 ft away from the jet (Navy 2015, p. 3.6-60). We do not have SL measurements for the lowest power setting that Growlers will operate at for short periods during some activities (65 percent; Navy 2016, pp. A-299 – A-319). We will therefore conservatively use the sound data associated with the lowest available power setting (78 percent; Navy 2015, p. 3.6-60) as a substitute for when Growlers are at their lowest power setting. We also do not have SL measurements for the highest power setting that Growlers will operate at primarily over runways (97 percent; Navy 2016, pp. A-299 – A-319). It is unclear how accurate it would be to extrapolate a 97-percent

sound level from the highest available power setting (93 percent; Navy 2015, p. 3.6-60), so we considered sound data associated with the 93 percent power setting as the best available information for the highest extent of sound generated by Growlers.

Noise energy dissipates as it travels away from its source, thus a nearby receiver will experience a higher-intensity SL than a receiver that is farther away. Depending on the power setting of the Growler, marbled murrelets within about 1,250 to 8,000 ft of the aircraft overflight will be exposed to an SL that exceeds the 92 dBA<sub>SEL</sub> disturbance threshold. At the common 85 percent power setting, marbled murrelets within about 4,000 ft of a Growler will be exposed to SLs exceeding the 92 dBA<sub>SEL</sub> disturbance threshold. Refer to Table 3 for a summary of SLs and attenuation distances for Growlers.

Table 3. Sound levels and distances required for attenuation below the disturbance threshold for Growler power settings

<b>Power Setting (%)</b>	<b>SL at 400 ft (dBA<sub>SEL</sub>)*</b>	<b>Distance for sound to attenuate below 92 dBA<sub>SEL</sub> threshold (ft)</b>
93	120	8,000
85	114	4,000
78	101	1,250

\* Navy 2015, p. 3.6-60

The amount of marbled murrelet habitat exposed to a SL exceeding the disturbance threshold by each flight will depend not only on the power setting of the Growler, but also the altitude and flight path of the Growler. In the proposed action, Growler operations will fly below 4,000 ft Above Ground Level (AGL, refer to Section 4.2) down to ground level (since flight operations all include departures and/or arrivals). Since we assume that sound will travel away from the Growler in all directions, as Growlers are closer to the surface of the water the area exposed to noise expands. For example, a Growler at 85 percent power 1,200 feet above the water will expose about 1.6 square miles of the water surface around the jet to an SL exceeding the disturbance threshold (refer to Figure 7). The same Growler at the same power setting, but 2,000 feet above the water will expose about 1.4 square miles of the water surface to an SL exceeding the disturbance threshold. Note that these areas of exposure are measures of instantaneous exposure and do not account for the movement of Growlers.

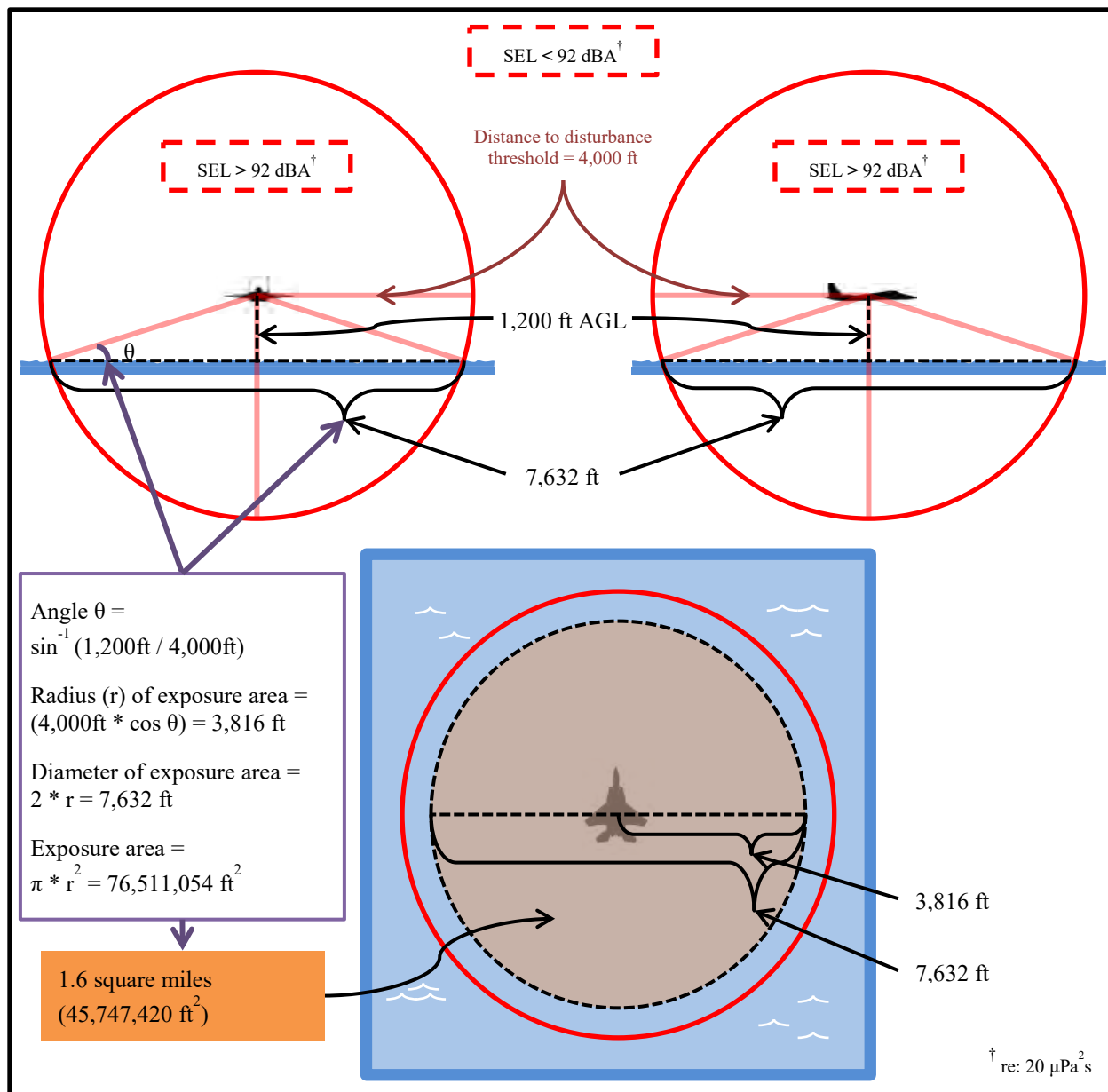


Figure 7. Example of area of exposure to noise exceeding disturbance threshold around a Growler operating at 85% power setting at a point in time, the Growler will carry the area of exposure with it along the flight path.

Flight paths will partially determine the amount of marbled murrelet habitat exposed to disturbing SLs because Growlers have the potential to expose areas along entire flight paths and flight paths vary in their shape and length (refer to Appendix A: Predominant Growler Flight Tracks). Some flight tracks keep Growlers largely over land and would limit exposure to the marine environment, while other flight tracks take Growlers more than ten miles away from land and have the potential to expose more of the marine environment to noise. The majority of the flight tracks for FCLP and T&G flight operations are over land, and together, make up nearly a third of the average total annual opportunities to expose marbled murrelets to stressors (refer to

Table 2). At the power setting used for the majority of FCLP and T&G operations ( $\approx$  85 percent, Navy 2016, pp. A-313-A-317), noise from Growlers exceeding the disturbance threshold will extend less than one mile from the Growlers (Figure 7), illustrates this scenario with the maximum altitude flown for FCLP/T&Gs from the DEIS). Therefore, Growlers performing FCLPs and T&Gs will only expose marbled murrelet marine habitat to disturbing sound when they are above the over the water, within one mile of the water, or landing and taking off (when power settings are higher). Other flight operations, especially ground-controlled approaches, interfacility flights, and depart and re-enter patterns, will expose much more marbled murrelet habitat to noise from Growlers. Those flight operations take Growlers over the water for long distances and over areas known for having high densities of marbled murrelets. Compared with FCLPs and T&Gs, Growlers will fly at higher altitudes for portions of the flight tracks for ground-controlled approaches, interfacility flights, and depart and re-enter patterns, but not high enough to allow noise from the jets to attenuate to an SL below the disturbance threshold.

There are 119 different modeled flight tracks associated with 9 types of flight operations in the proposed action. Within each flight track, Growlers will use several power settings and fly at different altitudes. To estimate the amount of marbled murrelet marine habitat that will be exposed to disturbance level sound we simplified the proposed flight tracks by using the predominant power setting used and an altitude that was representative of the average altitude along the flight track. The flight tracks provided in the DEIS are the predominant paths of aircraft, Growlers may fly as much as several miles to the left or right of the predominant path based on aircraft performance, pilot technique, other air traffic, and weather conditions (Navy 2016, p. 3-7). Due to this variability and the uncertainty it creates, we were conservative in our estimation of exposure areas, meaning that we erred on the side of estimating more exposure. That conservative approach guards against the exposure from proposed action having greater effects than that which we analyzed. A more detailed description of the methods we used to estimate the area of marbled murrelet marine habitat disturbance is included in Appendix C: Estimating Marbled Murrelet Marine Habitat Exposure to Growler Disturbance. The estimated minimum, average, and maximum areas that Growlers on different flight tracks could expose marbled murrelets to noise exceeding the disturbance threshold is summarized in Table 4.

As shown in Table 4, each Interfacility Flight, Ground-controlled Approach, and Departure will, on average, expose substantially more marbled murrelet marine habitat than FCLPs and T&Gs. However, marbled murrelets can move in and out of areas so each overflight is an independent opportunity to expose birds to stressors. Therefore, to compare the exposure of the various activities, we also considered the number of times different activities will expose marbled murrelet marine habitat. As shown in Table 5, departures, ground-controlled approaches, and overhead break arrivals will expose relatively large areas of marbled murrelet marine habitat to noise a relatively high number of times over the duration of the proposed action. Growlers will perform FCLPs and T&Gs at Ault Field many times during the proposed action, but each occurrence will, on average, expose a relatively small area of marbled murrelet marine habitat. Performing FCLPs at OLF Coupeville appears to expose a relatively small area of marbled murrelet marine habitat. However, the exposure associated with Interfacility Flights should be considered when evaluating OLF Coupeville FCLP exposure since Interfacility Flights are only performed to move Growlers to and from OLF Coupeville for FCLPs.

Table 4. Estimated area of marbled murrelet marine habitat exposed to disturbance-level noise from Growler activities

Flight Operation		Estimated Marbled Murrelet Marine Habitat Exposure Area per Incident (miles <sup>2</sup> )		
		Minimum	Average*	Maximum
<b>AULT FIELD</b>				
Departures		33.3**		
Arrivals	Straight-in/Full-stop	14.6	21.4	22.7
	Overhead Break	14.6	21.5	28.4
	Instrument Approach	7.9	11.4	15.9
Pattern Operations	FCLP and T&G***	0.0	4.2	8.8
	Ground-controlled Approach	30.7	39.7	64.3
	Depart and Re-enter	21.3	28.2	38.1
<b>OLF COUPEVILLE</b>				
Pattern Operations	FCLP	3.8	5.2	8.8
Interfacility Flights	Ault Field to OLF Coupeville	15.5	42.1	53.7
	OLF Coupeville to Ault Field	16.5	33.4	44.5

\* Average area of exposure is weighted by the proposed use of different flight tracks (Navy 2016, pp. A-263, A-269 - A-294)

\*\* Flight paths for departures were estimated to have equal exposure areas due to Growlers climbing to high altitudes in a relatively short distance

\*\*\* FCLPs and T&Gs follow the same flight tracks

Growlers will expose occupied marbled murrelet marine habitat to elevated SLs, so marbled murrelets will be exposed to elevated SLs from Growler operations. Growler operations will occur throughout the year, day and night. Marbled murrelets will be in the marine environment of the action area year-round, day and night. The Service considers the Northwest Forest Plan's Effectiveness Monitoring (NWFPEM) Program to be the best available science on the population status and trends of marbled murrelets in Puget Sound. The NWFPEM Program regularly surveys marine areas near shorelines within the action area, including areas within the San Juan Islands, Saratoga Passage, Admiralty Inlet, and near Sequim Bay (Marbled Murrelet Effectiveness Monitoring Module 2015).

Table 5. Total annual cumulative marbled murrelet marine habitat exposed to disturbance-level noise from Growlers

Flight Operation		Average* Estimated Habitat Exposure Area per Incident (miles <sup>2</sup> )	Expected Number of Incidents over 30 years
<b>AULT FIELD</b>			
Departures		33.3	502,620
Arrivals	Straight-in/Full-stop	21.4	186,690
	Overhead Break	21.5	287,670
	Instrument Approach	11.4	28,230
Pattern Operations	FCLP and T&G**	4.2	411,330
	Ground-controlled Approach	39.7	218,790
	Depart and Re-enter	28.2	54,810
<b>OLF COUPEVILLE</b>			
Pattern Operations	FCLP	5.2	233,310
Interfacility Flights	Ault Field to OLF Coupeville	42.1	29,160
	OLF Coupeville to Ault Field	33.4	29,160

\* Average area of exposure is weighted by the proposed use of different flight tracks (Navy 2016, pp. A-263, A-269 - A-294)

\*\* FCLPs and T&Gs follow the same flight tracks

The density of marbled murrelets in the action area varies naturally, geographically, and seasonally. Marbled murrelets are very mobile, and can move in and out of marine foraging areas often as part of their natural behavior responding to ocean conditions (Becker and Beissinger 2003, p. 251). The NWFPEM broadly estimates summer marbled murrelet density within Puget Sound by strata, ranging from 0.06 to 2.2 birds per km<sup>2</sup> (Lynch et al. 2016, p. 13), but finer-scale survey data suggest that local densities within the action area could be up to fifteen birds per km<sup>2</sup> in the summer (Marbled Murrelet Effectiveness Monitoring Module 2015). Flights over areas with higher marbled murrelet density are likely to expose more marbled murrelets to elevated SLs than equivalent flights over areas of low bird density. While concentrations of marbled murrelets could occur anywhere in the action area, in general, we expect higher marbled murrelet densities in the Strait of Juan de Fuca, around the San Juan Islands, in Admiralty Inlet, and in Saratoga Passage. Many of the flight tracks in the proposed action will take Growlers over these high-density areas (refer to Appendix A: Predominant Growler Flight Tracks); flight tracks for ground-controlled arrivals and interfacility flights will expose marbled murrelet marine habitat around the San Juan Islands, in Saratoga Passage, and in Admiralty Inlet.

Densities of marbled murrelets change seasonally within the action area. In some parts of the action area (e.g., around the San Juan Islands and within some bays) there is evidence suggesting that marbled murrelet densities increase in the fall and winter months, while in other (typically

less-sheltered) areas marbled murrelet density in the fall and winter may be less than the spring and summer (USFWS 2017, pp. 39-50). While marbled murrelet density and seasonal changes will vary, in general we expect there to be more marbled murrelets present in the action area during the winter as birds move from the outer Washington coast and Canadian waters into Puget Sound (Burger 1995, p. 297; Ralph et al. 1995, p. 9; Speich and Wahl 1995, p. 325; Beauchamp et al. 1999, entire). Due to this increase in marbled murrelet density, we expect increased marbled murrelet exposure to elevated SLs in the winter.

The area of marine marbled murrelet habitat exposed to disturbance-level noise from a single Growler flight will depend on the flight track flown, as well as the Growler's power setting and altitude along the flight track. Marbled murrelet marine habitat will be exposed many times each year, with each incident having the possibility of exposing marbled murrelets to disturbance-level noise. Certain flight tracks within the proposed action will expose areas that are likely to have relatively high densities of marbled murrelets. The number of marbled murrelets present within that habitat will depend on the geographic location, season, and will be subject to natural variability.

#### 9.2.2 Marbled Murrelet Response to Increased Sound Pressure Levels

The Navy has been conducting flight operations from Whidbey Island since the 1940s (Navy 2017, p. 30), and flying Growlers from the Island since 2012 (Navy 2017, p. 9). Throughout this period marbled murrelets have continued to be observed in the marine environment around Whidbey Island. However, as Francis and Barber found in their review of literature on the impacts of noise on wildlife:

*“...the presence of a species in a noisy area cannot be interpreted as an indication that it is not being impacted by elevated sound levels....”*

(Francis and Barber 2013, p. 305)

When a species does not have an obvious response to a stressor (e.g., completely avoiding an area where stressors occur) it can be challenging to assess the consequences of exposure. There are no known research efforts on the response of marbled murrelets to military aircraft overflights. Therefore, we included more general information on the response of other birds to aircraft overflights and other noise.

Researchers have studied the responses of birds to noise generally, and some have investigated response to aircraft overflights specifically. Of these, some are more applicable to analyzing the expected response of marbled murrelets to noise from Growler overflights. Since marbled murrelets will be exposed to noise from Growler overflights in their marine habitat rather than their nesting habitat, we focused on studies of non-nesting birds. Also, studies that examine the effects of continuous, relatively low-level noise (Kleist et al. 2018 for example) are not as useful for analyzing this proposed action, which will present intermittent, higher-level noise of shorter duration.

### 9.2.2.1 Likelihood of Marbled Murrelet Behavioral Response

Shorebirds exhibit a range of disturbed behaviors when exposed to overflights (from looking up to taking flight and not returning); the response varies by species (Smit and Visser 1993, p. 13). Ward and others (1999) observed the behavioral responses of Pacific brant (*Branta bernicla nigricans*) and Canada geese (*Branta canadensis taverneri*) to aircraft overflights in southwestern Alaska. The researchers found that the majority (seventy-five percent) of brant fly in response to overflights and that brant respond to overflights as high as 1,219 m (about 4,000 ft) and as far away as 4.8 km (about 3 miles) away (Ward et al. 1999, p. 375). Canada geese responded less often than brant, but both species exhibited a greater response to loud aircraft and aircraft that were laterally closer (Ward et al. 1999, pp. 375-377). The researchers also observed that during some overflights, flocks of brant and Canada geese took flight before the aircraft were visible, suggesting that aircraft noise cued the escape behavior (Ward et al. 1999, p. 379). Researchers observing wintering waterfowl found that the majority of birds exhibit stressed behaviors to overflights 300 m (about 1,000 ft) AGL or lower, and that they typically return to their pre-overflight behavior within five minutes following the overflight (Komenda-Zehnder et al. 2003, pp. 7-8). All of these studies documented that the birds' behavioral response is influenced by the type of aircraft flying overhead (Smit and Visser 1993, p. 13; Ward et al. 1999, pp. 376-379; Komenda-Zehnder et al. 2003, pp. 8-11).

Since the type of aircraft appears to influence disturbance response, anticipating the effects of the proposed action are best aided by studies of bird responses to aircraft similar to Growlers. We were unable to find any studies of disturbance from Grouse overflights specifically, so we looked to studies with military jet overflights generally. Observations of shorebirds in Europe vary by species, altitude, and location. Military jet overflights elicited no response in some birds and altered behavior (ranging from looking up to flying away) in other species (Smit and Visser 1993, pp. 12-13). One study found behavioral responses to actual and simulated military jet overflights in captive black and wood ducks (Conomy et al. 1998, pp. 1138-1140). Over consecutive days of exposure to overflights, the behavioral response rate for black ducks decreases on average. However, large proportions of black ducks respond to overflights after many several months of exposure (Conomy et al. 1998, p. 1139). The duration of black duck behavioral responses to overflights decreases slightly over repeated daily exposures (Conomy et al. 1998, p. 1139). However, wood ducks' behavioral responses do not significantly decrease over several days of exposure to recordings of jet overflights, suggesting that changes in reactions to disturbance over time may differ between species (Conomy et al. 1998, pp. 1140-1141). Observations of harlequin ducks exposed to military jet overflights show that the ducks increase their alert, vigilant, and agitated behaviors as well as startle responses during overflights, and that responses to overflights were short (less than one minute), but duck behavior remained altered for up to two hours following the overflights (Goudie and Jones 2004, pp. 289, 293-294). There is also a correlation between the intensity of jet noise and the intensity of behavioral reactions – the strength of harlequin duck behavioral reactions increased with louder overflights (Goudie and Jones 2004, pp. 293-294). Further analysis of the data shows that harlequin ducks have a significantly stronger response to military jet overflights compared to overflights of other types of aircraft, which is probably at least partially due to military jets being the loudest aircraft observed (Goudie 2006, pp. 33-34).



Without studies specifically examining whether marbled murrelets will respond to Growler overflights, we must draw conclusions from the best available information. Multiple studies show that waterbirds respond to aircraft overflights and specifically military jet overflights, but the proportions of birds exhibiting disturbance behavior varied (Smit and Visser 1993, pp. 12-13; Conomy et al. 1998, pp. 1140-1141; Ward et al. 1999, pp. 375-377). There is potential for Growler overflights to disturb the normal behavior of marbled murrelets. However, the proportion of birds reacting to overflights and whether/how reactions to overflights change over time appears to vary by species, even species that are part of the same family (Conomy et al. 1998, pp. 1140-1141; Ward et al. 1999, pp. 375-377). We do not have data from a species that is closely related to the marbled murrelet. If marbled murrelet reactions to aircraft overflights fall somewhere on the continuum seen in the species discussed above, then between six (Conomy et al. 1998, p. 1140) and seventy-five percent (Ward et al. 1999, p. 375) of marbled murrelets can be expected to alter their behavior in response to Growler noise exposure. Observations of seabirds (including marbled murrelets) in Hood Canal found that reactions to human-generated noise (in this case, pile driving) decreased, but did not completely cease, over the duration of exposure. An average of sixty percent of birds showed visible reactions during the first month and then an average of about sixteen percent of birds reacted visibly the following months (Entranco Inc. and Hamer Environmental L.P. 2005, pp. 16-17). Those aggregated observations included more than five different species of birds, but suggest that marbled murrelet reactions to ongoing noise and human activity may decrease over time. However, those observations also suggest that some level of responsiveness persists over time. Furthermore, in both the pile driving observations and the observations of captive ducks exposed to military jet overflights discussed earlier the proportion of birds reacting to the noise did not consistently decrease over time. Both studies observed initial drops in reactions to noise followed by increases in reactions (Conomy et al. 1998, p. 1140; Entranco Inc. and Hamer Environmental L.P. 2005, pp. 16-17). We therefore do not expect the proportion of birds reacting to Growler overflights to eventually drop to zero, although some decrease in reaction from initial exposure is possible.

We reviewed multiple studies that document a wide range of responses to military jet overflights for numerous bird species. It is reasonable to assume marbled murrelets will exhibit behavioral responses. Analysis of effects if the proposed action require determination of how marbled murrelets will alter their behavior.

#### *9.2.2.2 Types of Marbled Murrelet Responses*

There are a variety of factors that can affect the physical condition of marbled murrelets, including prey availability, breeding (or attempting to), disease, toxic pollutants, travelling long distances, and disturbances. There is a range of behavioral responses to human-generated noise and other disturbances by birds documented in the literature. These include increased alertness and changes in posture, aggressiveness between birds, decreased courtship, and locomotion (fleeing the area) (Conomy et al. 1998, p. 1136; Goudie and Jones 2004, p. 290). Reactions to noise disturbance can decrease foraging effectiveness as individuals devote time and energy to response behaviors or interfere with communication between mates or potential mates (Francis and Barber 2013, pp. 309-310). Disturbances that startle animals are perceived as threats and

will elicit reactions similar to responses to actual predation risk (Francis and Barber 2013, p.306). When individuals flee from a perceived threat they stop their typical behavior, expend energy, and are more exposed to predation (Francis and Barber 2013, p. 310).

Studies on marbled murrelet and Kittlitz's murrelet (*Brachyramphus brevirostris*) (a closely related species) response to boats inform our understanding of the range of possible responses by marbled murrelet to Growler overflights. Lacking information specific to murrelet response to military jet overflights, this body of information can be used to categorize the potential behavioral responses that might result from exposure to Growler activity. Observations in Puget Sound found that when approached by a moving vessel, marbled murrelets do not typically flush, but usually dive to avoid the boat (Evans Mack et al. 2002, pp. 865-866). Similarly, researchers in southwestern Alaska observed marbled murrelets response to small (four to five meter) and slow (less than eight kilometers per hour) boats (Speckman et al. 2004, pp. 32-33). The researchers observed that the "vast majority" of marbled murrelets paddled away from the boats, while a few dove away and some flew away (Speckman et al. 2004, p. 33). In 2005, two separate studies examined the reactions of marbled murrelets exposed to boats off the southwestern coast of Vancouver Island. The researchers found similar behavior patterns. The majority of marbled murrelets (59.8 and 58.1 percent) exhibited no reaction to the boats (Bellefleur et al. 2009, p. 534). However, while typical marbled murrelet behavior includes diving and flying, exposing birds to boats increased the rates of these behaviors substantially (diving: from 5.4 percent to about 31 percent; flying: from less than one percent to around 10 percent; Hentze 2006, p. 13; Bellefleur et al. 2009, pp. 534, 535). Further analysis of the data showed that when marbled murrelets flew in response to boats the large majority (82.7 percent) left the feeding area (Bellefleur et al. 2009, p. 535). Kittlitz's murrelets also increase diving and flying behaviors in response to boats. The study noted that when Kittlitz's murrelets left feeding areas because of exposure to boats they would return to those areas by the end of the day (Agness et al. 2008, p. 352).

Based on these observations, we expect that some marbled murrelets exposed to Growler overflights to respond by either diving or flying away. The dive response will be more prevalent than flight, especially during the post-breeding-season molt when adult marbled murrelets shed their flight feathers and temporarily lose the ability to fly. In the studies of marbled murrelet response to boats, more than 40 percent of the exposed marbled murrelets responded to disturbance by either diving or flying; the rate of responses to Growlers could be higher. Marbled murrelets have a higher response rate when disturbances are moving faster (Agness et al. 2008, pp. 351-352; Bellefleur et al. 2009, pp. 534-535), and the slowest Growler (130 knots or about 240 km/hr, Navy 2016, pp. A-299-A319) will be travelling much faster than the fastest boat from these studies (48 km/hr, Agness et al. 2008, p. 348). Furthermore, louder disturbances generally elicit stronger behavioral reactions in birds (Ward et al. 1999, pp. 375-377; Goudie and Jones 2004, pp. 293-294; Goudie 2006, p. 33). We expect Growlers to be louder than the small boats used in the boat disturbance studies. The rate of marbled murrelet responses also increased as boats travelled closer to marbled murrelets. While Growlers close to shore (and runways) will fly low enough for the distances between marbled murrelets and Growlers to be comparable to the maximum disturbance distance for boats (80m, Bellefleur et al. 2009, p. 534), Growlers will be at higher altitudes the majority of the time Growlers are above water.

These behavioral responses to aircraft overflights are energetically costly. Kittlitz's murrelets are an appropriate surrogate species to analyze in regards to marbled murrelets since the two species are closely related, are similar in size, and have similar life histories. The research with Kittlitz's murrelets indicated that increased energy expenditures associated with these behavioral responses result in decreased fitness (reduced reproduction, growth, or survival) (Agness et al. 2013, pp. 13, 19). Responding to boats increased the energy demands more in non-breeding birds, which are more likely to fly in response to vessels, than in breeding birds which tend to dive in response to disturbance (Agness et al. 2013, pp. 14, 17). Flight in response to vessels caused non-breeding Kittlitz's murrelets to expend up to fifty percent more energy than they would in the absence of exposure to vessels (Agness et al. 2013, p. 17). Breeding birds, which fly in response to disturbance less often expend up to thirty percent more energy than they would in the absence of exposure to vessels (Agness et al. 2013, pp. 14, 17). Even if breeding marbled murrelets can capture additional prey to offset the energy expense to themselves, the time and energy spent to catch that prey may impact prey deliveries to chicks and threaten nest success (Agness et al. 2013, p. 18). It is probably easier for non-breeding marbled murrelets to compensate for the energy lost to responding to disturbances, but it is unclear if, or how long, they can cope with frequent (almost daily) additional energy needs (Agness et al. 2013, pp. 18-19). A marbled murrelet's ability to compensate for additional energy needs is also dependent on the availability of prey. Forage fish availability is influenced by cyclic ocean conditions and pressures from human population growth (Greene et al. 2015, pp. 163-165). When ocean conditions, fishing, and effects from the human population drive forage fish populations down, it may be especially difficult for marbled murrelets to catch additional prey to compensate for the energy lost to disturbance responses.

Research has shown that non-breeding adult Kittlitz's murrelets need to consume more than a third of their body weight in Pacific sand lance to maintain their typical metabolic rate (Hatch 2011, pp. 75, 81). During chick rearing, adult Kittlitz's murrelets have to consume about two-thirds of their body weight in Pacific sand lance to maintain their typical metabolic rate (Hatch 2011, pp. 75, 81). When energy expenditures are greater than average or when medium- to high-quality prey is unavailable, Kittlitz's murrelets may be unable to consume enough prey to meet their energy needs (Hatch 2011, pp. 87-88). Therefore we expect that when adult marbled murrelets respond to Growler overflights they will expend additional energy and increase the likelihood that they will be unable to catch enough prey to meet their energy needs. When birds cannot meet their energy needs they become malnourished; they may lose mass (Hatch 2011, pp. 87-88), be less likely to reproduce (Peery et al. 2004, pp. 1094-1095), and/or be more susceptible to infection (Beer 1968, p. 122; Smith 1975, p. 243).

As discussed earlier, breeding marbled murrelets are more likely to dive than they are to fly in response to disturbance. We expect the energetic cost of diving to be significant, although less than that measured for Kittlitz's murrelets when responding by flight. In a study of another alcid species, thick-billed murres (*Uria lomvia*), researchers found that their metabolic rate when diving was triple the resting metabolic rate (Croll et al. 1992, p. 351). Diving birds may use aerobic and anaerobic metabolism to fuel their dives (Croll et al. 1992, p. 351; Butler and Jones 1997, p. 840; Jodice and Collopy 1999, p. 1410). Anaerobic metabolism is less efficient, and therefore more energetically costly, than aerobic metabolism (Jodice and Collopy 1999, p. 1410), and recovering from dives fueled by anaerobic metabolism can require longer recovery time

(Butler and Jones 1997, p. 879). However, anaerobic metabolism can fuel longer dives, and is useful when the benefits of a longer dive are high enough or when it is difficult to find prey (Jodice and Collopy 1999, p. 1410). Increased dive duration, shorter periods between individual dives, and longer periods between diving events are indicators that suggest marbled murrelets are increasingly using anaerobic metabolism to fuel their dives (Jodice and Collopy 1999, pp. 1412,1416). Marbled murrelets responding to boats by diving show a pattern of repeated dives separated by short pauses, that is similar to the anaerobic diving pattern (Fitzgerald, K., in litt. 2018). If marbled murrelets use anaerobic metabolism to fuel their disturbance response dives, birds will have to compensate for the energy lost to extra activity while also spending more time at the surface to recover from those anaerobic dives. In this situation marbled murrelets will still have the energy deficit, but compensating for the lost energy by catching additional prey will be more difficult due to the required recovery time at the surface.

Behavioral responses to aircraft overflights may affect certain marbled murrelets more than others. Juvenile marbled murrelets are more likely to fly, rather than dive, in response to boat disturbance (Bellefleur et al. 2009, p. 536). Taking the more energetically costly behavioral response more frequently could increase the vulnerability of juvenile marbled murrelets to other stressors such as disease or other sources of disturbance, when they already have a lower survival rate as compared to adults (Bellefleur et al. 2009, p. 536). Disturbance effects to breeding adults may also interfere with feeding nestlings. Adult marbled murrelets that are feeding a nestling will hold prey in their beaks while sitting on the water before flying inland to deliver the prey (Carter and Sealy 1987, p. 289; Strachan et al. 1995, p. 251). Fish-holding marbled murrelets sometimes swallow the prey when they are disturbed (Speckman et al. 2004, p. 33). If the adult marbled murrelet is successful in catching a new prey item for the nestling, the nestling may experience a delayed feeding. If the adult marbled murrelet is unsuccessful at replacing the lost prey, the nestling will likely experience a missed feeding.

Missed feedings can reduce the fitness of nestlings. During chick rearing, adults feed the young 1 to 8 times per day (mean =  $3.2 \pm 1.3$  SD) (Nelson and Hamer 1995a, p. 61). If we assume an average of 4 feedings per day, a single aborted feeding would constitute a loss of 25 percent of that day's food and water intake for the nestling. Such a loss is considered to be a significant disruption of normal behavior given that, "Murrelet chicks grow rapidly compared to most alcids, gaining 5 to 15 g/day during the first 9 days after hatching" (Nelson and Hamer 1995a, p. 60). With such a fast growth rate and a low average number of daily feedings, it is reasonable to assume missing a single feeding may disrupt normal growth and create the likelihood of injury by presenting a developmental risk to the chick. Young marbled murrelets that receive multiple daily feedings grow faster and fledge earlier than those with lower provisioning rates. Early fledging helps minimize nest mortality (Nelson and Hamer 1995a, p. 66).

Fish-eating alcids (e.g., murrelets, *Brachyramphus spp.*; and puffins, *Fratercula spp.*) exhibit wide variations in nestling growth rates. The nestling stage of marbled murrelet development can vary from 27 to 40 days before fledging (DeSanto and Nelson 1995, p. 45). The variations in alcid development are attributed to constraints on feeding ecology, such as specialized foraging behaviors, unpredictable and patchy food distributions, and great distances between feeding and nesting sites (Oyan and Anker-Nilssen 1996, p. 830). Food limitation often results in poor growth, delayed fledging, increased mortality of chicks, and nest abandonment by adults

(Oyan and Anker-Nilssen 1996, p. 836). Growth rates of body mass and skeletal elements in alcids are strongly affected by rates of food intake; and low rates of daily food intake result in a significant increase in the duration of chick development time (Kitaysky 2009, p. 466). Some alcids respond to reduced provisioning by slowing their metabolic rates and allocating growth to the head and wings to facilitate successful fledging (Oyan and Anker-Nilssen 1996, p. 830; Kitaysky 2009, p. 470). Marbled murrelets also exhibit this adaptive behavior by prioritizing wing and bill growth in the nest and delaying the development of fat stores to post-fledging development (Janssen et al. 2011, p. 859). This is believed to be an adaptive strategy to reduce the length of the nestling period while maintaining a high probability of successful fledging and survival immediately after fledging (Janssen et al. 2011, p. 866). However, marbled murrelets may already use this developmental flexibility to its limit in responding to a shift in prey availability.

Contemporary studies of marbled murrelet diets in the Puget Sound–Georgia Basin region indicate that Pacific sand lance now comprise the majority of the marbled murrelet diet (Gutowsky et al. 2009, p. 251). Historically, energy-rich fishes such as herring and northern anchovy comprised the majority of the marbled murrelet diet (Becker and Beissinger 2006, p. 470; Gutowsky et al. 2009, p. 247). This is significant because sand lance have the lowest energetic value of the fishes that marbled murrelets commonly feed on. For example, a single northern anchovy has nearly six times the energetic value of a sand lance of the same size (Gutowsky et al. 2009, p. 251), so a chick would have to eat six sand lance to get the equivalent energy of a single anchovy. Lower caloric value food resources increases the significance of missed feeding events. Assuming nestlings receive an average of three single-fish feedings per day (Nelson and Hamer 1995a, p. 61), a nestling being fed a low-quality diet comprised primarily of sand lance may be on the edge of its energetic needs for successful development. Nestlings have minimum daily energetic demands to sustain life and development, and mortality from starvation occurs when nestlings do not receive sufficient food (Kitaysky 2009, p. 471). A study conducted over 2004 to 2008 of 157 radio-tagged marbled murrelets in Washington found that of 20 confirmed nesting attempts, only 4 nests were successful, indicating a very low nesting rate and low nesting success (Lorenz et al. 2017, p. 310). The majority of the nest failures were attributed to nestling starvation or adults abandoning eggs during incubation (Bloxtton and Raphael 2009, p. 11).

The findings from Bloxtton and Raphael (2009, entire) indicate that marbled murrelets in Washington are not initiating nesting or are abandoning their nests during incubation or chick rearing, possibly in response to poor foraging conditions. For those marbled murrelets that do initiate nesting and begin chick rearing, the implications of missed feedings due to noise or visual disturbance are significant, because each missed feeding represents a delay in the development of the chick, prolonging the time to fledging and increasing the risk of predation, accidental death from falling off the nest, or abandonment by the adults. If the disturbance at a nest site is prolonged, each successive day of disturbance represents an increasing risk that multiple missed feedings will trigger a significant delay in their growth and development processes, cause permanent stunting, or result in the mortality of a nestling due to malnourishment.

### 9.2.3 Aircraft Overflights Conclusion

Based on the above analysis, we conclude that both adult and sub-adult marbled murrelets will be exposed to noise from Growler operations in their marine habitat. When adult marbled murrelets are exposed during the nesting season they may drop or swallow fish intended for delivery to nestlings. As a result of that exposure of adults during the nesting season, nestlings may experience delayed or missed feedings.

Growlers will be operating at power settings and altitudes that will expose sub-adult and adult marbled murrelets to SLs exceeding 92 dBA<sub>SEL</sub> in their marine habitat. The amount of marine habitat exposed to SLs above 92 dBA<sub>SEL</sub> will depend on the Growlers' flight tracks, altitudes, power settings, and the environmental conditions during the operations. The number of marbled murrelets within the exposed habitat will depend on the area, the season, and natural variation in marbled murrelet movements. Though there are many variables that influence how many marbled murrelets will be exposed, due to the relatively high densities of marbled murrelets in the action area and the large number of overflights per year, over thirty years, we conclude that sub-adult and adult marbled murrelets will be exposed to noise from Growler overflights year-round, during both the day and the night, over the thirty year term of the proposed action.

A portion of the marbled murrelets that are exposed to aircraft overflights in their marine habitat will respond by altering their normal foraging and resting behaviors. Marbled murrelets that behaviorally respond to the aircraft overflights in the marine environment are most likely to dive, but we expect some to fly and leave the foraging area. Both diving and flying are energetically costly behaviors. Individual sub-adult and adult marbled murrelets that leave the foraging area are expected to have their foraging efficiency reduced for up to the remainder of the day. If an overflight during the nesting season corresponds with exposure of an adult, fish-holding, breeding marbled murrelet, we expect that some of those individuals will swallow or drop their prey items and then have to expend additional energy finding and capturing a new prey item. By diving or flying in response to aircraft overflights sub-adult and adult marbled murrelets will expend energy that they can only replace by capturing additional prey. Given the number of overflights proposed, and the long duration of the activity (thirty years), we expect that some sub-adult and adult marbled murrelets will not be able to replace energy spent to respond to disturbance. When sub-adult and adult marbled murrelets are unable to compensate for these energetic expenditures we expect they will become malnourished, and we expect that malnourishment will degrade the physical condition of adult, sub-adult, and juvenile marbled murrelets. A degraded physical condition will make these sub-adult and adult marbled murrelets more susceptible to the other factors that negatively affect their fitness. We expect that malnourishment resulting from exposure to overflights will make sub-adult and adult marbled murrelets more likely to contract infections (Beer 1968, p. 122; Smith 1975, p. 243) and/or decreased fitness. Ultimately, the inability of sub-adult and adult marbled murrelets to replace energy lost to responses to overflights creates a likelihood of injury or death from starvation or disease.

We expect that exposure of adult marbled murrelets, in their marine habitat, during the nesting season will impair their ability to deliver prey items to chicks. When overflights correspond with exposure of adult, fish-holding, breeding marbled murrelets, we expect that some of those individuals will swallow or drop their prey items and then have to expend additional energy finding and capturing a new prey item. This, in turn, will result in delayed or missed feedings to chicks. These delays in feeding and/or missed feedings will hinder the growth and development of nestlings.

### **9.3 Air Pollutants**

Air pollutants are emitted during the Navy's use of aircraft. Criteria pollutants are the six major air pollutants of concern: carbon monoxide, sulfur dioxide, nitrogen dioxide, ozone, suspended particulate matter, and lead. The EPA regulates 187 substances as hazardous air pollutants known to cause or suspected of causing cancer or other serious health effects. Criteria and hazardous air pollutants are generated by the combustion of fuel by aircraft. Pollutant levels are based on location, altitude, number of aircraft, and length of activity.

#### **9.3.1 Exposure to Air Pollutants**

Emission of pollutants occurs throughout the action area. Air pollutants emitted above 3,000 ft elevation are above the atmospheric mixing height and do not affect ground-level air quality (USEPA 1992 as cited by Navy 2015, p. 3.2-7). We expect that atmospheric dispersion will quickly reduce potential impacts of the Navy emissions of air pollutants. Emissions of increased air pollutants will be intermittent and limited in physical extent and duration.

Greenhouse gasses are another class of air pollutants generated by the proposed action and linked to climate change. While climate change is a significant threat to listed species, we do not anticipate measurable effects from contributions of the proposed action in the context of existing and predicted global climate conditions.

#### **9.3.2 Air Pollutants Conclusion**

The release of these criteria and hazardous air pollutants is not expected to result in measurable effects to marbled murrelets. As such, we consider the effects of increased air pollutants on these listed species to be insignificant.

### **9.4 Conclusion**

The proposed action will expose marbled murrelets in their marine habitat to noise that above 92 dBA<sub>SEL</sub>. The number of incidents (refer to Section 4.2) of potential marbled murrelet exposure are summarized below in Table 6. The proposed action will affect marbled murrelets by causing altered behavior (a response to overflights) in some of the exposed marbled murrelets which will have an energetic cost to those birds. Marbled murrelets will respond to overflights by diving or flying away. Some adult marbled murrelets will be unable to compensate for the extra energetic cost of their response and will become malnourished. Malnourished murrelets will be more likely to be injured by starvation or illness. Breeding marbled murrelets may also drop or swallow prey held for

chicks during their response to overflights. Some breeding marbled murrelets will be unable to replace the prey item for their chick, causing the chick to experience a delayed or missed feeding. Delayed or missed feedings will delay the growth and development of the chick. Extended growth and development before fledging will increase the likelihood of chick injury or mortality from starvation, falling, and predation.

Table 6. Summary of proposed flight operations and habitat exposure

Flight Operation		Annual Average Number of Incidents	Total Number of Incidents over 30 Years
<b>AULT FIELD</b>			
Departures		16,754	502,620
Arrivals	Straight-in/Full-stop	6,223	186,690
	Overhead Break	9,589	287,670
	Instrument Approach	941	28,230
Pattern Operations	FCLP and T&G	13,711	411,330
	Ground-controlled Approach	7,293	218,790
	Depart and Re-enter	1,827	54,810
<b>OLF COUPEVILLE</b>			
Pattern Operations	FCLP	7,771	233,130
Interfacility Flights	Ault Field to OLF Coupeville	972	29,160
	OLF Coupeville to Ault Field	972	29,160
<b>TOTAL</b>		<b>66,053</b>	<b>1,981,560</b>

## 10 CUMULATIVE EFFECTS: Marbled Murrelet

Cumulative effects include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this Opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Within the action area, all State, Tribal, local, and private construction or excavation actions are required to obtain a U.S. Army Corps of Engineers permit for work conducted in, over, or under navigable waters under the authority of Section 10 of the Rivers and Harbors Act and/or for the discharge of dredged or fill material under Section 404 of the Clean Water Act. Therefore, new actions involving construction or excavation within the action area will require section 7 consultation with the Service.



However, marbled murrelets will continue to be affected by other ongoing non-federal activities within the action area and along rivers and streams draining into the action area. Threats to marine habitat quality that do not involve a federal nexus include shoreline development and armoring above Mean Higher High Water (Carman et al. 2010, p. 49), human population growth, urbanization that increases the amount of impervious surfaces, pressures on water supplies, and water and air pollution. The population of the Puget Sound region is growing quickly, with an estimated increase of 700,000 people between 2008 and 2020 (WDOE 2016).

Human population increases result in higher levels of toxic chemicals entering Puget Sound from surface runoff, groundwater discharges, and municipal and wastewater outfalls. These contaminants include oil, grease, polychlorinated biphenyls (PCBs), and heavy metals. Many areas surrounding Puget Sound are highly urbanized, and development is spreading to the surrounding areas, causing conversion of agriculture and forested lands to impervious surfaces. The increase in impervious surfaces increases storm water runoff, which carries contaminants into the action area (WDOE 2006; WDOE and King County 2011, p. 30). Air pollution increases due to increased urbanization also lead to the increased deposition of contaminants such as polybrominated diphenyl ethers (PBDEs, used as flame retardants) into the marine environment (WDOE and King County 2011, p. 32). Contaminants have been found in marbled murrelet prey species within the action area at levels that may affect prey health and reproductive success (USFWS 2009, p. 39-40; Liedtke et al. 2013, p. 5). These contaminants increase in concentration as they move up the food chain (Borgå et al. 2001, pp. 191-196). Such contaminants have been shown to cause developmental abnormalities, wasting, disruption of thyroid function, immunosuppression, and decreased reproductive success in fish-eating birds (reviewed in Luebke et al. 1997, pp. 7-10; Rolland 2000, pp. 615, 620-626).

Oil tanker and barge traffic in and near the action area is increasing (Etkin et al. 2015, p. 271; Felleman 2016, p. 27). In particular, the Kinder Morgan Trans Mountain pipeline expansion is advancing through a process to be approved by the Canadian government (NEB 2016, p. 18; NEB 2017). If approved, it will lead to approximately one additional oil tanker per day departing Burnaby, BC and traveling through or along the edge of the action area (Van Dorp et al. 2014, pp. 38, 52; Felleman 2016, pp. 37-38), and tanker and tug traffic related to the expansion are projected to increase vessel traffic through the Georgia, Haro, and Juan de Fuca Straits by approximately 7 to 14 percent over 2012 traffic rates (NEB 2016, p. 325). Increases in oil transportation within or along the boundary of the action area raise the likelihood of an oil spill affecting the action area. A major oil spill into the action area would likely kill marbled murrelets, as has been documented as a result of previous oil spills in other areas (reviewed by Carter and Kuletz 1995, entire). Oil spills may also cause sublethal injury to marbled murrelets and may affect forage fish populations (Carter and Kuletz 1995, p. 264). Oil spill remediation may also be damaging to forage fish populations (Pentilla 2007, p. 19).

These cumulative effects, acting in concert with other stressors on marbled murrelet individuals, are likely to increase marbled murrelet mortality rates and depress reproductive rates over time.

## **11 INTEGRATION AND SYNTHESIS OF EFFECTS: Marbled Murrelet**

The Integration and Synthesis section is the final step in assessing the risk posed to species and critical habitat as a result of implementing the proposed action. In this section, we add the effects of the action and the cumulative effects to the status of the species and critical habitat, and the environmental baseline, to formulate our biological opinion as to whether the proposed action is likely to: (1) appreciably reduce the likelihood of both survival and recovery of the species in the wild by reducing its numbers, reproduction, or distribution; or (2) reduce the value of designated critical habitat for the conservation of the species.

### **11.1 Proposed Action Summary**

The Navy proposes to continue and expand existing EA-18G “Growler” operations at NAS Whidbey Island complex, which will include adding personnel and aircraft and continuing and expanding flight operations. The Navy will also construct and renovate facilities at Ault Field to accommodate the expansion of Growler squadrons. Growler flight operations at NAS Whidbey Island complex include departures, several types of arrivals, interfacility flights, and pattern operations. The majority of flight operations will occur at Ault Field, but OLF Coupeville will be used for FCLPs. The Navy proposes to perform an average of 96,651 flight operations (which equate to 66,053 incidents of potential stressor exposure to marbled murrelets) annually for the remainder of years the Navy expects to fly EA-18G “Growlers” (30 years).

### **11.2 Range-wide Status Summary**

Marbled murrelet populations have declined at an average rate of 1.2 percent per year since 2001. The most recent population estimate for the entire Northwest Forest Plan area in 2014 was 21,305 birds (95 percent CI: 17,492 to 25,118 birds) (Lynch et al. 2016, p. 8). While the overall trend estimate is negative (-0.7 percent per year), this trend is not conclusive because the confidence intervals for the estimated trend overlap zero (95 percent CI: -2.3 to 0.8 percent), indicating the marbled murrelet population may be declining, stable, or increasing at the range-wide scale (Lynch et al. 2016, p. 9).

Marbled murrelet population size and marine distribution during the summer breeding season is strongly correlated with the amount and pattern (large contiguous patches) of suitable nesting habitat in adjacent terrestrial landscapes (Falxa and Raphael 2016, p. 109; Lorenz et al. 2016, pp. 10-12). Monitoring of marbled murrelet nesting habitat within the Northwest Forest Plan area indicates nesting habitat has declined from an estimated 2.53 million acres in 1993 to an estimated 2.23 million acres in 2012, a total decline of about 12.1 percent (Falxa and Raphael 2016, p. 72). The largest and most stable marbled murrelet subpopulations now occur off the coast of Oregon and northern California, while subpopulations in Washington have experienced the greatest rates of decline (-4.4 percent per year; 95 percent CI: -6.8 to -1.9 percent) (Lance and Pearson 2016, p. 5). Rates of nesting habitat loss have also been highest in Washington, primarily due to timber harvest on non-Federal lands (Falxa and Raphael 2016, pp. 72-81), which suggests that the loss of nesting habitat continues to be an important limiting factor for the recovery of marbled murrelets.

Factors affecting marbled murrelet fitness and survival in the marine environment include: reductions in the quality and abundance of marbled murrelet forage fish species through overfishing and marine habitat degradation; marbled murrelet by-catch in net fisheries; marbled murrelet entanglement in derelict fishing gear; oil spills; and high levels of underwater sound pressure generated by pile-driving and underwater detonations (USFWS 2009, pp. 27-67). While all of these factors are recognized as stressors to marbled murrelets in the marine environment, the extent to which these stressors affect marbled murrelet populations is unknown (USFWS 2012). As with nesting habitat loss, marine habitat degradation is most prevalent in the Puget Sound area where anthropogenic activities (e.g., shipping lanes, boat traffic, shoreline development) are an important factor influencing the marine distribution and abundance of marbled murrelets in Conservation Zone 1 (Falxa and Raphael 2016, pp. 106-110; Lorenz et al. 2016, pp. 10-12).

### **11.3 Threats to Marbled Murrelet Survival and Recovery**

Since it was listed under the Act, the marbled murrelet population has continued to decline in portions of its range as a result of poor reproduction and recruitment. The Recovery Implementation Team for the marbled murrelet identified the following major factors that appear to be contributing to this decline (USFWS 2012, pp. 10-11):

- Ongoing and historic loss of nesting habitat;
- Predation on marbled murrelet eggs and chicks in their nests;
- Changes in marine conditions that affect the abundance, distribution, and quality of marbled murrelet prey species;
- Post-fledging mortality (e.g., due to predation, entanglement in gillnets, and exposure to oil-spills); and
- Cumulative and synergistic effects of various factors affecting individuals and populations.

Climate change is also considered to be a threat to marbled murrelet survival and recovery. Although seabirds, such as the marbled murrelet, have life-history strategies adapted to variable marine environments, ongoing and future climate change could present changes at a frequency and scope that exceeds their capacity to adapt in a timely and effective manner (USFWS 2009, p. 46).

### **11.4 Marbled Murrelet Conservation Needs**

Reestablishing an abundant supply of high quality marbled murrelet nesting habitat is a vital conservation need given the extensive removal of that habitat during the 20th century. Much of the federal lands managed under the Northwest Forest Plan that currently do not support marbled murrelet nesting habitat are expected to transition into mature and older-forest habitat over the next few decades (Raphael et al. 2011, p. 44). In addition to increasing nesting habitat, there are other conservation imperatives. Foremost among those is increasing marbled murrelet reproductive success and productivity (i.e., fecundity) by increasing the number of breeding

adults, improving marbled murrelet nest success (due to low nestling survival and low fledging rates), and reducing anthropogenic stressors in marine and terrestrial habitat that reduce individual marbled murrelet fitness or lead to mortality. Marbled murrelets would also likely benefit from improvements in the health of the marine food web in the Salish Sea and along the Pacific Coast in Washington (Lorenz et al. 2017, p. 319).

General criteria for marbled murrelet recovery and delisting are established under the marbled murrelet recovery plan (USFWS 1997, p. 114-115). These general criteria include:

- Documenting stable or increasing trends in population size, density, and productivity in four of the six Conservation Zones for a 10-year period; and
- Implementing management and monitoring strategies in the marine and terrestrial environments to ensure protection of marbled murrelets for at least 50 years.

Thus, increasing marbled murrelet reproductive success and reducing the frequency, magnitude, or duration of any anthropogenic stressor that directly or indirectly affects marbled murrelet fitness or survival in the marine and terrestrial environments are the priority conservation needs of the species. The Service estimates recovery of the marbled murrelet will require at least 50 years (USFWS 1997).

### **11.5 Summary of the Environmental Baseline in the Action Area**

The action area includes northern Puget Sound, the San Juan Islands, and portions of the Strait of Juan de Fuca and the Strait of Georgia. The action area is in marbled murrelet Conservation Zone 1 (USFWS 1997, pp. 113-114). The marbled murrelet population in Conservation Zone 1 has declined over the past two decades due to multiple environmental and anthropogenic stressors that reduce marbled murrelet productivity and survival. The population estimate for Zone 1 in 2015 was 4,290 marbled murrelets (95 percent CI: 2,783 – 6,942), with a -5.3 percent (95 percent CI: -8.4 to -2.0) average annual rate of decline for the 2001 – 2015 period (Lance and Pearson 2016, p. 4).

Although the average change is negative, the population fluctuates from year to year, and sometimes the population increases from one year to the next. For example, the Zone 1 population was larger in 2015 than in 2014 (Lynch et al. 2016, p. 13).

Within the action area during the summer months, marbled murrelets forage at the highest densities in the nearshore waters along the Strait of Juan de Fuca, San Juan Islands, Rosario Strait, and Admiralty Inlet. They are found during the breeding season at lower densities in Possession Sound, Skagit Bay, Bellingham Bay, and along the eastern shores of the Strait of Georgia. Beginning in August, marbled murrelet distributions within the action area shift and an influx of marbled murrelets enters the action area from British Columbia and the outer coast of Washington. Marbled murrelet densities in the fall and winter do not show substantial changes along the eastern Strait of Georgia, apparently exhibit a dip followed by a larger late fall increase in Admiralty Inlet, and increase late in the breeding season in all other portions of the action area.

The decline of marbled murrelets within the action area is attributed to low reproductive rates stemming from the loss of terrestrial habitat, nest predation, degraded marine conditions affecting prey resources, and cumulative effects of multiple smaller impacts. The conditions specifically affecting the marine environment within the action area include prey contamination with polychlorinated biphenyls; changes in the prey base; harmful algal blooms and other biotoxins; dead zones; entanglement in derelict fishing gear; elevated sound level in the marine environment leading to disturbance, injury, or death; and climate change, which is expected to exacerbate some of the preceding conditions. The Marbled Murrelet Recovery Plan (USFWS 1997) identified the need to protect the quality of marine habitat for marbled murrelets and to reduce adult and juvenile mortality in the marine environment.

Within the action area, the Service has previously consulted on numerous federal agency actions that include a variety of construction projects along shorelines and within harbors, aquaculture, wastewater treatment plant discharges, and military activities. Many of these actions expose marbled murrelets to increased sound pressure levels, which can injure or kill individual birds. Many projects also affect the marbled murrelets prey. Some actions also increase the level of contaminants entering the action area.

The effects of previous and ongoing greenhouse gas emissions have resulted in changes to the physical and biological characteristics of the action area, and these changes are expected to continue and in some cases accelerate. Physical changes include increases in water and air temperatures, changes in precipitation seasonality, possible disruptions in naturally-occurring climate cycles such as ENSO and PDO, alterations in the timing and amount of fresh water inputs, patterns of nutrient upwelling, acidification, deoxygenation, and sea level rise. These changes are likely to affect primary productivity, with potentially beneficial effects to eelgrass, kelp, and toxic algae species. The changes in physical conditions and primary producers are likely to have both positive and negative effects on higher trophic levels, and may lead to reorganization of marine food webs. Although some species are likely to benefit from climate change, the effects to marbled murrelets and their preferred forage fish prey are generally expected to be detrimental.

## **11.6 Summary of the Effects of the Proposed Action on Marbled Murrelets**

The Service expects Growler flight operations to expose marbled murrelet marine habitat and marbled murrelets within that habitat to noise from aircraft overflights that exceeds the disturbance threshold ( $92 \text{ dB}_{\text{SEL re:}20\mu\text{Pa}^2\text{s}}$ ). In response to exposure to noise from aircraft overflights, the Service expects some of the exposed marbled murrelets to deviate from their normal behavior by increasing their diving or flying rates in response. As a consequence of the additional diving and flying, marbled murrelets will expend energy that they otherwise would have retained. Marbled murrelets require energy to maintain their baseline metabolism and continue their essential behaviors. Marbled murrelet behavior is especially energy intensive while the birds are breeding and flying inland to feed nestlings. We expect marbled murrelets to be able to compensate for some of the energy lost to behavioral responses to noise by catching additional prey. However, compensating for lost energy will be especially difficult during periods of lower prey availability or if marbled murrelets are already in poor condition (i.e. low body weight or low energy reserves, over the nearly two million anticipated incidents of marbled

murrelet marine habitat exposure, we expect some marbled murrelets to fail to compensate for energy lost to behavioral responses to aircraft overflights. As such, we expect that a small portion of exposed marbled murrelets will have reduced survival, or reproduction.

Exposure to noise from the proposed aircraft overflights can also indirectly affect nestling marbled murrelets. Adult marbled murrelets sit on the water holding prey in their beaks before flying inland to feed nestlings. Behavioral responses to aircraft overflights can cause marbled murrelets to lose or swallow that prey, which means the adult will need to catch and deliver another prey item to avoid the nestling missing a feeding. A single missed feeding can negatively impact the growth and development of a nestling (USFWS 2013, p. 108). Only a fraction of adult marbled murrelets breed each year and we expect many exposed breeders to either retain their prey or be able to catch replacement prey. However, due to the large number of expected aircraft overflights associated with the proposed action, we expect that a portion of breeding adults will be exposed, and will drop or swallow prey being held for a nestling. It is unlikely that all of those adult marbled murrelets will be able to replace lost prey items, and as a result, some nestlings will miss feedings. Missed feedings delay the growth and development of chicks.

Ultimately, we expect the consequence of exposure to aircraft overflights will be impacts to growth, development, and survival of some chicks and decreased survival and reproduction in some adults. Some nestlings will have a prolonged period of growth and development before fledging. Delayed growth and development increases the risk of predation, accidental death from falling, or abandonment by the parents. Some juvenile and adult marbled murrelets will be more susceptible to starvation and decreased reproductive success during periods of low forage fish availability.

#### **11.7 Effects of the Proposed Action on Marbled Murrelet Population, Distribution and Reproduction**

Growler overflights will adversely affect marbled murrelets by increasing the likelihood of injury due to behavioral responses that have energetic consequences for both adults and chicks. However, Growler overflights will not cause direct mortality and we expect marbled murrelets will be able to compensate for most behavioral responses to overflights. We therefore do not expect the proposed action will appreciably reduce marbled murrelet numbers.

We do not expect that the proposed action will have significant negative effects the distribution of marbled murrelets within the action area or rangewide. The proposed action will affect marbled murrelets that nest in Conservation Zones 1 and 2 and British Columbia. Effects to marbled murrelets that nest in Conservation Zone 2 and British Columbia are expected to occur primarily during the winter months when individuals from those areas utilize Puget Sound, and the proposed action will not interfere with birds returning to their nesting ranges. Impacts to marbled murrelets nesting in Canada will not significantly affect the survival and recovery of the listed, Distinct Population Segment. The aircraft overflights associated with the proposed action are intermittent and although they will occur year-round and during both the day and the night, there will be breaks in the activity. Exposure to these intermittent stressors are expected to result in short-term changes in marine habitat utilization by marbled murrelets. Because marbled

murrelets will be able to use marine habitat within a day after overflights (Agness et al. 2008, p. 352), and because we do not expect that the proposed action will negatively affect forage fish abundance or distribution, the action area will continue to function as foraging habitat. Further, we do not expect that the proposed action will result in reductions to numbers of marbled murrelets that would result in gaps in marine habitat utilization or significant reductions in at-sea densities. Therefore, we do not expect the proposed action to affect the distribution of marbled murrelets in the action area, Conservation Zones 1 and 2, or within the listed range of the species.

The proposed action is likely to result in an incremental reduction in marbled murrelet reproduction in Conservation Zone 1. We expect that malnourished adult marbled murrelets may not attempt to breed or will be less-successful when they do attempt breeding. We also expect that the indirect effects of Growler overflights to chicks will decrease nest success. However, only a small number of adults will become malnourished and a small number of chicks will experience delayed development. Furthermore, since the action will not result in direct mortality to adult breeding marbled murrelets, the action will not reduce the existing potential breeding population at the scale of Conservation Zone 1 or rangewide. Based on these conclusions, we do not expect the reduced reproduction resulting from the proposed action to appreciably reduce the likelihood of survival and recovery through a significant reduction in marbled murrelet reproduction.

## **12 CONCLUSION: Marbled Murrelet**

After reviewing the current status of marbled murrelet, the environmental baseline for the action area, the effects of the proposed NAS Whidbey Island Complex EA-18G “Growler” Airfield Operations, and the cumulative effects, it is the Service's Opinion that the NAS Whidbey Island Complex EA-18G “Growler” Airfield Operations, as proposed, is not likely to jeopardize the continued existence of the marbled murrelet.

## **13 INCIDENTAL TAKE STATEMENT**

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. *Harm* is defined by the Service as an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering (50 CFR 17.3). *Harass* is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3). Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to

and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Navy for the exemption in section 7(o)(2) to apply. The Navy has a continuing duty to regulate the activity covered by this Incidental Take Statement. If the Navy fails to assume and implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Navy must report the progress of the action and its impact on the species to the Service as specified in this Incidental Take Statement [50 CFR 402.14(i)(3)].

#### **14 AMOUNT OR EXTENT OF TAKE**

The Service anticipates incidental take of marbled murrelets will be difficult to detect for the following reasons: the proposed action will introduce stressors to large areas over short periods; marbled murrelets may be widely distributed throughout the marine environment and their distribution is likely to change frequently; locating marbled murrelet nests is difficult and nesting habitat for birds exposed to stressors in the marine environment could be dispersed over a very large area. However, pursuant to 50 CFR 402.14(i)(1)(i), a surrogate can be used to express the anticipated level of take in an incidental take statement, provided three criteria are met: (1) measuring take impacts to a listed species is not practical; (2) a link is established between the effects of the action on the surrogate and take of the listed species; and (3) a clear standard is set for determining when the level of anticipated take based on the surrogate has been exceeded.

The Service acknowledges that in many cases the science related to the habitat requirements and behavior of the listed species informs the analytical basis for establishing a causal link between the effects of the proposed Federal action to habitat and take of the listed species. A habitat-based approach to evaluating the effects of proposed Federal actions on listed species is a customary practice of the Service in biological opinions. For these reasons, quantifying and monitoring take impacts via project effects to the habitat of the listed species, not a surrogate species, is a scientifically credible and practical approach for expressing and monitoring the anticipated level of take for situations where use of a surrogate is warranted.

The following discussion presents the Service's analysis and findings with respect to the three regulatory criteria for use of a surrogate in this Incidental Take Statement to express the anticipated level of take likely to be caused by the proposed action.

In this case, a coextensive surrogate based on specific project components is necessary to express the extent of take because it is not practical to monitor take impacts in terms of individual marbled murrelets due to difficulty of monitoring marbled murrelet behavior throughout the action area and the extremely low likelihood of finding dead or injured individuals in the aquatic environment. The coextensive surrogate is the direct source of the stressors causing the taking,



and a clear standard for take exceedance can be established under the monitoring requirements using this surrogate. On that basis, the extent of take of the marbled murrelet covered under this Incidental Take Statement is described below by stressor category using a coextensive surrogate.

The Service anticipates incidental take of a subset of adult and juvenile marbled murrelets exposed to 1,981,560 incidents (created by 2,899,530 pattern maneuvers) over thirty years when marbled murrelet marine habitat will be exposed to aircraft overflights. The incidental take is expected to be in the form of harassment, because exposure to aircraft overflights will create a likelihood of injury by significantly disrupting normal behaviors such as foraging and reproduction. Altered behavior will result in some adult and subadult marbled murrelets being more susceptible to injury or mortality from starvation or illness and will increase the likelihood that some chicks will die from starvation, falling, or predation.

## **15 EFFECT OF THE TAKE**

In the accompanying Opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the marbled murrelet or destruction.

## **16 REASONABLE AND PRUDENT MEASURES**

The Service believes the following reasonable and prudent measure(s) (RPM) are necessary and appropriate to minimize the impacts (i.e., the amount or extent) of incidental take of marbled murrelet:

RPM 1: Monitor implementation of the proposed action and report the annual number of Growler flight operations and their associated flight tracks to ensure that the level of take exempted by this Incidental Take Statement is not exceeded.

## **17 TERMS AND CONDITIONS**

In order to be exempt from the prohibitions of section 9 of the Act, the Navy must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

To implement RPM 1:

- 1a. The Navy shall submit a monitoring report to the Service (Washington Fish and Wildlife Office, attn.: Federal Activities Branch) by February 1 of each year. The report shall describe the Growler flight operations of the previous year. At a minimum, this report shall include the number of flight operations by type (e.g. departures, FCLPs, ground-controlled arrivals, interfacility flights, etc.) and flight track. If any of these numbers cannot be recorded and reported directly, the report shall contain an estimate of the numbers and explain the method used to derive the estimate.

- 1b. The Navy shall request a meeting with the Service if the monitoring described in 1a shows that the Navy is on a trend to exceed the level of take exempted by this Incidental Take Statement. The purpose of this meeting will be for the Service and Navy to discuss implementation of additional conservation measures to ensure the proposed action does not exceed the level of take exempted by this Incidental Take Statement.

The Service believes that no more than the extent of take described above will occur as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

The Service is to be notified within three working days upon locating a dead, injured or sick endangered or threatened species specimen. Initial notification must be made to the nearest U.S. Fish and Wildlife Service Law Enforcement Office. Notification must include the date, time, precise location of the injured animal or carcass, and any other pertinent information. Care should be taken in handling sick or injured specimens to preserve biological materials in the best possible state for later analysis of cause of death, if that occurs. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure that evidence associated with the specimen is not unnecessarily disturbed. Contact the U.S. Fish and Wildlife Service Law Enforcement Office at (425) 883-8122, or the Service's Washington Fish and Wildlife Office at (360) 753-9440.

## **18 CONSERVATION RECOMMENDATIONS**

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. Work with the Service to design and conduct a study that evaluates marbled murrelets response to military aircraft overflights and the consequences of those reactions.
2. Work through the Navy's Integrated Natural Resources Management Plans to restore and enhance forage fish habitat to increase productivity and prey available to marbled murrelets.
3. Continue to monitor incidents of aircraft/bird strikes, identify the species of bird struck, and report findings to the Service.

4. Limit the number of FCLPs performed at OLF Coupeville. Interfacility flights (which are only needed to perform FCLPs at OLF Coupeville) expose large areas of marine habitat along their flight tracks and limiting the number of FCLPs at OLF Coupeville will limit the number of interfacility flights.
5. Limit the use of flight tracks that expose a greater amount of marbled murrelet marine habitat to Growler overflights. Within each type of flight operation there are flight tracks that expose more or less marbled murrelet marine habitat. Limiting use of flight tracks that expose larger areas of marbled murrelet habitat will decrease exposure of marbled murrelets to stressors.
6. Facilitate surveys for streaked horned larks by trained biologists at Ault Field and OLF Coupeville.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

## **19 REINITIATION NOTICE**

This concludes formal consultation on the action(s) outlined in the request for formal consultation. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this Opinion; 3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this Opinion; or 4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

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**APPENDIX A**  
**PREDOMINANT GROWLER FLIGHT TRACKS**

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# APPENDIX A PREDOMINANT GROWLER FLIGHT TRACKS

Departures:



(Navy 2016, p. A-269)



(Navy 2016, p. 270)

**Straight-in/Full-stop Arrivals:**

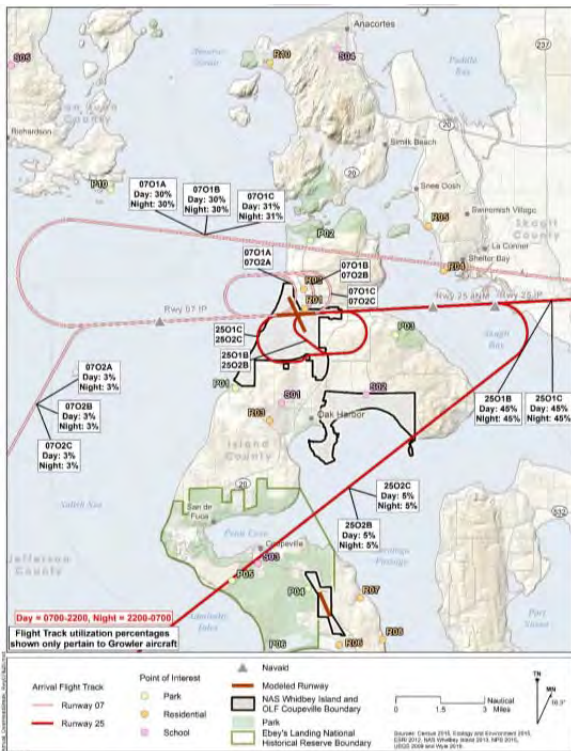


(Navy 2016, p. 271)



(Navy 2016, p. 272)

**Overhead Break Arrivals:**



(Navy 2016, p. 276)



(Bianchi, M., in litt. 2018)



# Instrument Approaches:



(Navy 2016, p. 277)



(Navy 2016, p. 278)

Field Carrier Landing Practice/Touch-and-go:  
Ault Field



(Navy 2016, p. 279)



(Navy 2016, p. 280)

OLF Coupeville



(Navy 2016, p. 294)

Ground/Carrier Controlled Approaches:



(Navy 2016, p. 287)



Depart and Re-enter:



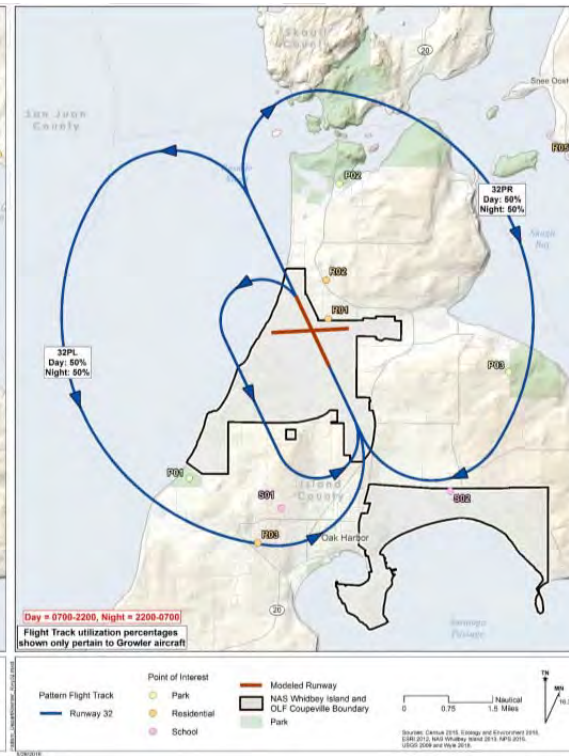
(Navy 2016, p. 283)



(Navy 2016, p. 284)



(Navy 2016, p. 285)



(Navy 2016, p. 286)



**Interfacility Flights:  
Ault Field to OLF Coupeville**



(Navy 2016, p. 292)



(Navy 2016, p. 293)

**OLF Coupeville to Ault Field**



(Navy 2016, p. 291)

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**APPENDIX B**  
**STATUS OF THE SPECIES: MARBLED MURRELET**

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## **APPENDIX B**

### **Status of the Species: Marbled Murrelet**

The marbled murrelet (*Brachyramphus marmoratus*) (murrelet) was listed by the U.S. Fish and Wildlife Service (Service) as a threatened species in Washington, Oregon, and California in 1992. The primary reasons for listing included extensive loss and fragmentation of the older-age forests that serve as nesting habitat for murrelets, and human-induced mortality in the marine environment from gillnets and oil spills (57 FR 45328 [Oct. 1, 1992]). Although some threats such as gillnet mortality and loss of nesting habitat on Federal lands have been reduced since the 1992 listing, the primary threats to species persistence continue (75 FR 3424 [Jan. 21, 2010]).

#### **Life History**

The murrelet is a small, fast-flying seabird in the Alcidae family that occurs along the Pacific coast of North America. Murrelets forage for small schooling fish or invertebrates in shallow, nearshore, marine waters and primarily nest in coastal older-aged coniferous forests. The murrelet lifespan is unknown, but is expected to be in the range of 10 to 20 years based on information from similar alcid species (De Santo and Nelson 1995, pp. 36-37). Murrelet nesting is asynchronous and spread over a prolonged season. In Washington, the murrelet breeding season extends from April 1 to September 23. Egg laying and incubation occur from April to early August and chick rearing occurs between late May and September, with all chicks fledging by late September (Hamer et al. 2003; USFWS 2012a).

Murrelets lay a single-egg which may be replaced if egg failure occurs early in the nesting cycle, but this is rare (Nelson 1997, p. 17). During incubation, one adult sits on the nest while the other forages at sea. Adults typically incubate for a 24-hour period, then exchange duties with their mate at dawn. Chicks hatch between May and August after 30 days of incubation. Hatchlings appear to be brooded by an adult for several days (Nelson 1997, p. 18). Once the chick attains thermoregulatory independence, both adults leave the chick alone at the nest for the remainder of the rearing period, except during feedings. Both parents feed the chick, which receives one to eight meals per day (Nelson 1997, p. 18). Most meals are delivered early in the morning while about a third of the food deliveries occur at dusk and intermittently throughout the day (Nelson and Hamer 1995, p. 62).

Murrelets and other fish-eating alcids exhibit wide variations in nestling growth rates. The nestling stage of murrelet development can vary from 27 to 40 days before fledging (De Santo and Nelson 1995, p. 45). The variations in alcid chick development are attributed to constraints on feeding ecology, such as unpredictable and patchy food distributions, and great distances between feeding and nesting sites (Øyan and Anker-Nilssen 1996, p. 830). Food limitation during nesting often results in poor growth, delayed fledging, increased mortality of chicks, and nest abandonment by adults (Øyan and Anker-Nilssen 1996, p. 836).

Murrelets are believed to be sexually mature at 2 to 4 years of age (Nelson 1997, p. 19). Adult birds may not nest every year, especially when food resources are limited. Recent monitoring efforts in Washington indicated that only 20 percent of monitored murrelet nesting attempts were successful, and only a small portion of the 158 tagged adult birds actually attempted to nest (13

percent) (Raphael and Bloxton 2009, p. 165). The low number of adults attempting to nest is not unique to Washington. Some researchers suspect that the portion of non-breeding adults in murrelet populations can range from about 5 percent to 70 percent depending on the year, but most population modeling studies suggest a range of 5 to 20 percent (McShane et al. 2004, p. 3-5).

### Murrelets in the Marine Environment

Marbled murrelets spend most (>90 percent) of their time at sea. Their preferred marine habitat includes sheltered, nearshore waters within 3 miles of shore, although they occur farther offshore in areas of Alaska and during the nonbreeding season (Huff et al. 2006, p. 19). They generally forage in pairs on the water, but they also forage solitarily or in small groups.

#### *Breeding Season*

The murrelet is widely distributed in nearshore waters along the west coast of North America. It occurs primarily within 5 km of shore (Alaska, within 50 km), and primarily in protected waters, although its distribution varies with coastline topography, river plumes, riptides, and other physical features (Nelson 1997, p. 3). Murrelet marine distribution is strongly associated with the amount and configuration of terrestrial nesting habitat (Raphael et al. 2015c, p. 17). In other words, they tend to be distributed in marine waters adjacent to areas of suitable breeding habitat. Non-breeding adults and subadults are thought to occur in similar areas as breeding adults. This species does occur farther offshore, but in much reduced numbers (Strachan et al. 1995, p. 247). Their offshore occurrence is probably related to current upwelling and plumes during certain times of the year that tend to concentrate their prey species.

#### *Winter Range*

The winter range of the murrelet is poorly documented, but they are present near breeding sites year-round in most areas (Nelson 1997, p. 3). Murrelets exhibit seasonal redistributions during non-breeding seasons. Generally more dispersed and found farther offshore in winter in some areas, although highest concentrations still occur close to shore and in protected waters (Nelson 1997, p. 3). In some areas, murrelets move from the outer exposed coasts of Vancouver Island and the Straits of Juan de Fuca into the sheltered and productive waters of northern and eastern Puget Sound. Less is known about seasonal movements along the outer coasts of Washington, Oregon, and California (Ralph et al. 1995, p. 9). The farthest offshore records of murrelet distribution are 60 km off the coast of northern California in October, 46 km off the coast of Oregon in February (Adams et al. 2014) and at least 300 km off the coast in Alaska (Piatt and Naslund 1995, p. 287). Known areas of winter concentration include and southern and eastern end of Strait of Juan de Fuca (primarily Sequim, Discovery, and Chuckanut Bays), San Juan Islands and Puget Sound, WA (Speich and Wahl 1995, p. 314).

## *Foraging and Diet*

Murrelets dive and swim through the water by using their wings in pursuit of their prey; their foraging and diving behavior is restricted by physiology. They usually feed in shallow, nearshore water <30 m (98 ft) deep, which seems to provide them with optimal foraging conditions for their generalized diet of small schooling fish and large, pelagic invertebrates: Pacific sand lance (*Ammodytes hexapterus*), northern anchovy (*Engraulis mordax*), Pacific herring (*Clupea harengus*), surf smelt (*Hypomesus* sp.), euphausiids, mysids, amphipods, and other species (Nelson 1997, p. 7). However, they are assumed to be capable of diving to a depth of 47 m (157 ft) based on their body size and diving depths observed for other Alcids species (Mathews and Burger 1998, p. 71).

Contemporary studies of murrelet diets in the Puget Sound–Georgia Basin region indicate that Pacific sand lance now comprise the majority of the murrelet diet (Gutowsky et al. 2009, p. 251). Historically, energy-rich fishes such as herring and northern anchovy comprised the majority of the murrelet diet (Becker and Beissinger 2006, p. 470; Gutowsky et al. 2009, p. 247). This is significant because sandlance have the lowest energetic value of the fishes that murrelets commonly consume. For example, a single northern anchovy has nearly six times the energetic value of a sandlance of the same size (Gutowsky et al. 2009, p. 251), so a murrelet would have to eat six sandlance to get the equivalent energy of a single anchovy. Reductions in the abundance of energy-rich forage fish species is likely a contributing factor in the poor reproduction in murrelets (Becker and Beissinger 2006, p. 470).

The duration of dives appears to depend upon age (adults vs. juveniles), water depth, visibility, and depth and availability of prey. Dive duration has been observed ranging from 8 seconds to 115 seconds, although most dives are between 25 to 45 seconds (Day and Nigro 2000; Jodice and Collopy 1999; Thoresen 1989; Watanuki and Burger 1999). Diving bouts last over a period of 27 to 33 minutes (Nelson 1997, p. 9). They forage in deeper waters when upwelling, tidal rips, and daily activity of prey concentrate prey near the surface (Strachan et al. 1995). Murrelets are highly mobile and some make substantial changes in their foraging sites within the breeding season. For example, Becker and Beissinger (2003, p. 243) found that murrelets responded rapidly (within days or weeks) to small-scale variability in upwelling intensity and prey availability by shifting their foraging behavior and habitat selection within a 100-km (62-mile) area.

For more information on murrelet use of marine habitats, see literature reviews in McShane et al. 2004 and USFWS 2009.

## Murrelets in the Terrestrial Environment

Murrelets are dependent upon older-age forests, or forests with an older tree component, for nesting habitat (Hamer and Nelson 1995, p. 69). Specifically, murrelets prefer high and broad platforms for landing and take-off, and surfaces which will support a nest cup (Hamer and Nelson 1995, pp. 78-79). In Washington, murrelet nests have been found in live conifers, specifically, western hemlock (*Tsuga heterophylla*), Sitka spruce (*Picea sitchensis*), Douglas-fir (*Pseudotsuga menziesii*), and western red cedar (*Thuja plicata*) (Hamer and Nelson 1995; Hamer

and Meekins 1999). Most murrelets appear to nest within 37 miles of the coast, although occupied behaviors have been recorded up to 52 miles inland, and murrelet presence has been detected up to 70 miles inland in Washington (Huff et al. 2006, p. 10). Nests occur primarily in large, older-aged trees. Overall, nests have been found in trees greater than 19 inches in diameter-at-breast and greater than 98 ft tall. Nesting platforms include limbs or other branch deformities that are greater than 4 inches in diameter, and are at greater than 33 ft above the ground. Substrate such as moss or needles on the nest platform is important for protecting the egg and preventing it from falling off (Huff et al. 2006, p. 13).

Murrelets do not form dense colonies which is atypical of most seabirds. Limited evidence suggests they may form loose colonies in some cases (Ralph et al. 1995). The reliance of murrelets on cryptic coloration to avoid detection suggests they utilize a wide spacing of nests in order to prevent predators from forming a search image (Ralph et al. 1995). Individual murrelets are suspected to have fidelity to nest sites or nesting areas, although this is has only been confirmed with marked birds in a few cases (Huff et al. 2006, p. 11). There are at least 15 records of murrelets using nest sites in the same or adjacent trees in successive years, but it is not clear if they were used by the same birds (McShane et al. 2004, p. 2-14). At the landscape scale, murrelets do show fidelity to foraging areas and probably to specific watersheds for nesting (McShane et al. 2004, p. 2-14). Murrelets have been observed visiting nesting habitat during non-breeding periods in Washington, Oregon, and California which may indicate adults are maintaining fidelity and familiarity with nesting sites and/or stands (Naslund 1993; O'Donnell et al. 1995, p. 125).

Loss of nesting habitat reduces nest site availability and displaces any murrelets that may have had nesting fidelity to the logged area (Raphael et al. 2002, p. 232). Murrelets have demonstrated fidelity to nesting stands and in some areas, fidelity to individual nest trees (Burger et al. 2009, p. 217). Murrelets returning to recently logged areas may not breed for several years or until they have found suitable nesting habitat elsewhere (Raphael et al. 2002, p. 232). The potential effects of displacement due to habitat loss include nest site abandonment, delayed breeding, failure to initiate breeding in subsequent years, and failed breeding due to increased predation risk at a marginal nesting location (Divoky and Horton 1995, p. 83; Raphael et al. 2002, p. 232). Each of these outcomes has the potential to reduce the nesting success for individual breeding pairs, and could ultimately result in the reduced recruitment of juvenile birds into the local population (Raphael et al. 2002, pp. 231-233).

Detailed information regarding the life history and conservation needs of the murrelet are presented in the *Ecology and Conservation of the Marbled Murrelet* (Ralph et al. 1995), the Service's 1997 *Recovery Plan for the Marbled Murrelet* (USFWS 1997), and in subsequent 5-year status reviews (McShane et al. 2004; USFWS 2009).

## **Distribution**

Murrelets are distributed along the Pacific coast of North America, with birds breeding from central California through Oregon, Washington, British Columbia, southern Alaska, westward through the Aleutian Island chain, with presumed breeding as far north as Bristol Bay (Nelson 1997, p. 2). The federally-listed murrelet population in Washington, Oregon, and California is



classified by the Service as a distinct population segment (75 FR 3424). The coterminous United States population of murrelets is considered significant as the loss of this distinct population segment would result in a significant gap in the range of the taxon and the loss of unique genetic characteristics that are significant to the taxon (75 FR 3430).

Murrelets spend most of their lives in the marine environment where they consume a diversity of prey species, including small fish and invertebrates. Murrelets occur primarily in nearshore marine waters within 5 km of the coast, but have been documented up to 300 km offshore in winter off the coast of Alaska (Nelson 1997, p. 3). The inland nesting distribution of murrelets is strongly associated with the presence of mature and old-growth conifer forests. Murrelets have been detected >100 km inland in Washington (70 miles), while the inland distribution in the southern portion of the species range is associated with the extent of the hemlock/tanoak vegetation zone which occurs up to 16-51 km inland (10-32 miles) (Evans Mack et al. 2003, p. 4).

The distribution of murrelets in marine waters during the summer breeding season is highly variable along the Pacific coast, with areas of high density occurring along the Strait of Juan de Fuca in Washington, the central Oregon coast, and northern California (Raphael et al. 2015c, p. 20). Low-density areas or gaps in murrelet distribution occur in central California, and along the southern Washington coast (Raphael et al. 2015c, p. 21). Analysis of various marine and terrestrial habitat factors indicate that the amount and configuration of inland nesting habitat is the strongest factor that influences the marine distribution of murrelets during the nesting season (Raphael et al. 2015c, p. 17). Local aggregations or “hot spots” of murrelets in nearshore marine waters are strongly associated with landscapes that support large, contiguous areas of mature and old-growth forest.

#### Distribution of Nesting Habitat

The loss of nesting habitat was a major cause of the murrelets decline over the past century and may still be contributing as nesting habitat continues to be lost to fires, logging, and wind storms (Miller et al. 2012, p. 778). Due mostly to historic timber harvest, only a small percentage (~11 percent) of the habitat-capable lands within the listed range of the murrelet currently contain potential nesting habitat (Raphael et al. 2015b, p. 118). Monitoring of murrelet nesting habitat within the Northwest Forest Plan area indicates nesting habitat declined from an estimated 2.53 million acres in 1993 to an estimated 2.23 million acres in 2012, a decline of about 12.1 percent (Raphael et al. 2015b, p. 89). Fire has been the major cause of nesting habitat loss on Federal lands, while timber harvest is the primary cause of loss on non-Federal lands (Raphael et al. 2015b, p. 90). While most (60 percent) of the potential habitat is located on Federal reserved-land allocations, a substantial amount of nesting habitat occurs on non-federal lands (34 percent) (Table 1).

Table 1. Estimates of higher-quality murrelet nesting habitat by State and major land ownership within the area of the Northwest Forest Plan – derived from 2012 data.

State	Habitat capable lands (1,000s of acres)	Habitat on Federal reserved lands (1,000s of acres)	Habitat on Federal non-reserved lands (1,000s of acres)	Habitat on non-federal lands (1,000s of acres)	Total potential nesting habitat (all lands) (1,000s of acres)	Percent of habitat capable land that is currently in habitat
WA	10,851.1	822.4	64.7	456	1,343.1	12 %
OR	6,610.4	484.5	69.2	221.1	774.8	12 %
CA	3,250.1	24.5	1.5	82.9	108.9	3 %
Totals	20,711.6	1,331.4	135.4	760	2,226.8	11 %
Percent		60 %	6 %	34 %	100 %	-

Source: (Raphael et al. 2015b, pp. 115-118)

## Population Status

The 1997 *Recovery Plan for the Marbled Murrelet* (USFWS 1997) identified six Conservation Zones throughout the listed range of the species: Puget Sound (Conservation Zone 1), Western Washington Coast Range (Conservation Zone 2), Oregon Coast Range (Conservation Zone 3), Siskiyou Coast Range (Conservation Zone 4), Mendocino (Conservation Zone 5), and Santa Cruz Mountains (Conservation Zone 6) (Figure 1). Recovery zones are the functional equivalent of recovery units as defined by Service policy (USFWS 1997, p. 115). The subpopulations in each Zone are not discrete. There is some movement of murrelets between Zones as indicated by radio-telemetry studies (e.g., Bloxton and Raphael 2006, p. 162), but the degree to which murrelets migrate between Zones is unknown. For the purposes of consultation, the Service treats each of the Conservation Zones as separate sub-populations of the listed murrelet population.

### Population Status and Trends

Population estimates for the murrelet are derived from marine surveys conducted during the nesting season as part of the Northwest Forest Plan effectiveness monitoring program. Surveys from 2001 to 2013 indicated that the murrelet population in Conservation Zones 1 through 5 (Northwest Forest Plan area) declined at a rate of -1.2 percent per year (Falxa et al. 2015, pp. 7-8). While the overall trend estimate across this time period is negative, the evidence of a detectable linear decline is not conclusive because the confidence intervals for the estimated trend overlap zero (95% confidence interval [CI]: -2.9 to 0.5 percent) (Falxa et al. 2015, pp. 7-8) (Table 2). This differs from the declines previously reported at the Northwest Forest Plan-scale for the 2001 to 2010 period. This difference was the result of high population estimates for 2011 through 2013 compared to the previous several years, which reduced the slope of the trend and increased variability (Falxa and Raphael 2015, p. 4).

Population monitoring from 2001 to 2013 indicates strong evidence for a linear decline for murrelet subpopulations in Washington, while trends in Oregon and northern California indicate potentially stable or increasing subpopulations with no conclusive evidence of a positive or negative trend over the monitoring period (Falxa et al. 2015, p. 26). While the direct causes for subpopulation declines in Washington are unknown, potential factors include the loss of nesting habitat, including cumulative and time-lag effects of habitat losses over the past 20 years (an individual murrelets potential lifespan), changes in the marine environment reducing the availability or quality of prey, increased densities of nest predators, and emigration (Miller et al. 2012, p. 778).

The most recent population estimate for the entire Northwest Forest Plan area in 2013 was 19,700 murrelets (95 percent CI: 15,400 to 23,900 birds) (Falxa et al. 2015, p. 7). The largest and most stable murrelet subpopulations now occur off the Oregon and northern California coasts, while subpopulations in Washington have experienced the greatest rates of decline. Murrelet zones are now surveyed on an every other-year basis, so the last year that a range-wide estimate for all zones combined is 2013 (Table 2). Subsequent surveys in Washington, Oregon, and California have been completed during the 2014 and 2015 seasons. Summaries of these more recent surveys are presented in Table 3.

The murrelet subpopulation in Conservation Zone 6 (central California- Santa Cruz Mountains) is outside of the Northwest Forest Plan area and is monitored separately by the University of California as part of an oil-spill compensation program (Henry et al. 2012, p. 2). Surveys in Zone 6 indicate a small subpopulation of murrelets with no clear trends. Population estimates from 2001 to 2014 have fluctuated from a high of 699 murrelets in 2003, to a low of 174 murrelets in 2008 (Henry and Tyler 2014, p. 3). In 2014, surveys indicated an estimated population of 437 murrelets in Zone 6 (95% CI: 306-622) (Henry and Tyler 2014, p. 3) (Table 3).

Table 2. Summary of murrelet population estimates and trends (2001-2013) at the scale of Conservation Zones and States (estimates combined across Zones within the Northwest Forest Plan area).

Zone	Year	Estimated number of murrelets	95% CI Lower	95% CI Upper	Average density (at sea) (murrelets /km <sup>2</sup> )	Average annual rate of change (%)	95% CI Lower	95% CI Upper	Cumulative change over 10 years (%)
1	2013	4,395	2,298	6,954	1.26	-3.9	-7.6	0.0	-32.8
2	2013	1,271	950	1,858	0.77	-6.7	-11.4	-1.8	-50.0
3	2013	8,841	6,819	11,276	5.54	+1.3	-1.1	+3.8	+6.2
4	2013	6,046	4,531	9,282	5.22	+1.5	-0.9	+4.0	+16.1
5	2013	71	5	118	0.08	-1.0	-8.3	+6.9	-9.6
Zones 1-5	2013	19,662	15,398	23,927	2.24	-1.2	-2.9	+0.5	-11.3
Zone 6	2013	628	386	1,022	na	na	na	na	na
WA	2013	5,665	3,217	8,114	1.10	-5.1	-7.7	-2.5	-37.6
OR	2013	9,819	6,158	13,480	4.74	0.3	-1.8	2.5	+3.0
CA	2013	4,178	3,561	4,795	2.67	2.5	-1.1	6.2	+28.0

Sources: (Falxa et al. 2015, pp. 41-43; Henry and Tyler 2014, p. 3).

Table 3. Summary of the most recent murrelet population estimates by Zone (2014-2015).

Zone	Year	Estimated number of murrelets	Estimated population 95% CI Lower	Estimated population 95% CI Upper	Average annual rate of decline (2001-2015)
1	2015	4,290	2,783	6,492	-5.3 %
2	2015	3,204	1,883	5,609	-2.8 %
3	2014	8,841	6,819	11,276	nc
4	2015	8,743	7,409	13,125	nc
5	2013	71	5	118	nc
6	2014	437	306	622	nc

Sources: (Henry and Tyler 2014, p. 3; Lance and Pearson 2016, pp. 4-5; NWFPEMP 2016, pp. 2-3).

## Factors Influencing Population Trends

Murrelet populations are declining in Washington, stable in Oregon, and stable in California where there is a non-significant but positive population trend (Raphael et al. 2015a, p. 163). Murrelet population size and distribution is strongly and positively correlated with the amount and pattern (large contiguous patches) of suitable nesting habitat and population trend is most strongly correlated with trend in nesting habitat although marine factors also contribute to this trend (Raphael et al. 2015a, p. 156). From 1993 to 2012, there was a net loss of about 2 percent of potential nesting habitat from on federal lands, compared to a net loss of about 27 percent on nonfederal lands, for a total cumulative net loss of about 12.1 percent across the Northwest Forest Plan area (Raphael et al. 2015b, p. 66). Cumulative habitat losses since 1993 have been greatest in Washington, with most habitat loss in Washington occurring on non-Federal lands due to timber harvest (Raphael et al. 2015b, p. 124) (Table 4).

Table 4. Distribution of higher-suitability murrelet nesting habitat by Conservation Zone, and summary of net habitat changes from 1993 to 2012 within the Northwest Forest Plan area.

<b>Conservation Zone</b>	<b>1993</b>	<b>2012</b>	<b>Change (acres)</b>	<b>Change (percent)</b>
Zone 1 - Puget Sound/Strait of Juan de Fuca	829,525	739,407	-90,118	-10.9 %
Zone 2 - Washington Coast	719,414	603,777	-115,638	-16.1 %
Zone 3 - Northern to central Oregon	662,767	610,583	-52,184	-7.9 %
Zone 4 - Southern Oregon - northern California	309,072	256,636	-52,436	-17 %
Zone 5 - north-central California	14,060	16,479	+2,419	+17.2 %

Source: (Raphael et al. 2015b, p. 121).

The decline in murrelet populations from 2001 to 2013 is weakly correlated with the decline in nesting habitat, with the greatest declines in Washington, and the smallest declines in California, indicating that when nesting habitat decreases, murrelet abundance in adjacent marine waters may also decrease. At the scale of Conservation Zones, the strongest correlation between habitat loss and murrelet decline is in Zone 2, the zone where both murrelet habitat and murrelet abundance has declined the greatest. However these relationships are not linear, and there is much unexplained variation (Raphael et al. 2015a, p. 163). While terrestrial habitat amount and configuration (i.e., fragmentation) and the terrestrial human footprint (i.e., cities, roads, development) appear to be strong factors influencing murrelet distribution in Zones 2-5; terrestrial habitat and the marine human footprint (i.e., shipping lanes, boat traffic, shoreline development) appear to be the most important factors that influence the marine distribution and abundance of murrelets in Zone 1 (Raphael et al. 2015a, p. 163).

As a marine bird, murrelet survival is dependent on their ability to successfully forage in the marine environment. Despite this, it is apparent that the location, amount, and landscape pattern of terrestrial nesting habitat are strongest predictors of the spatial and temporal distributions of

murrelets at sea during the nesting season (Raphael et al. 2015c, p. 20). Various marine habitat features (e.g., shoreline type, depth, temperature, etc.) apparently have only a minor influence on murrelet distribution at sea. Despite this relatively weak spatial relationship, marine factors, and especially any decrease in forage species, likely play an important role in explaining the apparent population declines, but the ability to model these relationships is currently limited (Raphael et al. 2015c, p. 20).

### Population Models

Prior to the use of survey data to estimate trend, demographic models were more heavily relied upon to generate predictions of trends and extinction probabilities for the murrelet population (Beissinger 1995; Cam et al. 2003; McShane et al. 2004; USFWS 1997). However, murrelet population models remain useful because they provide insights into the demographic parameters and environmental factors that govern population stability and future extinction risk, including stochastic factors that may alter survival, reproductive, and immigration/emigration rates.

In a report developed for the *5-year Status Review of the Marbled Murrelet in Washington, Oregon, and California* (McShane et al. 2004, p. 3-27 to 3-60), models were used to forecast 40-year murrelet population trends. A series of female-only, multi-aged, discrete-time stochastic Leslie Matrix population models were developed for each conservation zone to forecast decadal population trends over a 40-year period with extinction probabilities beyond 40 years (to 2100). The authors incorporated available demographic parameters (Table 5) for each conservation zone to describe population trends and evaluate extinction probabilities (McShane et al. 2004, p. 3-49).

McShane et al. (2004) used mark-recapture studies conducted in British Columbia by Cam et al. (2003) and Bradley et al. (2004) to estimate annual adult survival and telemetry studies or at-sea survey data to estimate fecundity. Model outputs predicted -3.1 to -4.6 percent mean annual rates of population change (decline) per decade the first 20 years of model simulations in murrelet Conservation Zones 1 through 5 (McShane et al. 2004, p. 3-52). Simulations for all zone populations predicted declines during the 20 to 40-year forecast, with mean annual rates of -2.1 to -6.2 percent per decade (McShane et al. 2004, p. 3-52). While these modeled rates of decline are similar to those observed in Washington (Falxa and Raphael 2015, p. 4), the simulated projections at the scale of Zones 1-5 do not match the potentially stable or increasing populations observed in Oregon and California during the 2001-2013 monitoring period.



These estimates of  $\hat{R}$  are assumed to be below the level necessary to maintain or increase the murrelet population. Demographic modeling suggests murrelet population stability requires a minimum reproductive rate of 0.18 to 0.28 (95 % CI) chicks per pair per year (Beissinger and Peery 2007, p. 302; USFWS 1997). Even the lower levels of the 95 percent confidence interval from USFWS (1997) and Beissinger and Peery (2007, p. 302) is greater than the current range of estimates for  $\hat{R}$  (0.02 to 0.13 chicks per pair) for any of the Conservation Zones (Table 4).

The current estimates for  $\hat{R}$  also appear to be well below what may have occurred prior to the murrelet population decline. Beissinger and Peery (2007, p. 298) performed a comparative analysis using historic data from 29 bird species to predict the historic  $\hat{R}$  for murrelets in central California, resulting in an estimate of 0.27 (95% CI: 0.15 - 0.65). Therefore, the best available scientific information of murrelet fecundity from model predictions and trend analyses of survey-derived population data appear to align well. Both indicate that the murrelet reproductive rate is generally insufficient to maintain stable population numbers throughout all or portions of the species' listed range.

#### Summary: Murrelet Abundance, Distribution, Trend, and Reproduction

Although murrelets are distributed throughout their historical range, the area of occupancy within their historic range appears to be reduced from historic levels. The distribution of the species also exhibits five areas of discontinuity: a segment of the border region between British Columbia, Canada and Washington; southern Puget Sound, WA; Destruction Island, WA to Tillamook Head, OR; Humboldt County, CA to Half Moon Bay, CA; and the entire southern end of the breeding range in the vicinity of Santa Cruz and Monterey Counties, CA (McShane et al. 2004, p. 3-70).

A statistically significant decline was detected in Conservation Zones 1 and 2 for the 2001-2014 period (Table 2). The overall population trend from the combined 2001-2013 population estimates (Conservation Zones 1 - 5) indicate a decline at a rate of -1.2 percent per year (Falxa et al. 2015, pp. 7-8). This decline across the listed range is most influenced by the significant declines in Washington, while subpopulations in Oregon and California are potentially stable.

The current range of estimates for  $\hat{R}$ , the juvenile to adult ratio, is assumed to be below the level necessary to maintain or increase the murrelet population. Whether derived from marine surveys or from population modeling ( $\hat{R}$  = 0.02 to 0.13, Table 4), the available information is in general agreement that the current ratio of hatch-year birds to after-hatch year birds is insufficient to maintain stable numbers of murrelets throughout the listed range. The current estimates for  $\hat{R}$  also appear to be well below what may have occurred prior to the murrelet population decline (Beissinger and Peery 2007, p. 298).

Considering the best available data on abundance, distribution, population trend, and the low reproductive success of the species, the Service concludes the murrelet population within the Washington portion of its listed range currently has little or no capability to self-regulate, as indicated by the significant, annual decline in abundance the species is currently undergoing in Conservation Zones 1 and 2. Populations in Oregon and California are apparently more stable, but threats associated with habitat loss and habitat fragmentation continue to occur in those



areas. The Service expects the species to continue to exhibit further reductions in the distribution and abundance into the foreseeable future, due largely to the expectation that the variety of environmental stressors present in the marine and terrestrial environments (discussed in the *Threats to Murrelet Survival and Recovery* section) will continue into the foreseeable future.

### **Threats to Murrelet Survival and Recovery**

When the murrelet was listed under the Endangered Species Act in 1992, several anthropogenic threats were identified as having caused the dramatic decline in the species:

- habitat destruction and modification in the terrestrial environment from timber harvest and human development caused a severe reduction in the amount of nesting habitat
- unnaturally high levels of predation resulting from forest “edge effects” ;
- the existing regulatory mechanisms, such as land management plans (in 1992), were considered inadequate to ensure protection of the remaining nesting habitat and reestablishment of future nesting habitat; and
- manmade factors such as mortality from oil spills and entanglement in fishing nets used in gill-net fisheries.

The regulatory mechanisms implemented since 1992 that affect land management in Washington, Oregon, and California (for example, the Northwest Forest Plan) and new gill-netting regulations in northern California and Washington have reduced the threats to murrelets (USFWS 2004, pp. 11-12). However, additional threats were identified in the Service’s 2009, 5-year review for the murrelet (USFWS 2009, pp. 27-67). These stressors are due to several environmental factors affecting murrelets in the marine environment. These stressors include:

- Habitat destruction, modification, or curtailment of the marine environmental conditions necessary to support murrelets due to:
  - elevated levels of polychlorinated biphenyls in murrelet prey species;
  - changes in prey abundance and availability;
  - changes in prey quality;
  - harmful algal blooms that produce biotoxins leading to domoic acid and paralytic shellfish poisoning that have caused murrelet mortality; and
  - climate change in the Pacific Northwest.
- Manmade factors that affect the continued existence of the species include:
  - derelict fishing gear leading to mortality from entanglement;
  - disturbance in the marine environment (from exposures to lethal and sub-lethal levels of high underwater sound pressures caused by pile-driving, underwater detonations, and potential disturbance from high vessel traffic).

Since the time of listing, the murrelet population has continued to decline due to lack of successful reproduction and recruitment. The murrelet Recovery Implementation Team identified five major mechanisms that appear to be contributing to this decline (USFWS 2012b, pp. 10-11):

- Ongoing and historic loss of nesting habitat.
- Predation on murrelet eggs and chicks in their nests.
- Changes in marine conditions, affecting the abundance, distribution, and quality of murrelet prey species.
- Post-fledging mortality (predation, gill-nets, oil-spills).
- Cumulative and interactive effects of factors on individuals and populations.

### Climate Change

In the Pacific Northwest, mean annual temperatures rose 0.8° C (1.5° F) in the 20th century and are expected to continue to warm from 0.1° to 0.6° C (0.2° to 1° F) per decade (Mote and Salathe 2010, p. 29). Climate change models generally predict warmer, wetter winters and hotter, drier summers and increased frequency of extreme weather events in the Pacific Northwest (Salathé et al. 2010, pp. 72-73). Predicted climate changes in the Pacific Northwest have implications for forest disturbances that affect the quality and distribution of murrelet habitat. Both the frequency and intensity of wildfires and insect outbreaks are expected to increase over the next century in the Pacific Northwest (Littell et al. 2010, p. 130).

One of the largest projected effects on Pacific Northwest forests is likely to come from an increase in fire frequency, duration, and severity. Westerling et al. (2006, pp. 940-941) analyzed wildfires and found that since the mid-1980s, wildfire frequency in western forests has nearly quadrupled compared to the average of the period from 1970-1986. The total area burned is more than 6.5 times the previous level and the average length of the fire season during 1987-2003 was 78 days longer compared to 1978-1986 (Westerling et al. 2006, p. 941). The area burned annually by wildfires in the Pacific Northwest is expected to double or triple by the 2080s (Littell et al. 2010, p. 140). Wildfires are now the primary cause of murrelet habitat loss on Federal lands, with over 21,000 acres of habitat loss attributed to wildfires from 1993 to 2012 (Raphael et al. 2015b, p. 123). Climate change is likely to further exacerbate some existing threats such as the projected potential for increased habitat loss from drought related fire, mortality, insects and disease, and increases in extreme flooding, landslides and windthrow events in the short-term (10 to 30 years).

Within the marine environment, effects on the murrelet food supply (amount, distribution, quality) provide the most likely mechanism for climate change impacts to murrelets. Studies in British Columbia (Norris et al. 2007) and California (Becker and Beissinger 2006) have documented long-term declines in the quality of murrelet prey, and one of these studies (Becker and Beissinger 2006, p. 475) linked variation in coastal water temperatures, murrelet prey quality during pre-breeding, and murrelet reproductive success. These studies indicate that murrelet recovery may be affected as long-term trends in ocean climate conditions affect prey resources

and murrelet reproductive rates. While seabirds such as the murrelet have life-history strategies adapted to variable marine environments, ongoing and future climate change could present changes of a rapidity and scope outside the adaptive range of murrelets (USFWS 2009, p. 46).

### **Conservation Needs of the Species**

Reestablishing an abundant supply of high quality murrelet nesting habitat is a vital conservation need given the extensive removal during the 20<sup>th</sup> century. However, there are other conservation imperatives. Foremost among the conservation needs are those in the marine and terrestrial environments to increase murrelet fecundity by increasing the number of breeding adults, improving murrelet nest success (due to low nestling survival and low fledging rates), and reducing anthropogenic stressors that reduce individual fitness or lead to mortality.

The overall reproductive success (fecundity) of murrelets is directly influenced by nest predation rates (reducing nestling survival rates) in the terrestrial environment and an abundant supply of high quality prey in the marine environment during the breeding season (improving potential nestling survival and fledging rates). Anthropogenic stressors affecting murrelet fitness and survival in the marine environment are associated with commercial and tribal gillnets, derelict fishing gear, oil spills, and high underwater sound pressure (energy) levels generated by pile-driving and underwater detonations (that can be lethal or reduce individual fitness).

General criteria for murrelet recovery (delisting) were established at the inception of the Plan and they have not been met. More specific delisting criteria are expected in the future to address population, demographic, and habitat based recovery criteria (USFWS 1997, p. 114-115). The general criteria include:

- documenting stable or increasing population trends in population size, density, and productivity in four of the six Conservation Zones for a 10-year period and
- implementing management and monitoring strategies in the marine and terrestrial environments to ensure protection of murrelets for at least 50 years.

Thus, increasing murrelet reproductive success and reducing the frequency, magnitude, or duration of any anthropogenic stressor that directly or indirectly affects murrelet fitness or survival in the marine and terrestrial environments are the priority conservation needs of the species. The Service estimates recovery of the murrelet will require at least 50 years (USFWS 1997)

### **Recovery Plan**

The Marbled Murrelet Recovery Plan outlines the conservation strategy with both short- and long-term objectives. The Plan places special emphasis on the terrestrial environment for habitat-based recovery actions due to nesting occurring in inland forests.

In the short-term, specific actions identified as necessary to stabilize the populations include protecting occupied habitat and minimizing the loss of unoccupied but suitable habitat (USFWS 1997, p. 119). Specific actions include maintaining large blocks of suitable habitat, maintaining

and enhancing buffer habitat, decreasing risks of nesting habitat loss due to fire and windthrow, reducing predation, and minimizing disturbance. The designation of critical habitat also contributes towards the initial objective of stabilizing the population size through the maintenance and protection of occupied habitat and minimizing the loss of unoccupied but suitable habitat.

Long-term conservation needs identified in the Plan include:

- increasing productivity (abundance, the ratio of juveniles to adults, and nest success) and population size;
- increasing the amount (stand size and number of stands), quality, and distribution of suitable nesting habitat;
- protecting and improving the quality of the marine environment; and
- reducing or eliminating threats to survivorship by reducing predation in the terrestrial environment and anthropogenic sources of mortality at sea.

#### *Recovery Zones in Washington*

Conservation Zones 1 and 2 extend inland 50 miles from marine waters. Conservation Zone 1 includes all the waters of Puget Sound and most waters of the Strait of Juan de Fuca south of the U.S.-Canadian border and the Puget Sound, including the north Cascade Mountains and the northern and eastern sections of the Olympic Peninsula. Conservation Zone 2 includes marine waters within 1.2 miles (2 km) off the Pacific Ocean shoreline, with the northern terminus immediately south of the U.S.-Canadian border near Cape Flattery along the midpoint of the Olympic Peninsula and extending to the southern border of Washington (the Columbia River) (USFWS 1997, pg. 126).

Lands considered essential for the recovery of the murrelet within Conservation Zones 1 and 2 are 1) any suitable habitat in a Late Successional Reserve (LSR), 2) all suitable habitat located in the Olympic Adaptive Management Area, 3) large areas of suitable nesting habitat outside of LSRs on Federal lands, such as habitat located in the Olympic National Park, 4) suitable habitat on State lands within 40 miles off the coast, and 5) habitat within occupied murrelet sites on private lands (USFWS 1997).

#### **Summary**

At the range-wide scale, murrelet populations have declined at an average rate of 1.2 percent per year since 2001. The most recent population estimate for the entire Northwest Forest Plan area in 2013 was 19,700 murrelets (95 percent CI: 15,400 to 23,900 birds) (Falxa et al. 2015, p. 7). The largest and most stable murrelet subpopulations now occur off the Oregon and northern California coasts, while subpopulations in Washington have experienced the greatest rates of decline (-4.4 percent per year; 95% CI: -6.8 to -1.9%) (Lance and Pearson 2016, p. 5).

Monitoring of murrelet nesting habitat within the Northwest Forest Plan area indicates nesting habitat declined from an estimated 2.53 million acres in 1993 to an estimated 2.23 million acres in 2012, a decline of about 12.1 percent (Raphael et al. 2015b, p. 89). Murrelet population size is strongly and positively correlated with amount of nesting habitat, suggesting that conservation of remaining nesting habitat and restoration of currently unsuitable habitat is key to murrelet recovery (Raphael et al. 2011, p. iii).

The species decline has been largely caused by extensive removal of late-successional and old growth coastal forest which serves as nesting habitat for murrelets. Additional factors in its decline include high nest-site predation rates and human-induced mortality in the marine environment from disturbance, gillnets, and oil spills. In addition, murrelet reproductive success is strongly correlated with the abundance of marine prey species. Overfishing and oceanographic variation from climate events have likely altered both the quality and quantity of murrelet prey species (USFWS 2009, p. 67).

Although some threats have been reduced, most continue unabated and new threats now strain the ability of the murrelet to successfully reproduce. Threats continue to contribute to murrelet population declines through adult and juvenile mortality and reduced reproduction. Therefore, given the current status of the species and background risks facing the species, it is reasonable to assume that murrelet populations in Conservation Zones 1 and 2 and throughout the listed range have low resilience to deleterious population-level effects and are at high risk of continual declines. Activities which degrade the existing conditions of occupied nest habitat or reduce adult survivorship and/or nest success of murrelets will be of greatest consequence to the species. Actions resulting in the further loss of occupied nesting habitat, mortality to breeding adults, eggs, or nestlings will reinforce the current murrelet population decline throughout the coterminous United States.

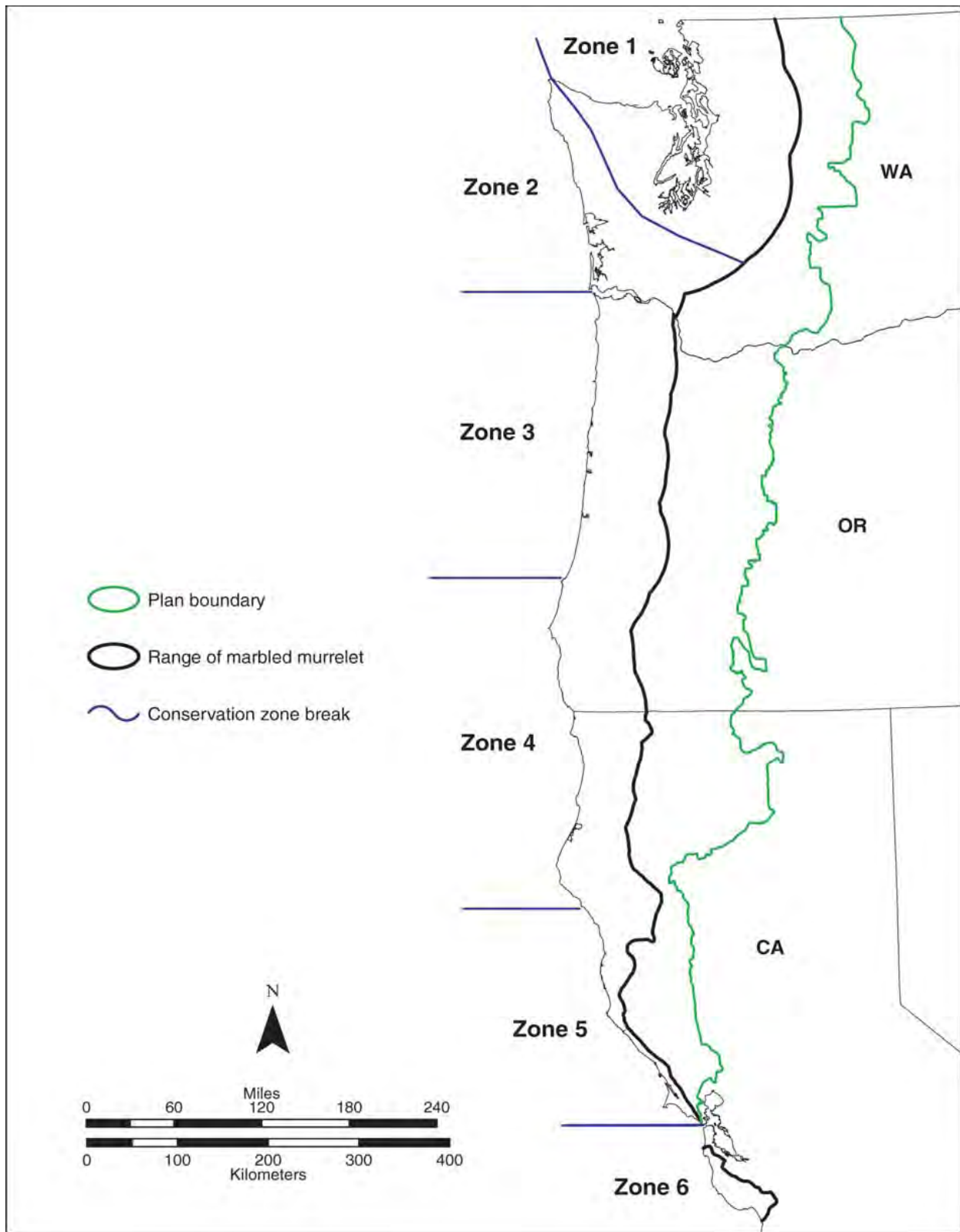


Figure 1. The six geographic areas identified as Conservation Zones in the recovery plan for the marbled murrelet (USFWS 1997). Note: “Plan boundary” refers to the Northwest Forest Plan. Figure adapted from Huff et al. (2006, p. 6).

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**APPENDIX C**  
**ESTIMATING MARBLED MURRELET MARINE HABITAT EXPOSURE TO**  
**GROWLER OVERFLIGHTS**

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## **Appendix C**

### **Estimating Marbled Murrelet Marine Habitat Exposure to Growler Overflights**

In previous analyses, the Service has concluded that exposure to aircraft noise above 92 dBA<sub>SEL</sub> re: 20 $\mu$ Pa<sup>2</sup>s may result in changes to breeding, feeding, and resting behaviors in marbled murrelets (USFWS 2013, pp. 101-102; Teachout 2015, entire). With consideration for the duration, intensity, timing and frequency of those exposures, the Service may determine that those behavioral responses are significant and could create a likelihood of injury. To expose marbled murrelet marine habitat to noise levels with the potential to cause significant behavioral responses, Growler overflights must have a power level and altitude to cause noise above 92 dBA<sub>SEL</sub> re: 20 $\mu$ Pa<sup>2</sup>s at the water surface. The first step in estimating the amount of marbled murrelet marine habitat that will be exposed to noise at this level is to determine where Growlers will fly. The Draft Environmental Impact Statement for EA-18G “Growler” Airfield Operations at Naval Air Station Whidbey Island Complex (the DEIS) provides maps of the 119 different modeled flight tracks associated with 9 types of Growler flight operations in the proposed action (Navy 2016, pp. A-269 – A-294). We recognized that the maps in the DEIS illustrate the predominant flight tracks and that Growlers may fly several miles to either side of the mapped flight tracks depending on aircraft performance, pilot technique, air traffic and whether conditions. For the purposes of our analysis, we took the mapped, predominant flight tracks as the best available information on where Growlers would fly for the proposed action.

To determine the amount of marbled murrelet marine habitat that will be exposed along those flight tracks, we examined the more detailed information provided for a representative subset of flight tracks (Navy 2016, pp. A-297 – A-319). The detailed information shows that, along the majority of flight tracks, Growlers are operating at power levels between 80 and 85 percent (see Figure 1 for an example). For our estimation of an area of exposure we therefore made a simplifying assumption that Growlers would be operating at 85 percent power along the entirety of their flight tracks. We used 85 percent power as the predominant power setting because it was the power setting with available Sound Exposure Level (SEL) data for Growlers that would not underestimate effects. At 85 percent power, a Growler overflight will produce sound that exceeds the Service’s disturbance threshold within 4,000 ft of the aircraft. Therefore, Growler overflights less than 4,000 ft above ground level (AGL) will expose the water surface to disturbance-level noise. Departure flight tracks were the exception to using 85 percent power along the flight tracks. Departing Growlers drop from 96 percent power to 84 percent power somewhere between two of the points provided in the DEIS (Navy 2016, p. A-299). Since it is uncertain where the Growler would drop to the lower power level, we used higher available power setting that we had SEL data for (93 percent power) for departure flight tracks. We also simplified our calculations by selecting a representative altitude that we estimated to be an average altitude flown along the flight track (for the portion of the flight track that was below 4,000 ft AGL; see Figure 1). The predominant power settings and representative altitudes for each type of flight operation are shown in the tables at the end of this appendix.

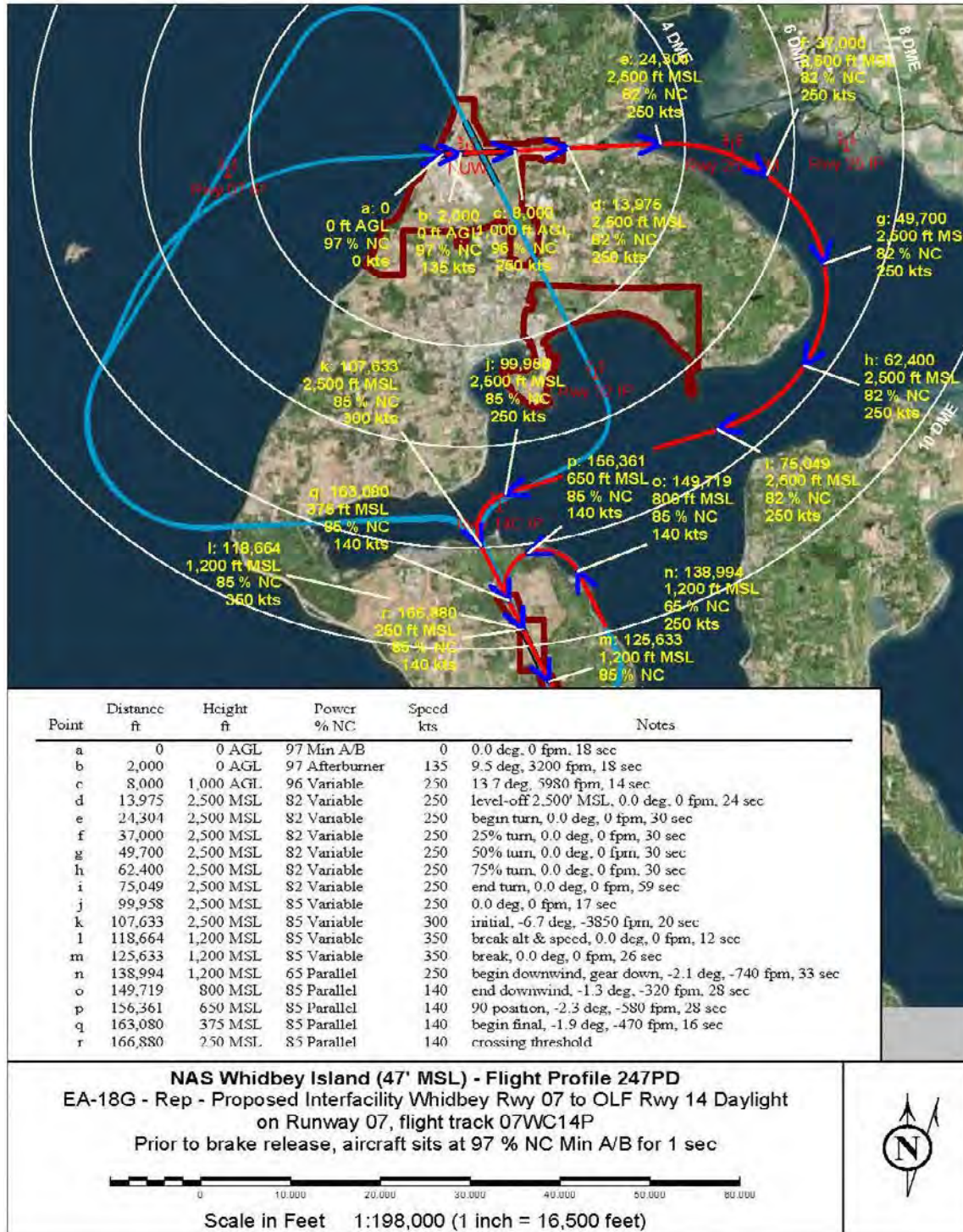


Figure 1. Example of detailed information provided by the DEIS (Navy 2016, p. A-305)



The predominant power settings gave us the distance to 92 dBA<sub>SEL</sub> re: 20μPa<sup>2</sup>s. For 93 percent power, we expect the sound from Growler overflights to attenuate to below 92 dBA<sub>SEL</sub> re: 20μPa<sup>2</sup>s at 8,000 ft from the Growler (Navy 2015, p. 3.6-60). For 85 percent power, we expect the sound from Growler overflights to attenuate to below 92 dBA<sub>SEL</sub> re: 20μPa<sup>2</sup>s at 4,000 ft from the Growler (Navy 2015, p. 3.6-60). Using these distances and representative altitudes, we calculated the width of marbled murrelet marine habitat that will be exposed to noise above 92 dBA<sub>SEL</sub> re: 20μPa<sup>2</sup>s using the Pythagorean Theorem and doubling the result to account for noise on both sides of Growlers:

$$\text{Width of Exposure Area} = 2 * \sqrt{(\text{Distance to the disturbance threshold}^2 - \text{Altitude}^2)}$$

Using the detailed information on representative flight tracks from the DEIS (Navy 2016, pp. A-297 – A-319), we estimated the linear distance along each flight track where Growlers would fly over water or near enough to water to cause sound levels to exceed 92 dBA<sub>SEL</sub> re: 20μPa<sup>2</sup>s. For some flight tracks, we were able to calculate distances using detailed information provided in the DEIS (in some instances this involved comparing less detailed flight track maps to the detailed flight track maps). For flight tracks without applicable detailed information, we measured flight tracks and estimated the distance using the scale of the map. The linear distances of marbled murrelet marine habitat exposure for each flight track are shown in the tables at the end of this appendix.

Multiplying the width of the exposure area along the path by the linear distance we estimated Growlers will fly over marbled murrelet marine habitat resulted in an estimate for the total area of murrelet marine habitat we expect to be exposed to noise by each Growler flight along a flight track. Flight tracks vary in the paths they take and consequently vary in the amount of marbled murrelet marine habitat they expose to noise. The maximum and minimum areas of marbled murrelet marine habitat that we expect to be exposed by flights of each type of flight operation are shown in the tables at the end of this appendix.

We also calculated the weighted average area of marbled murrelet marine habitat exposure by flight operation type. We weighted the average because flight tracks vary in the amount of marbled murrelet marine habitat they will expose and some flight tracks are used more than others. To determine the proportionate use of flight tracks within each type of flight operation we combined the runway utilization percentages and the flight track utilization percentages from the DEIS (see Figure 2 for an example of flight track utilization; Navy 2016, pp. A-261, A-269 – A-294). The percentages of flights expected to follow each predominant flight track are shown in the tables at the end of this appendix.



Figure 2. Example of predominant flight track map from DEIS (Navy 2016, p. A-292)

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## Departures

Predominant Power Setting: 93%	Distance to 92 dBA <sub>SEL</sub> : 8,000 ft
Representative Altitude: 2,000 ft AGL	Width of Exposure along Path: 15,716 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07D1A	5.93	59,000	33.3	Flight paths for departures estimated to have equal exposure area due to quick climb of Growlers
07D1B	4.24	59,000	33.3	
07D1C	1.69	59,000	33.3	
07D2A	2.54	59,000	33.3	
07D2B	1.69	59,000	33.3	
07D2C	0.85	59,000	33.3	
14D1A	10.52	59,000	33.3	
14D1B	7.51	59,000	33.3	
14D1C	3.01	59,000	33.3	
14D2A	4.51	59,000	33.3	
14D2B	3.01	59,000	33.3	
14D2C	1.50	59,000	33.3	
25D1A	17.48	59,000	33.3	
25D1B	12.49	59,000	33.3	
25D1C	4.99	59,000	33.3	
25D2A	7.49	59,000	33.3	
25D2B	4.99	59,000	33.3	
25D2C	2.50	59,000	33.3	
32D1A	1.07	59,000	33.3	
32D1B	0.76	59,000	33.3	
32D1C	0.31	59,000	33.3	
32D2A	0.46	59,000	33.3	
32D2B	0.31	59,000	33.3	
32D2C	0.15	59,000	33.3	

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
33.3	33.3	33.3

### Straight-in/Full-stop Arrivals

Predominant Power Setting: 85%	Distance to 92 dBA <sub>SEL</sub> : 4,000 ft
Representative Altitude: 1,500 ft AGL	Width of Exposure along Path: 7,416 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Over Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07A2A	8.46	85,270	22.7	(c-f) from DEIS A-300
07A2B	5.93	85,270	22.7	(c-f) from DEIS A-300
07A2C	2.54	85,270	22.7	(c-f) from DEIS A-300
14A1A	6.01	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
14A1B	4.21	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
14A1C	1.80	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
14A2A	9.02	85,270	22.7	(c-f) from DEIS A-300
14A2B	6.31	85,270	22.7	(c-f) from DEIS A-300
14A2C	2.71	85,270	22.7	(c-f) from DEIS A-300
25A2A	24.54	85,270	22.7	(c-f) from DEIS A-300
25A2B	17.17	85,270	22.7	(c-f) from DEIS A-300
25A2C	7.36	85,270	22.7	(c-f) from DEIS A-300
32A1A	0.79	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
32A1B	0.55	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
32A1C	0.24	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
32A2A	1.18	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
32A2B	0.83	54,787	14.6	(((c-d)/2)-f) from DEIS A-300
32A2C	0.35	54,787	14.6	(((c-d)/2)-f) from DEIS A-300

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
14.6	21.4	22.7

### Overhead Break Arrivals

Predominant Power Setting: 85%	Distance to 92 dBA <sub>SEL</sub> : 4,000 ft
Representative Altitude: 1,500 ft AGL	Width of Exposure along Path: 7,416 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07O1A	5.07	106,700	28.4	(k-c) from DEIS A-301
07O1B	5.07	106,700	28.4	
07O1C	4.24	106,700	28.4	
07O2A	0.51	106,700	28.4	
07O2B	0.51	106,700	28.4	
07O3C	0.51	106,700	28.4	
14O1A	8.73	74,703	19.9	(((c-d)/2)-k-13,000) from DEIS A-301 [subtracted 13k ft (portion of break) for path over land]
14O1B	8.73	74,703	19.9	
14O1C	9.02	74,703	19.9	
14O2A	0.87	93,700	24.9	(k-c-13,000) from DEIS A-301 [subtracted 13k ft (portion of break) for path over land]
14O2B	0.87	93,700	24.9	
14O2C	0.87	93,700	24.9	
25O1B	22.50	76,700	20.4	(k-c-30,000) from DEIS A-301 [subtracted 30k ft (majority of break) for path over land]
25O1C	22.50	76,700	20.4	
25O2B	2.50	76,700	20.4	
25O2C	2.50	76,700	20.4	
32O1B	1.80	54,703	14.6	(((c-d)/2)-k-33,000) from DEIS A-301 [subtracted 33k ft (southern approach and portion of break) for path over land]
32O1C	1.80	54,703	14.6	
32O2B	0.20	54,703	14.6	
32O2C	0.20	54,703	14.6	

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
14.6	21.5	28.4

### Instrument Approach Arrivals

Predominant Power Setting:	85%	Distance to 92 dBA <sub>SEL</sub> :	4,000 ft
Representative Altitude:	1,500 ft AGL	Width of Exposure along Path:	7,416 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07AHT	8.16	59,715	15.9	(g-d) from DEIS A-302
07ALT	8.16	59,715	15.9	
14AHT	13.50	59,715	15.9	
14ALT	13.50	59,715	15.9	
25AHT	26.34	29,715	7.9	(g-d-30,000) from DEIS A-302 [subtracted 30k ft for path over land]
25ALT	26.34	29,715	7.9	
32AHT	2.00	29,715	7.9	
32ALT	2.00	29,715	7.9	

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
7.9	11.4	15.9

NOTE: DEIS did not provide breakdown of High and Low TACAN use, so assumed they were used equally for this analysis.

### Field Carrier Landing Practice and Touch-and-Go at Ault Field

Predominant Power Setting: 85%	Distance to 92 dBA <sub>SEL</sub> : 4,000 ft
Representative Altitude: 400 ft AGL	Width of Exposure along Path: 7,960 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07FM1	9.95	30,988	8.8	Estimated by measuring flight track from DEIS A-279
07FU1	9.95	30,988	8.8	
14FM1	14.94	16,283	4.6	Estimated by measuring flight track from DEIS A-280
14FU1	14.94	16,283	4.6	
25FM1	24.12	0	0.0	Estimated by measuring flight track from DEIS A-279
25FU1	24.12	14,096	4.0	
32FU1	1.99	19,869	5.7	Estimated by measuring flight track from DEIS A-280

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
0.0	4.2	8.8



## Ground-controlled Approach

Predominant Power Setting: 85%	Distance to 92 dBA <sub>SEL</sub> : 4,000 ft
Representative Altitude: 2,000 ft AGL	Width of Exposure along Path: 6,928 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07G1	13.50	173,197	43.0	(e-c)+(l-f) from DEIS A-318
07G2	1.80	173,375	43.1	r2*[d-((d-c)/2)+c)+(l-f)] from DEIS A-318
07G3	2.70	209,206	52.0	r3*[d-((d-c)/2)+c)+(l-f)] from DEIS A-318
14G1	22.50	152,500	37.9	(d-c)+(f-e)+(l-g) from DEIS A-318
14G2	3.00	214,349	53.3	r2*[(((g-f)/2)+f)-c)+(l-(((h-g)/2)+g)] from DEIS A-318
14G3	4.50	258,649	64.3	r3*[(((g-f)/2)+f)-c)+(l-(((h-g)/2)+g)] from DEIS A-318
25G1	36.96	136,132	33.8	(g-b)+(l-k) from DEIS A-318
25G2	4.93	172,203	42.8	r2*[(g-b)+(l-k)] from DEIS A-318
25G3	7.39	171,908	42.7	r3*[(f-b)+(l-k)] from DEIS A-318
32G1	2.04	123,600	30.7	(d-b)+(k-g) from DEIS A-318
32G2	0.27	152,428	37.9	r2*[(((d-c)/2)+c)-b)+(h-e)+(l-j)]
32G3	0.41	183,931	45.7	r3*[(((d-c)/2)+c)-b)+(h-e)+(l-j)]

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
30.7	39.7	64.3

NOTE: Ratios (r2 [1.26] and r3[1.53]) were applied to estimate larger flight tracks. The ratios were calculated by comparing the sizes of flight tracks on pages A-287 and A-318, and estimating the difference in circumference of the flight tracks.

## Depart and Re-enter

Predominant Power Setting:	85%	Distance to 92 dBA <sub>SEL</sub> :	4,000 ft
Representative Altitude:	1,000 ft AGL	Width of Exposure along Path:	7,746 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07PL	8.50	137,274	38.1	(i-c)+(p-l) from DEIS A-312
07PR	8.50	113,184	31.4	(e-d)+(h-g)+(f-c)+(p-l) from DEIS A-312
14PL	14.48	76,733	21.3	(j-f)+(p-n) from DEIS A-312
14PR	14.48	95,866	26.6	(e-d)+(j-f)+(p-n) from DEIS A-312
25PL	25.02	87,382	24.3	(e-d)+(h-g)+(f-c)+(n-m) from DEIS A-312
25PR	25.02	117,965	32.8	(i-c)+(l-k) from DEIS A-312
32PL	2.00	102,734	28.5	(e-d)+(j-f)+(p-m) from DEIS A-312
32PR	2.00	83,601	23.2	(j-f)+(p-m) from DEIS A-312

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
21.3	28.2	38.1

### Field Carrier Landing Practice and Touch-and-Go at OLF Coupeville

Predominant Power Setting:	85%	Distance to 92 dBA <sub>SELce</sub> :	4,000 ft
Representative Altitude:	400 ft AGL	Width of Exposure along Path:	7,960 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
14FCP1	7.16	30,766	8.8	(k-g) from DEIS A-317
14FCP2	14.31	30,766	8.8	
14FCP3	7.16	30,766	8.8	
32FCP1	17.84	13,361	3.8	(k-i) from DEIS A-317
32FCP2	35.69	13,361	3.8	
32FCP3	17.84	13,361	3.8	

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
3.8	5.2	8.8

### Interfacility Flights – Ault Field to OLF Coupeville

Predominant Power Setting:	85%	Distance to 92 dBA <sub>SEL</sub> :	4,000 ft
Representative Altitude:	2,500 ft AGL	Width of Exposure along Path:	6,244 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
07WC14P	8.46	107,419	24.1	(k-e)+(q-n) from DEIS A-305
07WC32P	5.93	195,358	43.8	(o-e)+(t-r) from DEIS A-309
14WC14P	2.54	69,319	15.5	(k-h)+(q-n) from DEIS A-305 (estimating first overwater section = (k-h))
14WC32P	6.01	157,262	35.2	(o-h)+(t-r) from DEIS A-309 (estimating first overwater section = (j-h))
25WC14P	4.21	131,719	29.5	(k)+(q-n) from DEIS A-305 (assuming western route is same as (k-a))
25WC32P	1.80	219,662	49.2	(o)+(t-r) from DEIS A-309 (assuming western route is same as (o-a))
32WC14P	9.02	152,019	34.0	(k)+(q-n) from DEIS A-305 + 20,300 ft (assuming western route is same as (k-a) + an estimated additional 20,300 ft)
32WC32P	6.31	239,962	53.7	(o)+(t-r) from DEIS A-309 + 20,300 ft (assuming western route is same as (o-a) + an estimated additional 20,300 ft)

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
15.5	42.1	53.7

### Interfacility Flights – OLF Coupeville to Ault Field

Predominant Power Setting:	85%	Distance to 92 dBA <sub>SEL</sub> :	4,000 ft
Representative Altitude:	2,500 ft AGL	Width of Exposure along Path:	6,244 ft

Flight Track	Flight Track Use (% flights)	Linear Distance Water Exposure (ft)	Total Area Exposed per Flight (square miles)	Notes on Estimating Linear Distance Over Water
14CW07	3.48	170,435	38.2	Estimated by measuring flight track from DEIS A-291
14CW14	19.73	198,507	44.5	Estimated by measuring flight track from DEIS A-291
14CW25	26.57	142,191	31.8	Estimated by measuring flight track from DEIS A-291
14CW32	0.23	73,825	16.5	Estimated by measuring flight track from DEIS A-291
32CW07	3.48	127,598	28.6	Estimated by measuring flight track from DEIS A-291
32CW14	19.73	156,581	35.1	Estimated by measuring flight track from DEIS A-291
32CW25	26.57	114,474	25.6	Estimated by measuring flight track from DEIS A-291
32CW32	0.23	152,024	34.0	Estimated by measuring flight track from DEIS A-291

Minimum Area Exposed (square miles)	Average Area Exposed Weighted by Flight Track Use (square miles)	Maximum Area Exposed (square miles)
16.5	33.4	44.5



## Section 106 Documentation



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# Section 106 Documentation

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- Ms. Helen Price Johnson, Island County Commissioner	
- Ms. Jill Johnson, Island County Commissioner	
- Island County Historical Society	
- Mr. Michael Monson and Ms. Maryon Attwood	
- Operations Manager, National Park Service, Fort Casey	
- PBY Memorial Foundation	
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- Tulalip Tribes of Washington	
- Upper Skagit Indian Tribe	
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- Mr. David Day	
- Ms. Helen Price Johnson, Island County Commissioner	
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- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation
- Swinomish Indian Tribal Community
- Tulalip Tribes of Washington
- Upper Skagit Indian Tribe

*Interested Parties*

- Citizens of Ebey’s Reserve
- Mayor Hughes, Town of Coupeville
- Mr. David Day
- Mr. Richard Hannold, Island County Commissioner
- Ms. Helen Price Johnson, Island County Commissioner
- Ms. Jill Johnson, Island County Commissioner
- Operations Manager, National Park Service, Fort Casey
- Seattle Pacific University – Camp Casey

- Mayor Stinson, City of Port Townsend
- Trust Board of Ebey’s Landing National Historical Reserve
- Washington State Parks – Northwest Region Office

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- Lummi Tribe of the Lummi Reservation
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation
- Swinomish Indian Tribal Community
- Tulalip Tribes of Washington
- Upper Skagit Indian Tribe

November 10, 2016 – Letter to Interested Parties ..... C-555

- Mr. Pickard, Citizens of Ebey’s Reserve (letter provided)
- Mayor Hughes, Town of Coupeville
- Mr. David Day
- Mr. Richard Hannold, Island County Commissioner
- Ms. Helen Price Johnson, Island County Commissioner
- Ms. Jill Johnson, Island County Commissioner
- Mr. Roy Zipp, Operations Manager, National Park Service, Fort Casey
- Mr. Darrell Jacobson, Seattle Pacific University – Camp Casey
- Mayor Stinson, City of Port Townsend
- Ms. Kristen Griffin, Trust Board of Ebey’s Landing National Historical Reserve
- Washington State Parks – Northwest Region Office

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May 1, 2017 – Letter to Federally Recognized American Indian Tribes and Nations ..... C-589

- Jamestown S’Klallam Tribe (letter provided)
- Lummi Tribe of the Lummi Reservation
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation
- Swinomish Indian Tribal Community
- Tulalip Tribes of Washington
- Upper Skagit Indian Tribe

May 1, 2017 – Letter to Interested Parties ..... C-599

- Mr. Pickard, Citizens of Ebey’s Reserve (letter provided)
- Mayor Hughes, Town of Coupeville
- Mr. David Day
- Mr. Richard Hannold, Island County Commissioner
- Ms. Helen Price Johnson, Island County Commissioner
- Ms. Jill Johnson, Island County Commissioner
- Jefferson County Historical Society
- Mr. Roy Zipp, Operations Manager, National Park Service, Fort Casey
- Mr. Darrell Jacobson, Seattle Pacific University – Camp Casey
- Mayor Stinson, City of Port Townsend
- Ms. Kristen Griffin, Trust Board of Ebey’s Landing National Historical Reserve
- Washington State Parks – Northwest Region Office

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July 19, 2017 – Letter to Federally Recognized American Indian Tribes and Nations ..... C-735

- Jamestown S’Klallam Tribe (letter provided)
- Lummi Tribe of the Lummi Reservation
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington

- Suquamish Indian Tribe of the Port Madison Reservation
- Swinomish Indian Tribal Community
- Tulalip Tribes of Washington
- Upper Skagit Indian Tribe

July 19, 2017 – Letter to Interested Parties..... C-737

- Mr. Pickard, Citizens of Ebey’s Reserve (letter provided)
- Mayor Hughes, Town of Coupeville
- Mr. David Day
- Mr. Richard Hannold, Island County Commissioner
- Ms. Helen Price Johnson, Island County Commissioner
- Ms. Jill Johnson, Island County Commissioner
- Jefferson County Historical Society
- Mr. Roy Zipp, Operations Manager, National Park Service, Fort Casey
- Mr. Darrell Jacobson, Seattle Pacific University – Camp Casey
- Mayor Stinson, City of Port Townsend
- Ms. Kristen Griffin, Trust Board of Ebey’s Landing National Historical Reserve
- Washington State Parks – Northwest Region Office

**Continuing Section 106 Consultation for the Proposed Increase in EA-18G Growler Operations at Naval Air Station Whidbey Island, Island County, Washington**

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October 2, 2017 – Letter to SHPO..... C-741

October 2, 2017 – Letter to Federally Recognized American Indian Tribes and Nations ..... C-743

- Jamestown S’Klallam Tribe (letter provided)
- Lummi Tribe of the Lummi Reservation
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation
- Swinomish Indian Tribal Community
- Tulalip Tribes of Washington
- Upper Skagit Indian Tribe

October 2, 2017 – Letter to Interested Parties ..... C-745

- Mr. Pickard, Citizens of Ebey’s Reserve (letter provided)
- Mayor Hughes, Town of Coupeville
- Mr. David Day
- Mr. Richard Hannold, Island County Commissioner
- Ms. Helen Price Johnson, Island County Commissioner
- Ms. Jill Johnson, Island County Commissioner
- Jefferson County Historical Society

- Mr. Roy Zipp, Operations Manager, National Park Service, Fort Casey
- Mr. Darrell Jacobson, Seattle Pacific University – Camp Casey
- Mayor Stinson, City of Port Townsend
- Ms. Kristen Griffin, Trust Board of Ebey’s Landing National Historical Reserve
- Washington State Parks – Northwest Region Office

**Request for Section 106 Consultation on the Finding of Adverse Effect to Historic Properties for the Proposed Increase in EA-18G Growler Operations at Naval Air Station Whidbey Island, Island County, Washington**

June 25, 2018 – Letter to SHPO ..... C-747  
 June 27, 2018 – SHPO Response Letter to Ms. Campbell..... C-749

**Continuing Section 106 Consultation on the Finding of Adverse Effect to Historic Properties for the Proposed Increase in EA-18G Growler Operations at Naval Air Station Whidbey Island, Island County, Washington**

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- Jamestown S’Klallam Tribe (letter provided)
- Lummi Tribe of the Lummi Reservation
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation
- Swinomish Indian Tribal Community
- Tulalip Tribes of Washington
- Upper Skagit Indian Tribe

June 25, 2018 – Letter to Interested Parties ..... C-755

- Ms. Maryon Attwood, Citizens of Ebey’s Reserve (letter provided)
- Mayor Hughes, Town of Coupeville
- Mr. David Day
- Mr. Richard Hannold, Island County Commissioner
- Ms. Helen Price Johnson, Island County Commissioner
- Ms. Jill Johnson, Island County Commissioner
- Jefferson County Historical Society
- Mr. Roy Zipp, Operations Manager, National Park Service, Fort Casey
- Mr. Darrell Jacobson, Seattle Pacific University – Camp Casey
- Mayor Stinson, City of Port Townsend
- Ms. Kristen Griffin, Trust Board of Ebey’s Landing National Historical Reserve
- Washington State Parks – Northwest Region Office

**Section 106 Determination of Effect for the EA-18G “Growler” Airfield Operations at the Naval Air Station Whidbey Island Complex**

Attachment to June 25, 2018 consultation letters ..... C-757



# CITIZENS OF EBHEY'S RESERVE

*protecting our land, homes, and health*

Office of the Chief of Naval Operations  
Admiral Jonathon Greenert  
2000 Navy Pentagon, Washington, D.C. 20350-2000

Admiral Bill Gortney  
Commander, Fleet Forces Command  
1562 Mitscher Ave., Suite 250, Norfolk, VA 23551-2487

Rear Admiral Bette Bolivar  
Navy Region Northwest  
1100 Hunley Road, Silverdale, WA 98315

Commander Mike Nortier  
whdb\_naswi-pao@navy.mil  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue, Oak Harbor, WA 98278-5000

Ms. Kendall Campbell, Cultural Resources, U. S. Navy  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

FEBRUARY 22, 2014

## RE: **CONSULTING PARTY REQUEST FOR 106 PROCESS**

Transition of Expeditionary EA-6B Prowler Squadrons to EA-18G Growler at NAS Whidbey Island

Dear Sirs and Madams:

Our group, Citizens of Ebey's Reserve (COER), is a Washington non-profit corporation based in Central Whidbey Island, Washington. COER would like to officially request 'consulting party' status within the Section 106 process in regard to the consultation involving the transition to, and expansion of, the use of the EA-18G (Growler) relative to the impact on the historical and cultural landscape within Ebey's Landing National Historical Reserve and other historical properties within the flight paths of the aircraft including properties in Island, Jefferson, San Juan, and Skagit Counties.

Our request is, respectfully, made on the grounds that opportunity for public input into this matter under the 106 process has been made virtually unavailable to this point. Our group represents the interests of more than 3,000 concerned citizens throughout the region. We believe that we have significant factual material pertinent to the effects of the undertaking, and we believe that we can offer important input, information and interest into the resolution of this consultation and a satisfactory memorandum of agreement.

Regards,



Michael Monson,  
COER President, Board of Directors

Regards,



Ken Pickard  
Education & Outreach Chair, COER

*Incoming*  
MAR 04 2014

cc:

Allyson Brooks  
State Historic Preservation Officer  
Washington State Department of Archaeology and Historic Preservation

Kelly Yasaitis Fanizzo  
Program Analyst  
Advisory Council on Historic Preservation;

John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation

Post Office Box 202, Coupeville WA 98239 [citizensofebeysreserve.com](http://citizensofebeysreserve.com)  
Email – [citizensoftheebeyreserve2@gmail.com](mailto:citizensoftheebeyreserve2@gmail.com)



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

5090  
Ser N44/0667  
May 20, 2014

Mr. Michael Monson  
Mr. Kenneth Pickard  
Post Office Box 202  
Coupeville, WA 98239

Dear Mr. Monson and Mr. Pickard:

Thank you for your letter dated February 22, 2014 requesting consulting party status in the Navy's section 106 consultation under the National Historic Preservation Act (NHPA) in support of the upcoming EA-18G Growler Environmental Impact Statement (EIS).

The Navy will open this process to the public and interested parties such as your organization, the Citizens of Ebey's Reserve (COER), when we initiate section 106 consultation for this EIS under NHPA and governing regulations (36 C.F.R. Part 800).

My point of contact in this matter is Kendall Campbell, NAS Whidbey Island Cultural Resources Program Manager, and can be reached at [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil) or at (360) 257-6780.

Sincerely,

A handwritten signature in black ink, appearing to read "M. K. NORTIER".

M. K. NORTIER  
Captain, U.S. Navy  
Commanding Officer







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

5090  
Ser N44/1506  
10 October 2014

Advisory Council on Historic Preservation  
Old Post Office Building  
1100 Pennsylvania Avenue, NW, Suite 803  
Washington, D.C. 20004

Dear Mr. Nelson:

SUBJECT: PROPOSED INCREASE OF AIRCRAFT AND AIRCRAFT OPERATIONS  
AND DEVELOPMENT OF SUPPORT FACILITIES, NAVAL AIR STATION  
(NAS) WHIDBEY ISLAND, WASHINGTON

The Navy requests the Advisory Council on Historic Preservation's (ACHP) participation in the consultation on the proposed action to increase the number of aircraft, the number of air operations, and develop support facility on NAS Whidbey Island, Washington. This undertaking is a type of activity that has the potential to cause effects on historic properties. The Navy is currently preparing an Environmental Impact Statement (EIS) for the EA-18G Growler Airfield Operations to support this proposed action, and the Navy's intent is to coordinate its Section 106 responsibilities per 36 CFR 800 with the NEPA EIS process.

The Navy believes ACHP's participation in the 106 process will ensure its successful application. Based on our ongoing experience with addressing the Section 106 process on an undertaking on OLF Coupeville, which ACHP is actively participating in, consultation on this new undertaking may present unique challenges that the Counsel's participation can help to resolve.

I look forward to ACHP's participation in assisting the Navy in fulfilling its Section 106 responsibilities. If you require additional information, my point of contact is Ms. Kendall Campbell, Naval Air Station Whidbey Island Cultural Resources Manager. Ms. Campbell can be reached at 360-257-6780.

Sincerely,

A handwritten signature in black ink, appearing to read "M. K. Nortier", is positioned above the typed name.

M. K. NORTIER  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. NAS Whidbey Island Location Map

Copy to: Ms. Katharine Kerr

**NAS WHIDBEY ISLAND LOCATION MAP**







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

5090  
Ser N44/1505  
10 October 2014

Dr. Allyson Brooks  
State Historic Preservation Officer  
Washington State Department of Archaeology & Historic  
Preservation  
P.O. Box 48343  
Olympia, WA 98504

Dear Dr. Brooks:

SUBJECT: PROPOSED INCREASE OF EA-18G GROWLER AIRCRAFT AND  
AIRCRAFT OPERATIONS AND DEVELOPMENT OF SUPPORT  
FACILITIES, NAVAL AIR STATION (NAS) WHIDBEY ISLAND,  
WASHINGTON

In accordance with Section 106 of the National Historic Preservation Act, the Navy would like to initiate consultation on the proposed increase of EA-18G Growler aircraft and aircraft operations, and development of support facilities, on NAS Whidbey Island, Washington. This undertaking is a type of activity that has the potential to cause effects on historic properties. The Navy is currently preparing an Environmental Impact Statement (EIS) for EA-18G Growler Airfield Operations to support this proposed action. Therefore, the Navy requests to enter into consultation in defining the appropriate Area of Potential Effects (APE) and meeting our Section 106 obligations as defined by the National Historic Preservation Act (NHPA) and its implementing regulations 36 CFR 800.

In 2013, the Department of Defense (DoD) identified a need to increase electronic attack capability and Congress authorized the procurement of additional aircraft to meet new mission requirements. The primary aircraft that supports electronic attack capability in the DoD is the Navy's EA-18G Growler aircraft. NAS Whidbey Island is the home to the Navy's tactical electronic attack community and the infrastructure that supports them. The Navy initiated an EIS in September 2013 to analyze increasing the number of EA-18G aircraft (addition of 13 aircraft) at NAS Whidbey Island, along with a corresponding increase in training operations.

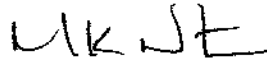
Since then, the Navy revised the scope of the ongoing EIS to analyze the potential increase in EA-18G aircraft from 13 to

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10 October 2014

up to 36 aircraft. The number of EA-18G aircraft ultimately procured will be determined by Congress. Nonetheless, the Navy has elected to include the potential increase in the ongoing EIS in order to be transparent and to ensure a holistic analysis of environmental impacts from the proposed action. In support of the EIS process, the Navy will hold public scoping meetings on October 28, 29, and 30. You will be receiving the Notice of Intent to revise the EIS shortly, which includes detailed information about the scoping meetings. Per 36 CFR 800.8(a), the Navy intends to utilize the EIS public scoping meetings to partially fulfill the Section 106 public notification and consultation requirements.

I look forward to consulting with you on this project to fulfill our Section 106 responsibilities. If you require additional information, my point of contact is Kendall Campbell, NAS Whidbey Island Cultural Resources Manager. Ms. Campbell can be reached at (360) 257-6780.

Sincerely,

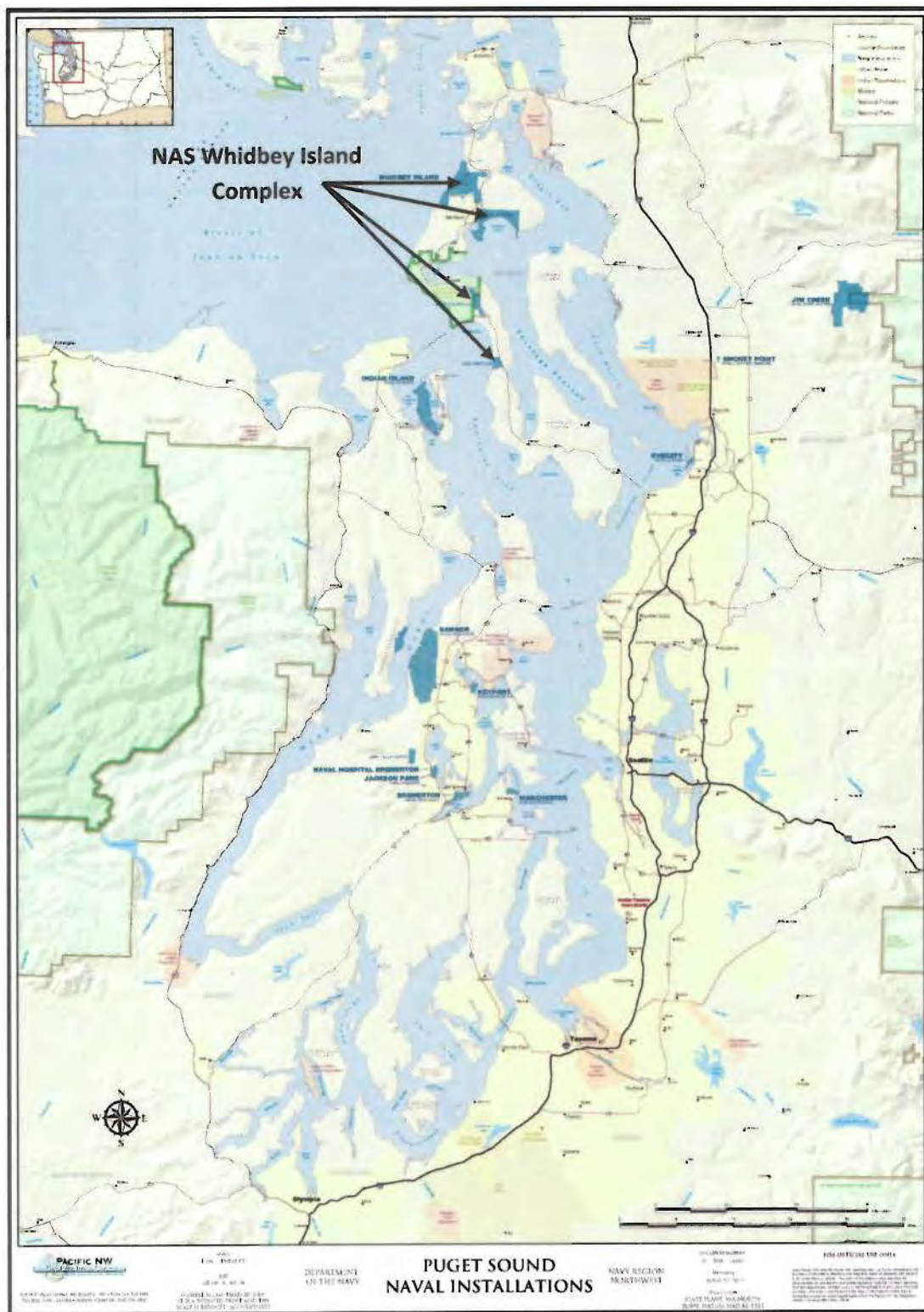


M. K. NORTIER  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. NAS Whidbey Island Location Map



# NAS WHIDBEY ISLAND LOCATION MAP



Enclosure (1)





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

5090  
Ser N44/1504  
10 October 2014

The Honorable W. Ron Allen  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382

Dear Chairman Allen,

SUBJECT: NOTIFICATION OF PROPOSED INCREASE OF THE EA-18G  
GROWLER AIRCRAFT AT NAVAL AIR STATION (NAS) WHIDBEY  
ISLAND IN OAK HARBOR, WASHINGTON

I would like to inform you that the Department of the Navy (Navy) is preparing an Environmental Impact Statement (EIS) for the proposed increase of EA-18G Growler aircraft and aircraft operations, and development of support facilities, at Naval Air Station Whidbey Island, Washington. The Notice of Intent to study the environmental effects of this proposed action will be published in the Federal Register on October 10, 2014 and additional information is available on the project website at [www.whidbeyeis.com](http://www.whidbeyeis.com).

Although in the preliminary stages of development, I would like to invite you to review the enclosed information on the proposed action to be studied in the EIS and evaluate whether you believe there may be a potential for this action to significantly affect tribal treaty harvest rights, resources or lands. This invitation is made pursuant to the Navy's policy for government-to-government consultation with American Indian and Alaska Native tribes.

In 2013, the Department of Defense (DoD) identified a need to increase electronic attack capability and Congress authorized the procurement of additional aircraft to meet new mission requirements. The primary aircraft that supports electronic attack capability in the DoD is the Navy's EA-18G Growler aircraft. NAS Whidbey Island is the home to the Navy's tactical electronic attack community and the infrastructure that supports them. The Navy initiated an EIS in September 2013 to analyze increasing the number of EA-18G aircraft (addition of 13 aircraft) at NAS Whidbey Island, along with a corresponding increase in training operations.



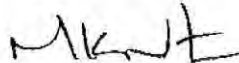
5090  
Ser N44/1504  
10 October 2014

Since then, the Navy revised the scope of the ongoing EIS to analyze the potential increase in EA-18G aircraft from 13 to up to 36 aircraft. The number of EA-18G aircraft ultimately procured will be determined by Congress. Nonetheless, the Navy has elected to include the potential increase in the ongoing EIS in order to be transparent and to ensure a holistic analysis of environmental impacts from the proposed action. In support of the EIS process, the Navy will hold public scoping meetings on October 28, 29, and 30. You will be receiving a separate notification letter inviting you and your staff to attend these meetings if you would like to ask questions in person.

If you would like to initiate government-to-government consultation, please provide the name(s) and title(s) of the tribal officials to contact to coordinate our first meeting. I look forward to discussing your questions and concerns about this proposed project.

If you have questions or concerns, or require further information regarding the proposed undertaking please contact me directly at michael.nortier@navy.mil, or (360)257-2037, or, have your staff contact Ms. Kendall Campbell the installation Cultural Resources Program Manager at kendall.campbell1@navy.mil or (360) 257-6780.

Sincerely,



M. K. NORTIER  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Description of Proposed Action and Proposed Alternatives

Copy to:  
Mr. Gideon U. Cauffman  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

ENCLOSURE 1. DESCRIPTION OF PROPOSED ACTION AND PROPOSED ALTERNATIVES

Naval Air Station (NAS) Whidbey Island is located in Island County, Washington, on Whidbey Island in the northern Puget Sound region. The main air station (Ault Field) is located in the north-central part of the island, adjacent to the Town of Oak Harbor. Outlying Landing Field (OLF) Coupeville is located approximately 10 miles south of Ault Field in the Town of Coupeville. OLF Coupeville is primarily dedicated to Field Carrier Landing Practice (FCLP) operations.

NAS Whidbey Island is the only naval aviation installation in the Pacific Northwest and has supported the electronic attack (VAQ) community for more than 35 years. It is the only home base location for the VAQ community in the United States and provides facilities and support services for: nine Carrier Air Wing (CVW) squadrons, three Expeditionary (EXP) squadrons, one Reserve squadron and one Fleet Replacement Squadron (FRS).

The Navy proposes to support and conduct VAQ airfield operations and provide facilities and functions to home base additional VAQ aircraft at NAS Whidbey Island. No changes to existing ranges or airspace are proposed. The proposed action includes the following:

- Continue and expand the existing VAQ operations at NAS Whidbey Island complex, which includes Ault Field and OLF Coupeville;
- Increase VAQ capabilities and augment the VAQ FRS (an increase of between 13 and 36 aircraft) to support an expanded DoD mission for identifying, tracking and targeting in a complex electronic warfare environment;
- Construct and renovate facilities at Ault Field to accommodate additional aircraft; and
- Station ~~up to 860~~ additional personnel ~~at~~ and ~~relocate~~ ~~approximately 2,150~~ ~~their~~ family members ~~at~~ ~~the~~ NAS Whidbey Island and the surrounding community.

The purpose of the proposed action is to improve the Navy's electronic attack capability and to provide the most effective force structure and tactical airborne electronic attack capabilities to operational commanders.

The action alternatives represent force structure changes that support an expanded DoD mission for identifying, tracking and targeting in a complex electronic warfare environment. This EIS will address the No Action Alternative and four alternatives:

**No Action Alternative:** Implementing the No Action Alternative, or taking "no action," means that legacy EA-6B Prowlers would



continue to gradually transition to next generation EA-18G Growler aircraft (82 aircraft) and annual EA-18G Growler airfield operations would be maintained at levels consistent with those identified in the 2005 and 2012 transition EAs. Under the No Action Alternative the Navy would not improve the Navy's Electronic Attack capability by adding VAQ squadrons or aircraft. While the No Action Alternative does not meet the purpose and need of the proposed action, it serves as a baseline against which impacts of the proposed action can be evaluated.

The Navy will analyze the potential environmental impacts of airfield operations, facilities and functions at NAS Whidbey Island associated with the following four force structure alternatives:

**Action Alternative 1:** Expand EXP capabilities by establishing two new EXP squadrons and augmenting FRS by three additional aircraft (a net increase of 13 aircraft);

**Action Alternative 2:** Expand CVW capabilities by adding two additional aircraft to each existing CVW squadron and augmenting FRS by six additional aircraft (a net increase of 24 aircraft);

**Action Alternative 3:** Expand CVW capabilities by adding three additional aircraft to each existing CVW squadron and augmenting FRS by eight additional aircraft (a net increase of 35 aircraft); and

**Action Alternative 4:** Expand EXP and CVW capabilities by establishing two new EXP squadrons, adding two additional aircraft to each existing CVW squadron, and augmenting FRS by eight additional aircraft (a net increase of 36 aircraft).

The environmental analysis in the EIS will focus on several aspects of the proposed action: aircraft operations at Ault Field and OLF Coupeville; facility construction; and personnel changes. Resource areas to be addressed in the EIS will include, but not be limited to: air quality, noise, land use, socioeconomic, natural resources, biological resources, cultural resources, and safety and environmental hazards.

The analysis will evaluate direct and indirect impacts, and will account for cumulative impacts from other relevant activities near the installation. Relevant and reasonable measures that could avoid or mitigate environmental effects will also be analyzed. Additionally, the DoN will undertake any consultation applicable by law and regulation. No decision will be made to implement any alternative until the EIS process is completed and a Record of Decision is signed by the Assistant Secretary of the Navy (Energy, Installations and Environment) or designee.



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

5090  
Ser N44/1547  
October 20, 2014

The Honorable Nancy Conard  
Mayor of Coupeville  
PO Box 725  
Coupeville, WA 98239-0725

Dear Mayor Conard:

SUBJECT: PROPOSED INCREASE OF AIRCRAFT AND AIRCRAFT OPERATIONS  
AND DEVELOPMENT OF SUPPORT FACILITIES, NAVAL AIR  
STATION WHIDBEY ISLAND, WASHINGTON

In accordance with Section 106 of the National Historic Preservation Act, the Navy has initiated consultation with the Washington State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) on the proposed increase of aircraft, increase in aircraft operations, and development of support facilities on Naval Air Station (NAS) Whidbey Island, Washington. As a potential interested party per Section 106's enabling regulation 36 CFR § 800.2(d), we would like to ascertain whether you wish to participate in the Navy's historic properties review process.

Section 106 requires federal agencies to consider what effects its projects may have on historic properties. A historic property is defined as any prehistoric or historic property included in or determined eligible for inclusion in the National Register of Historic Places (NRHP). This undertaking is a type of activity that has the potential to cause effects on historic properties.

At this point, the Navy invites The Town of Coupeville to participate as a consulting party in the Section 106 process and requests you to let us know if you wish to participate. If you choose to be a consulting party in the Section 106 process, simply respond to this letter requesting the Navy consider you as a consulting party per 36 CFR 800.3(f). Alternatively, if you would like to comment on the proposed action, but prefer not to participate as a consulting party, there are a number of additional opportunities for concerned parties or individuals to provide input and comments to the Navy.




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Ser N44/1547  
October 20, 2014

The Navy is preparing an Environmental Impact Statement (EIS) for EA-18G Growler Airfield Operations, and intends to coordinate its Section 106 responsibilities per 36 CFR 800 with the NEPA EIS process. In support of the NEPA process, the Navy will be holding public scoping meetings on October 28, 29, and 30, 2014 in Coupeville, Oak Harbor, and Anacortes, respectively, between 4:00pm and 8:00pm each night. These scoping meetings will also serve as an opportunity to ask questions specific to the Section 106 process and how public comments on historic properties may be provided to the Navy for consideration.

Regardless of whether you elect to become a consulting party under Section 106 or to participate in the EIS scoping meetings, the Navy values your comments and input at this early stage in development of the EIS. I look forward to hearing of concerns that you may have in regards to the potential impact of this undertaking on historic properties per 36 CFR Part 800. If you require additional information, my point of contact is Kendall Campbell, NAS Whidbey Island Cultural Resources Manager. Ms. Campbell can be reached at (360) 257-6780.

Sincerely,

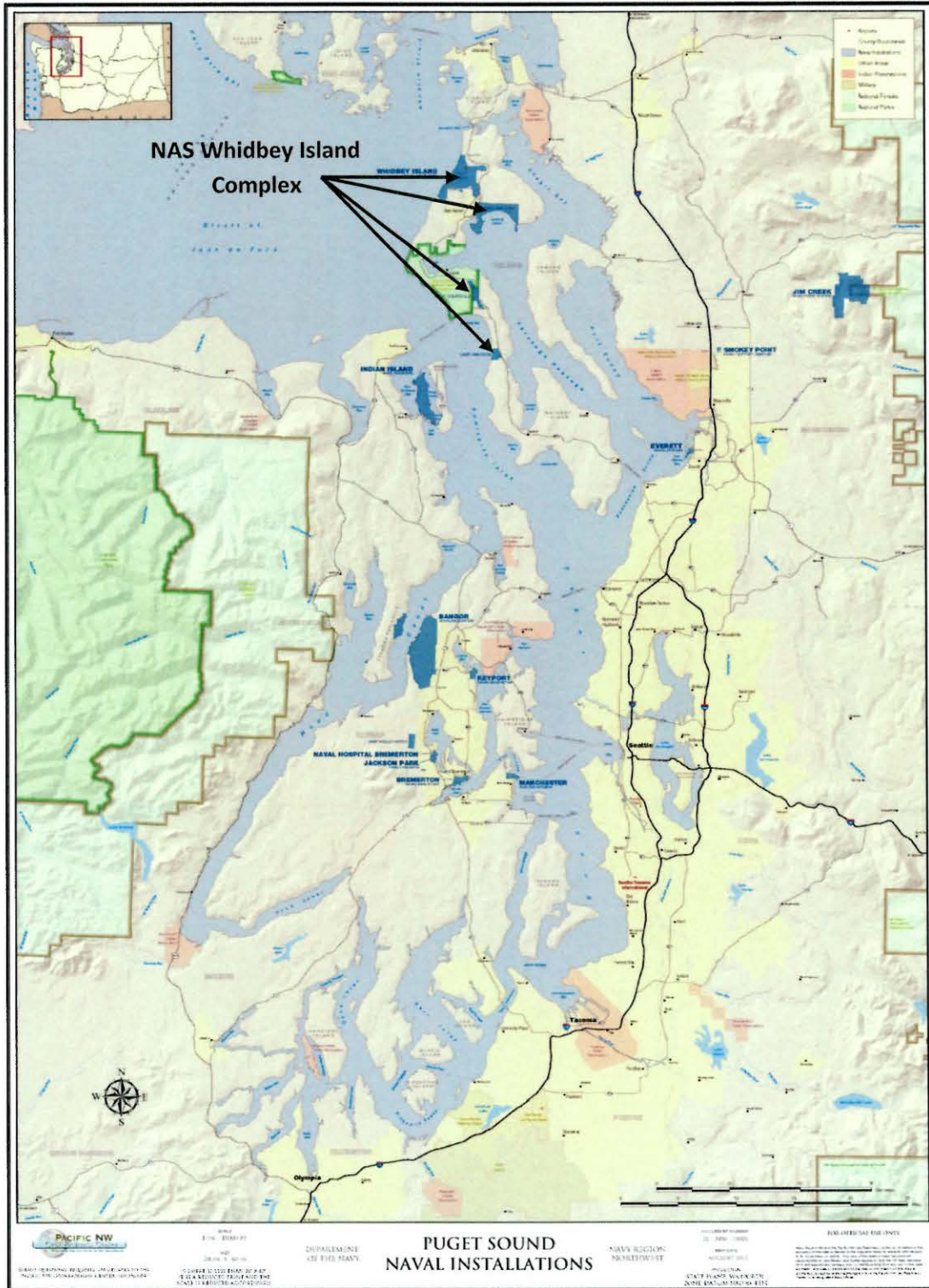


M. K. NORTIER  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. NAS Whidbey Island Location Map



**NAS WHIDBEY ISLAND LOCATION MAP**



Enclosure (1)



**From:** [Holter, Russell \(DAHP\)](#)  
**To:** [Campbell, Kendall CIV NAVFAC NW, PRW4](#)  
**Cc:** [kristin\\_griffin@partner.nps.gov](mailto:kristin_griffin@partner.nps.gov); [Chris Moore \(cmoore@preservewa.org\)](mailto:Chris Moore (cmoore@preservewa.org))  
**Subject:** NAS Whidbey and Areas Associated with Flight Paths  
**Date:** Thursday, October 23, 2014 16:25:15  
**Attachments:** [102214-23-USN\\_102314.pdf](#)

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For you!

Russell Holter

Project Compliance Reviewer

Department of Archaeology and Historic Preservation

360-586-3533

Office hours are from 8am to 5pm M-F

My hours are 7am to 5:30 M-Th







Allyson Brooks Ph.D., Director  
State Historic Preservation Officer

October 23, 2014

Capt. M. K. Nortier  
Captain, US Navy  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

In future correspondence please refer to:

Log: 102214-23-USN  
Property: NAS Whidbey and Areas Associated with Flight Paths  
Re: Proposed Increase in EA-18 Growler Operations

Dear Captain Nortier:

We have reviewed the materials forwarded to the Department of Archaeology and Historic Preservation (DAHP) regarding the above referenced proposal. Thank you for the opportunity to comment on the project. Based upon your letter, we understand the proposal to entail an increase in training sorties and other flight operations in the vicinity of Naval Air Station Whidbey.

Our concerns center on this proposal's effects to cultural and historic resources and how the impact of increased noise levels and the frequency of elevated sound levels might have to these resources in the Puget Sound Basin. Our interest is upon the following potential effects:

- 1) Effects to historic buildings, structures, objects, and districts from the vibration of sound waves to the short and long-term structural soundness of these historic property types. A related concern is the effect of resulting sound-proofing activities at historic properties that if undertaken could adversely affect historic character.
- 2) Effects on the public's experience of using cultural and historic resources, particularly traditional cultural properties, historic districts, and landscapes such as the Ebey's Landing National Historic Reserve and the Port Townsend National Historic Landmark District. The jarring effect of frequent and high noise levels on the feeling and association of cultural and historic resources are of concern.
- 3) Effects on the long-term viability of historic properties. Our concern is the increased and frequent noise levels on the long-term viability of historic resources as places to live, work, and recreate.

In defining the Area of Potential Effects, we recommend the Navy conduct a day and night noise level assessment for flight patterns across the entire region where Growler flights will be conducted. Such an assessment would help the Navy while considering the indirect effects posed by increased Growler operations on cultural resources.

We look forward to the results of your cultural resources survey efforts, your consultation with the concerned tribes, and receiving the survey report when it is available. We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4). These comments are

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State of Washington • Department of Archaeology & Historic Preservation  
P.O. Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065  
[www.dahp.wa.gov](http://www.dahp.wa.gov)



based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800.

Thank you for the opportunity to comment. If you have any questions, please contact me.

Sincerely,



Russell Holter  
Project Compliance Reviewer  
(360) 586-3533  
[russell.holter@dahp.wa.gov](mailto:russell.holter@dahp.wa.gov)

Cc: Kristen Griffin (Ebey's Landing)  
Chris Moore (WA Trust)



23 October  
320 Crown Avenue  
Coupeville, Washington 98239-3604

M. K. Nortier  
Captain, United States Navy  
Commanding Officer  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98278-5000

Captain Nortier,

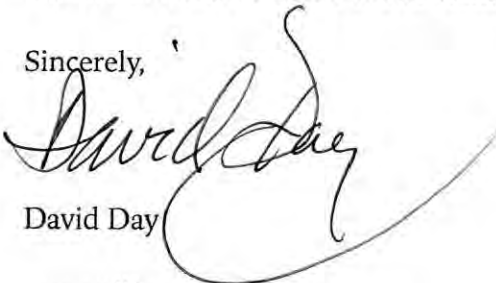
Thank you for your letter dated 20 October, 2014 informing me of the initiation of consultation within the 106 process for the proposed **“increase of aircraft and aircraft operations and development of support facilities at NAS Whidbey Island”**, and for the corresponding invitation from the Navy to participate as a consulting party in the process.

In response to your letter, and in accordance with the Code of Federal Regulations cited in your letter, I respectfully accept the Navy’s invitation to participate, and officially request the Navy to consider me as a consulting party in regard to this undertaking per Title 36 CFR 800.3(f).

I will look forward to further information as to the manner and timeframe in which this consultation process will unfold, and ask that sufficient notice be provided so as to reasonably facilitate the inclusion of this in my calendar as the process progresses.

Once again, thank you for this opportunity to become a participant in this serious, necessary and important process to protect the historical cultural landscape of Ebey’s Landing National Historical Reserve and Central Whidbey Island.

Sincerely,



David Day

[coupevillan@mac.com](mailto:coupevillan@mac.com)  
360.672.0252 cellular

cc: Kendall Campbell  
Cultural Resources Manager  
NAS Whidbey Island  
[kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil)





**From:** [Campbell, Kendall CIV NAVFAC NW, PRW4](#)  
**To:** [Roll, Marilyn M CIV NAVFAC NW, PRW41](#)  
**Subject:** FW: Notification of Proposed Increase of the EA-18G Growler Aircraft  
**Date:** Tuesday, October 28, 2014 12:11:21

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-----Original Message-----

From: Jackie Ferry [<mailto:jferry@samishtribe.nsn.us>]  
Sent: Tuesday, October 28, 2014 8:49 AM  
To: Campbell, Kendall CIV NAVFAC NW, PRW4  
Subject: Notification of Proposed Increase of the EA-18G Growler Aircraft

Hi Kendall,

At this time, we are not interested in consulting for cultural resources on the EIS.

Thanks,

Jackie

Tribal Historic Preservation Office, Samish Indian Nation  
2918 Commercial Ave, Anacortes, WA 98221 | 360-293-6404



# CITIZENS OF EBHEY'S RESERVE

*protecting our land, homes, and health*

October 28, 2014

M.K. Nortier  
Captain, United States Navy  
Commanding Officer  
Naval Air Station Whidbey Island  
3730 North Charles Porter Ave.  
Oak Harbor, WA 98278-5000

Dear Captain Nortier:

Thank you for your letter dated October 20, 2014 informing us of the initiation of the 106 process for the proposed "increase of aircraft and aircraft operations and development of support facilities at NAS, Whidbey Island," and for the invitation from the Navy to participate as a consulting party in the process.

In response to your letter, and in accordance with the Code of Federal Regulations cited in your letter, we respectfully accept the Navy's invitation to participate, and officially request the Navy to consider us as consulting parties in regard to this undertaking, per Title 36 CFR 800.3(f).

We look forward to further information as to the manner and timeframe in which this consultation process will unfold, and ask that sufficient notice be provided so as to reasonably facilitate the inclusion of these consultations in our calendars as the process progresses.

Once again, thank you for this opportunity to become participants in this serious, necessary, and important process to protect the cultural landscape and significant heritage resources of Ebey's Landing National Historical Reserve and Central Whidbey Island.

Sincerely,

Michael Monson  
President

Maryon Attwood  
Director

cc: Kendal Campbell  
Cultural Resources Manager  
NAS Whidbey Island  
kendall.campbell1@navy.mil



# CITIZENS OF EBHEY'S RESERVE

*protecting our land, homes, and health*

October 30, 2014

M.K. Nortier  
Captain, United States Navy  
Commanding Officer  
Naval Air Station Whidbey Island  
3730 North Charles Porter Ave.  
Oak Harbor, WA 98278-5000

Dear Captain Nortier:

Thank you for your letter dated May 20, 2014 informing us of the initiation of the 106 process "to develop a Memorandum of Agreement (MOA) to resolve potential visual effects to historic properties from the Outlying Landing Field (OLF) Coupeville Security Enhancements Project" and for the invitation from the Navy to participate as a consulting party in the process representing the Citizens of Ebey's Reserve.

In response to your letter, and in accordance with the Code of Federal Regulations cited in your letter, we respectfully accept the Navy's invitation to participate, and officially request the Navy to consider us as consulting parties in regard to this undertaking, per Title 36 CFR Part 800.

We look forward to further information as to the manner and timeframe in which this consultation process will unfold, and ask that sufficient notice be provided so as to reasonably facilitate the inclusion of these consultations in our calendars as the process progresses.

Once again, thank you for this opportunity to become participants in this serious, necessary, and important process to protect the cultural landscape and significant heritage resources of Ebey's Landing National Historical Reserve and Central Whidbey Island.

Sincerely,

Michael Monson  
President

Maryon Attwood  
Director

cc: Kendal Campbell  
Cultural Resources Manager  
NAS Whidbey Island  
kendall.campbell1@navy.mil





NATIONAL PARK SERVICE  
Ebey's Landing National Historical Reserve  
Reuble Farmstead  
593 Fort Casey Road  
Coupeville, Washington 98239

November 3, 2014

Captain M. K. Nortier, U.S. Navy  
Commanding Officer  
Naval Air Station, Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98278-5000

*RE: Review under Section 106 of the National Historic Preservation Act of the Proposed Increase of Aircraft and Aircraft Operations and Development of Support Facilities, Naval Air Station Whidbey Island, Washington*

Dear Captain Nortier:

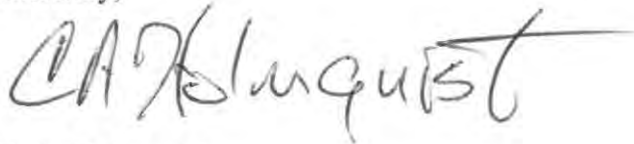
Thank you for notifying the National Park Service (NPS) of the Navy's intent to conduct Section 106 Review of the proposed increase in aircraft and aircraft operations and development of support facilities on Naval Air Station (NAS), Whidbey Island, Washington.

The NPS accepts the invitation to formally participate as a consulting party in the Section 106 Review process for this undertaking under 36CFR800.2 and 36CFR800.3(f). Please be aware that other units of the NPS system may also have concerns about the effects of increased aircraft and aircraft operations on historic properties within their jurisdictions. Therefore, Ebey's Landing National Historical Reserve is accepting this invitation on behalf of the National Park Service as a whole.

Ebey's Landing National Historical Reserve (NHR) is comprised of a large Historic District listed in the National Register of Historic Places in 1973. The boundaries of Ebey's Landing NHR coincide with those of the Historic District. A significant portion of the Navy's Outlying Landing Field (OLF) lies with the boundaries of the NHR. The remainder of the OLF has a common boundary with the NHR along Keystone Hill road.

Thank you for the opportunity to serve as a consulting party. The National Park Service looks forward to working with the U.S. Navy.

Sincerely,

A handwritten signature in black ink that reads "Craig Holmquist". The signature is written in a cursive style with a long horizontal stroke extending from the end of the name.

Craig Holmquist  
National Park Service Operations Manager  
Reuble Farmstead  
593 Fort Casey Road  
Coupeville WA 98253

Cc:

NPS - David Louter, Chief of Cultural Resources, Pacific West Region

NPS - Karen Taylor-Goodrich, Superintendent, North Cascades National Park Service Complex



## Campbell, Kendall CIV NAVFAC NW, PRW4

---

**From:** Griffin, Kristen <kristen\_griffin@partner.nps.gov>  
**Sent:** Monday, November 03, 2014 14:53  
**To:** Campbell, Kendall CIV NAVFAC NW, PRW4  
**Subject:** Accept invitation to consult on EA18G undertaking

Hi Kendall. The Trust Board does wish to be a consulting party for the Section 106 Review on the NAS 2014 Whidbey EA18G Operation undertaking. I'll have a letter out to you asap. Thanks,

--

Kristen P. Griffin  
Reserve Manager  
Ebey's Landing National Historical Reserve P.O. Box 774 Coupeville, WA 98239  
360.678.6084  
[www.nps.gov/ebla](http://www.nps.gov/ebla)





November 4, 2014

Captain M. K. Nortier  
Naval Air Station Whidbey Island  
3730 N. Charles Porter Ave.  
Oak Harbor, WA 98278-5000

**Trust Board Members**

*Lisa Meserole, Chair*  
*Jan Pickard, Vice Chair*  
*Al Sherman, Treasurer*  
*Molly Hughes, Secretary*  
*Fran Einterz*  
*Hank Florence*  
*Wilbur Bishop*  
*Eric Wutilo*  
*Jon Roberts*

*Kristen Griffin,*  
*Reserve Manager*

**Trust Board Partners**

*National Park Service*  
*Washington State Parks*  
*Island County*  
*Town of Coupeville*

Dear Captain Nortier:

On behalf of the Trust Board of Ebey's Landing National Historical Reserve, I accept your invitation to participate as a consulting party, per 36 CFR 800.3(f), in the Section 106 Review of the following federal undertaking: *Proposed Increase of Aircraft and Aircraft Operations and Development of Support Facilities, Naval Air Station Whidbey Island, Washington.*

The Trust Board is charged with administering and managing Ebey's Landing National Historical Reserve as a unit of the National Park system, and in a manner consistent with its enabling legislation (1978 National Parks and Recreation Act, P.L. 95-625) and the Interlocal Agreement of July 26, 1988 between the National Park Service, Washington State Parks and Recreation Commission, Island County, and the Town of Coupeville.

In light of these responsibilities, the Trust Board and I look forward to working with the Navy during the review process.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kristen Griffin".

Kristen Griffin  
Reserve Manager  
Trust Board of Ebey's Landing National Historical Reserve

*file*

Post Office Box 774  
Coupeville, WA 98239  
Phone (360) 678-6084  
Fax (360) 678-7490



## Campbell, Kendall CIV NAVFAC NW, PRW4

---

**From:** Debbie Thompson <DebbieT@co.island.wa.us>  
**Sent:** Tuesday, November 04, 2014 11:47  
**To:** Campbell, Kendall CIV NAVFAC NW, PRW4  
**Cc:** Jill Johnson  
**Subject:** Section 106 - Participation Process

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**Categories:** Purple Category

Proposed Increase of Aircraft and Aircraft Operations and Development of Support Facilities, Naval Air Station Whidbey Island, WA

Thank you for the invitation to participate as a consulting party in this Section 106 process. On behalf of Commissioner Jill Johnson, please consider her as a consulting party per 36 CFR 800.3(f). We will await notice of the consultation meetings which I understand will occur after the first of the year.

Should you need anything further, just let me know.

Kind Regards,

Debbie

Debbie Thompson

Clerk of the Board/Administrative Assistant to

Jill Johnson, Chair

Board of Island County Commissioners

(360) 679.7385

debbiet@co.island.wa.us



## **Campbell, Kendall CIV NAVFAC NW, PRW4**

---

**From:** Nicole Tesch <N.tesch@co.island.wa.us>  
**Sent:** Wednesday, November 05, 2014 12:23  
**To:** Campbell, Kendall CIV NAVFAC NW, PRW4  
**Cc:** Helen Price Johnson  
**Subject:** Section 106 - Participation Process

**Categories:** Purple Category

Proposed Increase of Aircraft and Aircraft Operations and Development of Support Facilities, Naval Air Station Whidbey Island, WA

Thank you for the invitation to participate as a consulting party in this Section 106 process. On behalf of Commissioner Price Johnson, please consider her as a consulting party per 36 CFR 800.3(f). We will await notice of the consultation meetings which I understand will occur after the first of the year.

Nicole Tesch

Administrative Assistant to

Commissioner Helen Price Johnson, District 1

Board of Island County Commissioners

1 NE 7th Street, PO Box 5000

Coupeville, WA 98239

Phone: 360.679.7354

Email: [n.tesch@co.island.wa.us](mailto:n.tesch@co.island.wa.us) <<mailto:n.tesch@co.island.wa.us>>

Note: email correspondence to this account is a matter of public record and subject to release under the Public Records Act.







Seattle Pacific  
UNIVERSITY

Business and Finance

3307 Third Avenue West, Suite 105  
Seattle, Washington 98119-1922

206 281 2222 office  
206 281 2388 fax

spu.edu

November 25, 2014

Department of the Navy  
Naval Air Station Whidbey Island  
Attn: Ms. Kendall Campbell, NAS Whidbey Island Cultural Resources Manager  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

Re: Proposed Increase of Aircraft and Aircraft Operations and Development of Support  
Facilities, Naval Air Station Whidbey Island, Washington – Consulting Party

To Whom It May Concern:

Thank you for extending an invitation to Seattle Pacific University (SPU) to participate in the Navy's historic properties review process related to the proposed increase in aircraft and aircraft operations and the development of support facilities at Naval Air Station Whidbey Island. SPU would like to accept this invitation and provide a representative to be considered as a consulting party in the Section 106 process described in the letter to SPU dated October 20, 2014. Darrell Jacobson, the Site Manager of the Camp Casey Conference Center, will serve as the University's representative for this process. Darrell's contact information follows below.

Darrell Jacobson, Site Manager  
Camp Casey Conference Center  
1276 Engle Road  
Coupeville, WA 98239  
360-678-1187  
djacob@spu.edu

SPU has operated the Camp Casey Conference Center since the 1950s and the site hosts 30,000 visitors a year for both indoor and outdoor athletic, educational and retreat type activities. The facilities have the capacity to lodge 642 people a day in historic buildings which feature single pane windows and uninsulated walls. As a result, the Conference Center operations can be very sensitive to the activities that go on around facility by land, sea and air.

The University is very interested to participating in the Navy's process and hopes that Mr. Jacobson will be strongly considered for participation as a consulting party through this process.

Sincerely,

Craig Kisper  
Vice President for Business and Finance





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

5090  
Ser N44/1445  
30 Jun 16

Mr. John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

Dear Mr. Fowler:

**SUBJECT: REQUEST FOR SECTION 106 COMMENTS ON THE PROPOSED DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE CONTINUATION AND INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station Whidbey Island (NAS Whidbey Island) is continuing consultation first requested on 10 October 2014 and asks for your comments on the Navy's proposed definition of the Area of Potential Effect (APE) for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosures 1 and 2).

Over the last 74 years, NAS Whidbey Island has been home to a variety of evolving naval aircraft that have addressed the technological and military demands of their time. These aircraft and their missions have played critical roles in events that have shaped our nation's history, including the rearming of Seaplanes in World War II, the introduction of Tactical Electronic Warfare during the Cold War, and the modern technological era of electronic attack and the EA-18G Growler. NAS Whidbey Island has made critical contributions to these historic events and has been on the forefront of the evolution of electronic attack technology, supporting the Department of Defense's (DoD) electronic attack mission, training, and operations.

As the home of the electronic attack aviation community for the United States Navy, NAS Whidbey Island currently provides facilities and support services for nine Carrier Air Wing (CVW) squadrons, three Expeditionary (EXP) squadrons, one Reserve squadron, and one Fleet Replacement Squadron (FRS). To continue support of the electronic attack mission at NAS Whidbey Island, the U.S. Navy proposes to:

- Continue and expand the existing electronic attack operations at NAS Whidbey Island complex, which includes Ault Field and OLF Coupeville;

- Increase electronic attack capabilities and augment the EA-18G Growler FRS to support an expanded DoD mission for identifying, tracking, and targeting in a complex electronic warfare environment;
- Construct, demolish, and renovate facilities at Ault Field to accommodate additional aircraft; and
- Station additional personnel and their family members at NAS Whidbey Island and in the surrounding community.

The above actions are the type of activities that have the potential to effect historic properties both directly and indirectly. The Navy proposes to define the direct effects component of the Area of Potential Effect (APE) as those areas where construction will occur on the installation. Maps indicating the direct effect component will become available as the Draft Environmental Impact Statement (DEIS) matures and will be used to define the proposed APE.

Consistent with historical practice, the Navy proposes to define the indirect effects component of the APE as those areas on and off the installation within the 65 dB DNL noise contours that result from air operations at NAS Whidbey Island. The DNL is the federally-accepted metric used by the Federal Aviation Administration (FAA), Environmental Protection Agency (EPA), DoD, and other federal and state agencies to assess noise effects on communities. The 65 dB DNL is used to assess compatible land uses within the DNL contours. The threshold of 65 dB DNL or less is considered to be "acceptable" for most land uses and not expected to affect historic properties.

In order to facilitate this initial discussion, we have included the most current noise contours for Ault Field and OLF Coupeville. Specifically, Enclosure 3 represents the DNL contours developed for Ault Field in the 2014 Supplemental EIS for the introduction of the P-8A aircraft, and Enclosure 4 represents the DNL contours developed for OLF Coupeville as part of the 2005 Environmental Assessment for the replacement of EA-6B aircraft with EA-18G aircraft at NAS Whidbey Island. The enclosed noise contours are the most current noise contours available. The Navy is preparing an updated noise modeling study with DNL contours for this undertaking and for the DEIS process. When updated DNL contours become available, the Navy will define the proposed APE boundaries accordingly and continue consultation.

The Navy recognizes that the proposed APE may include historic properties of interest to state and federal agencies, local governments, community groups, and individuals on and near Whidbey Island. In accordance with 36 CFR Part 800.3(f), the Navy has identified and invited the following interested parties to participate as consulting parties:

- Washington State Historic Preservation Office
- Island County Commissioners (Districts 1 and 2)

- Town of Coupeville
- National Park Service
- Trust Board of Ebey's Landing National Historical Reserve
- Washington State Parks
- Seattle Pacific University
- David Day
- Citizens of Ebey's Reserve (COER)

The Navy also understands that the APE may include properties of cultural importance and significance to members of the traditional cultural groups of Whidbey Island. In order to identify possible religious or cultural significance to affected tribes, the Navy has initiated consultation with the following tribes:

- Swinomish Indian Tribal Community
- Upper Skagit Tribe
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Lummi Nation
- Tulalip Tribes
- Suquamish Tribe
- Jamestown S'Klallam Tribe

The Navy will take into consideration the results of consultation with all identified parties in defining the APE.

If you require additional information, please contact NAS Whidbey Island Cultural Resources Program Manager, Kendall Campbell, at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil), or Tracy Schwartz, Cultural Resource Contract Support, at (360) 257-5742 or at [tracy.schwartz.ctr@navy.mil](mailto:tracy.schwartz.ctr@navy.mil).

We look forward to continued consultation and appreciate your comments on the proposed definition of the Area of Potential Effect for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island.

Sincerely,



G. C. MOORE  
Captain, United States Navy  
Commanding Officer

5090  
Ser N44/1445  
30 Jun 16

- Enclosures:
1. NAS Whidbey Island Site Locations
  2. NAS Whidbey Island Ault Field and Seaplane Base
  3. 2013 Navy Noise Study DNL Contours
  4. 2005 Navy Noise Study DNL Contours



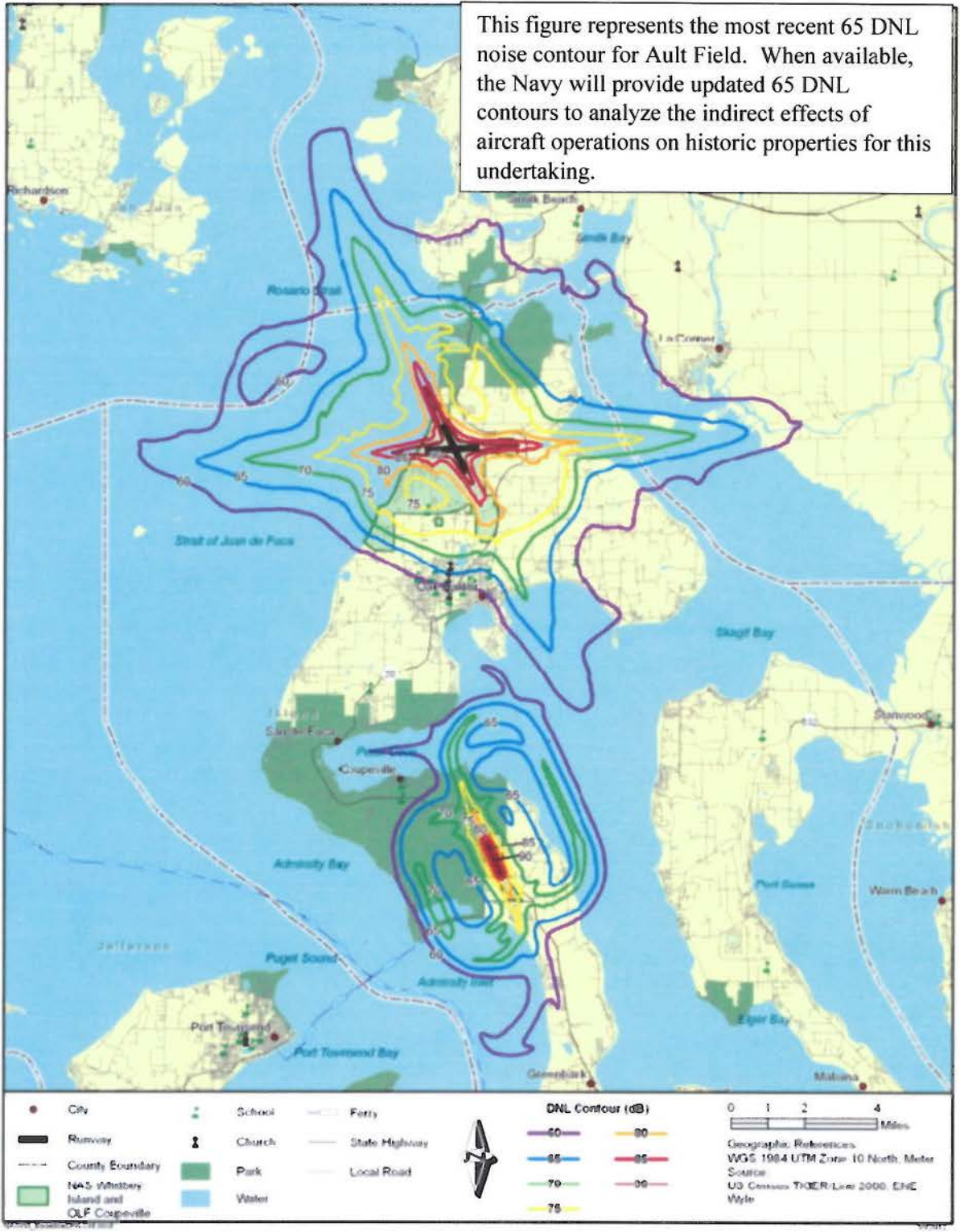




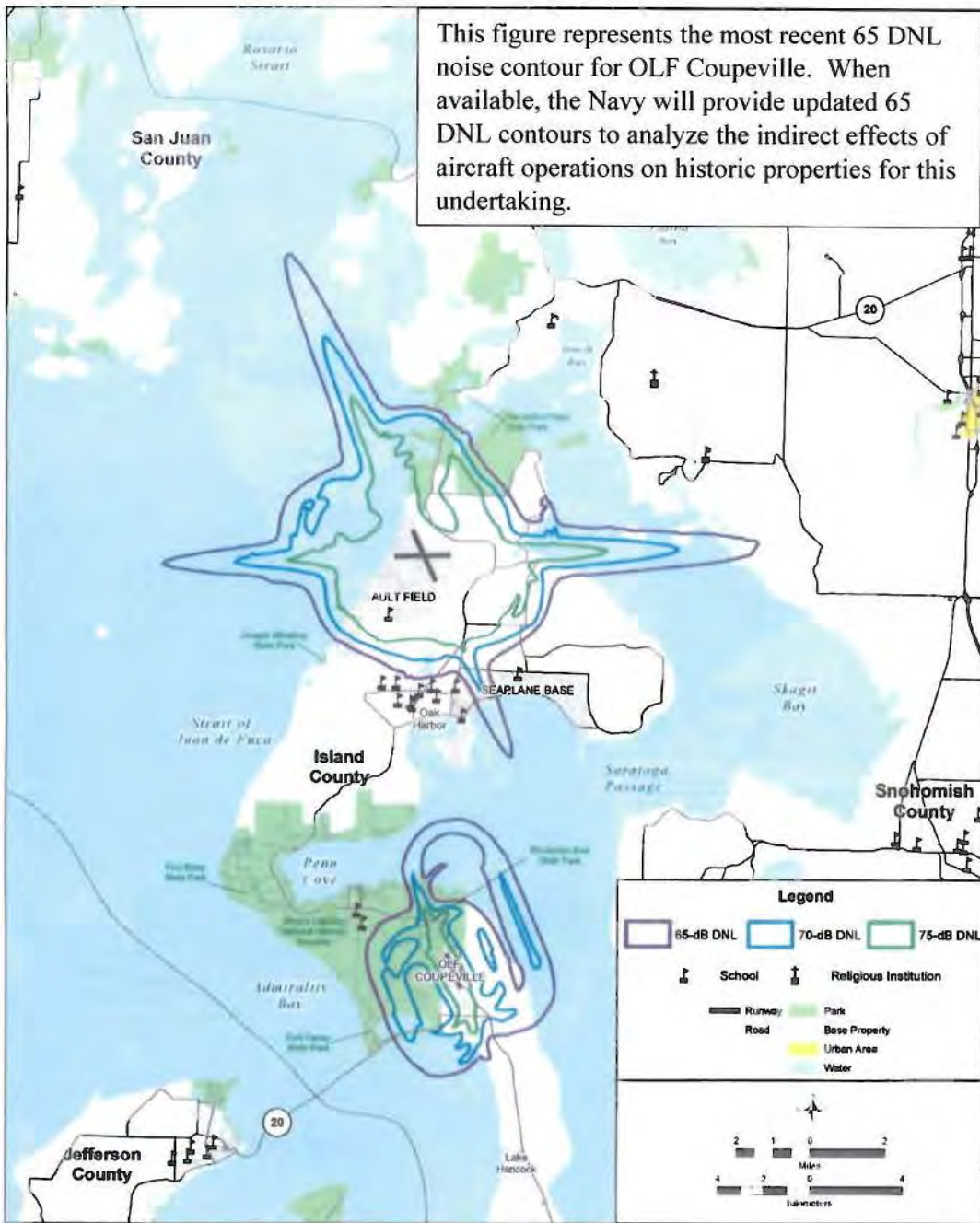
Enclosure (2)



This figure represents the most recent 65 DNL noise contour for Ault Field. When available, the Navy will provide updated 65 DNL contours to analyze the indirect effects of aircraft operations on historic properties for this undertaking.



Enclosure (3)



Source: Wyle Laboratories Inc. 2004.

Enclosure (4)



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

5090  
Ser N44/1451  
30 Jun 16

Allyson Brooks, PhD  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
1063 South Capital Way, Suite 106  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: LOG NO. 102214-23-USN: REQUEST FOR SECTION 106 COMMENTS ON THE PROPOSED DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE CONTINUATION AND INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station Whidbey Island (NAS Whidbey Island) is continuing consultation first requested on 10 October 2014 (DAHP Log No. 102214-23-USN) and asks for your comments on the Navy's proposed definition of the Area of Potential Effect (APE) for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosures 1 and 2).

Over the last 74 years, NAS Whidbey Island has been home to a variety of evolving naval aircraft that have addressed the technological and military demands of their time. These aircraft and their missions have played critical roles in events that have shaped our nation's history, including the rearming of Seaplanes in World War II, the introduction of Tactical Electronic Warfare during the Cold War, and the modern technological era of electronic attack and the EA-18G Growler. NAS Whidbey Island has made critical contributions to these historic events and has been on the forefront of the evolution of electronic attack technology, supporting the Department of Defense's (DoD) electronic attack mission, training, and operations.

As the home of the electronic attack aviation community for the United States Navy, NAS Whidbey Island currently provides facilities and support services for nine Carrier Air Wing (CVW) squadrons, three Expeditionary (EXP) squadrons, one Reserve squadron, and one Fleet Replacement Squadron (FRS). To continue support of the electronic attack mission at NAS Whidbey Island, the U.S. Navy proposes to:

- Continue and expand the existing electronic attack operations at NAS Whidbey Island complex, which includes Ault Field and OLF Coupeville;

- Increase electronic attack capabilities and augment the EA-18G Growler FRS to support an expanded DoD mission for identifying, tracking, and targeting in a complex electronic warfare environment;
- Construct, demolish, and renovate facilities at Ault Field to accommodate additional aircraft; and
- Station additional personnel and their family members at NAS Whidbey Island and in the surrounding community.

The above actions are the type of activities that have the potential to effect historic properties both directly and indirectly. The Navy proposes to define the direct effects component of the Area of Potential Effect (APE) as those areas where construction will occur on the installation. Maps indicating the direct effect component will become available as the Draft Environmental Impact Statement (DEIS) matures and will be used to define the proposed APE.

Consistent with historical practice, the Navy proposes to define the indirect effects component of the APE as those areas on and off the installation within the 65 dB DNL noise contours that result from air operations at NAS Whidbey Island. The DNL is the federally-accepted metric used by the Federal Aviation Administration (FAA), Environmental Protection Agency (EPA), DoD, and other federal and state agencies to assess noise effects on communities. The 65 dB DNL is used to assess compatible land uses within the DNL contours. The threshold of 65 dB DNL or less is considered to be "acceptable" for most land uses and not expected to affect historic properties.

In order to facilitate this initial discussion, we have included the most current noise contours for Ault Field and OLF Coupeville. Specifically, Enclosure 3 represents the DNL contours developed for Ault Field in the 2014 Supplemental EIS for the introduction of the P-8A aircraft, and Enclosure 4 represents the DNL contours developed for OLF Coupeville as part of the 2005 Environmental Assessment for the replacement of EA-6B aircraft with EA-18G aircraft at NAS Whidbey Island. The enclosed noise contours are the most current noise contours available. The Navy is preparing an updated noise modeling study with DNL contours for this undertaking and for the DEIS process. When updated DNL contours become available, the Navy will define the proposed APE boundaries accordingly and continue consultation.

The Navy recognizes that the proposed APE may include historic properties of interest to state and federal agencies, local governments, community groups, and individuals on and near Whidbey Island. In accordance with 36 CFR Part 800.3(f), the Navy has identified and invited the following interested parties to participate as consulting parties:

- Advisory Council on Historic Preservation
- Island County Commissioners (Districts 1 and 2)
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- David Day
- Citizens of Ebey's Reserve (COER)

The Navy also understands that the APE may include properties of cultural importance and significance to members of the traditional cultural groups of Whidbey Island. In order to identify possible religious or cultural significance to affected tribes, the Navy has initiated consultation with the following tribes:


- Swinomish Indian Tribal Community
- Upper Skagit Tribe
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Lummi Nation
- Tulalip Tribes
- Suquamish Tribe
- Jamestown S'Klallam Tribe

The Navy will take into consideration the results of consultation with all identified parties in defining the APE.

If you require additional information, please contact NAS Whidbey Island Cultural Resources Program Manager, Kendall Campbell, at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil), or Tracy Schwartz, Cultural Resource Contract Support, at (360) 257-5742 or at [tracy.schwartz.ctr@navy.mil](mailto:tracy.schwartz.ctr@navy.mil).

We look forward to continued consultation and appreciate your comments on the proposed definition of the Area of Potential Effect for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island.

Sincerely,

  
A handwritten signature in black ink, appearing to read "G. C. Moore", is written over a vertical line that extends from the word "Sincerely," down to the typed name below.

G. C. MOORE  
Captain, United States Navy  
Commanding Officer

5090  
Ser N44/1451  
30 Jun 16

- Enclosures:
1. NAS Whidbey Island Site Locations
  2. NAS Whidbey Island Ault Field and Seaplane Base
  3. 2013 Navy Noise Study DNL Contours
  4. 2005 Navy Noise Study DNL Contours



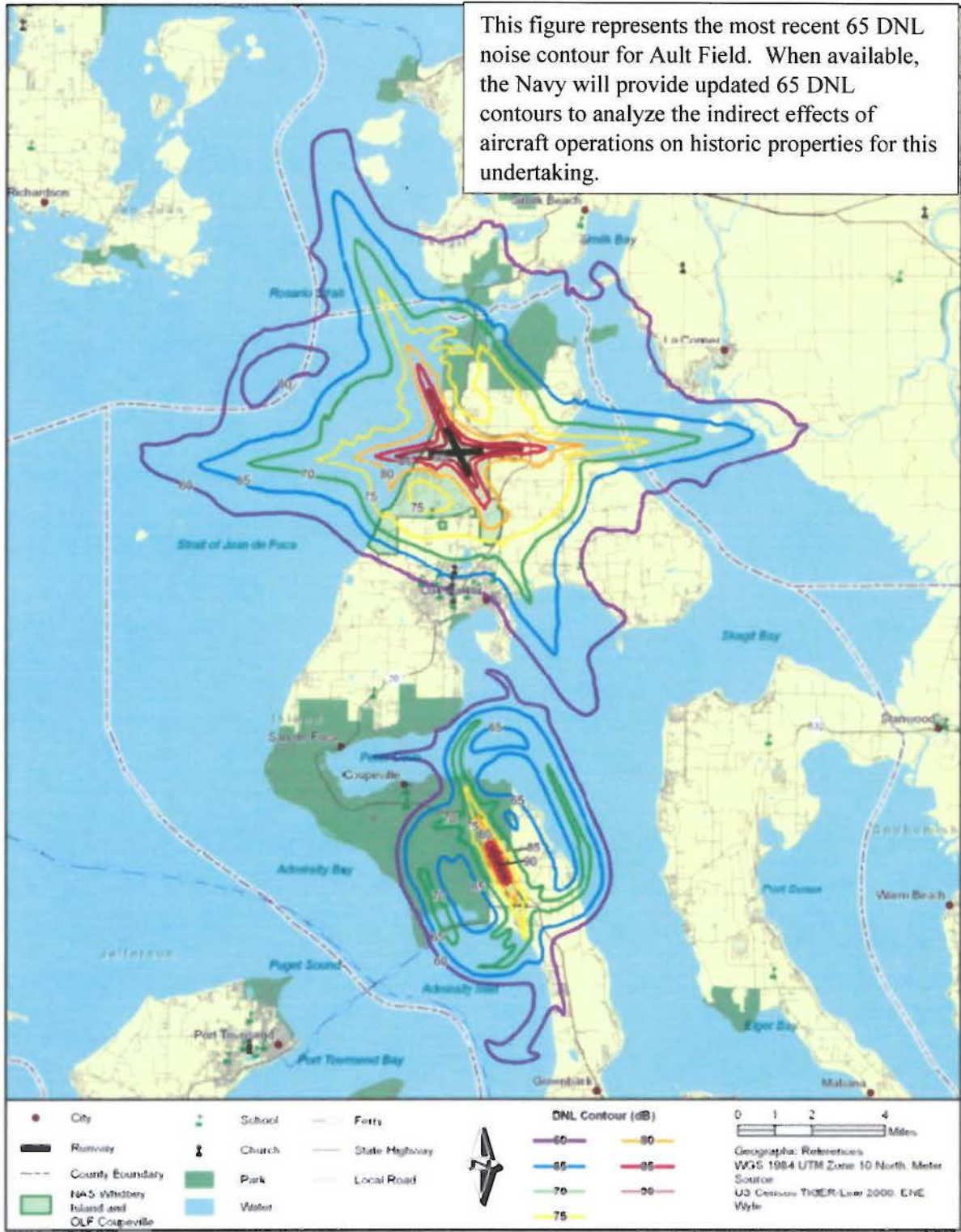




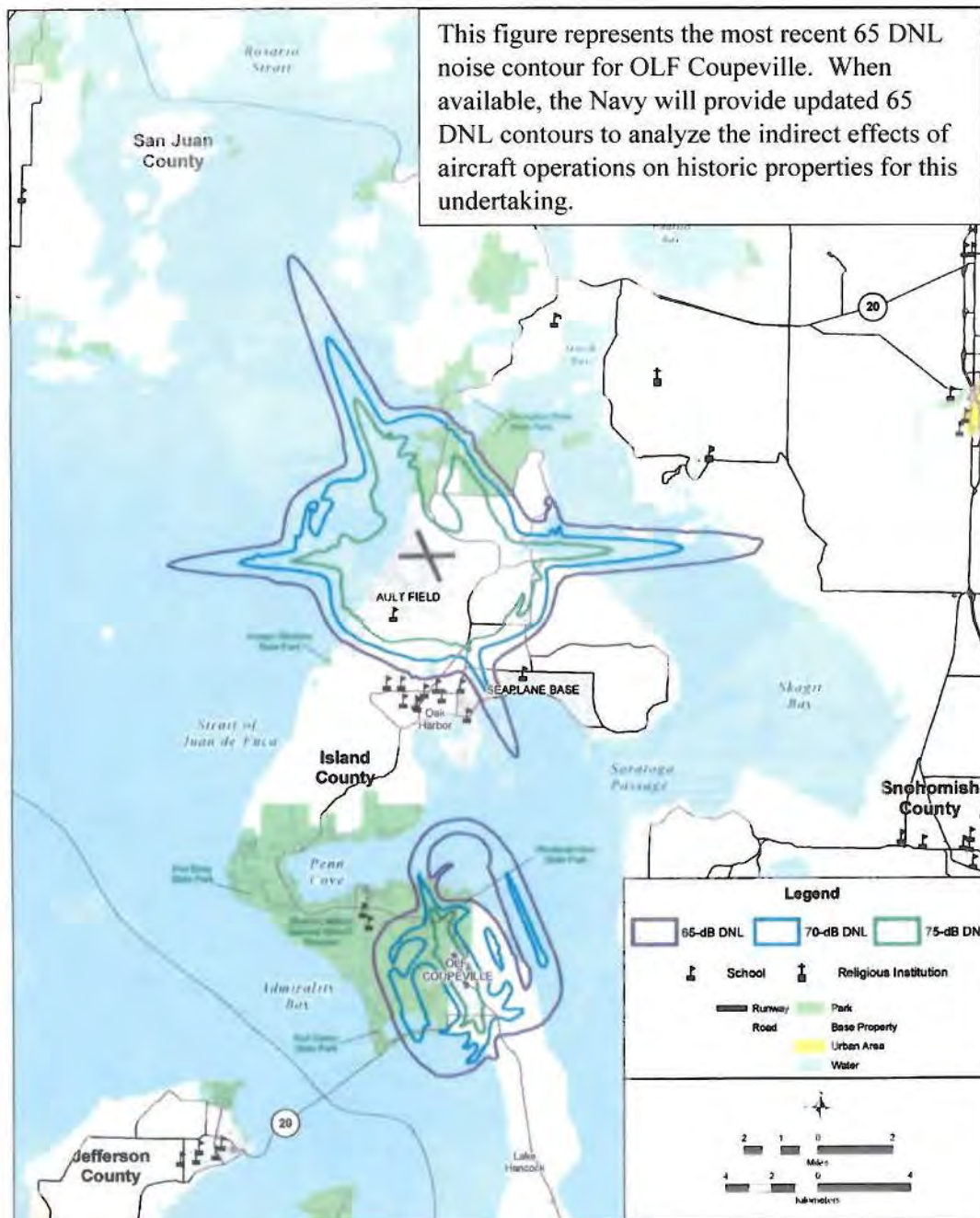
Enclosure (2)



This figure represents the most recent 65 DNL noise contour for Ault Field. When available, the Navy will provide updated 65 DNL contours to analyze the indirect effects of aircraft operations on historic properties for this undertaking.



Enclosure (3)



Source: Wyle Laboratories Inc. 2004.

Enclosure (4)



DEPARTMENT OF THE NAVY  
NAVAL AIR STATION WHIDBEY ISLAND  
3730 NORTH CHARLES PORTER AVENUE  
OAK HARBOR, WA 98278-3000

5090  
Ser N44/1446  
30 Jun 16

Mr. David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Mr. Brownell:

**SUBJECT: REQUEST FOR SECTION 106 COMMENTS ON THE PROPOSED DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE CONTINUATION AND INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station Whidbey Island (NAS Whidbey Island) is asking for your comments on the Navy's proposed definition of the Area of Potential Effect (APE) for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosures 1 and 2).

Over the last 74 years, NAS Whidbey Island has been home to a variety of evolving naval aircraft that have addressed the technological and military demands of their time. These aircraft and their missions have played critical roles in events that have shaped our nation's history, including the rearming of Seaplanes in World War II, the introduction of Tactical Electronic Warfare during the Cold War, and the modern technological era of electronic attack and the EA-18G Growler. NAS Whidbey Island has made critical contributions to these historic events and has been on the forefront of the evolution of electronic attack technology, supporting the Department of Defense's (DoD) electronic attack mission, training, and operations.

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The Navy understands that the project area and its surrounding location may have cultural importance and significance to the Jamestown S'Klallam Tribe. Section 106 of the NHPA requires federal agencies to seek information from tribes likely to have knowledge of, or concerns with, historic resources within the project's APE. We are specifically seeking your comments on our proposed APE and will continue consultation in the near future to identify properties that may have religious or cultural significance and may be eligible for listing in the National Register of Historic Places, including Traditional Cultural Properties.


We appreciate any assistance you could provide us in our efforts to comply with Section 106 of the NHPA. Please be assured that the Navy will treat any information you share with us with the degree of confidentiality that is required in Section 800.11(c) of the NHPA, or with any other special restrictions you may require.

5090  
Ser N44/1446  
30 Jun 16

If you require additional information, please contact NAS Whidbey Island Cultural Resources Program Manager, Kendall Campbell, at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil), or Tracy Schwartz, Cultural Resource Contract Support, at (360) 257-5742 or at [tracy.schwartz.ctr@navy.mil](mailto:tracy.schwartz.ctr@navy.mil).

We look forward to continued consultation and appreciate your comments on the proposed definition of the Area of Potential Effect for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island.

Sincerely,



G. C. MOORE  
Captain, United States Navy  
Commanding Officer

Enclosures: 

1. NAS Whidbey Island Site Locations
2. NAS Whidbey Island Ault Field and Seaplane Base
3. 2013 Navy Noise Study DNL Contours
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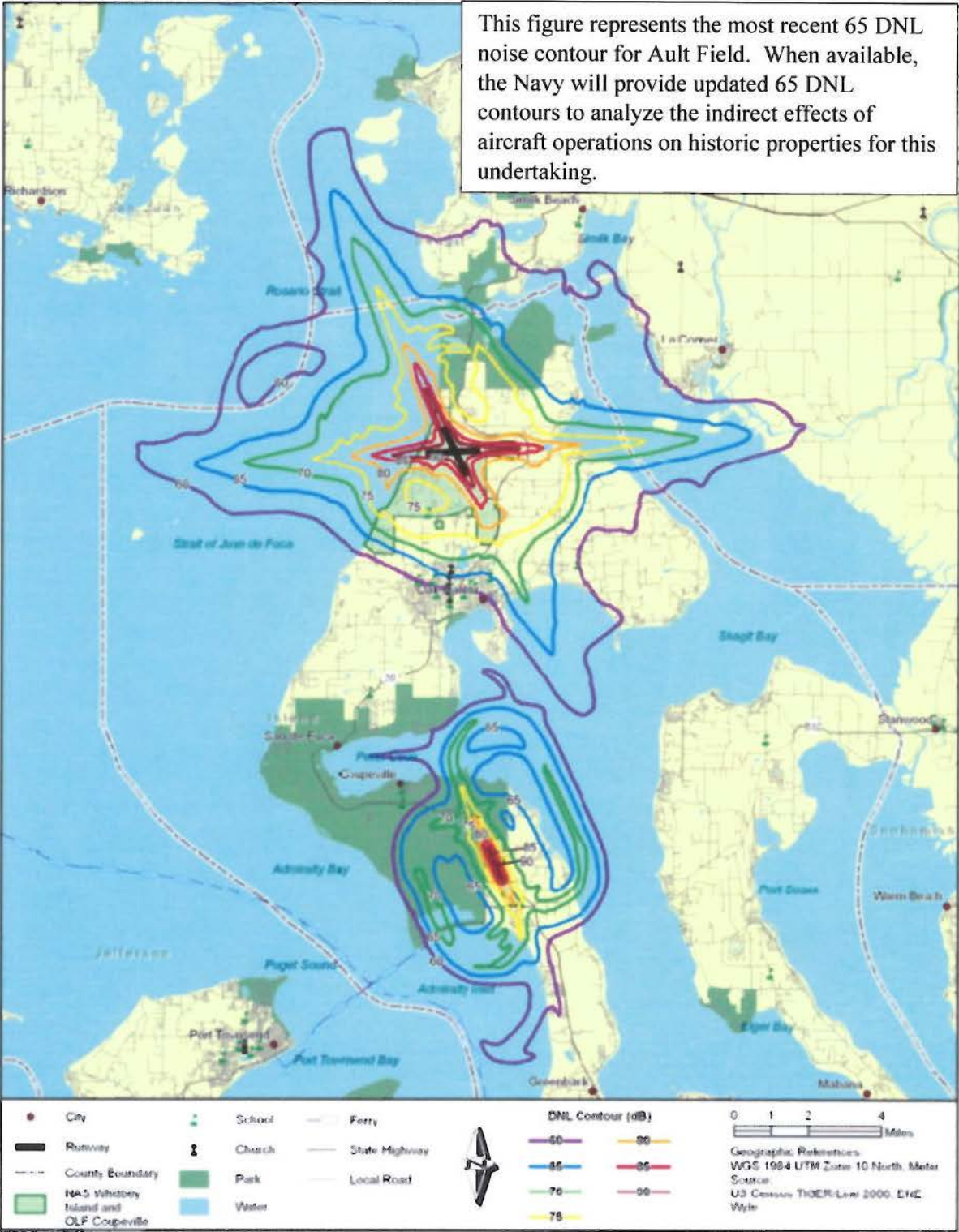




Enclosure (2)

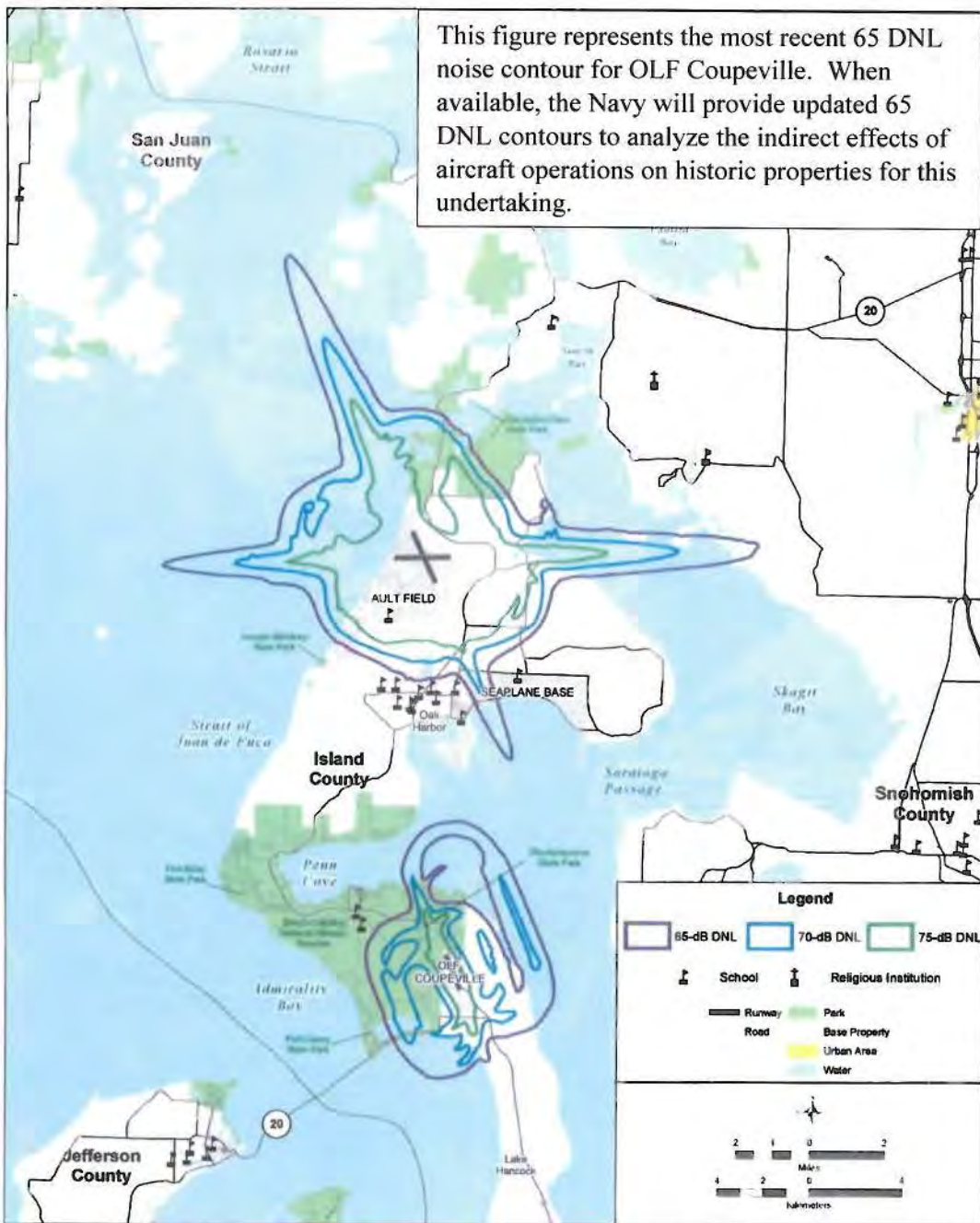


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Enclosure (3)





Source: Wyle Laboratories Inc. 2004.

Enclosure (4)





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

5090  
Ser N44/1446  
30 Jun 16

Mr. Ken Pickard  
President  
Citizens of Ebey's Reserve  
P.O. Box 202  
Coupeville, WA 98239

Dear Mr. Pickard:

**SUBJECT: REQUEST FOR SECTION 106 COMMENTS ON THE PROPOSED DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE CONTINUATION AND INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

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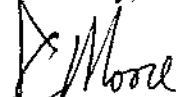
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We look forward to continued consultation and appreciate your comments on the proposed definition of the Area of Potential Effect for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island.

Sincerely,



G. C. MOORE  
Captain, United States Navy  
Commanding Officer

5090  
Ser N44/1447  
30 Jun 16

Enclosures: 1. NAS Whidbey Island Site Locations  
2. NAS Whidbey Island Ault Field and Seaplane Base  
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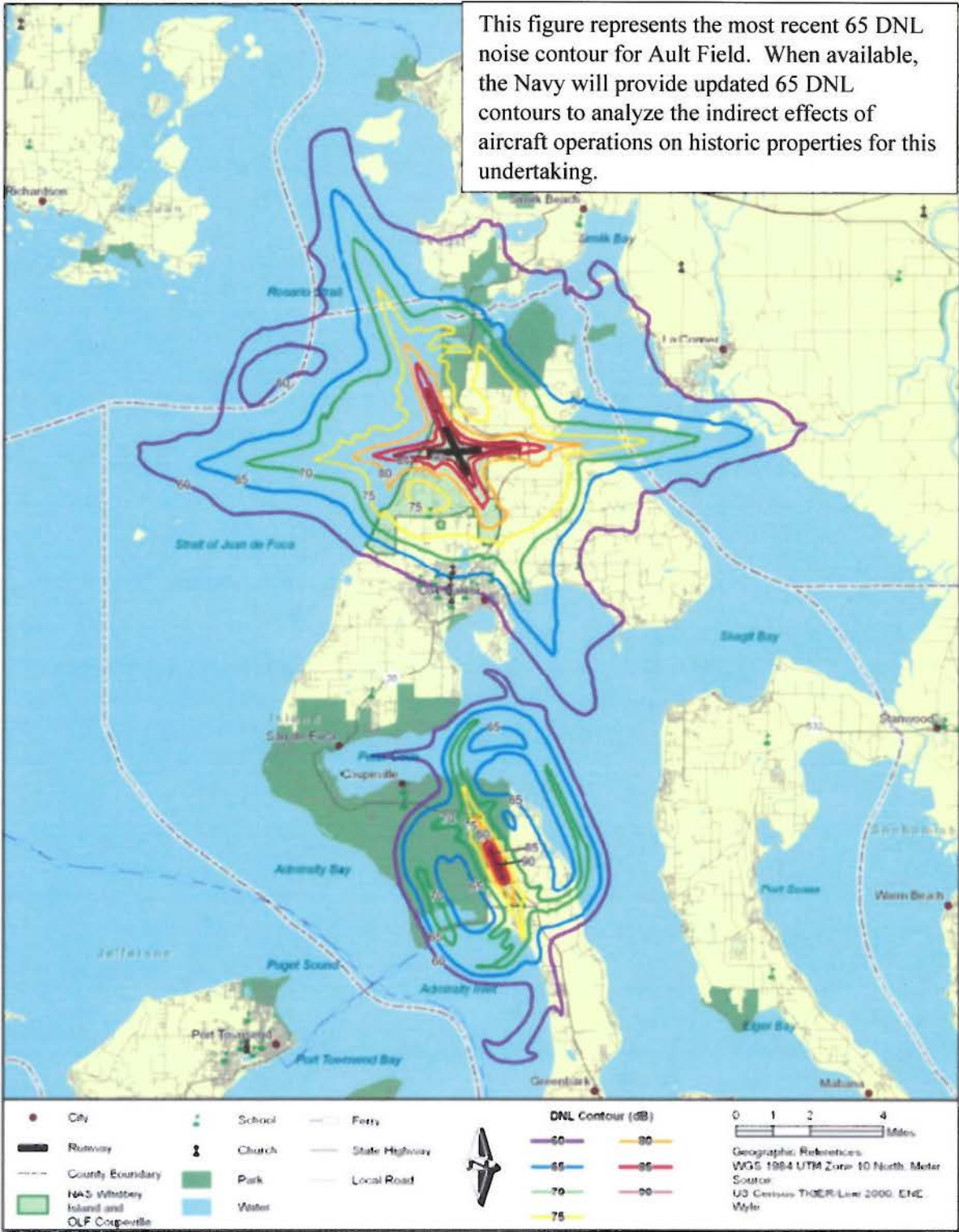






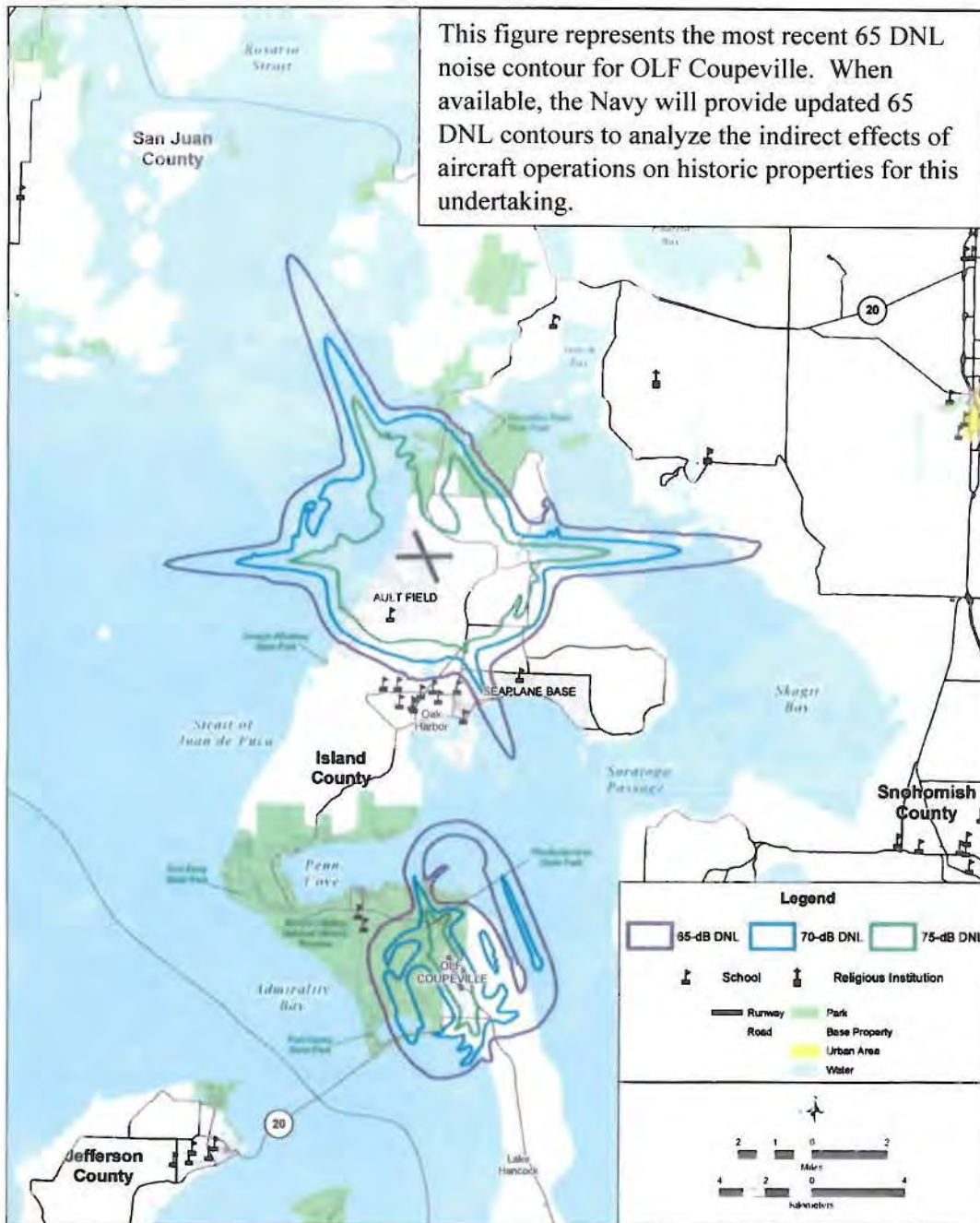
Enclosure (2)

This figure represents the most recent 65 DNL noise contour for Ault Field. When available, the Navy will provide updated 65 DNL contours to analyze the indirect effects of aircraft operations on historic properties for this undertaking.



Enclosure (3)





Source: Wyle Laboratories Inc. 2004.

Enclosure (4)



## Kirchler-Owen, Leslie

---

**From:** Campbell, Kendall D CIV NAVFAC NW, PRW4 <kendall.campbell1@navy.mil>  
**Sent:** Friday, October 21, 2016 4:11 PM  
**To:** Kirchler-Owen, Leslie  
**Subject:** FW: NAS Whidbey Island Section 106 consultation for Proposed Increase of EA-18G Aircraft and Operations  
**Signed By:** kendall.campbell1@navy.mil

FYSA

-----Original Message-----

**From:** Campbell, Kendall D CIV NAVFAC NW, PRW4  
**Sent:** Tuesday, July 05, 2016 12:08 PM  
**To:** 'Brooks, Allyson (DAHP)'; 'Katharine R. Kerr'  
**Cc:** Schwartz, Tracy CTR NAVFAC NW, EV2  
**Subject:** NAS Whidbey Island Section 106 consultation for Proposed Increase of EA-18G Aircraft and Operations

Consultation Partners,

In continuation of section 106 consultation for the Proposed Increase of EA-18G Growler Aircraft and Aircraft Operations and Development of Support Facilities at Naval Air Station Whidbey Island (NASWI), you will soon be receiving correspondence from NASWI inviting you to comment on our proposed definition of the Area of Potential Effect (APE). Since some time has passed since we began section 106 consultation on this undertaking and we have experienced some issues with mail delivery, we wanted to reach out via email to let you know you should soon be receiving a consultation letter from us via regular mail. If you do not receive this letter in the next 10 days please let me know.

Please feel free to contact me at any time during our consultation process if you have questions or want to know where we are at in the section 106 process. To ensure that your concerns are effectively taken into consideration and to help facilitate development of our final determination of the APE, we would appreciate receiving written comments back by 1 September 2016 in order to prepare our determination of the APE. Please send comments to myself at kendall.campbell1@navy.mil or Tracy Schwartz, Cultural Resource Contract Support, at tracy.schwartz.ctr@navy.mil.

Again, please do not hesitate to contact me with questions. We look forward to continuing consultation and building partnerships throughout the section 106 process. If you feel I have not included the appropriate representative for consultation on this email list please let me know.

All My Best,  
Kendall

Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexington Dr.  
Oak Harbor, WA 98278-3500  
Kendall.campbell1@navy.mil  
360-257-6780





Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexington Dr.  
Oak Harbor, WA 98278-3500  
Kendall.campbell1@navy.mil  
360-257-6780

**From:** Schwartz, Tracy CTR NAVFAC NW, EV2  
**To:** ["106 \(DAHP\)"](#)  
**Cc:** [Campbell, Kendall D CIV NAVFAC NW, PRW4](#)  
**Subject:** Log No. 102214-23-USN: Comments on the APE for the Proposed Increase of EA-18G Growler Aircraft and Aircraft Operations and Development of Support Facilities, NAS Whidbey Island  
**Date:** Wednesday, July 06, 2016 6:22:00  
**Attachments:** [Growler APE for Comments, dtd 30 June 16 \(SHPO\).pdf](#)

---

Dr. Brooks,

Please find our letter continuing section 106 consultation and asking for comments on the proposed definition of the Area of Potential Effect for the proposed increase of EA-18G Growler aircraft operations and development of support facilities at Naval Air Station (NAS) Whidbey Island (Log No. 102214-23-USN).

Please CC Kendall Campbell on all correspondence.

Thank you!  
-Tracy

-Tracy Schwartz

Cultural Resource Contract Support  
Naval Air Station Whidbey Island

Phone: 360.257.5742  
Email: [tracy.schwartz.ctr@navy.mil](mailto:tracy.schwartz.ctr@navy.mil)





**From:** [Campbell, Kendall D CIV NAVFAC NW, PRW4](#)  
**To:** [Romero, Joseph CAPT USFF, N01L](#); [Padgett, Lisa M CIV USFF, N46](#); [Stallings, Sarah CIV NAVFAC Atlantic](#); [Williamson, Todd H CIV NAVFAC LANT, EV](#); [Hall, Amberly CIV NAVFAC LANT, Counsel](#); [Sackett, Russell H CIV NAVFAC NW, EV22](#); [Bishop, Laura E LCDR RLSO NW, BANGOR](#); [Bianchi, Michael C NAVFAC NW, PRW4](#); [Bengtson, Melanie L CIV NAVFAC NW, PRW4](#); [Schwartz, Tracy CTR NAVFAC NW, EV2](#); [Parr, Timothy R LCDR OJAG, CODE 13](#); [McCurdy, Caren L CAPT RLSO NW, BREMERTON](#)  
**Cc:** [Quay, Erin C LCDR USFF, N01L](#); [Shurling, Cynthia](#); [Kirchler-Owen, Leslie](#)  
**Subject:** FW: Response to APE Growler Operations  
**Date:** Wednesday, July 06, 2016 16:50:53

---

Please find below my acknowledgement of receipt to Dr. Brooks.

Best,  
Kendall

Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexinton Dr.  
Oak Harbor, WA 98278-3500  
Kendall.campbell1@navy.mil  
360-257-6780

-----Original Message-----

From: Campbell, Kendall D CIV NAVFAC NW, PRW4  
Sent: Wednesday, July 06, 2016 4:33 PM  
To: 'Brooks, Allyson (DAHP)'  
Cc: Baumgart, Jim (GOV); Whitlam, Rob (DAHP)  
Subject: RE: Response to APE Growler Operations

Allyson,

Thank you for your prompt response. I appreciate your comments and want to assure you that we are not seeking your concurrence at this time. As stated in our letter, the correspondence is meant to initiate a discussion on our proposed definition of the APE. Your comments are exactly what we were looking for and we hope to have a response with the clarification you desire before we request your concurrence on our definition of the APE.

Thank you again for your response and I will make sure it is forwarded to Captain Moore.

All My Best,  
Kendall

Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexinton Dr.  
Oak Harbor, WA 98278-3500  
Kendall.campbell1@navy.mil  
360-257-6780

-----Original Message-----



From: Brooks, Allyson (DAHP) [<mailto:Allyson.Brooks@DAHP.WA.GOV>]  
Sent: Wednesday, July 06, 2016 2:45 PM  
To: Campbell, Kendall D CIV NAVFAC NW, PRW4  
Cc: Whitlam, Rob (DAHP); Baumgart, Jim (GOV); KKerr@acp.gov; Leonard Forsman; 'Dennis Lewarch'; ryoung@tulaliptribes-nsn.gov; Jpeters@swinomish.nsn.us  
Subject: [Non-DoD Source] Response to APE Growler Operations

Kendall - Please forward to Captain Moore.

Thank you.

All the best

Allyson

Allyson Brooks Ph.D.

State Historic Preservation Officer

Dept. of Archaeology and Historic Preservation

1110 Capitol Way South, Suite 30

360-586-3066

Cell:360-480-6922

Like DAHP on Facebook <<https://www.facebook.com/pages/Department-of-Archaeology-and-Historic-Preservation/222364134453940>> !

Please note that in order to streamline responses plus save time and money, DAHP now requires that all documents related to project reviews be submitted electronically. Reports, forms, photos, etc. must now be submitted in PDF format through DAHP's on-line WISAARD system. For more information about interacting with WISAARD visit: <http://www.dahp.wa.gov/wisaard-and-historic-property-inventory-phase-iii-rollout> <<http://www.dahp.wa.gov/wisaard-and-historic-property-inventory-phase-iii-rollout>> .

Description: logo option FINAL - Small





July 7, 2016

Captain G.C. Moore  
Naval Air Station Whidbey Island  
Department of the Navy  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98278-5000

Log No.: 102214-23-USN  
Re: Increase in EA-18G Growler Operations Project

Dear Captain Moore:

Thank you for contacting us. We reviewed the materials you provided for the proposed *Continuation and Increase in EA-18G Growler Operations Project* at Naval Air Station Whidbey Island, Whidbey Island, Island County, Washington.

We appreciate your identification of the proposed Area of Potential Effect (APE) however, we have serious concerns about the defined APE as detailed in your letter and associated maps. We therefore cannot concur with your APE until we receive additional information.

We specifically need to understand the location of areas that are proposed to contain flight paths associated with Growlers operations at Ault Field and OLF Coupeville. This additional information for the purposes of developing the APE should include identifying areas containing the flight paths for the return to Ault Field after field carrier landing practice and any areas of general flight Growler practices. These routes may generate noise impacts for the neighboring communities in the San Juan Islands, Port Townsend, and the Olympic Peninsula, and may need to be considered part of the APE.

While we appreciate that for security reasons you may not be able to supply us with actual flight paths, you should be able to identify large areas that will contain the flights for the purpose of the APE. Again, we need to understand the noise impacts from practice flights whether touch and go at OLF or general practice from Ault Field.



Captain G.C. Moore  
July 6, 2016  
Page 2

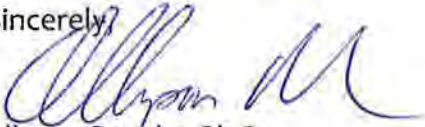
We also need the additional information and maps detailing actual construction areas that due to increased operations will result in increased personnel and family members at NAS Whidbey and the surrounding communities. We would also appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer in compliance with the Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36CFR800.4.

Should additional information become available, our assessment may be revised. We look forward to your response on this information request.

If you have any questions, please contact me at 360.586.3066 or at [Allyson.brooks@dahp.wa.gov](mailto:Allyson.brooks@dahp.wa.gov).

Sincerely,



Allyson Brooks, Ph.D  
Director, State Historic Preservation Officer

cc: Kendall Campbell



## Kirchler-Owen, Leslie

---

**From:** Campbell, Kendall D CIV NAVFAC NW, PRW4 <kendall.campbell1@navy.mil>  
**Sent:** Wednesday, July 06, 2016 6:48 PM  
**To:** Romero, Joseph CAPT USFF, N01L; Padgett, Lisa M CIV USFF, N46; Stallings, Sarah CIV NAVFAC Atlantic; Williamson, Todd H CIV NAVFAC LANT, EV; Hall, Amberly CIV NAVFAC LANT, Counsel; Sackett, Russell H CIV NAVFAC NW, EV22; Bishop, Laura E LCDR RLSO NW, BANGOR; Bianchi, Michael C NAVFAC NW, PRW4; Bengtson, Melanie L CIV NAVFAC NW, PRW4; Schwartz, Tracy CTR NAVFAC NW, EV2; Parr, Timothy R LCDR OJAG, CODE 13; McCurdy, Caren L CAPT RLSO NW, BREMERTON  
**Cc:** Quay, Erin C LCDR USFF, N01L; Shurling, Cynthia; Kirchler-Owen, Leslie  
**Subject:** FW: Response to APE Growler Operations  
**Attachments:** image001.jpg; 0914\_001.pdf  
**Signed By:** kendall.campbell1@navy.mil

All,

Please find attached Dr. Allyson Brooks response to our proposed APE. I have responded briefly to her emailing acknowledging receipt and clarifying that we are not currently seeking her concurrence at this time. I will forward that email next for the administrative record.

I propose that we meet briefly next week to discuss a response to her letter and determine what information we can include. I do not anticipate we would need more than 30 minutes.

Best,  
Kendall

Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexington Dr.  
Oak Harbor, WA 98278-3500  
Kendall.campbell1@navy.mil  
360-257-6780

-----Original Message-----

**From:** Brooks, Allyson (DAHP) [mailto:Allyson.Brooks@DAHP.WA.GOV]  
**Sent:** Wednesday, July 06, 2016 2:45 PM  
**To:** Campbell, Kendall D CIV NAVFAC NW, PRW4  
**Cc:** Whitlam, Rob (DAHP); Baumgart, Jim (GOV); KKerr@acp.gov; Leonard Forsman; 'Dennis Lewarch'; ryoung@tulaliptribes-nsn.gov; Jpeters@swinomish.nsn.us  
**Subject:** [Non-DoD Source] Response to APE Growler Operations

Kendall - Please forward to Captain Moore.

Thank you.

All the best

Allyson

Allyson Brooks Ph.D.

State Historic Preservation Officer

Dept. of Archaeology and Historic Preservation

1110 Capitol Way South, Suite 30

360-586-3066

Cell:360-480-6922

Like DAHP on Facebook <<https://www.facebook.com/pages/Department-of-Archaeology-and-Historic-Preservation/222364134453940>> !

Please note that in order to streamline responses plus save time and money, DAHP now requires that all documents related to project reviews be submitted electronically. Reports, forms, photos, etc. must now be submitted in PDF format through DAHP's on-line WISAARD system. For more information about interacting with WISAARD visit: <http://www.dahp.wa.gov/wisaard-and-historic-property-inventory-phase-iii-rollout> <<http://www.dahp.wa.gov/wisaard-and-historic-property-inventory-phase-iii-rollout>> .

Description: logo option FINAL - Small





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

5090  
Ser N44/1499  
12 Jul 16

The Honorable Richard Hannold  
Island County Commissioner  
PO Box 5000  
Coupeville, WA 98239-5000

Dear Commissioner Hannold:

**SUBJECT: REQUEST FOR SECTION 106 COMMENTS ON THE PROPOSED DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE CONTINUATION AND INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station Whidbey Island (NAS Whidbey Island) is asking for your comments on the Navy's proposed definition of the Area of Potential Effect (APE) for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosures 1 and 2).

Over the last 74 years, NAS Whidbey Island has been home to a variety of evolving naval aircraft that have addressed the technological and military demands of their time. These aircraft and their missions have played critical roles in events that have shaped our nation's history, including the rearming of Seaplanes in World War II, the introduction of Tactical Electronic Warfare during the Cold War, and the modern technological era of electronic attack and the EA-18G Growler. NAS Whidbey Island has made critical contributions to these historic events and has been on the forefront of the evolution of electronic attack technology, supporting the Department of Defense's (DoD) electronic attack mission, training, and operations.

As the home of the electronic attack aviation community for the United States Navy, NAS Whidbey Island currently provides facilities and support services for nine Carrier Air Wing (CVW) squadrons, three Expeditionary (EXP) squadrons, one Reserve squadron, and one Fleet Replacement Squadron (FRS). To continue support of the electronic attack mission at NAS Whidbey Island, the U.S. Navy proposes to:

- Continue and expand the existing electronic attack operations at NAS Whidbey Island complex, which includes Ault Field and OLF Coupeville;
- Increase electronic attack capabilities and augment the EA-18G Growler FRS to support an expanded DoD mission for identifying, tracking, and targeting in a complex electronic warfare environment;
- Construct, demolish, and renovate facilities at Ault Field to accommodate additional aircraft; and

- Station additional personnel and their family members at NAS Whidbey Island and in the surrounding community.

The above actions are the type of activities that have the potential to effect historic properties both directly and indirectly. The Navy proposes to define the direct effects component of the Area of Potential Effect (APE) as those areas where construction will occur on the installation. Maps indicating the direct effect component will become available as the Draft Environmental Impact Statement (DEIS) matures and will be used to define the proposed APE.

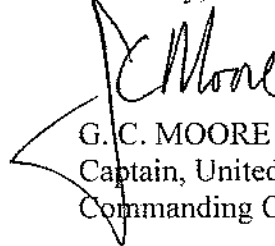
Consistent with historical practice, the Navy proposes to define the indirect effects component of the APE as those areas on and off the installation within the 65 dB DNL noise contours that result from air operations at NAS Whidbey Island. The DNL is the federally-accepted metric used by the Federal Aviation Administration (FAA), Environmental Protection Agency (EPA), DoD, and other federal and state agencies to assess noise effects on communities. The 65 dB DNL is used to assess compatible land uses within the DNL contours. The threshold of 65 dB DNL or less is considered to be "acceptable" for most land uses and not expected to affect historic properties.

In order to facilitate this initial discussion, we have included the most current noise contours for Ault Field and OLF Coupeville. Specifically, Enclosure 3 represents the DNL contours developed for Ault Field in the 2014 Supplemental EIS for the introduction of the P-8A aircraft, and Enclosure 4 represents the DNL contours developed for OLF Coupeville as part of the 2005 Environmental Assessment for the replacement of EA-6B aircraft with EA-18G aircraft at NAS Whidbey Island. The enclosed noise contours are the most current noise contours available. The Navy is preparing an updated noise modeling study with DNL contours for this undertaking and for the DEIS process. When updated DNL contours become available, the Navy will define the proposed APE boundaries accordingly and continue consultation.

If you require additional information, please contact NAS Whidbey Island Cultural Resources Program Manager, Kendall Campbell, at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil), or Tracy Schwartz, Cultural Resource Contract Support, at (360) 257-5742 or at [tracy.schwartz.ctr@navy.mil](mailto:tracy.schwartz.ctr@navy.mil).

We look forward to continued consultation and appreciate your comments on the proposed definition of the Area of Potential Effect for the continuation and increase of EA-18G Growler operations at NAS Whidbey Island.

Sincerely,



G. C. MOORE  
Captain, United States Navy  
Commanding Officer

5090  
Ser N44/1499  
12 Jul 16

- Enclosures:
1. NAS Whidbey Island Site Locations
  2. NAS Whidbey Island Ault Field and Seaplane Base
  3. 2013 Navy Noise Study DNL Contours
  4. 2005 Navy Noise Study DNL Contours

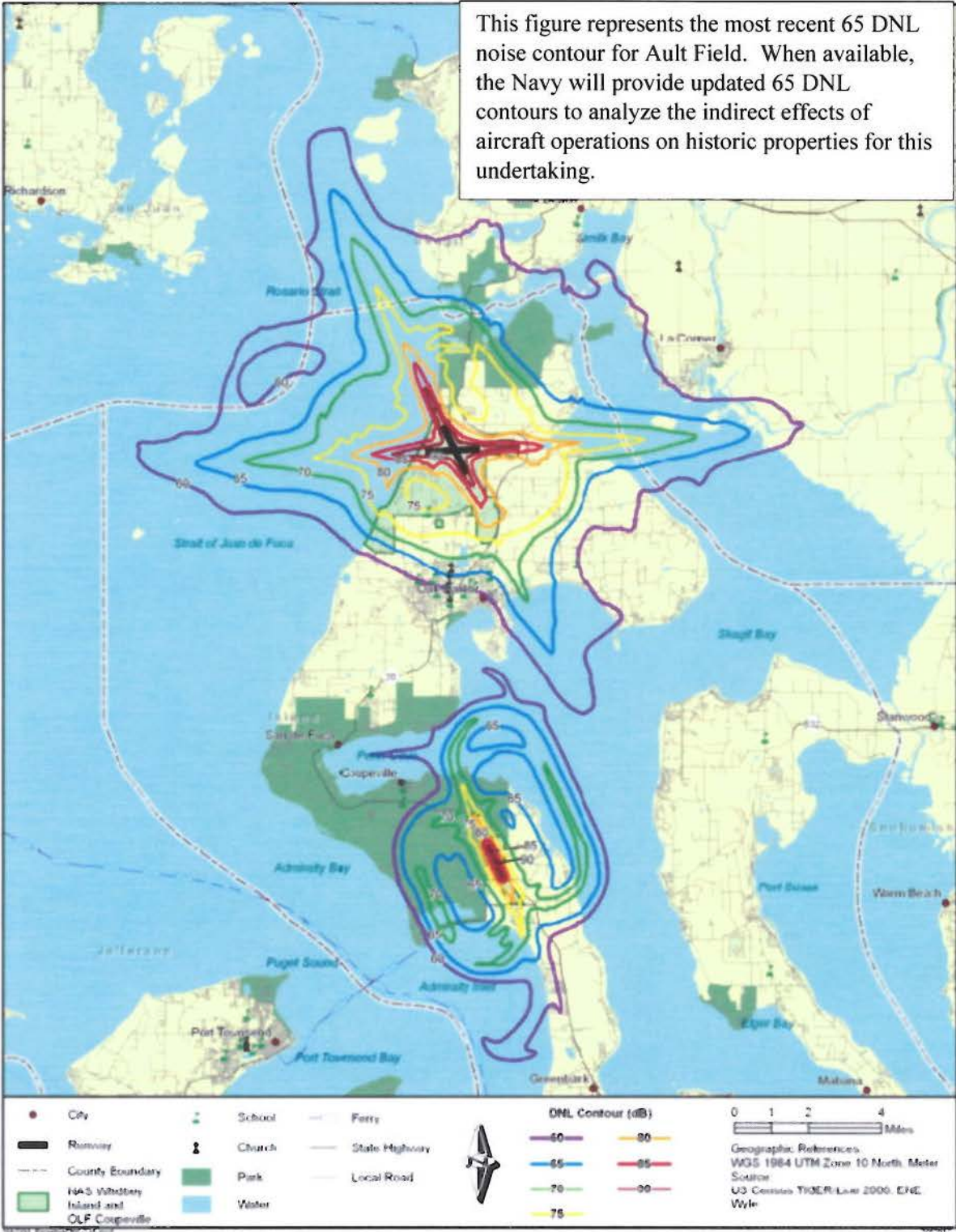


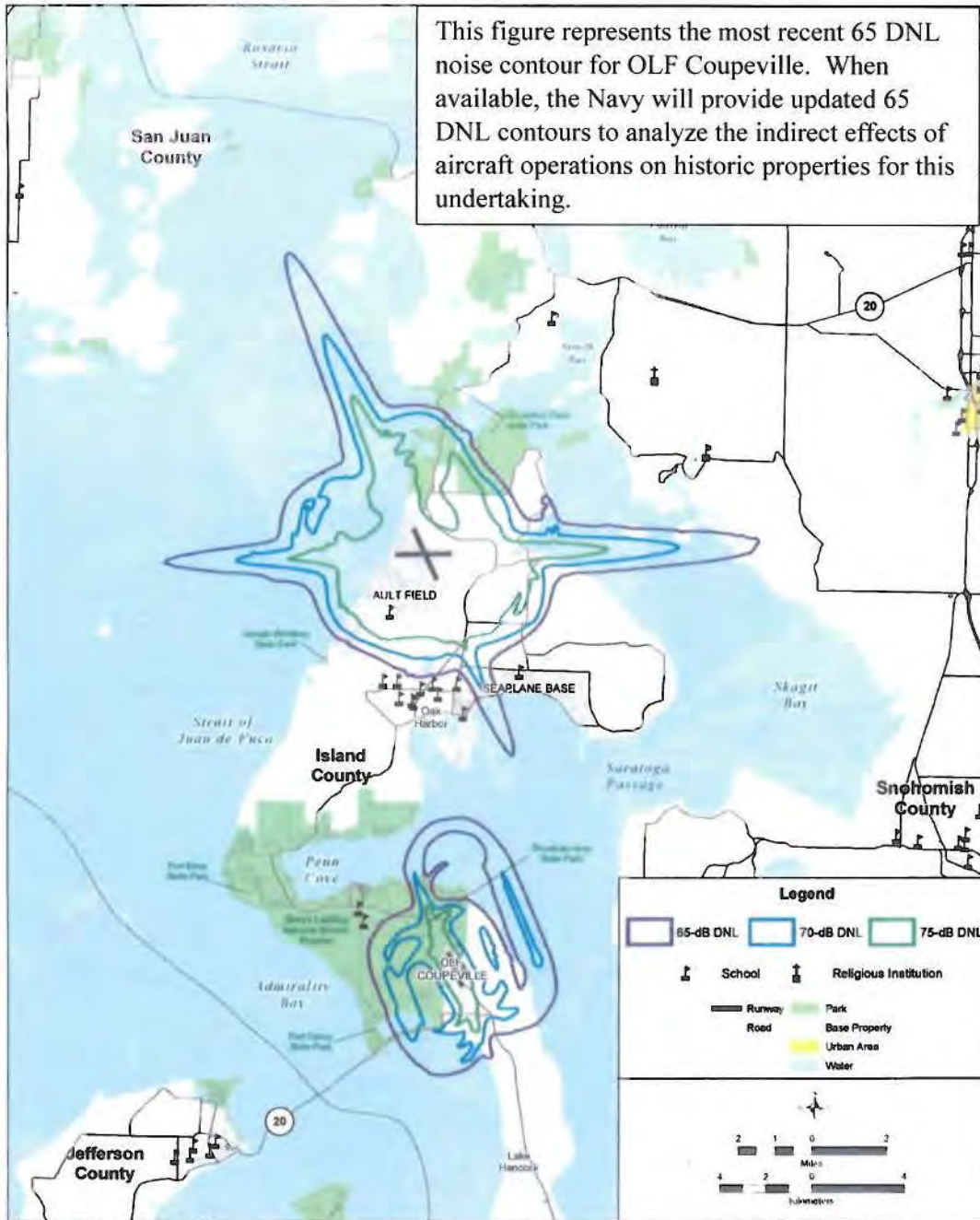


Enclosure (2)



This figure represents the most recent 65 DNL noise contour for Ault Field. When available, the Navy will provide updated 65 DNL contours to analyze the indirect effects of aircraft operations on historic properties for this undertaking.





Enclosure (4)





# CITIZENS OF EBHEY'S RESERVE

*protecting our land, homes, and health*

July 22, 2016

Commander NASWI  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

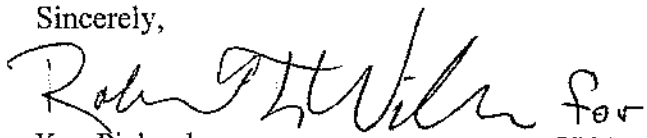
Dear Captain Moore,

I received your June 30, 2016, request for section 106 comments on expanded operations. The COER board of directors appreciates that opportunity and will comment. Can you please inform me as to the comment deadline and two related questions:

Your first-stated bullet is, "Continue and expand the existing electronic attack operations at NAS Whidbey Island complex, which includes Ault Field and OLF Coupeville." Could you please inform what expanded operations at the Ault Field and OLF entails, and most specifically whether that means an increase in FCLPs at those fields.

Near the end of your letter, you further mention that the "Navy is preparing an updated noise modeling study" for the OLF draft EIS. We repeat previous correspondence expressing our interest in acquiring the input variables for that study as soon as they are available, in addition to our earlier request for the input files for the 2005 EA. Is that something you can provide directly or will we need to FOIA that?

Sincerely,

  
Ken Pickard

Chair, Citizens of Ebey's Reserve, COER

Post Office Box 202, Coupeville WA 98239 [citizensofebeyreserve.com](http://citizensofebeyreserve.com) Email  
[citizensoftheebeyreserve2@gmail.com](mailto:citizensoftheebeyreserve2@gmail.com)





ATTN: Kendall Campbell  
NASWI Cultural Resources Program Manager and Archaeologist  
Re: EA-18G Growler Operations

August 1, 2016

Ms. Campbell,

The Jamestown S'Klallam Tribe has received a request for comments on the continuation and increase of EA18-G operation at Naval Air Station Whidbey Island, WA. With respect to cultural resources, the Jamestown S'Klallam Tribe has no comments regarding EA-18G flight operations. However, the Tribe would appreciate engaging in consultation with the Navy regarding the future renovation, demolition, and construction of facilities at Naval Air Station Whidbey Island. Please notify the Tribe when additional information is available regarding these or any other projects requiring ground disturbance.

Thank you for the opportunity to comment on this project. If you need any additional information, please contact me at 360-681-4638 or [dbrownell@jamestowntribe.org](mailto:dbrownell@jamestowntribe.org).

Sincerely,

David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe





Preserving America's Heritage

August 10, 2016

Captain G.C. Moore  
Commanding Officer  
Department of the Navy  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

Ref: *Proposed Increase of Aircraft and Aircraft Operations and Development of Support Facilities  
Naval Air Station Whidbey Island  
Island County, Washington  
ACHPConnect Log Number: 008500*

Dear Capt. Moore:

On July 11, 2016, the Advisory Council on Historic Preservation received your correspondence regarding the proposed Area of Potential Effects (APE) for the reference undertaking. Based on the information provided, and the response you have already received from the Washington State Historic Preservation Office (SHPO), the ACHP has the following comments:

- This is a complex undertaking involving various moving parts and programs. The ACHP understands the undertaking includes the continuation of current operations and the increase in the number of EA-18G Growlers at Naval Air Station Whidbey Island (NASWI).
- Given this complex nature, the APE should be drawn as broad as possible to take into account both direct and indirect effects, and may be multiple geographical areas based on the scope and scale of the undertaking. It is our undertaking that NASWI intends to have two APEs: (1) for direct effects based on the information gathered and analyzed for the development of an Environmental Impact Statement in accordance with the National Environmental Policy Act (NEPA); and (2) for indirect effects, based on the 65 dB Day-Night Sound Level (DNL) noise contours that result from air operations at NASWI.
- The maps provided are only for the indirect APE; however, the maps include contours out to 60 dB DNL, which is beyond the 65 dB DNL for which NASWI proposes to define the boundary of the indirect APE. If there is no substantive reason to illustrate this 60dB contour, we recommend that you only include the line of the contour for 65 dB DNL.
- While NASWI is still determining the direct APE, by coordinating review efforts with the NEPA process, we recommend that you provide consulting parties with a *draft* direct APE for comment that is based on the proposed construction areas at Ault Field to accommodate additional aircraft.

The ACHP appreciates the effort NASWI is demonstrating to meet both the regulatory and substitutive

ADVISORY COUNCIL ON HISTORIC PRESERVATION

401 F Street NW, Suite 308 • Washington, DC 20001-2637  
Phone: 202-517-0200 • Fax: 202-517-9391 • [achp@achp.gov](mailto:achp@achp.gov) • [www.achp.gov](http://www.achp.gov)

requirements of Section 106. In using the Section 106 process as intended, as a planning tool, it can meet the requirement to take into account effects of this undertaking on historic properties and make a more informed decision. In order to keep the consultation process moving along, we also recommend that NASWI develop a consultation plan that includes key milestones for the review and implementation of this undertaking.

If you have any questions regarding our comments please contact Ms. Katharine R. Kerr who can be reached at (202) 517-0216 or via e-mail at [kkerr@achp.gov](mailto:kkerr@achp.gov) and reference the ACHPConnect Log Number.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tom", followed by a long, sweeping horizontal stroke.

Tom McCulloch, Ph.D., R.P.A.  
Assistant Director  
Office of Federal Agency Programs  
Federal Property Management Section



**Deborah Stinson  
Mayor**

250 Madison, Suite 2  
Port Townsend, WA 98368  
360-379-5047  
dstinson@cityofpt.us

August 16, 2016

Captain G.C. Moore  
Commanding Officer  
Naval Air Station, Whidbey Island  
3730 North Charles Potter Avenue  
Oak Harbor, Washington 98278-5000

RE: Request for Section 106 Comments – EA-18G Growler Operations

Dear Captain Moore:

Thank you for the opportunity you provide in your July 12, 2016 letter for the City of Port Townsend to consult on the proposed Area of Potential Effect (“APE”) for the continuation and increase of Growler operations at NAS Whidbey Island.

The City asks that you expand your area of study, as well as your definition of the indirect effects component of the APE. We also ask that you consider using a different measure of sound impacts.

Area of study is too narrow.

Your area of study does not include all of the historic areas over which the Growlers fly. While the primary impact areas on Whidbey are affected by take-off and landing operations, many other areas of the Salish Sea area, including the City, are affected by flight operations. The City was founded in 1851 and contains two U.S. National Historic Landmark Districts: our Downtown and Uptown areas, as well as the Fort Worden Historic District. The Districts include approximately 40 separately-listed properties and structures on the National Register of Historic





Places. The noise impacts from Growler operations impacts residents, visitors, and historic structures in the District. Therefore, the City asks that the APE be expanded to include all historic areas within the training flight areas.

Measure of sound impacts does not take into account rural/naturally quiet areas.

The City believes that the flight operations may diminish the integrity of the setting of Port Townsend's Historic Districts in that they change the historically-quiet setting of those Districts. Also, flight operations may have an adverse physical effect on some historic structures within those Districts<sup>1</sup>.

According to your letter, your baseline for impacts is noise over 65 decibel ("dB") Day-Night Average Sound Level ("DNL"). This is an average noise level measured over the course of a year. While this is the FAA standard, FAA policy does not preclude local jurisdictions from setting a lower threshold of compatibility for new land use developments, and the policy allows for supplemental or alternative measurements<sup>2</sup>.

The average decibel level in the City, especially at night, is likely to be very low – even below 55dB in certain parts of the City. Growler operations are not continuous; the noise impacts of the operations vary based on the exercise, but include flights over and near the City for hours at a time – frequently at night. Therefore, the City believes that measuring the noise impacts here and on Whidbey using an Effective Perceived Noise Level as provided in Federal Aviation Regulation Part 36 would be a more accurate measure of the effect of flight operations.

Finally, the DNL uses A-weighting for the decibel measurement. It does not take into account low-frequency noise. As noted in a 2004 article:

Regulatory authorities must accept that annoyance by low frequency noise presents a real problem which is not addressed by the commonly used assessment methods. In particular, the A-weighted level is very inadequate, as are the NR and NC criterion curves. Assessment methods specific to low frequency noise are emerging, but a limitation of existing methods is that they do not give full assessment of fluctuations. It is possible that application of noise quality concepts, in particular fluctuation and roughness (Zwicker and Fastl, 1999), may be a way forward.

---

<sup>1</sup> See FAA Section 106 Handbook, June 2015, Page 27, Section C(1)(a), (e); Noise Basics and the Effect of Aviation Noise on the Environment, Wyle, Page 25, Sections 3.10, 3.11 (Viewed at <http://www.rduaircraftnoise.com/rduaircraftnoise/noiseinfo/downloads/NoiseBasicsandEffects.pdf> on August 16, 2016).

<sup>2</sup> Report No. DOT/FAA/AEE/2011-02, Technical Support for Day/Night Average Sound Level (DNL) Replacement Metric Research, June 14, 2011. Mestre, Schomer, Fidell, & Berry, Authors



Leventhall H G. Low frequency noise and annoyance. Noise Health [serial online] 2004 [cited 2016 Aug 3];6:59-72. Available from: <http://www.noiseandhealth.org/text.asp?2004/6/23/59/31663>.

The City appreciates the need for pilot training, and is grateful for the sacrifices made by the members of our military and their families. We ask that the APE be expanded to cover all historic areas subject to flight operations, not just take-off and landing. We also ask that you measure those impacts as precisely as possible, and take into consideration low-impact frequencies.

Sincerely,

  
Deborah S. Stinson  
Mayor

Encl.

cc: Honorable Patty Murray, U.S. Senator  
Honorable Maria Cantwell, U.S. Senator  
Honorable Derek Kilmer, U.S. Representative  
Honorable James Hargrove, Washington State Senator  
Honorable Steve Tharinger, Washington State Representative  
Honorable Kevin Van De Wege, Washington State Representative

# National Register of Histori...

National Park Service  
U.S. Department of the Interior

Public, non-restricted data depicting National Register spatial data proce...







August 25, 2016

Naval Air Station Whidbey Island  
Attn: Captain G.C. Moore  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

Dear Captain Moore,

Thank you for the opportunity to comment on the Navy's proposed definition of the Area of Potential Effect (APE), due to existing and expanded electronic attack operations and increased EA-18G Growler operations at OLF Coupeville, pursuant to Section 106.

The Coupeville Town Council and I discussed the proposal at our August 9 workshop. We feel we are unable to provide complete input for three reasons:

1. The maps provided, showing the 65 DNL noise contour for OLF Coupeville, are small and without detail, making it hard to determine what streets and areas are included. It appears the Town of Coupeville is not within the 65 DNL noise contour.
2. We do not fully understand the Day-Night Average Sound Level (DNL) method used to determine the APE.
3. The Areas of Potential Effect shown for OLF Coupeville are based on 2005 noise data. Until noise data is updated, we won't know how it will affect the noise contours and therefore, are uncomfortable committing to the parameters of 65 dB DNL Area.

We do, however, want to honor the September 1 deadline for comments. Based on what we know now, we offer the following comments:

The current method of defining the APE, using Day-Night Average Sound Levels (DNL) noise modeling, does not appear to cover an area large enough, at 65 dB, to include affected residents, businesses and historic resources in Central Whidbey. We strongly disagree with defining the area around OLF Coupeville as "indirectly affected". Central Whidbey and a large portion of Ebey's Landing National Historical Reserve, should be classified as "directly affected" by jet noise.

We believe expanded and increased electronic attack operations and Growler training flights will result in an expanded and increased APE.

Specifically, as to section 106, we support and encourage the adaptive reuse of historic properties to help owners financially maintain and preserve their buildings. Some of the more successful reuses of historic buildings in Central Whidbey have been bed and breakfasts and event venues. Agriculture is also an important part of the historic landscape of Ebey's Reserve. All three of these cited businesses and, therefore, the historic resource, have been negatively affected by jet noise.



There are over 300 historic buildings in Central Whidbey and all of Ebey's Reserve is listed as a national historic district. Many of the affected historic properties, buildings and landscapes are outside of your defined APE. This indicates to us that the 65dB DNL is not an adequate noise measurement to use to define the APE.

Again, we appreciate the opportunity to comment and look forward to receiving up-to-date noise data and maps with the coming EIS draft.

Sincerely,



Molly Hughes  
Mayor

cc: Town Council Members

Date: September 1, 2016

To: NAS Whidbey Island Cultural Resources Program Manager, Kendal Campbell,  
[kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil)

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station Whidbey Island (NAS Whidbey Island) is continuing consultation first requested on 20 October 2014 and now is asking for comments on this proposed action.

From: Ken Pickard, President, Citizens of Ebey's Reserve ( COER)

Regarding: Request for Section 106 Comments on the Proposed Definition of the Area of Potential Effect for the Continuation and Increase in EA-18G Growler Operations at Naval Air Station, Whidbey Island, Island County, Washington.

## **COMMENTS:**

### **Problems with the DNL Metric**

The DNL metric is the wrong metric to address the direct and indirect impacts of Growler jet noise on The Area of Potential Impact over Ebey's Reserve and the Outlying Field located at the southerly entrance to the Reserve. Nor is it the correct metric to determine the extent of that impact on Central Whidbey and its residents, visitors and historic structures.

The day–night average sound level, or DNL, is a complicated metric of quiet times averaged, with noisy times. This has the effect of making the noisy times seem not so noisy. DNLs do not inform as to the noise magnitude, duration, or number of single hazardous noise events; instead DNLs attempt to characterize the overall noise experience in a 24-hour period. Our bodies, however, react to the cumulative impact of each separate hazardous noise event, not to an overall average. Put another way, using the DNL to evaluate health or structural impacts is like using average wind speed in New Orleans throughout the year of 2004 to evaluate the damage done by Hurricane Katrina.

The DNL is an accepted method to evaluate *community annoyance* as related to land-use

planning, The Navy's 2005 AICUZ (pages 4-6) clearly states as much (emphasis added)<sup>1</sup>:

*“However, individuals do not “hear” DNL. The DNL contours are **intended for land use planning, not to describe what someone hears when a single event occurs.** Individual or single noise events are described in terms of the Sound Exposure Level (SEL) in units of dB [decibels]<sup>2</sup>. SEL takes into account the amplitude of a sound and the length of time during which each noise event occurs. It thus provides a direct comparison of the **relative intrusiveness** among single noise events of different intensities and durations of aircraft overflights. (emphasis added)*

Most of the day–night noise level (DNL) annoyance research has been derived from studies of commercial airports, which generally have frequent daily traffic, but lower maximum sound levels. According to Paul Schomer (Standards Director, Emeritus, Acoustical Society of America, Schomer and Associates, Inc.), extrapolating that database to military jets impacting civilian residents is problematic. He questions *“the substantiated extension of DNL into untested and unsubstantiated regions so loud that hearing protection and warning signs are required.”* He goes on to point out that a *“65 DNL for a year is 91 dB if it comes in one day, 140 dB in 1 second, and 170 dB in 1 millisecond (ms)—permanent hearing loss and damage to the ear but no [DNL] impacts.”* That clearly shows how and why the DNL is a useless metric to evaluate health impacts on humans or wildlife.

Indeed, as stated in USACHPPM (1998; page 28),<sup>3</sup> *“although the DNL has been emphasized by the DoD and especially the Army as the primary noise exposure metric, this metric applies to community annoyance and is seldom related to behavioral or reproductive effects of wildlife. Hence the DNL metric is of no use or value to evaluate Growler noise impacts on visitors to the Reserve or on its wildlife, or historic structures. A complicated formula is used to figure DNLs but, simply put, it means that quiet times are averaged, with noisy times. Theoretically, this has the effect of making the noisy times seem not so noisy. DNLs are an average – they do not exist.*

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<sup>1</sup> AICUZ Study Update for Naval Air Station Whidbey Island's Ault Field and Outlying Landing Field Coupeville, Washington. Final Submission. March 2005. (This study was produced by The Onyx Group of Alexandria, VA and San Diego, CA, under the direction of the NAVFAC Southwest)

<sup>2</sup> Noise is measured on a log scale in decibel (dB) units. Loudness is a measurement index of the sound we perceive, and hence how it affects our psyche and functionality; sound pressure intensity is the more important metric when it comes to hearing damage and pressure impacts on the body.

<sup>3</sup> *Ecological Risk Assessment Framework for Low-Altitude Overflights by Fixed-Wing and Rotary-Wing Military Aircraft*. January 2000. Rebecca A. Efroymson (Oak Ridge National Laboratory), Winifred Hodge Rose and Sarah Nemeth (U. S. Army Construction Engineering Research Laboratory), and Glenn W. Suter II (U. S. Environmental Protection Agency). Research sponsored by the Strategic Environmental Research and Development Program of the U. S. Department of Defense under Interagency Agreement 2107-N218-S1 under contract DE-AC05-00OR22725 with UT-Battelle, LLC. Publication No. 5010, Environmental Sciences Division, ORNL.  
<https://www.researchgate.net/publication/252522677>

They are imaginary numbers. They don't tell us what the loudest event is in a 24-hour period, nor do they tell us how many noisy events there may be in a 24-hour period. Our ears don't average noise over 24-hours --- We hear and react to each noise as a separate event. So, in looking strictly at annoyance, it similarly follows that an annual average DNL as applied to Ebey's Reserve and its thousands of annual visitors is not useful for assessing 'impact' because Growlers have no annoyance effect when not flying overhead and a huge effect when they do fly overhead.

## **DNL Flaws in the Navy's 2005 Finding of No Significant Impact**

Other problems impact the Navy's proposed continuance and expansion of Growler flights, as well; i.e., inappropriate data was used to produce the 2005 EA "finding of no significant impact" (FONSI) for the completed transition of Prowlers to Growlers at OLFC in 2013.

The five problems discussed below apply significant question to the validity of the DNL noise contours recently provided for OLFC by Commander Moore, NASWI. If those problems were corrected and revised, it would expand the areas of land encompassed within each contour. It follows that increased Growler activity at OLFC would further expand the 65 DNL area and encroach even further upon the quiet cultural soundscape and historic buildings and residences of the Reserve, and the intention and purpose of the Ebey's National Historical Reserve.

The following five problems involve fallacious information the Navy data putatively provided to Wyle for its two noise studies used to produce its 2004 and 2012 noise studies<sup>4</sup> as refuted by actual data obtained by COER via the Freedom of Information Act:

- 1) Wyle in both 2004 and 2012 based its DNLs on a 50:50 split-use of OLFC paths 14 and 32. However, use of path 14 has never been near 50%, but instead 5% to 25%. The Navy affirmed in the lawsuit trial record and as iterated by Judge Zilly in his decision,<sup>5</sup> "...it is

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<sup>4</sup> Aircraft Noise Study For Naval Air Station Whidbey Island and Outlying Field Coupeville Washington, WR 04-26, Wyle, October 2004. <And> Aircraft Noise Study For Naval Air Station Whidbey Island and Outlying Field Coupeville Washington, WR 10-22, Wyle, October 2012.

<sup>5</sup> Citizens of Ebey's Reserve v. U. S. Navy, Quote from base commander Norter's declaration to Judge Zilly [Citizens of Ebey's Reserve v. U. S. Navy]: "OLF Coupeville has one runway oriented generally North/South, and is called runway 32 or 3 runway 14, depending on direction of approach. The weather and winds determine the direction in which to conduct FCLPs. The local prevailing winds support runway 32 usage most of the 4 year. FCLP flight patterns for OLF Coupeville were historically used by the EA 6B and A 6 aircraft, which shared similar flight characteristics. In the past, the flight pattern for runway 14 5 was adjusted for noise abatement purposes for homes on the eastern coastal boundary. Additionally, noise abatement procedures were designed to avoid flying over Long Point and a 6 bird farm that is no longer in existence, and those procedures are still followed. Even with



*apparent that flight path 14 is now rarely used for FCLP operations....*” So, path 32 has and will continue to be used almost exclusively.

[https://ja.scribd.com/mobile/document/267136375/2015\\_05\\_29\\_Declaration\\_of\\_Captain\\_Mike\\_Nortier\\_With\\_2\\_Appendices](https://ja.scribd.com/mobile/document/267136375/2015_05_29_Declaration_of_Captain_Mike_Nortier_With_2_Appendices). This 50:50 misrepresentation, corrected to >90% on path 32, would expand the impact area over the Reserve and adjacent Admirals Cove and Pelicar Shores.

- 2) Wyle also indicated its use of OLFC after 10 PM is 5.8% of the landing practices, and Wyle based its DNL analysis on that percentage (note: night operations drive the DNL level way up due to a 10-fold mathematical weighting penalty). However, rather than 5.8%, the actual after 10 PM operations from 2007 to 2012 averaged 24% to 63%. So, Wyle’s 2004 and 2012 DNL contours based on 5.8% night FCLPs, makes the DNL values and contours far less that had the 2007-2012 average (35%) had been used.
- 3) The 2005 EA and attendant 2004 Wyle noise study were based on the Navy’s selection of a single year, 2003, to represent the number of FCLP operations over the baseline years prior to the 2005 EA. The EA stipulated that Navy plans for 2013 and beyond called for 6120 operations annually at OLFC, the so-called “*projected operations*.” If the historical base of operations (the so-called “*existing condition*”) was greater than the *projected* 6120, then the *projected* number of operations would be less than the *existing condition*. That, in turn, would make the *projected operations* produce less noise than the historical *existing condition* ... and that would help establish no environmental impact for the transition to Prowlers. So, the Navy selected 2003 as the base year, which at 7682 operations was the only year of the six preceding years that exceeded the 6120 *projected* operations. Had any year other than 2003 been selected for the comparison year (e.g., 2002 = 4100 operations, or 2001 = 3568, or an average of 2002-2004 = 5117), then the *existing condition* would have been lower than the 6120 *projected operations* and produced an increase in noise, rather than a decrease. No respectable statistician would establish a baseline from a single stochastic year, especially given the wide variation in annual operation totals. This, however, is what the Navy did by selecting 2003 as the baseline year.

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these modifications to the pattern, the EA 6B and A 6 could operate within acceptable parameters and use runway 14 when the meteorological conditions favored this runway. The EA 18G has a slightly different required flight profile in the FCLP pattern due to differences in weight and flight characteristics. As a result, the EA 18G cannot safely operate within the confines of the daytime runway 14 parameters currently in place. The Navy is examining runway usage and historical noise abatement procedures as part of its ongoing EA 18G Environmental Impact study. ntil hat tudy omplete, unway 4 arely sed or CLPs.”



The Navy's 2012 EA and 2012 Wyle noise study used a 6-year average (2005-2010), which should have more fairly represented the *existing condition*. The problem, however is that the information from the Navy via FOIA data shows that the average for those 6 years is 4206 operations (about 4700 including arrivals/departures), NOT 6120 reported by the Navy. This is about 1400 operations fewer than used by Wyle—a discrepancy of about 30% (1400/4700).

Had COER's FOIA data from the Navy been used by Wyle, the DNLs produced by NOISEMAP would have been greater, and the noise contours would have been larger.

- 4) In 2005 the Navy asserted in their 2005 AICUZ document that on approach to touchdown Growlers are at 114 decibels (dB) at 1000 feet above ground, or 7 dB louder than Prowlers at 107 dB. But the 2012 Navy feed to Wyle somehow found that Growlers on approach were 109 dB and the Prowler was 111 dB. So, in those 7 years between 2005 and 2012, the Growlers inexplicably grew 5 dB quieter and the Prowlers grew 7 dB louder (see table below). Likewise, in those 7 years the departure takeoff for the Growler had become 2 db quieter, while inexplicitly the Prowler had become 2 dB louder. And the Prowler downwind leg of the FCLP at 1000 ft was 4 dB louder than the Growler in 2005, but in 2012 the Prowler was 8 dB louder. Which of those disparate Prowler vs. Growler metrics is believable, if any? Note too that Growlers, on their approach and takeoff on either path, cross the most populous portion of the racetrack, often at 200-400 feet above rooftops. By comparison, the FAA with its quieter commercial aircraft standards strictly requires no flyovers be less than 500 feet over people or homes.
- 5) The well-established standards for calculating an annual 24-hour average DNL is different for airports used daily versus those used intermittently. Airfields used daily are to be calculated based on all 365 days of use in the year; DNLs for airstrips used intermittently are to be based on just the "busy days" of use. In other words, if the airport averages just 50 days of use per year, the DNL should be averaged over just those 50 days, not all 365 days of the year. Averaging OLFC use over 365 days would reduce the area under each noise contour, while use of 50 days would increase the areas.

The Navy has been unable to confirm how the DNLs were averaged, as requested by COER (July 3, 2016, letter). In essence Commander Moore indicated that the average could be an average of "busy days" only (i.e., all days OLFC was used in an average year) **or** an average over all 365 days in the average year. He wasn't sure which. If the Navy used the 365-day averaging method, then the DNLs Commander Moore provided would likely understate the DNL, such that the 65 DNL contour might actually be close to 70 DNL, and the 60 DNL might be a close to 65 DNL.

Those five data irregularities have a profound effect on the assessment of environmental impacts related to the Prowler–Growler transition and the related 2005 EA’s dubious “finding of no significant impact” at OLFC. It follows that the contours Commander Moore provided for the Section 106 Process understate the size of the 65 DNL area, which, in reality, extends further into Ebey’s Reserve than shown on current maps.

Jet type	Approach @ 1000 feet (SEL, dB)		Departure @ 1000 feet (SEL, dB)		Downwind leg cruise @1000 feet (SEL, dB)	
	2005 AICUZ	2012 EA	2005 AICUZ	2012 EA	2005 AICUZ	2012 EA
Prowler	107	111 (+4)	114	116 (+2)	117	109
Growler	114	109 (-2)	117	109 (-8)	113	101

Note that in regard to Prowler vs. Growler noise (#4 above), the 2005 EA states:

The Navy has acquired aviation easements (also known in some cases as joint stipulations) in the vicinity of OLF Coupeville. These easements provide landowners’ consent for the EA-6B or follow-on aircraft of *lesser or comparable noise level* to fly at altitudes of 800 feet AGL, based on a maximum of 10,000 flights per calendar year.

Note, in that quote “*of lesser or comparable noise level,*” This could be one reason the Navy needs the Growler to be quieter than the Prowler. Also note that the approach over Admirals Cove is well under 800 feet, albeit there is no navigation easement there. And, nowhere in either EA or in the Wyle studies are the approach elevations over Admirals Cove mentioned, perhaps with good reason. In this respect, it should be noted that the Growler produces greater low-frequency noise than the Prowler, which the dBA scale used by Wyle filters out. Using bBC would make the Growler about 8 dB louder than the Prowler.

### **Problems with Modeling the DNL Contour**

The modeling used to prepare the DNLs is also potentially problematic. The Navy has recently asserted it was not necessary to have on-site noise studies for OLFC in the current EIS process, and they have opted to use modeled (NOISEMAP) data instead. The contours provided for this Section 106 Process were derived from the 2005 NOISEMAP data.

Modeled data, however, can fail to reflect actual on-site measurements. A study of 36 sites around Raleigh–Durham airport<sup>6</sup> found the modeled data consistently **underestimated** the actual on-site noise by 5–15 decibels; that is, the actual noise levels were roughly 50% to 150% louder than the NOISEMAP (1991–1998) and INM (1999–2002) models had indicated.

## ISO Invalidates 65-dB DNL Threshold

In 1992 the Federal Aviation Administration (FAA), based on a synthesis of 1978 studies, established in Regulation Part 150 that a maximum average DNL of 65 dB or above is incompatible with residential communities, and that communities in affected areas may be eligible for mitigation such as soundproofing.

The 65 DNL was established in 1992 by the Federal Interagency Committee on Noise (FICON) from a dose/response curve showing that at 65 DNL 13.2% of the population is highly annoyed by aircraft noise. It hence was established as the point at which the FAA considers significant noise impact to begin. Based on that science, Congress adopted 13.2% as the threshold that should not be exceeded, and 65 DNL became the standard.

The Navy’s Air Installations Compatible Use Zones (AICUZ)<sup>7</sup> similarly adopted the 65 DNL for its land-use compatibility determinations concerning aircraft noise, noting the sources as the Federal Interagency Committee on Urban Noise, “Guidelines for Considering Noise In Land Use Planning and Control” (Reference (km)) as endorsed by FICON in the “Federal Agency Review of Selected Airport Noise Analysis Issues” (see section 2.b in <http://www.dtic.mil/whs/directives/corres/pdf/416557p.pdf>).

New scientific information, however, now shows the 1978 studies and dose/response curve were flawed, invalidating the 65 DNL threshold. On March 9, 2016, the International Organization for Standardization (ISO)—an independent, non-governmental organization of 162 national standards bodies—published a revision of ISO standard on measurement and assessment of environmental noise. The revised ISO standard reflects 5 years of analysis by an ISO technical committee, which produced the new dose/response curve based on recent research. An American National Standards Institute (ANSI) version of the ISO standard has been developed, which further mirrors ISO findings and validates the pervasive concurrence of worldwide noise experts. To be consistent with 13.2% annoyance, the correct standard needs to be reduced to 55 DNL.

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<sup>6</sup> *Technical Report on Preparation of Day-Night Sound Level (DNL) Contours of Aircraft Noise During 2003 Raleigh-Durham International Airport North Carolina*. March 2005. HMMH Report 295097.001 . Harris Harris Miller & Hanson, Inc., 15 New England Executive Park, Burlington, MA 01803  
[http://198.1.119.239/~flyduco/rduaircraftnoise/noiseinfo/downloads/RDU\\_2003\\_DNL.pdf](http://198.1.119.239/~flyduco/rduaircraftnoise/noiseinfo/downloads/RDU_2003_DNL.pdf)

<sup>7</sup> AICUZ Study Update for Naval Air Station Whidbey Island’s Ault Field and Outlying Landing Field Coupeville, Washington. Final Submission. March 2005. (This study was produced by The Onyx Group of Alexandria, VA and San Diego, CA, under the direction of the NAVFAC Southwest)

The technical team's findings show that at 65 DNL, actually 28% of individuals will be highly annoyed by aircraft noise, rather than the old prediction of 13.2%, or about twice that predicted by the old dose/response curve. So, to achieve the congressional limit of 13.2%, the FAA will need to adopt the new 55 DNL standard; it can no longer hold up the old standard as scientifically valid.

So, the 65 DNL contour underestimates by nearly 50% the annoyance impacts among Ebey's Reserve visitors and residents. So, to comply with 13.2% standard, the attendant contour needs to be 55 DNL, which will therefore encompass a much larger area of the Reserve. And in that regard, as discussed above, the existing 55 DNL contour in the maps provided by Commander Moore is smaller than it would be if corrected for data irregularities and shortcomings.

### **OLFC Violates Navy's Own Encroachment Guidelines**

During a recent attempt to build an outlying field in eastern North Carolina, the Navy sought 30,000 acres of relatively undeveloped land in order to comply with its AICUZ land-use guidelines. By comparison, at only 700 acres, OLFC falls 29,300 acres short. This is why, in 1987, a Navy planning document (Navy document 101) examined the status of OLFC for future use and called for alternatives to OLFC be investigated by the Navy because of the surrounding encroachment. Instead, the Navy administrators issued itself a permanent waiver to continue use of OLFC.

As a result, the 65 DNL contour includes much of the Reserve with its historic farms and homes, as well as the adjacent residential area and several state and local parks, a well-used children's athletic field and dog park, a youth shelter, County re-cycling Center, and a Transportation Center with above-ground fuel tanks. And of course, when the Growlers are practicing at OLFC all these areas are highly impacted by the loudest noise imaginable, juxtapose against the expected natural beauty and soundscape of the Reserve.

Because of an interagency agreement among the U. S. Fish and Wildlife Service, the National Park Service, and the Bureau of Land Management with the Federal Aviation Administration, it has imposed a voluntary altitude restriction of 2000 feet above ground level for overflights crossing land administered by the Department of the Interior. The Department of Defense is not bound by this agreement, and policies regarding lands near DoD installations are typically negotiated locally. However, OLFC flight paths are at less than 1000 feet.

Both OLFC flight paths (14 and 32) require low-level (200–1000 feet) flight altitudes. As explained by this Oak Ridge National Laboratory Report, this violates federal regulation the Department of Defense is supposed to honor but ignores at OLFC:

The military services are committed to safety and to minimizing the collateral noise associated with low-level flight training. The U. S. Air Force, for example, has set numerous restrictions and tailored its training to reduce noise as much as possible. The DoD in general, in addition to following its own flying rules of low-level altitudes and airspeed, also follows those in Federal Aviation Regulation 91.79 which states that no plane may fly closer than "500 ft [152 m] from any person, vessel, vehicle, or structure." (USAF Fact Sheet 96-17) In addition, because of the greater potential for human annoyance during sleeping hours, low-level flying by military fixed-wing aircraft generally occurs during daylight hours; low-level flying near densely populated areas is prohibited.<sup>8</sup>

The 2012 EA states, in regard to land use planning:

[The Navy limits] flying to only mission essential activities, locating engine run-up areas away from populated areas, and minimizing flights over heavily populated areas, while fulfilling all mission essential requirements. In addition, the Navy works with communities to discourage locating noise-sensitive land uses in high noise areas through the use of zoning and other land use planning tools. Communities that MUST locate noise-sensitive land uses, such as residential, in high noise areas are encouraged to require that sound-reduction techniques be used in new construction and to require real estate disclosures. (p 1-19; emphasis added)

It is true that incompatible land use recommendations are stated clearly in the 2005 AICUZ. It is also true that Island County has been apparently unaware of those recommendations and remains so, to the extent that no building permits have been refused due to non-compliant jet noise in Admirals Cove or Pelican Shores, among others.

For example, Commander Nortier delineates in his declaration to Judge Zilly (paragraph 12) the things he has done to "mitigate" noise impacts. In total, they amount to window dressing. For example, in paragraph 14 he states the 2005 AICUZ is made available to prospective homebuyers (see: [https://www.scribd.com/document/267136375/2015\\_05\\_29\\_Declaration\\_of\\_Captain\\_Mike\\_Nortier\\_With\\_2\\_Appendices](https://www.scribd.com/document/267136375/2015_05_29_Declaration_of_Captain_Mike_Nortier_With_2_Appendices)),

Actually, this is a false statement. The Island County jet noise disclosure to prospective home buyers says nothing about the AICUZ, and even if did, the lengthy technical text and charts would easily exceed most buyers comprehension and analysis. And the disclosure says nothing of the fact that thousands of homes--the one you could be buying--may be within an area the Navy's AICUZ asserts should contain none/zero residences.

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<sup>8</sup> *Ecological Risk Assessment Framework for Low-Altitude Overflights by Fixed-Wing and Rotary-Wing Military Aircraft*. January 2000. Rebecca A. Efroymson (Oak Ridge National Laboratory), Winifred Hodge Rose and Sarah Nemeth (U. S. Army Construction Engineering Research Laboratory), and Glenn W. Suter II (U. S. Environmental Protection Agency). Research sponsored by the Strategic Environmental Research and Development Program of the U. S. Department of Defense under Interagency Agreement 2107-N218-S1 under contract DE-AC05-00OR22725 with UT-Battelle, LLC. Publication No. 5010, Environmental Sciences Division, ORNL. <https://www.researchgate.net/publication/252522677>

## **DNL – An Inappropriate Health Impact Metric**

Hearing and sound pressures on the human body produce intertwined physical and physiological reactions, and that biological reaction includes reactions to the sound vibrations that penetrate into the entire body (just as it rattles buildings). Low-frequency sounds are more intense in their penetration. Loudness is a measurement index of the sound we perceive to hear, and hence how it affects our psyche and functionality. Sound pressure intensity is the metric to index both hearing damage and pressure impacts on the body.

So, to evaluate the biological complement of noise effects on health, the Navy admits that single noise event metrics (e.g., *sound exposure levels* or SELs), *not* DNLs, are the appropriate metrics of ubiquitous use in medical research to evaluate noise–health (dose/response) impacts. Yet the 2012 EA nevertheless argues that the DNL overestimates hearing damage:

Since hearing loss is a function of the actual sound levels rather than annoyance levels, characterizing the noise exposure in terms of DNL usually overestimates the assessment of hearing loss risk because DNL includes a 10-dB weighting factor for aircraft operations occurring between 2200 and 0700. (p 3-14)

That statement is wrong. Medical research on toxic noise does not use DNLs (as explained above), but rather, uses the exposure time and actual noise levels from single noise events. And the 10 dB penalty has no basis in terms of health impact. If, for example, jets flew  $x$  number of overflights during a given daytime session producing a DNL of  $y$ . Had those same overflights occurred after 10PM instead of at daytime, then the DNL would be considerably greater than  $y$ , but the sound exposure levels would have been equal and, hence, the health impacts about the same. So, the EA statement above is scientifically unsupportable and disturbingly misleading.

In 2013, COER engaged an independent noise study (JGL Noise Study #1<sup>9</sup>) to obtain actual on-site Growler noise data at OLFC (report is available on request). We commissioned the JGL study, rather than simply accept the computer-modeled data used by Wyle Labs because the Navy refused to conduct on-site recordings and modeled DNLs have been shown to be inaccurate. That is, a study of 36 sites around Raleigh–Durham airport<sup>10</sup> found the modeled data consistently underestimated the actual DNLs from on-site noise measurement by 5-15 dB.

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<sup>9</sup> Whidbey Island Military Jet Noise Study, JGL Acoustics report to David Mann, June 10, 2013, available at <http://citizensofbebysreserve.com/References/Files/JGL%20Noise%20Report.pdf> )

<sup>10</sup> Technical Report on Preparation of Day-Night Sound Level (DNL) Contours of Aircraft Noise During 2003 Raleigh-Durham International Airport North Carolina. March 2005. HMMH Report 295097.001 . Harris Harris

The JGL sound data were gathered at five locations around OLFC while Growlers conducted FCLPs on Path 32. One site was directly under the approach over Admirals Cove and another was at a youth ballpark (Rhododendron Park) adjacent to and under the takeoff path, a third was at Ebey's Landing, and the fourth was in farm lands within the Reserve. At each site about 30 Growler flyovers were recorded, and sound levels for each such flyover at all four outdoor sites were very similar having sound exposure levels of 122 to 128 dBA for a recorded session.

At the ballpark/playground for example, Lilly found that had parents and children been present they would have experienced in one 40-min FCLP session (30 flyovers) a cumulative 2.25 minutes of noise over 100 dB or about 1 minute over what EPA has identified as a noise dose sufficient to cause permanent hearing loss. That is, if someone in a 24-hour period is exposed to 1.5 minutes of noise over 100 dB, the EPA indicates that individual will likely suffer some permanent hearing loss. The same is generally true for those visiting portions of the Reserve that were measured. Repeat exposure adds to the loss each time.

This information is reinforced by the National Institute for Occupational Safety and Health (NIOSH). They assert that above a critical noise level, the mechanism of hearing damage changes from one based on cumulative noise exposure (i.e., the combination of magnitude and duration of sound) to a mechanism based on sound pressure intensity alone, regardless of duration. They estimate 115 to 120 dBA as the critical noise level at which human hearing is subject to a permanent hearing threshold shift. All of this information is available at <http://citizensofebeysreserve.com/LinksAndFiles.html>.

Furthermore, children are well known to be more sensitive to noise. Executive Order 13045 of April 21, 1997: Protection of Children From Environmental Health Risks and Safety Risks, recognizes the susceptibility of children to greater environmental risks than adults, and it creates requirements to ensure their extra protection (EO 13045, Protection of Children from Environmental Health Risks and Safety Risks (EO 13045, 62 Federal Register 1985).

The Navy has argued that the 2013 JGL noise study lacked statistical robustness because it was a stochastic one-time sample that might lack repeatability due to weather. That possibility lacks credibility because all sites were well within one mile of the jet path; Lilly explained it this way:

*Temperature profiles, humidity, and wind all can affect the resulting sound level, but these environmental effects are insignificant unless the listener is at least a mile or more away from the source. The greater the distance, the greater the effect. Sometimes the environmental conditions will cause the noise level to increase by 10 dB (or more) and other times it might decrease the level by 10 dB (or more). Atmospheric conditions will have no impact on the areas directly below (or within a mile of) the flight patterns. (Jerry Lilly, JGL Acoustics)*

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Miller & Hanson, Inc., 15 New England Executive Park, Burlington, MA 01803  
[http://198.1.119.239/~flyduco/rduaircraftnoise/noiseinfo/downloads/RDU\\_2003\\_DNL.pdf](http://198.1.119.239/~flyduco/rduaircraftnoise/noiseinfo/downloads/RDU_2003_DNL.pdf)

Nevertheless, to quell the possibility that the May 2013 JGL noise sampling was atypical of routine FCLPs at OLFC, COER again commissioned Lilly to conduct a second set of samples in February 2016 with repeat sampling at two of the same sites and two additional sites not sampled in 2013 (also available at <http://citizensofebeysreserve.com/LinksAndFiles.html>).

Samples at the 2016 repeated sites produced almost identical results with the 2013 measurements, while the two new sites showed that noise was extremely consistent across the full approach path above Admirals Cove. The consistency (i.e., the standard deviation was very low) between the two independent sampling periods show that the JGL measurements were not anomalies but were reliable and valid, as explained by Lilly:

*The primary purpose for this study was to determine if there is any significant difference in the measured noise levels when compared with the data collected in 2013. ...The fact that the measured change from 2013 to 2016 is less than half of the standard deviation of the maximum noise level within a single session suggests that the difference is insignificant. <JGL Acoustics>*

It is also noteworthy that the JGL sound exposure levels (SELs) at position 1 and 6, which are under the path 32 approach over Admirals Cove) are very similar to the approach sound exposure levels (SELs) for Growlers stated in the 2005 AICUZ.

Further, based on a Navy study (Wyle Aircraft Noise Study dated October 2012), the Growler produces more low-frequency noise, on average 11 decibels, than the Prowler aircraft previously used by the Navy at Whidbey. This increased low-frequency noise has a greater impact on areas further from the base (i.e., San Juan Islands) because it travels further than high-frequency noise, which tends to get filtered out much more quickly than low frequencies.

COER also retained a well-known environmental and occupational health physician, Dr. James Dalgren, professor at UCLA and on the staff at Cedars Sinai Hospital in Los Angeles, to review the Lilly and Wyle sound data and advise as to the attendant health risks. His conclusion in July 2014 is that "*the Navy has created a public health emergency at Central Whidbey Island.*" He went on to say:

*"If there was a poisonous gas cloud over Central Whidbey and people were falling over dead, they would know why. But because the health impacts are more gradual and cumulative most citizens do not yet know why they are suffering more strokes, more severe strokes, strokes at a younger age, cardiovascular events such as arrhythmias, heart attacks, hypertension, psychological damage such as anxiety, depression and panic attacks, along with sleep disorders, weight gains, hearing loss, tinnitus, and in children, especially, troubling learning disorders and attention deficit disorder."*



As per state and national guidelines and law addressing noise exposure, Coupeville has sustained noise levels above the “community exposure level” threshold. This is reflected in a review of the scientific literature on noise–health studies by experts at the University of Washington, which confirms that public health is a real issue of great concern under OLFC’s jet shadow. All of that extensive research information has been compiled and is available at [http://citizensofebysreserve.com/Files/Community%20Aircraft%20Noise\\_A%20Public%20Health%20Issue.pdf](http://citizensofebysreserve.com/Files/Community%20Aircraft%20Noise_A%20Public%20Health%20Issue.pdf).

It is clear that residents, visitors and those who work in the Reserve and its surrounds, especially in Central Whidbey, are put at health risk due to the adverse effects of toxic noise levels that they can be exposed to by Growler FCLP’s at the OLF. Increased Growler operations at the OLFC will only exacerbate those risks.

### **Low-Frequency Noise: Growler Worse than Prowler**

All noise consists of pressure fluctuations in the air. Low-frequency noise (LFN) fluctuations occur between 20 and 160 times/sec. Most everyday sounds fluctuate much faster than this (up to 16,000 times/sec), so the term “low frequency” means the fluctuations are relatively slow compared with other types of sound. Said another way, in audiology, the measured range is restricted to the frequencies relevant to speech 125–8000 Hz (i.e., SI symbol for hertz, meaning “frequency” or specific to sound, “cycles per second”). Low-frequencies are loosely defined as those below this range, which are typically heard as a low rumble. Sometimes there is also a sensation of vibration or pressure on the ears.

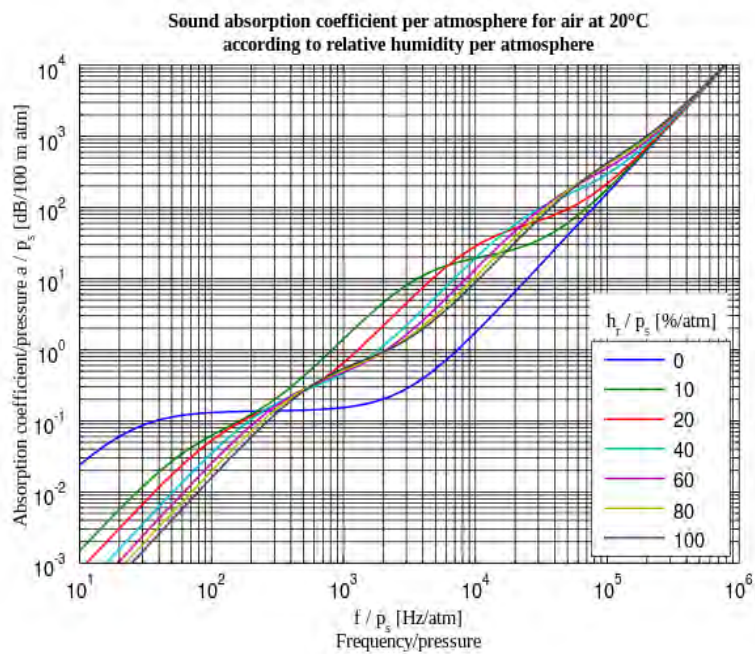
Low-frequency noise travels further than higher frequencies. That has to do with what's stopping the sound, a process referred to as “attenuation.” Sound is a pressure wave vibration of molecules. Whenever molecules are "pushed" they lose some energy to heat. Because of this, sound is lost to heating of the medium it is propagating through. The attenuation of sound waves is frequency-dependent in most materials, and this means that low frequencies are not absorbed at nearly the same rate as high frequencies, so low frequencies travel further through air. ([https://en.wikibooks.org/wiki/Engineering\\_Acoustics/Outdoor\\_Sound\\_Propagation](https://en.wikibooks.org/wiki/Engineering_Acoustics/Outdoor_Sound_Propagation)).

The Growler sound profile is substantially different from the Prowler. From the Navy’s own website: “The EA-18G has more low frequency content than the Prowler it is replacing. Close to the airfield, there might be a slight increase in potential for noise-induced vibration in areas where the peak sound levels exceed 110 dB.”

The 2012 Wyle noise study reiterates that:

The EA-18G Growler is recognizable by the low frequency “rumble” of its jet engines, whereas the EA-6B Prowler is associated with a higher frequency sound of its jet engines. With its increased low-frequency content, Growler take-off events have the higher potential to cause noise induced vibration. Noise-induced structural vibration may also cause annoyance to dwelling occupants because of induced secondary vibrations, or rattling of objects within the dwelling such as hanging pictures, dishes, plaques, and bric-a-brac. (p 1-15)

The graph depicts the attenuation of sound at difference frequencies (accounting for atmospheric pressure and humidity):



From Physics Stack Exchange

Sound propagation, especially through walls, is also affected by other relative hard surfaces, which is known as reflection. Reflection is also frequency-dependent. High frequencies are better reflected than low frequencies, which are able to pass through hard barriers.

According to Mireille Oud, a medical physicist in an article *Low-Frequency Noise: a biophysical phenomenon*, “there is no shielding against LFN. Since LFN propagation is mainly structure-borne, closing doors and windows is not effective. Earplugs are of no use, because LFN bypasses the eardrum.”<sup>11</sup>

<sup>11</sup> Mireille Oud, *Low frequency Noise: a biophysical phenomenon*, Presented at Congress “Noise, Vibrations, Air Quality, Field & Building”, 6 November 2012, Nieuwegein, The Netherlands.

## Impact of LFN on Structures and the Environment

According to Norman Lederman, MS, Director of Research & Development, Oval Window Audio<sup>12</sup>, the commonly used A-weighted decibel metric, is scientifically inaccurate; the C-weighted metric should instead be used.

Low frequency noise pollution is an intrusive and unhealthy by product of aviation. In addition, the current acceptance of A weighted noise measurements largely understates the degree that low frequency noise pollution impacts the environment. For example, using A weighting...a low frequency noise of 50 Hz, which vibrates homes and is felt in the body, is under measured by 30 dB as compared to 1.3 dB in measurements taken with C weighting. Overall measurements are undermeasured by 7 8 dB A weighting as compared to C weighting...

Strong low frequency components produced by aircraft may rattle doors, windows, and other contents of houses. These secondary physical sound sources may be much more annoying than the original primary low frequency component the low frequency range of 15 400 Hz. It may then under predict perceived loudness by 7 to 8 dBA, relative to a 1,000 Hz target noise (Kjellberg & Goldstein, 1985).

And more recently a study<sup>13</sup> of the impact of low-frequency sound on historic structures focused on a soundscape regime at the low end of the frequency spectrum (e.g., 10–25 Hz), which is inaudible to humans:

[N]onindigenous sound energy may cause noise induced vibrations structures. uch w frequency components may be of sufficient magnitude to pose damage risk potential to historic structures and cultural resources. Examples include Anasazi cliff and cave dwellings, and pueblo structures of vega type roof construction. Both are susceptible to noise induced vibration rom low frequency sound pressures that excite resonant frequencies in these structures. The initial damage mechanism is usually fatigue cracking. Many mechanisms are subtle, temporally multi phased, and not initially evident to the naked eye. This paper reviews the types of sources posing the greatest potential threat, their low frequency spectral characteristics, typical structural responses, and the damage risk mechanisms involved.

The adverse impacts of LFN on buildings was known and discussed in the Navy's 2012 EA,

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<sup>12</sup> Norman Nederland, CO., USA in his article, *Aviation Low Frequency Noise of April 13, 2001*,

<sup>13</sup> Louis C. Sutherland and Richard D. Horonjeff; Impact f w frequency sound on historic structures 2005. Noise Pollution Clearing House, <http://www.nonoise.org/index.htm>, **Report to Congress: Report of Effects of Aircraft Overflights on the National Park System EFFECTS ON CULTURAL AND HISTORIC RESOURCES, SACRED SITES, AND CEREMONIES, Chapter 4, September 4, 1994.**

which calls for special building codes to protect against such damage.

From all of the above, it follows that older buildings are at risk because they lack the necessary reinforcement against vibration. This problem as related to OLFC is exacerbated by LFN because it travels much further than higher frequencies. As a result, Growler LFN has potential to impact structures from low-level FCLP flight patterns at OLFC (paths 14 and 32). This is cause for serious preservation concerns in the town of Coupeville, Washington State's second oldest town, and recognized for its large number of examples of Victorian houses as well as, historic Reserve farm structures and clusters. Current FCLPs are already exposing these national historical treasures to undue vibrational deterioration, and an increase in FCLP is unacceptable if these structures are to be retained for future generations.

### **Low Frequency Noise (LFN) Impacts on APE Historic Properties**

There is no doubt that absence of noise and the presence of sound contribute to the sense of place or setting of many heritage assets. For example, churchyards, burial mounds, ruined buildings can all have a very distinct sense of place which is at least partially the result of the absence, or at least recession, of the invasive sounds of jet noise. Soundscape is an important factor in the Reserve.

A variety of laws, executive orders, and regulations clearly charge the National Park Service (NPS), a partner in the Reserve, with preserving cultural resources and providing for their enjoyment "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Parks offer special opportunities for people to experience their cultural inheritance by offering special protection for cultural resources.

The NPS Management Policies recognize five broad categories of cultural resources, with many resources often classified into multiple categories.

**1. Archeological resources** are organized bodies of scientific evidence providing clues to the mystery of past events, primarily objects in context, ranging from household debris in a site from a past culture, to foundations of buildings, to pottery and tools, to paintings or writings.

**2. Cultural landscapes** are settings humans have created in the natural world showing fundamental ties between people and the land, ranging from formal gardens to cattle ranches, and from cemeteries or battlefields to village squares.

**3. Structures** are large, mechanical constructions that fundamentally change the nature of human capabilities, ranging from Anasazi cliff dwellings to statues, and from locomotives to temple mounds.

**4. Museum objects** are manifestations and records of behavior and ideas that span the breadth of human experience and depth of natural history, and may include archeological resources removed from the context where they were found.

**5. Ethnographic resources** are the foundation of traditional societies and the basis for cultural continuity, ranging from traditional arts and native languages, spiritual concepts and subsistence activities which are supported by special places in the natural world, structures with historic associations, and natural materials.

An important aspect of cultural resources is their non-renewability. If they lose significant material aspect, context, associations, and integrity, they are lost forever. The responsibility of the NPS is to minimize loss of pre-historic and historic material. Closely related but secondary responsibilities include maximizing the expression of historic character, integrating site development with natural processes, sustaining the lifeways of ethnic groups, increasing our knowledge of past human behavior, and supporting the interpretation of park resources.

Adverse aircraft overflight impacts on cultural resources entrusted to the NPS include physical impacts from vibrations, loss of historical or cultural context or setting, and interference with visitors' park experience. The term "adverse effect" has special meaning when used in association with historical properties. The definition put forth in The National Historic Preservation Act of 1966 states: *"An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association."*

While physical impacts can permanently harm objects, impacts to context or setting, such as when aircraft fly over an 1800's reenactment or an ancient religious ceremony, can significantly reduce the associations and integrity of the objects, and the enjoyment and understanding of the cultural heritage.

Growler noise is both extremely loud and includes low-frequency vibrational noise. This adversely impacts and stands in the way of the National Park Service and the Ebey's National Historical Reserve Board fulfilling their mission and directives of protecting this non-renewable cultural resource of National importance today and for future generations.

The National Park Service, a partner in the Ebey's National Historical Reserve, has recently completed its own six week noise study which confirms data collected in two independent COER noise studies of actual noise from the Navy's Growlers flying in FCLP patterns at the OLF. These studies confirm the current significant and adverse impacts of jet noise in the Reserve and on its mission, as well as, on the structures and people living in the Reserve, and the thousands of annual visitors. Further, the Navy has made a decision NOT to measure actual noise

but to rely on modeled noise profiles, which generally predict lower decibel readings than actual measurements.

Based on the research presented in this analysis, including the Navy's own research of low-frequency sound, there is cause for real concern. The Navy's current operations, not to mention proposed operational increases at OLFC, represent potential adverse impacts on the 426 contributing fragile historic structures listed in the Reserve, as well as the cultural and historical heritage, soundscape, context, and visitor appreciation of the Reserve. These impacts will occur every time a jet flies over Central Whidbey. These impacts will include the farm clusters and historic homes and fine examples of Victorian architecture in historic Coupeville, Washington State's second oldest town. The Navy's 2005 EA listed some of these structures that were of concern at that time, demonstrating recognition for this issue. (see [Appendix A](#))

Island County and the citizen's of Island County have a long-term investment and commitment in the Reserve and have deemed it a priority in the goals and policies of the new Comprehensive Plan. The intrusion of the Navy's Growler jet noise into the Reserve's soundscape has considerable impact on Island County's ability to achieve the protection and pro-active preservation goals published in its Comprehensive Plan. The low-level jet noise degrades and negatively impacts the rural character and the economically important heritage resources within our agricultural, recreation and tourism industries -- so important to the community and to the thousands of visitors who visit the Reserve annually. The direct and indirect impacts and the secondary effects of Growler jet noise have costs associated and them --- and these are 106 issues for the Navy to investigate so that they will have no adverse impact.

## **Examples of Frequency & Effects on Human Health**

Just as LFN vibration affects structures, those same vibrations invade the human body and impact its organ systems. The impacts of LFN on human health have been widely documented; the following are examples:

**7 Hz:** Supposedly the most dangerous frequency corresponding with the median alpha-rhythm frequencies of the brain. It has also been alleged that this is the resonant frequency of the body's organs; therefore, organ rupture and even death can occur at prolonged exposure.<sup>14</sup>

**1–10 Hz:** "Intellectual activity is first inhibited, blocked, and then destroyed. As the amplitude is increased, several disconcerting responses have been noted. These responses begin a complete

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<sup>14</sup> Organ Music Instills Religious Feelings,' by Jonathan Amos, 9/8/2003

neurological interference. The action of the medulla is physiologically blocked, its autonomic functions cease.”<sup>15</sup>

**43–73 Hz:** “...lack of visual acuity, IQ scores fall to 77% of normal, distortion of spatial orientation, poor muscular coordination, loss of equilibrium, slurred speech, and blackout.”<sup>16</sup>

**50–100 Hz:** “...intolerable sensations in the chest and thoracic region can be produced—even with the ears protected. Other physiological changes that can occur include chest wall vibration and some respiratory rhythm changes in human subjects, together with hypopharyngeal fullness (gagging). The frequency range between 50 and 100 Hz also produces mild nausea and giddiness at levels of 150–155 dB, at which point subjective tolerance is reached. At 150–155 dB or 0.63–1.1 kPa [Pa is the SI symbol for pascal or pressure/stress; k = kilo or 1000], respiration-related effects include substernal discomfort, coughing, severe substernal pressure, choking respiration, and hypopharyngeal discomfort.”<sup>17</sup>

**100 Hz:** At this level, a person experiences irritation, “mild nausea, giddiness, skin flushing, and body tingling.” Following this, a person undergoes “vertigo, anxiety, extreme fatigue, throat pressure, and respiratory dysfunction.”<sup>18</sup>

In researching impacts of low-frequency sound, numerous references were found, both old and recent, to demonstrate the well-known characteristics and adverse impacts of low-frequency sound—not assessed by the Navy in its 2012 EA.

The research strongly supports serious health effects of LFN like vertigo, disturbed sleep, stress, hypertension, and heart rhythm disorders. An excerpt<sup>19</sup> had this to say:

Although the effects of lower intensities of low frequency noise are difficult to establish for methodological reasons, evidence suggests that a number of adverse effects of noise in general may be greater for low frequency noise than for the same noise energy in higher frequencies: loudness judgments and annoyance reactions are greater for low frequency noise than other noises for equal sound pressure level regardless of which weighting scheme is employed (Goldstein, 1994); annoyance is exacerbated by rattle or vibration induced by low frequency noise; speech intelligibility may be reduced more by low frequency noise than other noises (except those in the frequency range of speech itself because of the upward spread of masking) (Pickett, 1959; Loeb, 1986).

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<sup>15</sup> Gavreau V., “Sons graves intenses et infrasons” in: *Scientific Progres – la Nature* (Sept. 1968) p. 336-344

<sup>16</sup> Gavreau V., “Sons graves intenses et infrasons” in: *Scientific Progres – la Nature* (Sept. 1968) p. 336-344

<sup>17</sup> Acoustic Trauma: Bioeffects of Sound, by Alex Davies

<sup>18</sup> Gavreau V., “Sons graves intenses et infrasons” in: *Scientific Progres – la Nature* (Sept. 1968) p. 336-344

<sup>19</sup> Stalker, From a Short History of Sound Weapons Pt2: Infrasound, January 14, 2008

The following excerpts are from a study<sup>20</sup> summarizing 25 years of research on health impacts pertaining to LFN:

**Abstract:** Respiratory pathology induced by low frequency noise (LFN, < 500 Hz, including infrasound) at a level subject even had in the 1960's, within the context of U.S. and U.S.S.R. Space Programs, other authors have already reported its existence. Within the scope of vibroacoustic disease (VAD), a whole body pathology caused by excessive exposure to LFN, respiratory pathology takes on specific features. Initially, respiratory pathology was not considered a consequence of LFN exposure; but today, LFN can be regarded as a major agent of disease that targets the respiratory system. The goal of this report is to put forth what is known to date on the clinical signs of respiratory pathology seen in VAD patients.

The methods explain, “Data from the past 25 years of research will be taken together and presented...” and the results section goes on to state:

In persons exposed to LFN in the job, respiratory complaints appear after the first 4 years of professional activity. At this stage, they disappear during vacation periods or when the person is removed from his/her workstation for other reasons. With long term exposure, more serious situations can arise, such as, atypical pleural effusion, respiratory insufficiency, fibrosis and tumors. There is no correlation with smoking habits. In LFN exposed animal models, morphological changes of the pleura, and loss of the phagocytic ability of pleural mesothelial cells (explaining the atypical pleural effusions). Fibrotic lesions and neo vascularization were observed along the entire respiratory tract. Fibrosis lesions and neovascularization were observed throughout the respiratory tract of the animals seen. Pre malignant lesions, metaplasia e dysplasia, were also identified.

And the authors go on in the discussion to explain, “LFN is an agent of disease and the respiratory tract is one of its preferential targets. The respiratory pathology associated with VAD needs further in-depth studies in order to achieve a greater understanding, and develop methods of pharmacological intervention.”

Excerpts from another publication: Noise-induced extra-aural pathology: a review and commentary, Alves-Pereira M<sup>20</sup> further define LFN health effects.

**Abstract:** The focus of this review paper will be the effects of acoustic phenomenon (noise), characterized by large pressure amplitude  $\geq 90$  dB and low frequency ( $\leq 500$  Hz) (LPALF) on humans and animal models. Current concepts imply the assumption that such LPALF noise impinges only on, through, the acoustic medium of the auditory system. As a consequence of this assumption, the effect of noise on humans is only regulated for purposes of hearing conservation. Guidelines and regulations governing occupational noise assessments are biased toward the subjective human perception of sound. The author will not make the assumption that airborne acoustic phenomena impacts only on the auditory system, and will present a literature

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<sup>20</sup> Respiratory pathology in vibroacoustic disease: 25 years of research, Branco NA<sup>1</sup>, Ferreira JR, Alves Pereira M.



review providing evidence for such position. The purpose of this review paper is to defend the existence of extra aural, noise induced pathology, particularly the vibroacoustic disease; and to advance the recognition that the respiratory tract could very well be a target organ of this environmental stressor.

An epidemiological survey<sup>21</sup> examined low frequency noise from plant and appliances in or near domestic buildings by comparing to a control group of dwellings had comparable conditions to the test group except that there was no low frequency noise.

There were 27 individuals in the test group and 22 in the control group. The test group suffered more from their noise exposure than the control group did (as indicated in the table below); they were less happy, less confident and more inclined to depression, among others.

Symptom	Test group %	Control group %
Chronic fatigue	59	38
Heart ailments anxiety, stitch, beating palpitation	81	54
Chronic insomnia	41	9
Repeated headaches	89	59
Repeated ear pulsation, pains in neck, backache	70	40
Frequent ear vibration, eye ball and other pressure	55	5
Shortness of breath, shallow breathing, chest trembling	58	10
Frequent irritation, nervousness, anxiety	93	59
Frustration, depression, indecision	85	19
Depression	30	5

The World Health Organization recognizes the special place of low frequency noise as an environmental problem. Its publication on Community Noise<sup>22</sup> (Berglund et al., 2000) makes a number of references to low frequency noise:

"For noise with a large proportion of low frequency sounds a still lower guideline (than 30dBA) is recommended."

"When prominent low frequency components are present, noise measures based on A weighting are inappropriate."

<sup>21</sup> Alves Pereira M' Noise induced extra aural pathology: a review and commentary, 1999

Mirowska and Mroz. 2000. As reported in [https://www.windwatch.org/documents/review\\_of\\_published\\_research\\_on\\_low\\_frequency\\_noise\\_and\\_its\\_effects/](https://www.windwatch.org/documents/review_of_published_research_on_low_frequency_noise_and_its_effects/)

<sup>22</sup> World Health Organization, Guidelines for Community Noise, edited by B. Berglund, T. Lindvall, and D. H. Schuella, Cluster of Sustainable Development and Healthy Environment, Department of the Protection of the Human Environment, Occupational and Environmental Health, Geneva, Switzerland, 1999.

"Since A weighting underestimates the sound pressure level of noise with low frequency components, a better assessment of health effects would be to use C weighting."

"It should be noted that a large proportion of low frequency components in a noise may increase considerably the diverse effects on health."

"The evidence on low frequency noise is sufficiently strong to warrant immediate concern."

It is important to note that while the intensity of Growlers practice at OLFC is episodic, the sound intensity far exceeds anything like the intensity the subjects above experienced.

The more research that is done on LFN, the more we know about new negative health impacts. There seems to be little good news here. Navy caution over potential harm to civilian populations seems well advised as a way forward – especially in the Reserve where thousands of people visit from around the world.

## **Navy's Hearing Conservation Zones: Noise Equals Risk & Adverse Impact**

If the areas under the OLFC racetrack were a Navy site, many residents would mandatorily be part of a "*Hearing Conservation Program*"<sup>23</sup> because they are in what the Navy calls a "*Hazardous Noise Area.*" The Navy identifies hazardous noise areas wherever the 8-hour time-weighted average noise exceeds 85 dB for more than 2 days in any month. Military and civilian personnel working in such areas are automatically enrolled and identified as "*At Risk,*" and must undergo frequent hearing tests and health monitoring.

The noise levels made by Growlers on path 32 over Ebey's Reserve as recorded by JGL Acoustics documented sound levels of over 130 dB. The JGL data were examined by another COER-retained noise expert Paul Schomer (Standards Director, Emeritus, of the Acoustical Society of America). Simplified, Dr. Schomer revealed that folks under path 32 are experiencing well over the Navy's threshold for designation of a Hearing Conservation Zone.

For example, in 14 days in July 2012 there were 1122 FCLP overflights, or an average of 80 overflights for each flying day that month. The noise that residents experienced that July exceeded the Navy's Hearing Conservation Zone threshold by more than 7 fold.

What the Navy is required to do for civilian and military folks in their Hearing Conservation Program has five components:

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<sup>23</sup> Navy and Marine Corps Public Health Center Technical Manual NMCPHC – TM 6260.51.99-2. Navy Medical Department Hearing Conservation Program Procedures. Navy and Marine Corps Public Health Center, September 15, 2008. [http://www.public.navy.mil/surfor/Documents/6260\\_51\\_99\\_2\\_NMCPHC\\_TM.pdf](http://www.public.navy.mil/surfor/Documents/6260_51_99_2_NMCPHC_TM.pdf)

1. **On-Site Noise Measurement**, to identify noise exposure levels and spatial variations.
2. **Engineering Controls**, to reduce the potential hazard to the maximum extent feasible.
3. **Annual Personnel Testing**, to enable timely audiological and medical evaluation.
4. **Hearing Protective Devices**, to be provided and fit to each individual and to be worn until and unless effective engineering controls mitigate the noise hazard.
5. **Education of Personnel**, as required regarding the impacts of noise hazards on human health and proper use and care of hearing protective devices.

However, there is NO protection program at all for those civilian residents routinely exposed in the Reserve or for Reserve visitors unknowingly exposed, and the mere existence of the DOD program acknowledges the existence of a health risk problem --- as a result of noise.

## **A Final Correction**

Commander Moore, in his request for comment on this 106 Process, infers that OLFC has been used by the Navy for 74 years, which is off by nearly 25 years. To clarify, the Navy reactivated this 1943 WWII emergency landing strip in the late 1960s for FCLP use. In the intervening 50 or so years, while the jets evolved into the now fastest and loudest jets ever operated by the Navy -- the population density in Central Whidbey and around the OLF increased, the Reserve was created, and the highway was expanded that is located along side the OLF through the entrance to the Reserve.

The often-stated claim that the “Navy was here first” grossly misrepresents actual history and insults the Skagit Indians (one of four groups of Salish Indians), the European settlers, and the founding families of the historic town of Coupeville – the second oldest town in Washington State and establishment of the Ebey’s National Historical Reserve. The Navy is actually a Johnny-come-lately to Whidbey Island. And to Central Whidbey.

Even Admirals Cove, a community of over 600 properties lying directly under the FCLP approach, was planned and initiated in the mid-1960s, at which time public records show the Navy was intending to release OLFC to Island County. It was even offered to the developers of Admirals Cove, but they declined, not realizing that inaction by the County would fail to obtain OLFC for public use. So, even when Admirals Cove was developed, the Navy’s plans for the outlying field were conversion to nonmilitary use, and even after OLFC was reactivated in 1967, the Navy's use was supposed to be part-time along with civilian use.

While the Navy infers that its presence grants it some sort of grandfather rights, under that logic the grandfather rights really belong to those preceding the Navy. But, of course, neither argument is constructive or logical. What has happened here is the pure absence of foresight and meaningful planning, both by politicians and by the Navy, to address changes in military jets and demographics and to mitigate encroachment on the civilian community and its cultural history

and structures. Also, the Navy has an inconsistent record for following its own procedures and policies, providing itself with maximum use, instead of a negotiated, compromised or reconciled use. Additionally, indirect impacts on the contested Area of Impact have not been addressed by the Navy, nor can they be addressed because of the inappropriate noise metrics used to measure impact and effect mentioned already in the above comments.

While the development surrounding OLFC is too entrenched and important to move at this point, nor certainly can the historic and culturally significant structures and family relationships with the land in the Reserve, Growlers do and can move. The Navy can do Growler FCLP sessions at many other locations that will not impact a nationally significant cultural and historical resource.

## **CONCLUSION:**

The Board of Directors of Citizens of Ebey's Reserve (COER), given (1) the inadequacies of the Navy's noise data and its reliance on an improper single noise metric (DNL based on LFN-masking dBA scale), and (2) based on the noise impacts on visitor and resident health and related annoyance and the long-term structural integrity of historic buildings of the Reserve, do hereby recommend that all FCLPs at OLFC and low-level fights over the Reserve be discontinued and redirected to an appropriate remote and environmentally insensitive location.

The Navy's use of the wrong measuring metric fails to measure the impacts on the Reserve and therefore makes it impossible to determine the Area of Potential Impact, which we strongly believe actually includes most of Central Whidbey – not just the area under flight path 32 and 14 at the OLFC. Until this is rectified, the Growler/Reserve 106 process cannot proceed with any veracity nor meet the requirements of this federal process.

We believe that the facts and data clearly demonstrate that there already is significant adverse impact on the Reserve and its environs from Growler jet noise and that additional flights and training proposed over the Reserve by the Navy will make the mission of the Ebey's Reserve and the preservation goals of Island County impossible to achieve.

—APPENDIX A —

**NASWI 2005 EA: Table 3-26 NRHP-Listed Historic Sites at Ebey’s Landing National Historic Reserve Currently Located within the  $\geq 65$ -dB DNL and are of high concern for low-level noise impacts on fragile historic structures.** These properties are all at risk and each should be surveyed and monitored for on-going current impacts.<sup>24</sup>

**Noise Zone (CY 2003 and CY 2013)**

**CY 2003**

Newcomb Property  
Bergman House  
Benson House  
Hughes House  
Bradt House

**Island County (outside town of Coupeville)**

**CY 2003**

Reuble Farm  
John Kineth Farmhouse  
Sam Keith House  
Wiley Place  
Strong Granary  
Old Anderson Place  
Grove Terry Place  
Fort Casey Housing/Myers House  
Fort Casey Pump House  
C. Wanamaker House  
J. Gould House/Miller House  
Strong House  
Gilbert Place/Eggerman House  
Gillespie House  
Sam Crockett House  
H. Crockett House/Boyer Farm

**CY 2013**

Reuble Farm  
John Kineth Farmhouse  
Sam Keith House  
Wiley Place  
Strong Granary  
Old Anderson Place  
Grove Terry Place  
Fort Casey Housing/Myers House  
Fort Casey Pump House  
C. Wanamaker House  
J. Gould House/Miller House  
Strong House  
Gilbert Place/Eggerman House  
Gillespie House  
Sam Crockett House  
H. Crockett House/Boyer Farm  
Col. W. Crockett Farmhouse  
Thomas Sullivan House  
Engle Farm

\* Source: Kwarsick 2004; Island County Department of Planning and Community Development 2004

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<sup>24</sup> FROM The NAS Whidbey Island’s 2005 EA.

In addition, NAS Whidbey Island should agree to provide historical documentation for the Kellogg House, a historic house that once occupied the OLF site and was the residence of a physician known as “the Canoe Doctor.”

**Island County’s Comprehensive Plan supports the Goals & Policies of Ebey’s Reserve.**

Washington State’s Growth Management Act outlines thirteen goals that communities must plan by; Goal 13 is to “identify and encourage the preservation of lands, sites, and structures, that have historical or archaeological significance.” Few communities however, have thoroughly addressed historic preservation in their Comprehensive Plans. Given the abundance of Island County’s historic resources, historic preservation is a high priority within the community and several sections of the new Comprehensive Plan include the preservation of Ebey’s Reserve.

**5.3 EBEB’S LANDING HISTORIC RESERVE**

National Reserves are geographic areas containing nationally significant resources in which federal, state and/or local agencies, along with the private sector, work cooperatively to manage, protect and interpret the resources.

Ebey’s Landing National Historical Reserve (Reserve) was established by an act of Congress in 1978 in order “to preserve and protect a rural community which provides an unbroken historic record from nineteenth century exploration and settlement of Puget Sound up to the present time.” (Public Law 95 625, November 10, 1978). The Reserve, is one of the only remaining area in the Puget Sound region here road spectrum of Northwest history clearly visible in the landscape that lived and actively armed. Most of the land remains in private ownership, while retaining its historic, cultural, and rural character.

The Reserve is nationally significant; when it was established, it represented a new approach to preserving land and heritage resources. This new approach recognized that local government, including land county the government and residents) as always been a partner in the Reserve.

The Reserve’s distinct landscape, rural character and heritage resources are economically important in our agricultural, recreation and tourism industries, socially important in our community, and worthy of proactive Preservation.

... The Reserve’s boundaries reflect this history and are the same as those of the Central Whidbey Island Historic District established in 1973, which were based on the settlement patterns resulting from the Public Lands Survey Act of 1850, also known as the Donation Land Claim Act. The legislation points to the fact that this is a community that has evolved from early exploration to the present and consists of descendants of original settlers as well as new residents. As such, the Reserve cannot be interpreted from one specific point in time. In addition, most of the land is privately owned, with the rest a combination of local, state, and federal ownership; creating a unique set of circumstances. The NPS has purchased little land within the Reserve, but has actively acquired scenic easements on farms and important open spaces. The concept of the Reserve was a community effort and participating in land protection is voluntary in the part of private landowners. This has been a key to the Reserve’s success

the community.

The impetus to protect central Whidbey began from local citizens' initiative to protect Ebey's Prairie from inappropriate development and is well documented in the Reserve's administrative history. The concept of a national historical reserve was viewed as a way to preserve open space with a minimum disturbance to private landowners—to provide initial federal support without threatening local autonomy.

Goal 1. Actively participate as a partner in Ebey's Landing National Historical Reserve in order to "preserve and protect a rural community which provides an unbroken historical record from 19th century exploration and settlement in Puget Sound to the present time" (Public Law 95 625, November 10, 1978).

Goal 2. To identify Island County's archaeological resources, and to protect and preserve the cultural, historical, social, educational, and scientific value of these resources in a manner that respects their cultural significance.







**EBEY'S LANDING**  
NATIONAL HISTORICAL RESERVE

**Trust Board Members**

*Wilbur Bishop, Chair*  
*Mark Sheehan, Vice Chair*  
*Al Sherman, Treasurer*  
*Lisa Bernhardt, Secretary*

*Fran Einterz*  
*Hank Florence*  
*Jan Pickard*  
*Lisa Meserole*  
*Jon Crimmins*

*Kristen Griffin,*  
*Reserve Manager*

**Trust Board Partners**

*National Park Service*  
*Washington State Parks*  
*Island County*  
*Town of Coupeville*

Post Office Box 774  
Coupeville, WA 98239  
Phone (360) 678-6084  
[www.nps.gov/ebla](http://www.nps.gov/ebla)

To: Kendall Campbell, NASWI Cultural Resources Program Manager

From: Trust Board of Ebey's Landing National Historical Reserve

Date: September 28, 2016

Subject: NHPA Section 106 comments on the proposed definition of the APE for the continuation and increase in the EA-18G Growler Operation at NASWI (letter of June 30, 2016, 5090, Ser N44/1450).

Ebey's Landing National Historical Reserve (the Reserve) is an area of nationally significant historic resources with boundaries defined by the Central Whidbey Island Historic District. The Trust Board of Ebey's Landing National Historical Reserve oversees the administration and management of the Reserve, as provided by the 1978 National Parks and Recreation Act, P.L. 95-625, and an Interlocal Agreement of July 26, 1988 between Island County, the Town of Coupeville, The Washington State Parks and Recreation Commission, and the National Park Service. The following comments are provided on behalf of the Trust Board in response to a request for comment on the process for determining the Area of Potential Effect as part of Section 106 Review for continued and increased EA-18G Growler Operation at NASWI.

The Trust Board does not agree that the current process for measuring Growler operation noise impacts is appropriate as an APE for this undertaking.

As noted in previously submitted comments for the EA-18G Growler Operation EIS (in process), the Trust Board is concerned that the 65 dB DNL contours may not fully characterize noise exposure and impacts (direct and indirect) to the Reserve's resources, values and/or visitor experience. This would require the use of metrics such as "time audible" and "time above," maximum A-weighted sound level, sound exposure level, equivalent sound level, and number-of-events-above a specified sound level.

More specifically, noise assessment and analysis should include not only noise propagation computer models but also actual ground measurement of intensity, frequency, and vibration as they are experienced by Reserve users, historic structures and other resources both directly under and immediately adjacent to over flights; should be measured at a wide range of locations within the Reserve, including locations associated with Growler noise complaints; should consider and report measured (not presumed) altitudes of the Growlers over the same during ascent, cruising, and descent; and should include on-ground intensity, duration and frequency measurements from multiple locations for entire touch and go training sessions at OLF, rather than include or average measurements during non-active periods.

Day-Night Average Sound Level is one measurement that the federal government can use for evaluating community noise impacts but in this case, there is concern it will not provide data adequate to define and evaluate impact to the Reserve.

The Trust Board of Ebey's Landing National Historical Reserve appreciates the opportunity to provide input during this Section 106 review and looks forward to further consultation on this issue.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kristen Griffin".

Kristen Griffin, Reserve Manager  
Trust Board of Ebey's Landing National Historical Reserve

*Cc: file*





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

5090  
Ser N44/1806  
August 31, 2016

Mr. John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

Dear Mr. Fowler:

SUBJECT: ACHP LOG NO. 008500: CLARIFICATION OF THE SECTION 106 PROCESS FOR THE CONTINUATION AND INCREASE OF EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

In order to facilitate your participation in the section 106 consultation process for the proposed continuation and increase of EA-18G Growler operations at Naval Air Station Whidbey Island (NAS Whidbey Island), the Navy would like to offer you this overview of the section 106 consultation process and a description of our proposed plan to meet federal statutory responsibilities under the National Historic Preservation Act (NHPA) of 1966, as amended.

Per the NHPA, and its implementing regulations 36 CFR 800, the Navy, as a federal agency, is required to take into account the effects of an undertaking on historic properties included in or eligible for inclusion in the National Register of Historic Places (NRHP). Given the nature and scope of this undertaking, and the public interest in historic properties within the Area of Potential Effect (APE), the Navy will be offering ample opportunity for consulting parties to comment throughout the section 106 consultation process. The section 106 process consists of four steps:

**1. DETERMINING THE UNDERTAKING:**

The Navy has determined that the proposed action qualifies as an undertaking that is of a type that has the potential to effect historic properties.

**2. DEFINING THE AREA OF POTENTIAL EFFECT (APE):**

Currently, the Navy is requesting comments on the proposed approach to defining the Area of Potential Effect (APE). After comments have been received, and when updated noise model studies for the Environmental Impact Statement (EIS) have been completed, the Navy will define the APE, provide maps to all consulting parties for further comment, and request SHPO concurrence on the APE.

**3. IDENTIFY AND EVALUATE HISTORIC PROPERTIES WITHIN THE APE:**

Following defining the APE, the Navy will introduce their methodology for identifying historic properties and assessing the historic significance of resources that have not yet been evaluated for eligibility in the NRHP. All consulting parties will have the opportunity to comment on the proposed methodology prior to the Navy identifying and evaluating historic properties within the APE and requesting SHPO concurrence on determinations of eligibility.

**4. DETERMINATION OF EFFECT:**

The fourth step in the section 106 consultation process is to determine if the undertaking has an adverse effect on the identified historic properties within the APE. The Navy will provide our finding of effect to all consulting parties for comment prior to preparing a final finding of effect for SHPO concurrence.

5090  
Ser N44/1806  
August 31, 2016

For a more detailed explanation of this process and the federal regulations and requirements that guide it please refer to Enclosures 1 and 2. Please find a copy of the implementing regulations 36 CFR 800 in Enclosure 3.

The time required to complete the section 106 consultation process can be influenced by other federal regulations and requirements outside of the NHPA. For the proposed continuation and increase of EA-18G Growler operations at NAS Whidbey Island section 106 consultation is being done in coordination with the National Environmental Policy Act (NEPA) review and preparation of an Environmental Impact Statement (EIS). The EIS will analyze the potential socio/economic, health, natural resource, and cultural resource impacts, whereas the section 106 process focuses specifically on potential effects to historic properties. Through coordination of these two federal processes the Navy seeks to increase the efficiency and effectiveness of each process by sharing information and documents while decreasing duplication of effort. In addition, coordinating the NHPA and NEPA processes allows for the promotion of greater transparency and potential for public involvement.

For this undertaking the section 106 consultation will provide the EIS team information to ensure historic properties are appropriately analyzed in the NEPA review. The EIS provides specialized studies to fill data gaps that meet information standards for the section 106 consultation. For this undertaking, the EIS will provide updated noise study models for the proposed action, which are necessary to facilitate section 106 consultation, particularly in defining the APE.

If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil). We appreciate your comments on the continuation and increase of EA-18G Growler operations at NAS Whidbey Island and look forward to continued section 106 consultation.

Sincerely,



KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer

Enclosures:    1. Continuation and Increase of Growler Operation Section 106 Consultation Process / Strategy  
                    2. Continuation and Increase of Growler Operation Section 106 Consultation Process / Strategy  
                    Flow Chart  
                    3. 36 CFR 800

## **Continuation and Increase of EA-18G Growler Operations: Section 106 Consultation Process / Strategy**

**1. Establish Undertaking [36 CFR 800.3(a)]:** An undertaking is a “project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency...” [36 CFR 800.16(y)].

- The undertaking for the Continuation and Increase to Growler Operations is to:
  - continue and expand existing Growler operations at the Naval Air Station (NAS) Whidbey Island complex , which includes field carrier landing practice by Growler aircraft that occurs at Ault Field and Outlying Landing Field (OLF) Coupeville;
  - increase electronic attack capabilities (provide for an increase of 35 or 36 aircraft) to support an expanded U.S. Department of Defense mission for identifying, tracking, and targeting in a complex electronic warfare environment;
  - construct and renovate facilities at Ault Field to accommodate additional Growler aircraft; and
  - station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community, beginning as early as 2017.
- Navy Cultural Resource staff determined this undertaking to be the type of activity that “has the potential to cause effects on historic properties” [36 CFR 800.3(a)]. In October 2014, the Navy initiated section 106 consultation and invited interested parties to consult on the undertaking. Navy Cultural Resource staff were present at National Environmental Policy Act (NEPA) scoping meetings seeking public comments on the undertaking.

**2. Determine the Area of Potential Effect [36 CFR 800.4(a)]:** The Area of Potential Effect (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking” [36 CFR 800.16(d)].

- Given the nature and size of the undertaking, as well as coordination with the NEPA review process, the Navy asked consulting parties for comments on the proposed approach to defining the APE in June and July of 2016.
- When the Draft EIS is released to the public for comment (anticipated 30 September 2016), noise model studies included in the EIS will be used to define the APE and create a map of the APE based on the most expansive 65 dB DNL contours for all of the combined proposed alternatives. Maps of the proposed finalized APE will be sent to consulting parties for additional comments and considerations. The Washington State Historic Preservation Office (SHPO) will be asked to concur on the proposed finalized definition of the APE.
  - *The proposed and final definition of the APE is subject to Federal Aviation Administration (FAA) regulations (14 CFR 150).*

**3. Identify Historic Properties and Evaluate Historic Significance [36 CFR 800.4(b) & 36 CFR 800.4(c)]:** Based on comments received from consulting parties on the definition of the APE, the Navy will “make a reasonable and good faith effort to carry out appropriate identification efforts” of historic properties within the APE [36 CFR 800.4(b)(1)]. The Navy will also “apply National Register criteria (36 CFR 63) to properties identified within the [APE] that have not been previously evaluated for National Register eligibility” [36 CFR 800.4(c)(1)].

- A historic property “means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places...” [36 CFR 800.16(1)(1)]
- Once the APE has been defined and the Washington SHPO has concurred, the Navy will send out their proposed methodology for identifying historic properties and evaluating historic significance to all consulting parties. Consulting parties will have the opportunity to comment on the proposed methodology.
- Once comments have been received and taken into consideration, the Navy will identify historic properties and evaluate historic significance based on the finalized methodology. The final identification and evaluation report will be submitted to consulting parties.
  - Due to confidentiality requirements for archaeological sites and properties of traditional, religious, and cultural importance, the status of some historic properties may be withheld from consulting parties [36 CFR 800.11(c)].

**4. Finding of Effect [36 CFR 800.4(d)]:** If the Navy “finds that there are historic properties which may be affected by the undertaking, the [Navy] shall notify all consulting parties...and assess adverse effects, if any, in accordance, with 36 CFR 800.5” [36 CFR 800.4.(d)(2)].

- The Navy “shall apply the criteria of adverse effect to historic properties within the [APE]” [36 CFR 800.5(a)] and report their findings to all consulting parties for comments.
- Once comments have been received and taken into consideration, the Navy will send out the final finding of effect to all consulting parties and ask for Washington SHPO concurrence.
- In the event the Navy determines an Adverse Effect, the Navy shall follow 36 CFR 800.6 to resolve adverse effects to historic properties through avoidance, minimization, or mitigation.

ENCLOSURE 1.





# Section 106 Consultation Process for the Continuation and Increase of EA-18G Growler Operations at NAS Whidbey Island / Strategy Flow Chart

**Navy:** Established the proposed continuation and increase of EA-18G Growlers at NAS Whidbey Island is an undertaking of the type that “has the potential to cause effects on historic properties”. Began section 106 consultation by notifying SHPO, ACHP, and consulting parties. (October 2014)

**Public Consultation:** To meet section 106 public notification requirements, public comments on section 106 were solicited and accepted at NEPA scoping meetings. (October/December 2014)



**Navy:** Consult with SHPO, ACHP, and consulting parties on the proposed approach to defining the Area of Potential Effect (APE) and ask for comments. (June/July 2016)

**Consulting Parties:** Provide Navy comments on proposed approach to defining the APE.

**Navy:** Take comments into consideration and using updated noise modeling maps from the Draft EIS, define the APE. Provide final APE to consulting parties for further comments and ask for SHPO concurrence. (Fall 2016)

**Public Consultation:** Navy will solicit and accept public comments on section 106 consultation during public meetings on the Draft EIS.

**Consulting Parties:** Provide Navy comments on the definition of the APE. SHPO has 30 days to respond to the Navy.



**Navy:** Make a “good and reasonable faith” effort to identify historic properties within the APE and apply National Register eligibility criteria to unevaluated properties within the APE. Share proposed methodology for identification and evaluation with SHPO, ACHP, and consulting parties for comments.

**Consulting Parties:** Provide Navy comments on proposed methodology for identifying and evaluating historic properties within the APE.

**Navy:** Take comments into consideration and identify and evaluate historic properties within the APE. Submit findings to consulting parties for comments and ask for SHPO concurrence.

**Consulting Parties:** Provide Navy comments on the identification and evaluation of historic properties. SHPO has 30 days to respond to the Navy.



**Navy:** Apply the criteria of adverse effect to determine if the undertaking will have an adverse effect to historic properties. Share proposed finding with SHPO, ACHP, and consulting parties for comments.

**Consulting Parties:** Provide Navy comments on the proposed finding of effect.

**Navy:** Take comments into consideration and submit final finding of effect to consulting parties and ask for SHPO concurrence.

**Public Consultation:** Navy will accept public comments on section 106 consultation during the comment period for the Final EIS.

**Consulting Parties:** Provide Navy comments on the finding of effect. SHPO has 30 days to respond to the Navy.



**Navy:** In the event Navy determines an Adverse Effect finding, the Navy shall follow 36 CFR 800.6 to resolve adverse effects to historic properties through avoidance, minimization, or mitigation.

**Public Consultation:** Please note, Navy will accept comments on section 106 consultation at anytime.





**36 CFR PART 800 -- PROTECTION OF HISTORIC PROPERTIES (incorporating amendments effective August 5, 2004)**

**Subpart A -- Purposes and Participants**

Sec.

- 800.1 Purposes.
- 800.2 Participants in the Section 106 process.

**Subpart B -- The Section 106 Process**

- 800.3 Initiation of the section 106 process.
- 800.4 Identification of historic properties.
- 800.5 Assessment of adverse effects.
- 800.6 Resolution of adverse effects.
- 800.7 Failure to resolve adverse effects.
- 800.8 Coordination with the National Environmental Policy act.
- 800.9 Council review of Section 106 compliance.
- 800.10 Special requirements for protecting National Historic Landmarks.
- 800.11 Documentation standards.
- 800.12 Emergency situations.
- 800.13 Post-review discoveries.

**Subpart C -- Program Alternatives**

- 800.14 Federal agency program alternatives.
- 800.15 Tribal, State and Local Program Alternatives. (Reserved)
- 800.16 Definitions.
- Appendix A – Criteria for Council involvement in reviewing individual section 106 cases

**Authority:** 16 U.S.C. 470s.

**Subpart A-Purposes and Participants**

**§ 800.1 Purposes.**

(a) *Purposes of the section 106 process.* Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings. The procedures in this part define how Federal agencies meet these statutory responsibilities. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of

project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

(b) *Relation to other provisions of the act.* Section 106 is related to other provisions of the act designed to further the national policy of historic preservation. References to those provisions are included in this part to identify circumstances where they may affect actions taken to meet section 106 requirements. Such provisions may have their own implementing regulations or guidelines and are not intended to be implemented by the procedures in this part except insofar as they relate to the section 106 process. Guidelines, policies and procedures issued by other agencies, including the Secretary, have been cited in this part for ease of access and are not incorporated by reference.

(c) *Timing.* The agency official must complete the section 106 process "prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license." This does not prohibit agency official from conducting or authorizing nondestructive project planning activities before completing compliance with section 106, provided that such actions do not restrict the subsequent consideration of alternatives to avoid, minimize or mitigate the undertaking's adverse effects on historic properties. The agency official shall ensure that the section 106 process is initiated early in the undertaking's planning, so that a broad range of alternatives may be considered during the planning process for the undertaking.

**§ 800.2 Participants in the Section 106 process.**

(a) *Agency official.* It is the statutory obligation of the Federal agency to fulfill the requirements of section 106 and to ensure that an agency official with jurisdiction over an undertaking takes legal and financial responsibility for section 106 compliance in accordance with subpart B of this part. The agency official has approval authority for the undertaking and can commit the Federal agency to take appropriate action for a specific undertaking as a result of section 106 compliance. For the purposes of subpart C of this part, the agency official has the authority to commit the Federal agency to any obligation it may assume in the

implementation of a program alternative. The agency official may be a State, local, or tribal government official who has been delegated legal responsibility for compliance with section 106 in accordance with Federal law.

(1) *Professional standards.* Section 112(a)(1)(A) of the act requires each Federal agency responsible for the protection of historic resources, including archeological resources, to ensure that all actions taken by employees or contractors of the agency shall meet professional standards under regulations developed by the Secretary.

(2) *Lead Federal agency.* If more than one Federal agency is involved in an undertaking, some or all the agencies may designate a lead Federal agency, which shall identify the appropriate official to serve as the agency official who shall act on their behalf, fulfilling their collective responsibilities under section 106. Those Federal agencies that do not designate a lead Federal agency remain individually responsible for their compliance with this part.

(3) *Use of contractors.* Consistent with applicable conflict of interest laws, the agency official may use the services of applicants, consultants, or designees to prepare information, analyses and recommendations under this part. The agency official remains legally responsible for all required findings and determinations. If a document or study is prepared by a non-Federal party, the agency official is responsible for ensuring that its content meets applicable standards and guidelines.

(4) *Consultation.* The agency official shall involve the consulting parties described in paragraph (c) of this section in findings and determinations made during the section 106 process. The agency official should plan consultations appropriate to the scale of the undertaking and the scope of Federal involvement and coordinated with other requirements of other statutes, as applicable, such as the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archeological Resources Protection Act and agency-specific legislation. The Council encourages the agency official to use to the extent possible existing agency procedures and mechanisms to fulfill the consultation requirements of this part.

(b) *Council.* The Council issues regulations to implement section 106,

provides guidance and advice on the application of the procedures in this part, and generally oversees the operation of the section 106 process. The Council also consults with and comments to agency officials on individual undertakings and programs that affect historic properties.

(1) *Council entry into the section 106 process.* When the Council determines that its involvement is necessary to ensure that the purposes of section 106 and the act are met, the Council may enter the section 106 process. Criteria guiding Council decisions to enter the section 106 process are found in appendix A to this part. The Council will document that the criteria have been met and notify the parties to the section 106 process as required by this part.

(2) *Council assistance.* Participants in the section 106 process may seek advice, guidance and assistance from the Council on the application of this part to specific undertakings, including the resolution of disagreements, whether or not the Council is formally involved in the review of the undertaking. If questions arise regarding the conduct of the section 106 process, participants are encouraged to obtain the Council's advice on completing the process.

(c) *Consulting parties.* The following parties have consultative roles in the section 106 process.

(1) *State historic preservation officer.*

(i) The State historic preservation officer (SHPO) reflects the interests of the State and its citizens in the preservation of their cultural heritage. In accordance with section 101(b)(3) of the act, the SHPO advises and assists Federal agencies in carrying out their section 106 responsibilities and cooperates with such agencies, local governments and organizations and individuals to ensure that historic properties are taken into consideration at all levels of planning and development.

(ii) If an Indian tribe has assumed the functions of the SHPO in the section 106 process for undertakings on tribal lands, the SHPO shall participate as a consulting party if the undertaking takes place on tribal lands but affects historic properties off tribal lands, if requested in accordance with § 800.3(c)(1), or if the Indian tribe agrees to include the SHPO pursuant to § 800.3(f)(3).

(2) *Indian tribes and Native Hawaiian organizations.*

(i) *Consultation on tribal lands.*

(A) *Tribal historic preservation officer.* For a tribe that has assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act, the tribal historic preservation officer (THPO) appointed or designated in accordance with the act is the official representative for the purposes of section 106. The agency official shall consult with the THPO in lieu of the SHPO regarding undertakings occurring on or affecting historic properties on tribal lands.

(B) *Tribes that have not assumed SHPO functions.* When an Indian tribe has not assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act, the agency official shall consult with a representative designated by such Indian tribe in addition to the SHPO regarding undertakings occurring on or affecting historic properties on its tribal lands. Such Indian tribes have the same rights of consultation and concurrence that the THPOs are given throughout subpart B of this part, except that such consultations shall be in addition to and on the same basis as consultation with the SHPO.

(ii) *Consultation on historic properties of significance to Indian tribes and Native Hawaiian organizations.* Section 101(d)(6)(B) of the act requires the agency official to consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by an undertaking. This requirement applies regardless of the location of the historic property. Such Indian tribe or Native Hawaiian organization shall be a consulting party.

(A) The agency official shall ensure that consultation in the section 106 process provides the Indian tribe or Native Hawaiian organization a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects. It is the responsibility of the agency official to make a reasonable and good faith effort to identify Indian tribes and Native Hawaiian organizations that shall be consulted in the section 106 process. Consultation should commence early in the planning process, in order to identify and discuss relevant

preservation issues and resolve concerns about the confidentiality of information on historic properties.

(B) The Federal Government has a unique legal relationship with Indian tribes set forth in the Constitution of the United States, treaties, statutes, and court decisions. Consultation with Indian tribes should be conducted in a sensitive manner respectful of tribal sovereignty. Nothing in this part alters, amends, repeals, interprets or modifies tribal sovereignty, any treaty rights, or other rights of an Indian tribe, or preempts, modifies or limits the exercise of any such rights.

(C) Consultation with an Indian tribe must recognize the government-to-government relationship between the Federal Government and Indian tribes. The agency official shall consult with representatives designated or identified by the tribal government or the governing body of a Native Hawaiian organization. Consultation with Indian tribes and Native Hawaiian organizations should be conducted in a manner sensitive to the concerns and needs of the Indian tribe or Native Hawaiian organization.

(D) When Indian tribes and Native Hawaiian organizations attach religious and cultural significance to historic properties off tribal lands, section 101(d)(6)(B) of the act requires Federal agencies to consult with such Indian tribes and Native Hawaiian organizations in the section 106 process. Federal agencies should be aware that frequently historic properties of religious and cultural significance are located on ancestral, aboriginal, or ceded lands of Indian tribes and Native Hawaiian organizations and should consider that when complying with the procedures in this part.

(E) An Indian tribe or a Native Hawaiian organization may enter into an agreement with an agency official that specifies how they will carry out responsibilities under this part, including concerns over the confidentiality of information. An agreement may cover all aspects of tribal participation in the section 106 process, provided that no modification may be made in the roles of other parties to the section 106 process without their consent. An agreement may grant the Indian tribe or Native Hawaiian organization additional rights to participate or concur in agency decisions in the section 106 process beyond those specified in subpart B of this part. The agency official shall

provide a copy of any such agreement to the Council and the appropriate SHPOs.

(F) An Indian tribe that has not assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act may notify the agency official in writing that it is waiving its rights under § 800.6(c)(1) to execute a memorandum of agreement.

(3) *Representatives of local governments.* A representative of a local government with jurisdiction over the area in which the effects of an undertaking may occur is entitled to participate as a consulting party. Under other provisions of Federal law, the local government may be authorized to act as the agency official for purposes of section 106.

(4) *Applicants for Federal assistance, permits, licenses and other approvals.* An applicant for Federal assistance or for a Federal permit, license or other approval is entitled to participate as a consulting party as defined in this part. The agency official may authorize an applicant or group of applicants to initiate consultation with the SHPO/THPO and others, but remains legally responsible for all findings and determinations charged to the agency official. The agency official shall notify the SHPO/THPO when an applicant or group of applicants is so authorized. A Federal agency may authorize all applicants in a specific program pursuant to this section by providing notice to all SHPO/THPOs. Federal agencies that provide authorizations to applicants remain responsible for their government to government relationships with Indian tribes.

(5) *Additional consulting parties.* Certain individuals and organizations with a demonstrated interest in the undertaking may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties.

(d) *The public.*

(1) *Nature of involvement.* The views of the public are essential to informed Federal decisionmaking in the section 106 process. The agency official shall seek and consider the views of the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties, the likely interest of the public in the effects on historic properties, confidentiality concerns of private individuals and businesses, and

the relationship of the Federal involvement to the undertaking.

(2) *Providing notice and information.* The agency official must, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about an undertaking and its effects on historic properties and seek public comment and input. Members of the public may also provide views on their own initiative for the agency official to consider in decisionmaking.

(3) *Use of agency procedures.* The agency official may use the agency's procedures for public involvement under the National Environmental Policy Act or other program requirements in lieu of public involvement requirements in subpart B of this part, if they provide adequate opportunities for public involvement consistent with this subpart.

#### **Subpart B-The section 106 Process**

##### **§ 800.3 Initiation of the section 106 process.**

(a) *Establish undertaking.* The agency official shall determine whether the proposed Federal action is an undertaking as defined in § 800.16(y) and, if so, whether it is a type of activity that has the potential to cause effects on historic properties.

(1) *No potential to cause effects.* If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, the agency official has no further obligations under section 106 or this part.

(2) *Program alternatives.* If the review of the undertaking is governed by a Federal agency program alternative established under § 800.14 or a programmatic agreement in existence before January 11, 2001, the agency official shall follow the program alternative.

(b) *Coordinate with other reviews.* The agency official should coordinate the steps of the section 106 process, as appropriate, with the overall planning schedule for the undertaking and with any reviews required under other authorities such as the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archeological Resources Protection Act and agency-specific legislation, such as section 4(f) of the Department of

Transportation Act. Where consistent with the procedures in this subpart, the agency official may use information developed for other reviews under Federal, State or tribal law to meet the requirements of section 106.

(c) *Identify the appropriate SHPO and/or THPO.* As part of its initial planning, the agency official shall determine the appropriate SHPO or SHPOs to be involved in the section 106 process. The agency official shall also determine whether the undertaking may occur on or affect historic properties on any tribal lands and, if so, whether a THPO has assumed the duties of the SHPO. The agency official shall then initiate consultation with the appropriate officer or officers.

(1) *Tribal assumption of SHPO responsibilities.* Where an Indian tribe has assumed the section 106 responsibilities of the SHPO on tribal lands pursuant to section 101(d)(2) of the act, consultation for undertakings occurring on tribal land or for effects on tribal land is with the THPO for the Indian tribe in lieu of the SHPO. Section 101(d)(2)(D)(iii) of the act authorizes owners of properties on tribal lands which are neither owned by a member of the tribe nor held in trust by the Secretary for the benefit of the tribe to request the SHPO to participate in the section 106 process in addition to the THPO.

(2) *Undertakings involving more than one State.* If more than one State is involved in an undertaking, the involved SHPOs may agree to designate a lead SHPO to act on their behalf in the section 106 process, including taking actions that would conclude the section 106 process under this subpart.

(3) *Conducting consultation.* The agency official should consult with the SHPO/THPO in a manner appropriate to the agency planning process for the undertaking and to the nature of the undertaking and its effects on historic properties.

(4) *Failure of the SHPO/THPO to respond.* If the SHPO/THPO fails to respond within 30 days of receipt of a request for review of a finding or determination, the agency official may either proceed to the next step in the process based on the finding or determination or consult with the Council in lieu of the SHPO/THPO. If the SHPO/THPO re-enters the section 106 process, the agency official shall continue the consultation without being required to reconsider previous findings or determinations.

(d) *Consultation on tribal lands.*

Where the Indian tribe has not assumed the responsibilities of the SHPO on tribal lands, consultation with the Indian tribe regarding undertakings occurring on such tribe's lands or effects on such tribal lands shall be in addition to and on the same basis as consultation with the SHPO. If the SHPO has withdrawn from the process, the agency official may complete the section 106 process with the Indian tribe and the Council, as appropriate. An Indian tribe may enter into an agreement with a SHPO or SHPOs specifying the SHPO's participation in the section 106 process for undertakings occurring on or affecting historic properties on tribal lands.

(e) *Plan to involve the public.* In consultation with the SHPO/THPO, the agency official shall plan for involving the public in the section 106 process. The agency official shall identify the appropriate points for seeking public input and for notifying the public of proposed actions, consistent with § 800.2(d).

(f) *Identify other consulting parties.* In consultation with the SHPO/THPO, the agency official shall identify any other parties entitled to be consulting parties and invite them to participate as such in the section 106 process. The agency official may invite others to participate as consulting parties as the section 106 process moves forward.

(1) *Involving local governments and applicants.* The agency official shall invite any local governments or applicants that are entitled to be consulting parties under § 800.2(c).

(2) *Involving Indian tribes and Native Hawaiian organizations.* The agency official shall make a reasonable and good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties. Such Indian tribe or Native Hawaiian organization that requests in writing to be a consulting party shall be one.

(3) *Requests to be consulting parties.* The agency official shall consider all written requests of individuals and organizations to participate as consulting parties and, in consultation with the SHPO/THPO and any Indian tribe upon whose tribal lands an undertaking occurs or affects historic properties, determine which should be consulting parties.

(g) *Expediting consultation.* A consultation by the agency official with the SHPO/THPO and other consulting parties may address multiple steps in §§ 800.3 through 800.6 where the agency official and the SHPO/THPO agree it is appropriate as long as the consulting parties and the public have an adequate opportunity to express their views as provided in § 800.2(d).

**§ 800.4 Identification of historic properties.**

(a) *Determine scope of identification efforts.* In consultation with the SHPO/THPO, the agency official shall:

(1) Determine and document the area of potential effects, as defined in § 800.16(d);

(2) Review existing information on historic properties within the area of potential effects, including any data concerning possible historic properties not yet identified;

(3) Seek information, as appropriate, from consulting parties, and other individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area, and identify issues relating to the undertaking's potential effects on historic properties; and

(4) Gather information from any Indian tribe or Native Hawaiian organization identified pursuant to § 800.3(f) to assist in identifying properties, including those located off tribal lands, which may be of religious and cultural significance to them and may be eligible for the National Register, recognizing that an Indian tribe or Native Hawaiian organization may be reluctant to divulge specific information regarding the location, nature, and activities associated with such sites. The agency official should address concerns raised about confidentiality pursuant to § 800.11(c).

(b) *Identify historic properties.* Based on the information gathered under paragraph (a) of this section, and in consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to properties within the area of potential effects, the agency official shall take the steps necessary to identify historic properties within the area of potential effects.

(1) *Level of effort.* The agency official shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews,

sample field investigation, and field survey. The agency official shall take into account past planning, research and studies, the magnitude and nature of the undertaking and the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the area of potential effects. The Secretary's Standards and Guidelines for Identification provide guidance on this subject. The agency official should also consider other applicable professional, State, tribal and local laws, standards and guidelines. The agency official shall take into account any confidentiality concerns raised by Indian tribes or Native Hawaiian organizations during the identification process.

(2) *Phased identification and evaluation.* Where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process to conduct identification and evaluation efforts. The agency official may also defer final identification and evaluation of historic properties if it is specifically provided for in a memorandum of agreement executed pursuant to § 800.6, a programmatic agreement executed pursuant to § 800.14 (b), or the documents used by an agency official to comply with the National Environmental Policy Act pursuant to § 800.8. The process should establish the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation, taking into account the number of alternatives under consideration, the magnitude of the undertaking and its likely effects, and the views of the SHPO/THPO and any other consulting parties. As specific aspects or locations of an alternative are refined or access is gained, the agency official shall proceed with the identification and evaluation of historic properties in accordance with paragraphs (b)(1) and (c) of this section.

(c) *Evaluate historic significance.*

(1) *Apply National Register criteria.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified properties and guided by the Secretary's Standards and Guidelines for Evaluation, the agency official shall

apply the National Register criteria (36 CFR part 63) to properties identified within the area of potential effects that have not been previously evaluated for National Register eligibility. The passage of time, changing perceptions of significance, or incomplete prior evaluations may require the agency official to reevaluate properties previously determined eligible or ineligible. The agency official shall acknowledge that Indian tribes and Native Hawaiian organizations possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them.

(2) *Determine whether a property is eligible.* If the agency official determines any of the National Register criteria are met and the SHPO/THPO agrees, the property shall be considered eligible for the National Register for section 106 purposes. If the agency official determines the criteria are not met and the SHPO/THPO agrees, the property shall be considered not eligible. If the agency official and the SHPO/THPO do not agree, or if the Council or the Secretary so request, the agency official shall obtain a determination of eligibility from the Secretary pursuant to 36 CFR part 63. If an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to a property off tribal lands does not agree, it may ask the Council to request the agency official to obtain a determination of eligibility.

(d) *Results of identification and evaluation.*

(1) *No historic properties affected.* If the agency official finds that either there are no historic properties present or there are historic properties present but the undertaking will have no effect upon them as defined in § 800.16(i), the agency official shall provide documentation of this finding, as set forth in § 800.11(d), to the SHPO/THPO. The agency official shall notify all consulting parties, including Indian tribes and Native Hawaiian organizations, and make the documentation available for public inspection prior to approving the undertaking.

(i) If the SHPO/THPO, or the Council if it has entered the section 106 process, does not object within 30 days of receipt of an adequately documented finding, the agency official's responsibilities under section 106 are fulfilled.

(ii) If the SHPO/THPO objects within 30 days of receipt of an adequately documented finding, the agency official shall either consult with the objecting party to resolve the disagreement, or forward the finding and supporting documentation to the Council and request that the Council review the finding pursuant to paragraphs (d)(1)(iv)(A) through (d)(1)(iv)(C) of this section. When an agency official forwards such requests for review to the Council, the agency official shall concurrently notify all consulting parties that such a request has been made and make the request documentation available to the public.

(iii) During the SHPO/THPO 30 day review period, the Council may object to the finding and provide its opinion regarding the finding to the agency official and, if the Council determines the issue warrants it, the head of the agency. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The agency shall then proceed according to paragraphs (d)(1)(iv)(B) and (d)(1)(iv)(C) of this section.

(iv)(A) Upon receipt of the request under paragraph (d)(1)(ii) of this section, the Council will have 30 days in which to review the finding and provide the agency official and, if the Council determines the issue warrants it, the head of the agency with the Council's opinion regarding the finding. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. If the Council does not respond within 30 days of receipt of the request, the agency official's responsibilities under section 106 are fulfilled.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion before the agency reaches a final decision on the finding.

(C) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall then prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council, the SHPO/THPO, and the consulting parties. The head of the agency may delegate his or her duties under this paragraph to the agency's senior policy official. If the agency official's initial finding will be revised, the agency official shall proceed in

accordance with the revised finding. If the final decision of the agency is to affirm the initial agency finding of no historic properties affected, once the summary of the decision has been sent to the Council, the SHPO/THPO, and the consulting parties, the agency official's responsibilities under section 106 are fulfilled.

(D) The Council shall retain a record of agency responses to Council opinions on their findings of no historic properties affected. The Council shall make this information available to the public.

(2) *Historic properties affected.* If the agency official finds that there are historic properties which may be affected by the undertaking, the agency official shall notify all consulting parties, including Indian tribes or Native Hawaiian organizations, invite their views on the effects and assess adverse effects, if any, in accordance with § 800.5.

#### § 800.5 Assessment of adverse effects.

(a) *Apply criteria of adverse effect.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

(1) *Criteria of adverse effect.* An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

(2) *Examples of adverse effects.* Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

(3) *Phased application of criteria.* Where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process in applying the criteria of adverse effect consistent with phased identification and evaluation efforts conducted pursuant to § 800.4(b)(2).

(b) *Finding of no adverse effect.* The agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines, to avoid adverse effects.

(c) *Consulting party review.* If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

(1) *Agreement with, or no objection to, finding.* Unless the Council is reviewing the finding pursuant to paragraph (c)(3) of this section, the agency official may proceed after the close of the 30 day review period if the SHPO/THPO has agreed with the finding or has not provided a response, and no consulting party has objected. The agency official shall then carry out the undertaking in accordance with paragraph (d)(1) of this section.

(2) *Disagreement with finding.*

(i) If within the 30 day review period the SHPO/THPO or any consulting party notifies the agency official in writing that it disagrees with the finding and specifies the reasons for the disagreement in the notification, the agency official shall either consult with the party to resolve the disagreement, or request the Council to review the finding pursuant to paragraphs (c)(3)(i) and (c)(3)(ii) of this section. The agency official shall include with such request the documentation specified in § 800.11(e). The agency official shall also concurrently notify all consulting parties that such a submission has been made and make the submission documentation available to the public.

(ii) If within the 30 day review period the Council provides the agency official and, if the Council determines the issue warrants it, the head of the agency, with a written opinion objecting to the finding, the agency shall then proceed according to paragraph (c)(3)(ii) of this section. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part.

(iii) The agency official should seek the concurrence of any Indian tribe or Native Hawaiian organization that has made known to the agency official that it attaches religious and cultural significance to a historic property subject to the finding. If such Indian tribe or Native Hawaiian organization disagrees with the finding, it may within the 30 day review period specify the reasons for disagreeing with the finding and request the Council to review and object to the finding pursuant to paragraph (c)(2)(ii) of this section.

(3) *Council review of findings.*

(i) When a finding is submitted to the Council pursuant to paragraph (c)(2)(i) of this section, the Council shall review the finding and provide the agency official and, if the Council determines the issue warrants it, the head of the agency with its opinion as to whether the adverse effect criteria have

been correctly applied. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The Council will provide its opinion within 15 days of receiving the documented finding from the agency official. The Council at its discretion may extend that time period for 15 days, in which case it shall notify the agency of such extension prior to the end of the initial 15 day period. If the Council does not respond within the applicable time period, the agency official's responsibilities under section 106 are fulfilled.

(ii)(A) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion in reaching a final decision on the finding.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council, the SHPO/THPO, and the consulting parties. The head of the agency may delegate his or her duties under this paragraph to the agency's senior policy official. If the agency official's initial finding will be revised, the agency official shall proceed in accordance with the revised finding. If the final decision of the agency is to affirm the initial finding of no adverse effect, once the summary of the decision has been sent to the Council, the SHPO/THPO, and the consulting parties, the agency official's responsibilities under section 106 are fulfilled.

(C) The Council shall retain a record of agency responses to Council opinions on their findings of no adverse effects. The Council shall make this information available to the public.

(d) *Results of assessment.*

(1) *No adverse effect.* The agency official shall maintain a record of the finding and provide information on the finding to the public on request, consistent with the confidentiality provisions of § 800.11(c). Implementation of the undertaking in accordance with the finding as documented fulfills the agency official's responsibilities under section 106 and this part. If the agency official will not conduct the undertaking as proposed in the finding, the agency official shall reopen consultation under paragraph (a) of this section.

(2) *Adverse effect.* If an adverse effect is found, the agency official shall consult further to resolve the adverse effect pursuant to § 800.6.

**§ 800.6 Resolution of adverse effects.**

(a) *Continue consultation.* The agency official shall consult with the SHPO/THPO and other consulting parties, including Indian tribes and Native Hawaiian organizations, to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties.

(1) *Notify the Council and determine Council participation.* The agency official shall notify the Council of the adverse effect finding by providing the documentation specified in § 800.11(e).

(i) The notice shall invite the Council to participate in the consultation when:

(A) The agency official wants the Council to participate;

(B) The undertaking has an adverse effect upon a National Historic Landmark; or

(C) A programmatic agreement under § 800.14(b) will be prepared;

(ii) The SHPO/THPO, an Indian tribe or Native Hawaiian organization, or any other consulting party may at any time independently request the Council to participate in the consultation.

(iii) The Council shall advise the agency official and all consulting parties whether it will participate within 15 days of receipt of notice or other request. Prior to entering the process, the Council shall provide written notice to the agency official and the consulting parties that its decision to participate meets the criteria set forth in appendix A to this part. The Council shall also advise the head of the agency of its decision to enter the process. Consultation with Council participation is conducted in accordance with paragraph (b)(2) of this section.

(iv) If the Council does not join the consultation, the agency official shall proceed with consultation in accordance with paragraph (b)(1) of this section.

(2) *Involve consulting parties.* In addition to the consulting parties identified under § 800.3(f), the agency official, the SHPO/THPO and the Council, if participating, may agree to invite other individuals or organizations to become consulting parties. The agency official shall invite any individual or organization that will assume a specific role or responsibility

in a memorandum of agreement to participate as a consulting party.

(3) *Provide documentation.* The agency official shall provide to all consulting parties the documentation specified in § 800.11(e), subject to the confidentiality provisions of § 800.11(c), and such other documentation as may be developed during the consultation to resolve adverse effects.

(4) *Involve the public.* The agency official shall make information available to the public, including the documentation specified in § 800.11(e), subject to the confidentiality provisions of § 800.11(c). The agency official shall provide an opportunity for members of the public to express their views on resolving adverse effects of the undertaking. The agency official should use appropriate mechanisms, taking into account the magnitude of the undertaking and the nature of its effects upon historic properties, the likely effects on historic properties, and the relationship of the Federal involvement to the undertaking to ensure that the public's views are considered in the consultation. The agency official should also consider the extent of notice and information concerning historic preservation issues afforded the public at earlier steps in the section 106 process to determine the appropriate level of public involvement when resolving adverse effects so that the standards of § 800.2(d) are met.

(5) *Restrictions on disclosure of information.* Section 304 of the act and other authorities may limit the disclosure of information under paragraphs (a)(3) and (a)(4) of this section. If an Indian tribe or Native Hawaiian organization objects to the disclosure of information or if the agency official believes that there are other reasons to withhold information, the agency official shall comply with § 800.11(c) regarding the disclosure of such information.

(b) *Resolve adverse effects.*

(1) *Resolution without the Council.*

(i) The agency official shall consult with the SHPO/THPO and other consulting parties to seek ways to avoid, minimize or mitigate the adverse effects.

(ii) The agency official may use standard treatments established by the Council under § 800.14(d) as a basis for a memorandum of agreement.

(iii) If the Council decides to join the consultation, the agency official shall follow paragraph (b)(2) of this section.

(iv) If the agency official and the SHPO/THPO agree on how the adverse

effects will be resolved, they shall execute a memorandum of agreement. The agency official must submit a copy of the executed memorandum of agreement, along with the documentation specified in § 800.11(f), to the Council prior to approving the undertaking in order to meet the requirements of section 106 and this subpart.

(v) If the agency official, and the SHPO/THPO fail to agree on the terms of a memorandum of agreement, the agency official shall request the Council to join the consultation and provide the Council with the documentation set forth in § 800.11(g). If the Council decides to join the consultation, the agency official shall proceed in accordance with paragraph (b)(2) of this section. If the Council decides not to join the consultation, the Council will notify the agency and proceed to comment in accordance with § 800.7(c).

(2) *Resolution with Council participation.* If the Council decides to participate in the consultation, the agency official shall consult with the SHPO/THPO, the Council, and other consulting parties, including Indian tribes and Native Hawaiian organizations under § 800.2(c)(3), to seek ways to avoid, minimize or mitigate the adverse effects. If the agency official, the SHPO/THPO, and the Council agree on how the adverse effects will be resolved, they shall execute a memorandum of agreement.

(c) *Memorandum of agreement.* A memorandum of agreement executed and implemented pursuant to this section evidences the agency official's compliance with section 106 and this part and shall govern the undertaking and all of its parts. The agency official shall ensure that the undertaking is carried out in accordance with the memorandum of agreement.

(1) *Signatories.* The signatories have sole authority to execute, amend or terminate the agreement in accordance with this subpart.

(i) The agency official and the SHPO/THPO are the signatories to a memorandum of agreement executed pursuant to paragraph (b)(1) of this section.

(ii) The agency official, the SHPO/THPO, and the Council are the signatories to a memorandum of agreement executed pursuant to paragraph (b)(2) of this section.

(iii) The agency official and the Council are signatories to a



memorandum of agreement executed pursuant to § 800.7(a)(2).

(2) *Invited signatories.*

(i) The agency official may invite additional parties to be signatories to a memorandum of agreement. Any such party that signs the memorandum of agreement shall have the same rights with regard to seeking amendment or termination of the memorandum of agreement as other signatories.

(ii) The agency official may invite an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties located off tribal lands to be a signatory to a memorandum of agreement concerning such properties.

(iii) The agency official should invite any party that assumes a responsibility under a memorandum of agreement to be a signatory.

(iv) The refusal of any party invited to become a signatory to a memorandum of agreement pursuant to paragraph (c)(2) of this section does not invalidate the memorandum of agreement.

(3) *Concurrence by others.* The agency official may invite all consulting parties to concur in the memorandum of agreement. The signatories may agree to invite others to concur. The refusal of any party invited to concur in the memorandum of agreement does not invalidate the memorandum of agreement.

(4) *Reports on implementation.* Where the signatories agree it is appropriate, a memorandum of agreement shall include a provision for monitoring and reporting on its implementation.

(5) *Duration.* A memorandum of agreement shall include provisions for termination and for reconsideration of terms if the undertaking has not been implemented within a specified time.

(6) *Discoveries.* Where the signatories agree it is appropriate, a memorandum of agreement shall include provisions to deal with the subsequent discovery or identification of additional historic properties affected by the undertaking.

(7) *Amendments.* The signatories to a memorandum of agreement may amend it. If the Council was not a signatory to the original agreement and the signatories execute an amended agreement, the agency official shall file it with the Council.

(8) *Termination.* If any signatory determines that the terms of a memorandum of agreement cannot be or are not being carried out, the signatories

shall consult to seek amendment of the agreement. If the agreement is not amended, any signatory may terminate it. The agency official shall either execute a memorandum of agreement with signatories under paragraph (c)(1) of this section or request the comments of the Council under § 800.7(a).

(9) *Copies.* The agency official shall provide each consulting party with a copy of any memorandum of agreement executed pursuant to this subpart.

**§ 800.7 Failure to resolve adverse effects.**

(a) *Termination of consultation.* After consulting to resolve adverse effects pursuant to § 800.6(b)(2), the agency official, the SHPO/THPO, or the Council may determine that further consultation will not be productive and terminate consultation. Any party that terminates consultation shall notify the other consulting parties and provide them the reasons for terminating in writing.

(1) If the agency official terminates consultation, the head of the agency or an Assistant Secretary or other officer with major department-wide or agency-wide responsibilities shall request that the Council comment pursuant to paragraph (c) of this section and shall notify all consulting parties of the request.

(2) If the SHPO terminates consultation, the agency official and the Council may execute a memorandum of agreement without the SHPO's involvement.

(3) If a THPO terminates consultation regarding an undertaking occurring on or affecting historic properties on its tribal lands, the Council shall comment pursuant to paragraph (c) of this section.

(4) If the Council terminates consultation, the Council shall notify the agency official, the agency's Federal preservation officer and all consulting parties of the termination and comment under paragraph (c) of this section. The Council may consult with the agency's Federal preservation officer prior to terminating consultation to seek to resolve issues concerning the undertaking and its effects on historic properties.

(b) *Comments without termination.* The Council may determine that it is appropriate to provide additional advisory comments upon an undertaking for which a memorandum of agreement will be executed. The Council shall provide them to the

agency official when it executes the memorandum of agreement.

(c) *Comments by the Council.*

(1) *Preparation.* The Council shall provide an opportunity for the agency official, all consulting parties, and the public to provide their views within the time frame for developing its comments. Upon request of the Council, the agency official shall provide additional existing information concerning the undertaking and assist the Council in arranging an onsite inspection and an opportunity for public participation.

(2) *Timing.* The Council shall transmit its comments within 45 days of receipt of a request under paragraph (a)(1) or (a)(3) of this section or § 800.8(c)(3), or termination by the Council under § 800.6(b)(1)(v) or paragraph (a)(4) of this section, unless otherwise agreed to by the agency official.

(3) *Transmittal.* The Council shall provide its comments to the head of the agency requesting comment with copies to the agency official, the agency's Federal preservation officer, all consulting parties, and others as appropriate.

(4) *Response to Council comment.* The head of the agency shall take into account the Council's comments in reaching a final decision on the undertaking. Section 110(l) of the act directs that the head of the agency shall document this decision and may not delegate his or her responsibilities pursuant to section 106. Documenting the agency head's decision shall include:

(i) Preparing a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's comments and providing it to the Council prior to approval of the undertaking;

(ii) Providing a copy of the summary to all consulting parties; and

(iii) Notifying the public and making the record available for public inspection.

**§ 800.8 Coordination With the National Environmental Policy Act.**

(a) *General principles.*

(1) *Early coordination.* Federal agencies are encouraged to coordinate compliance with section 106 and the procedures in this part with any steps taken to meet the requirements of the National Environmental Policy Act (NEPA). Agencies should consider their section 106 responsibilities as early as possible in the NEPA process, and plan



their public participation, analysis, and review in such a way that they can meet the purposes and requirements of both statutes in a timely and efficient manner. The determination of whether an undertaking is a "major Federal action significantly affecting the quality of the human environment," and therefore requires preparation of an environmental impact statement (EIS) under NEPA, should include consideration of the undertaking's likely effects on historic properties. A finding of adverse effect on a historic property does not necessarily require an EIS under NEPA.

(2) *Consulting party roles.* SHPO/THPOs, Indian tribes and Native Hawaiian organizations, other consulting parties, and organizations and individuals who may be concerned with the possible effects of an agency action on historic properties should be prepared to consult with agencies early in the NEPA process, when the purpose of and need for the proposed action as well as the widest possible range of alternatives are under consideration.

(3) *Inclusion of historic preservation issues.* Agency officials should ensure that preparation of an environmental assessment (EA) and finding of no significant impact (FONSI) or an EIS and record of decision (ROD) includes appropriate scoping, identification of historic properties, assessment of effects upon them, and consultation leading to resolution of any adverse effects.

(b) *Actions categorically excluded under NEPA.* If a project, activity or program is categorically excluded from NEPA review under an agency's NEPA procedures, the agency official shall determine if it still qualifies as an undertaking requiring review under section 106 pursuant to § 800.3(a). If so, the agency official shall proceed with section 106 review in accordance with the procedures in this subpart.

(c) *Use of the NEPA process for section 106 purposes.* An agency official may use the process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with section 106 in lieu of the procedures set forth in §§ 800.3 through 800.6 if the agency official has notified in advance the SHPO/THPO and the Council that it intends to do so and the following standards are met.

(1) *Standards for developing environmental documents to comply with Section 106.* During preparation of the EA or draft EIS (DEIS) the agency official shall:

(i) Identify consulting parties either pursuant to § 800.3(f) or through the NEPA scoping process with results consistent with § 800.3(f);

(ii) Identify historic properties and assess the effects of the undertaking on such properties in a manner consistent with the standards and criteria of §§ 800.4 through 800.5, provided that the scope and timing of these steps may be phased to reflect the agency official's consideration of project alternatives in the NEPA process and the effort is commensurate with the assessment of other environmental factors;

(iii) Consult regarding the effects of the undertaking on historic properties with the SHPO/THPO, Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to affected historic properties, other consulting parties, and the Council, where appropriate, during NEPA scoping, environmental analysis, and the preparation of NEPA documents;

(iv) Involve the public in accordance with the agency's published NEPA procedures; and

(v) Develop in consultation with identified consulting parties alternatives and proposed measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the EA or DEIS.

(2) *Review of environmental documents.*

(i) The agency official shall submit the EA, DEIS or EIS to the SHPO/THPO, Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to affected historic properties, and other consulting parties prior to or when making the document available for public comment. If the document being prepared is a DEIS or EIS, the agency official shall also submit it to the Council.

(ii) Prior to or within the time allowed for public comment on the document, a SHPO/THPO, an Indian tribe or Native Hawaiian organization, another consulting party or the Council may object to the agency official that preparation of the EA, DEIS or EIS has not met the standards set forth in paragraph (c)(1) of this section or that the substantive resolution of the effects on historic properties proposed in an EA, DEIS or EIS is inadequate. If the agency official receives such an objection, the agency official shall refer the matter to the Council.

(3) *Resolution of objections.* Within 30 days of the agency official's referral of an objection under paragraph (c)(2)(ii) of this section, the Council shall review the objection and notify the agency as to its opinion on the objection.

(i) If the Council agrees with the objection:

(A) The Council shall provide the agency official and, if the Council determines the issue warrants it, the head of the agency with the Council's opinion regarding the objection. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion in reaching a final decision on the issue of the objection.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council. The head of the agency may delegate his or her duties under this paragraph to the agency's senior Policy Official. If the agency official's initial decision regarding the matter that is the subject of the objection will be revised, the agency official shall proceed in accordance with the revised decision. If the final decision of the agency is to affirm the initial agency decision, once the summary of the final decision has been sent to the Council, the agency official shall continue its compliance with this section.

(ii) If the Council disagrees with the objection, the Council shall so notify the agency official, in which case the agency official shall continue its compliance with this section.

(iii) If the Council fails to respond to the objection within the 30 day period, the agency official shall continue its compliance with this section.

(4) *Approval of the undertaking.* If the agency official has found, during the preparation of an EA or EIS that the effects of an undertaking on historic properties are adverse, the agency official shall develop measures in the EA, DEIS, or EIS to avoid, minimize, or mitigate such effects in accordance with paragraph (c)(1)(v) of this section. The agency official's responsibilities under section 106 and the procedures in this

subpart shall then be satisfied when either:

- (i) a binding commitment to such proposed measures is incorporated in
  - (A) the ROD, if such measures were proposed in a DEIS or EIS; or
  - (B) an MOA drafted in compliance with § 800.6(c); or
- (ii) the Council has commented under § 800.7 and received the agency's response to such comments.

(5) *Modification of the undertaking.* If the undertaking is modified after approval of the FONSI or the ROD in a manner that changes the undertaking or alters its effects on historic properties, or if the agency official fails to ensure that the measures to avoid, minimize or mitigate adverse effects (as specified in either the FONSI or the ROD, or in the binding commitment adopted pursuant to paragraph (c)(4) of this section) are carried out, the agency official shall notify the Council and all consulting parties that supplemental environmental documents will be prepared in compliance with NEPA or that the procedures in §§ 800.3 through 800.6 will be followed as necessary.

#### **§ 800.9 Council review of section 106 compliance.**

(a) *Assessment of agency official compliance for individual undertakings.* The Council may provide to the agency official its advisory opinion regarding the substance of any finding, determination or decision or regarding the adequacy of the agency official's compliance with the procedures under this part. The Council may provide such advice at any time at the request of any individual, agency or organization or on its own initiative. The agency official shall consider the views of the Council in reaching a decision on the matter in question.

(b) *Agency foreclosure of the Council's opportunity to comment.* Where an agency official has failed to complete the requirements of section 106 in accordance with the procedures in this part prior to the approval of an undertaking, the Council's opportunity to comment may be foreclosed. The Council may review a case to determine whether a foreclosure has occurred. The Council shall notify the agency official and the agency's Federal preservation officer and allow 30 days for the agency official to provide information as to whether foreclosure has occurred. If the Council determines foreclosure has occurred, the Council shall transmit the determination to the

agency official and the head of the agency. The Council shall also make the determination available to the public and any parties known to be interested in the undertaking and its effects upon historic properties.

(c) *Intentional adverse effects by applicants.*

(1) *Agency responsibility.* Section 110(k) of the act prohibits a Federal agency from granting a loan, loan guarantee, permit, license or other assistance to an applicant who, with intent to avoid the requirements of section 106, has intentionally significantly adversely affected a historic property to which the grant would relate, or having legal power to prevent it, has allowed such significant adverse effect to occur, unless the agency, after consultation with the Council, determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. Guidance issued by the Secretary pursuant to section 110 of the act governs its implementation.

(2) *Consultation with the Council.* When an agency official determines, based on the actions of an applicant, that section 110(k) is applicable and that circumstances may justify granting the assistance, the agency official shall notify the Council and provide documentation specifying the circumstances under which the adverse effects to the historic property occurred and the degree of damage to the integrity of the property. This documentation shall include any views obtained from the applicant, SHPO/THPO, an Indian tribe if the undertaking occurs on or affects historic properties on tribal lands, and other parties known to be interested in the undertaking.

(i) Within thirty days of receiving the agency official's notification, unless otherwise agreed to by the agency official, the Council shall provide the agency official with its opinion as to whether circumstances justify granting assistance to the applicant and any possible mitigation of the adverse effects.

(ii) The agency official shall consider the Council's opinion in making a decision on whether to grant assistance to the applicant, and shall notify the Council, the SHPO/THPO, and other parties known to be interested in the undertaking prior to granting the assistance.

(3) *Compliance with Section 106.* If an agency official, after consulting with

the Council, determines to grant the assistance, the agency official shall comply with §§ 800.3 through 800.6 to take into account the effects of the undertaking on any historic properties.

(d) *Evaluation of Section 106 operations.* The Council may evaluate the operation of the section 106 process by periodic reviews of how participants have fulfilled their legal responsibilities and how effectively the outcomes reached advance the purposes of the act.

(1) *Information from participants.* Section 203 of the act authorizes the Council to obtain information from Federal agencies necessary to conduct evaluation of the section 106 process. The agency official shall make documentation of agency policies, operating procedures and actions taken to comply with section 106 available to the Council upon request. The Council may request available information and documentation from other participants in the section 106 process.

(2) *Improving the operation of section 106.* Based upon any evaluation of the section 106 process, the Council may make recommendations to participants, the heads of Federal agencies, and the Secretary of actions to improve the efficiency and effectiveness of the process. Where the Council determines that an agency official or a SHPO/THPO has failed to properly carry out the responsibilities assigned under the process in this part, the Council may participate in individual case reviews conducted under such process in addition to the SHPO/THPO for such period that it determines is necessary to improve performance or correct deficiencies. If the Council finds a pattern of failure by a Federal agency in carrying out its responsibilities under section 106, the Council may review the policies and programs of the agency related to historic preservation pursuant to section 202(a)(6) of the act and recommend methods to improve the effectiveness, coordination, and consistency of those policies and programs with section 106.

#### **§ 800.10 Special requirements for protecting National Historic Landmarks.**

(a) *Statutory requirement.* Section 110(f) of the act requires that the agency official, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to any National Historic Landmark that may be directly and adversely affected by an undertaking. When

commenting on such undertakings, the Council shall use the process set forth in §§ 800.6 through 800.7 and give special consideration to protecting National Historic Landmarks as specified in this section.

(b) *Resolution of adverse effects.* The agency official shall request the Council to participate in any consultation to resolve adverse effects on National Historic Landmarks conducted under § 800.6.

(c) *Involvement of the Secretary.* The agency official shall notify the Secretary of any consultation involving a National Historic Landmark and invite the Secretary to participate in the consultation where there may be an adverse effect. The Council may request a report from the Secretary under section 213 of the act to assist in the consultation.

(d) *Report of outcome.* When the Council participates in consultation under this section, it shall report the outcome of the section 106 process, providing its written comments or any memoranda of agreement to which it is a signatory, to the Secretary and the head of the agency responsible for the undertaking.

#### § 800.11 Documentation standards.

(a) *Adequacy of documentation.* The agency official shall ensure that a determination, finding, or agreement under the procedures in this subpart is supported by sufficient documentation to enable any reviewing parties to understand its basis. The agency official shall provide such documentation to the extent permitted by law and within available funds. When an agency official is conducting phased identification or evaluation under this subpart, the documentation standards regarding description of historic properties may be applied flexibly. If the Council, or the SHPO/THPO when the Council is not involved, determines the applicable documentation standards are not met, the Council or the SHPO/THPO, as appropriate, shall notify the agency official and specify the information needed to meet the standard. At the request of the agency official or any of the consulting parties, the Council shall review any disputes over whether documentation standards are met and provide its views to the agency official and the consulting parties.

(b) *Format.* The agency official may use documentation prepared to comply with other laws to fulfill the

requirements of the procedures in this subpart, if that documentation meets the standards of this section.

#### (c) *Confidentiality.*

(1) *Authority to withhold information.* Section 304 of the act provides that the head of a Federal agency or other public official receiving grant assistance pursuant to the act, after consultation with the Secretary, shall withhold from public disclosure information about the location, character, or ownership of a historic property when disclosure may cause a significant invasion of privacy; risk harm to the historic property; or impede the use of a traditional religious site by practitioners. When the head of a Federal agency or other public official has determined that information should be withheld from the public pursuant to these criteria, the Secretary, in consultation with such Federal agency head or official, shall determine who may have access to the information for the purposes of carrying out the act.

#### (2) *Consultation with the Council.*

When the information in question has been developed in the course of an agency's compliance with this part, the Secretary shall consult with the Council in reaching determinations on the withholding and release of information. The Federal agency shall provide the Council with available information, including views of the SHPO/THPO, Indian tribes and Native Hawaiian organizations, related to the confidentiality concern. The Council shall advise the Secretary and the Federal agency within 30 days of receipt of adequate documentation.

(3) *Other authorities affecting confidentiality.* Other Federal laws and program requirements may limit public access to information concerning an undertaking and its effects on historic properties. Where applicable, those authorities shall govern public access to information developed in the section 106 process and may authorize the agency official to protect the privacy of non-governmental applicants.

#### (d) *Finding of no historic properties affected.* Documentation shall include:

(1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary;

(2) A description of the steps taken to identify historic properties, including, as appropriate, efforts to seek information pursuant to § 800.4(b); and

(3) The basis for determining that no historic properties are present or affected.

(e) *Finding of no adverse effect or adverse effect.* Documentation shall include:

(1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, and drawings, as necessary;

(2) A description of the steps taken to identify historic properties;

(3) A description of the affected historic properties, including information on the characteristics that qualify them for the National Register;

(4) A description of the undertaking's effects on historic properties;

(5) An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects; and

(6) Copies or summaries of any views provided by consulting parties and the public.

(f) *Memorandum of agreement.* When a memorandum of agreement is filed with the Council, the documentation shall include, any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1), an evaluation of any measures considered to avoid or minimize the undertaking's adverse effects and a summary of the views of consulting parties and the public.

(g) *Requests for comment without a memorandum of agreement.* Documentation shall include:

(1) A description and evaluation of any alternatives or mitigation measures that the agency official proposes to resolve the undertaking's adverse effects;

(2) A description of any reasonable alternatives or mitigation measures that were considered but not chosen, and the reasons for their rejection;

(3) Copies or summaries of any views submitted to the agency official concerning the adverse effects of the undertaking on historic properties and alternatives to reduce or avoid those effects; and

(4) Any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1).

#### § 800.12 Emergency situations.

(a) *Agency procedures.* The agency official, in consultation with the appropriate SHPOs/THPOs, affected Indian tribes and Native Hawaiian organizations, and the Council, is encouraged to develop procedures for taking historic properties into account during operations which respond to a disaster or emergency declared by the President, a tribal government, or the Governor of a State or which respond to other immediate threats to life or property. If approved by the Council, the procedures shall govern the agency's historic preservation responsibilities during any disaster or emergency in lieu of §§ 800.3 through 800.6.

(b) *Alternatives to agency procedures.* In the event an agency official proposes an emergency undertaking as an essential and immediate response to a disaster or emergency declared by the President, a tribal government, or the Governor of a State or another immediate threat to life or property, and the agency has not developed procedures pursuant to paragraph (a) of this section, the agency official may comply with section 106 by:

(1) Following a programmatic agreement developed pursuant to § 800.14(b) that contains specific provisions for dealing with historic properties in emergency situations; or

(2) Notifying the Council, the appropriate SHPO/THPO and any Indian tribe or Native Hawaiian organization that may attach religious and cultural significance to historic properties likely to be affected prior to the undertaking and affording them an opportunity to comment within seven days of notification. If the agency official determines that circumstances do not permit seven days for comment, the agency official shall notify the Council, the SHPO/THPO and the Indian tribe or Native Hawaiian organization and invite any comments within the time available.

(c) *Local governments responsible for section 106 compliance.* When a local government official serves as the agency official for section 106 compliance, paragraphs (a) and (b) of this section also apply to an imminent threat to public health or safety as a result of a natural disaster or emergency declared by a local government's chief executive officer or legislative body, provided that if the Council or SHPO/THPO objects to the proposed action within seven days, the agency official shall comply with §§ 800.3 through 800.6.

(d) *Applicability.* This section applies only to undertakings that will be implemented within 30 days after the disaster or emergency has been formally declared by the appropriate authority. An agency may request an extension of the period of applicability from the Council prior to the expiration of the 30 days. Immediate rescue and salvage operations conducted to preserve life or property are exempt from the provisions of section 106 and this part.

#### § 800.13 Post-review discoveries.

(a) *Planning for subsequent discoveries.*

(1) *Using a programmatic agreement.* An agency official may develop a programmatic agreement pursuant to § 800.14(b) to govern the actions to be taken when historic properties are discovered during the implementation of an undertaking.

(2) *Using agreement documents.* When the agency official's identification efforts in accordance with § 800.4 indicate that historic properties are likely to be discovered during implementation of an undertaking and no programmatic agreement has been developed pursuant to paragraph (a)(1) of this section, the agency official shall include in any finding of no adverse effect or memorandum of agreement a process to resolve any adverse effects upon such properties. Actions in conformance with the process satisfy the agency official's responsibilities under section 106 and this part.

(b) *Discoveries without prior planning.* If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties and:

(1) If the agency official has not approved the undertaking or if construction on an approved undertaking has not commenced, consult to resolve adverse effects pursuant to § 800.6; or

(2) If the agency official, the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property agree that such property is of value solely for its scientific, prehistoric, historic or archeological data, the agency official may comply with the

Archeological and Historic Preservation Act instead of the procedures in this part and provide the Council, the SHPO/THPO, and the Indian tribe or Native Hawaiian organization with a report on the actions within a reasonable time after they are completed; or

(3) If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.

(c) *Eligibility of properties.* The agency official, in consultation with the SHPO/THPO, may assume a newly-discovered property to be eligible for the National Register for purposes of section 106. The agency official shall specify the National Register criteria used to assume the property's eligibility so that information can be used in the resolution of adverse effects.

(d) *Discoveries on tribal lands.* If historic properties are discovered on tribal lands, or there are unanticipated effects on historic properties found on tribal lands, after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section and construction has commenced, the agency official shall comply with applicable tribal regulations and procedures and obtain the concurrence of the Indian tribe on the proposed action.

#### Subpart C-Program Alternatives

#### § 800.14 Federal agency program alternatives.

(a) *Alternate procedures.* An agency official may develop procedures to implement section 106 and substitute them for all or part of subpart B of this part if they are consistent with the Council's regulations pursuant to section 110(a)(2)(E) of the act.

(1) *Development of procedures.* The agency official shall consult with the Council, the National Conference of State Historic Preservation Officers or individual SHPO/THPOs, as appropriate, and Indian tribes and Native Hawaiian organizations, as specified in paragraph (f) of this section, in the development of alternate procedures, publish notice of the availability of proposed alternate procedures in the Federal Register and take other appropriate steps to seek public input during the development of alternate procedures.

(2) *Council review.* The agency official shall submit the proposed alternate procedures to the Council for a 60-day review period. If the Council finds the procedures to be consistent with this part, it shall notify the agency official and the agency official may adopt them as final alternate procedures.

(3) *Notice.* The agency official shall notify the parties with which it has consulted and publish notice of final alternate procedures in the Federal Register.

(4) *Legal effect.* Alternate procedures adopted pursuant to this subpart substitute for the Council's regulations for the purposes of the agency's compliance with section 106, except that where an Indian tribe has entered into an agreement with the Council to substitute tribal historic preservation regulations for the Council's regulations under section 101(d)(5) of the act, the agency shall follow those regulations in lieu of the agency's procedures regarding undertakings on tribal lands. Prior to the Council entering into such agreements, the Council will provide Federal agencies notice and opportunity to comment on the proposed substitute tribal regulations.

(b) *Programmatic agreements.* The Council and the agency official may negotiate a programmatic agreement to govern the implementation of a particular program or the resolution of adverse effects from certain complex project situations or multiple undertakings.

(1) *Use of programmatic agreements.* A programmatic agreement may be used:

(i) When effects on historic properties are similar and repetitive or are multi-State or regional in scope;

(ii) When effects on historic properties cannot be fully determined prior to approval of an undertaking;

(iii) When nonfederal parties are delegated major decisionmaking responsibilities;

(iv) Where routine management activities are undertaken at Federal installations, facilities, or other land-management units; or

(v) Where other circumstances warrant a departure from the normal section 106 process.

(2) *Developing programmatic agreements for agency programs.*

(i) The consultation shall involve, as appropriate, SHPO/THPOs, the National Conference of State Historic Preservation Officers (NCSHPO), Indian tribes and Native Hawaiian organizations, other Federal agencies, and members of the public. If the programmatic agreement has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the agency official shall also follow paragraph (f) of this section.

(ii) *Public Participation.* The agency official shall arrange for public participation appropriate to the subject matter and the scope of the program and in accordance with subpart A of this part. The agency official shall consider the nature of the program and its likely effects on historic properties and take steps to involve the individuals, organizations and entities likely to be interested.

(iii) *Effect.* The programmatic agreement shall take effect when executed by the Council, the agency official and the appropriate SHPOs/THPOs when the programmatic agreement concerns a specific region or the president of NCSHPO when NCSHPO has participated in the consultation. A programmatic agreement shall take effect on tribal lands only when the THPO, Indian tribe or a designated representative of the tribe is a signatory to the agreement. Compliance with the procedures established by an approved programmatic agreement satisfies the agency's section 106 responsibilities for all individual undertakings of the program covered by the agreement until

it expires or is terminated by the agency, the president of NCSHPO when a signatory, or the Council. Termination by an individual SHPO/THPO shall only terminate the application of a regional programmatic agreement within the jurisdiction of the SHPO/THPO. If a THPO assumes the responsibilities of a SHPO pursuant to section 101(d)(2) of the act and the SHPO is signatory to programmatic agreement, the THPO assumes the role of a signatory, including the right to terminate a regional programmatic agreement on lands under the jurisdiction of the tribe.

(iv) *Notice.* The agency official shall notify the parties with which it has consulted that a programmatic agreement has been executed under paragraph (b) of this section, provide appropriate public notice before it takes effect, and make any internal agency procedures implementing the agreement readily available to the Council, SHPO/THPOs, and the public.

(v) If the Council determines that the terms of a programmatic agreement are not being carried out, or if such an agreement is terminated, the agency official shall comply with subpart B of this part with regard to individual undertakings of the program covered by the agreement.

(3) *Developing programmatic agreements for complex or multiple undertakings.* Consultation to develop a programmatic agreement for dealing with the potential adverse effects of complex projects or multiple undertakings shall follow § 800.6. If consultation pertains to an activity involving multiple undertakings and the parties fail to reach agreement, then the agency official shall comply with the provisions of subpart B of this part for each individual undertaking.

(4) *Prototype programmatic agreements.* The Council may designate an agreement document as a prototype programmatic agreement that may be used for the same type of program or undertaking in more than one case or area. When an agency official uses such a prototype programmatic agreement, the agency official may develop and execute the agreement with the appropriate SHPO/THPO and the agreement shall become final without need for Council participation in consultation or Council signature.

(c) *Exempted categories.*

(1) *Criteria for establishing.* The Council or an agency official may propose a program or category of undertakings that may be exempted

from review under the provisions of subpart B of this part, if the program or category meets the following criteria:

(i) The actions within the program or category would otherwise qualify as "undertakings" as defined in § 800.16;

(ii) The potential effects of the undertakings within the program or category upon historic properties are foreseeable and likely to be minimal or not adverse; and

(iii) Exemption of the program or category is consistent with the purposes of the act.

(2) *Public participation.* The proponent of the exemption shall arrange for public participation appropriate to the subject matter and the scope of the exemption and in accordance with the standards in subpart A of this part. The proponent of the exemption shall consider the nature of the exemption and its likely effects on historic properties and take steps to involve individuals, organizations and entities likely to be interested.

(3) *Consultation with SHPOs/THPOs.* The proponent of the exemption shall notify and consider the views of the SHPOs/THPOs on the exemption.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the exempted program or category of undertakings has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Council review of proposed exemptions.* The Council shall review an exemption proposal that is supported by documentation describing the program or category for which the exemption is sought, demonstrating that the criteria of paragraph (c)(1) of this section have been met, describing the methods used to seek the views of the public, and summarizing any views submitted by the SHPO/THPOs, the public, and any others consulted. Unless it requests further information, the Council shall approve or reject the proposed exemption within 30 days of receipt, and thereafter notify the relevant agency official and SHPO/THPOs of the decision. The decision shall be based on the consistency of the exemption with the purposes of the act, taking into consideration the magnitude of the exempted undertaking or program and the likelihood of impairment of historic

properties in accordance with section 214 of the act.

(6) *Legal consequences.* Any undertaking that falls within an approved exempted program or category shall require no further review pursuant to subpart B of this part, unless the agency official or the Council determines that there are circumstances under which the normally excluded undertaking should be reviewed under subpart B of this part.

(7) *Termination.* The Council may terminate an exemption at the request of the agency official or when the Council determines that the exemption no longer meets the criteria of paragraph (c)(1) of this section. The Council shall notify the agency official 30 days before termination becomes effective.

(8) *Notice.* The proponent of the exemption shall publish notice of any approved exemption in the Federal Register.

(d) *Standard treatments.*

(1) *Establishment.* The Council, on its own initiative or at the request of another party, may establish standard methods for the treatment of a category of historic properties, a category of undertakings, or a category of effects on historic properties to assist Federal agencies in satisfying the requirements of subpart B of this part. The Council shall publish notice of standard treatments in the Federal Register.

(2) *Public participation.* The Council shall arrange for public participation appropriate to the subject matter and the scope of the standard treatment and consistent with subpart A of this part. The Council shall consider the nature of the standard treatment and its likely effects on historic properties and the individuals, organizations and entities likely to be interested. Where an agency official has proposed a standard treatment, the Council may request the agency official to arrange for public involvement.

(3) *Consultation with SHPOs/THPOs.* The Council shall notify and consider the views of SHPOs/THPOs on the proposed standard treatment.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the proposed standard treatment has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Termination.* The Council may terminate a standard treatment by publication of a notice in the Federal Register 30 days before the termination takes effect.

(e) *Program comments.* An agency official may request the Council to comment on a category of undertakings in lieu of conducting individual reviews under §§ 800.4 through 800.6. The Council may provide program comments at its own initiative.

(1) *Agency request.* The agency official shall identify the category of undertakings, specify the likely effects on historic properties, specify the steps the agency official will take to ensure that the effects are taken into account, identify the time period for which the comment is requested and summarize any views submitted by the public.

(2) *Public participation.* The agency official shall arrange for public participation appropriate to the subject matter and the scope of the category and in accordance with the standards in subpart A of this part. The agency official shall consider the nature of the undertakings and their likely effects on historic properties and the individuals, organizations and entities likely to be interested.

(3) *Consultation with SHPOs/THPOs.* The Council shall notify and consider the views of SHPOs/THPOs on the proposed program comment.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the program comment has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Council action.* Unless the Council requests additional documentation, notifies the agency official that it will decline to comment, or obtains the consent of the agency official to extend the period for providing comment, the Council shall comment to the agency official within 45 days of the request.

(i) If the Council comments, the agency official shall take into account the comments of the Council in carrying out the undertakings within the category and publish notice in the Federal Register of the Council's comments and steps the agency will take to ensure that effects to historic properties are taken into account.

(ii) If the Council declines to comment, the agency official shall continue to comply with the requirements of §§ 800.3 through 800.6 for the individual undertakings.

(6) *Withdrawal of comment.* If the Council determines that the consideration of historic properties is not being carried out in a manner consistent with the program comment, the Council may withdraw the comment and the agency official shall comply with the requirements of §§ 800.3 through 800.6 for the individual undertakings.

(f) *Consultation with Indian tribes and Native Hawaiian organizations when developing program alternatives.* Whenever an agency official proposes a program alternative pursuant to paragraphs (a) through (e) of this section, the agency official shall ensure that development of the program alternative includes appropriate government-to-government consultation with affected Indian tribes and consultation with affected Native Hawaiian organizations.

(1) *Identifying affected Indian tribes and Native Hawaiian organizations.* If any undertaking covered by a proposed program alternative has the potential to affect historic properties on tribal lands, the agency official shall identify and consult with the Indian tribes having jurisdiction over such lands. If a proposed program alternative has the potential to affect historic properties of religious and cultural significance to an Indian tribe or a Native Hawaiian organization which are located off tribal lands, the agency official shall identify those Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to such properties and consult with them. When a proposed program alternative has nationwide applicability, the agency official shall identify an appropriate government to government consultation with Indian tribes and consult with Native Hawaiian organizations in accordance with existing Executive orders, Presidential memoranda and applicable provisions of law.

(2) *Results of consultation.* The agency official shall provide summaries of the views, along with copies of any written comments, provided by affected Indian tribes and Native Hawaiian organizations to the Council as part of the documentation for the proposed program alternative. The agency official and the Council shall take those views

into account in reaching a final decision on the proposed program alternative.

#### § 800.15 Tribal, State, and local program alternatives. (Reserved)

#### § 800.16 Definitions.

(a) *Act* means the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470w-6.

(b) *Agency* means agency as defined in 5 U.S.C. 551.

(c) *Approval of the expenditure of funds* means any final agency decision authorizing or permitting the expenditure of Federal funds or financial assistance on an undertaking, including any agency decision that may be subject to an administrative appeal.

(d) *Area of potential effects* means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

(e) *Comment* means the findings and recommendations of the Council formally provided in writing to the head of a Federal agency under section 106.

(f) *Consultation* means the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the section 106 process. The Secretary's "Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act" provide further guidance on consultation.

(g) *Council* means the Advisory Council on Historic Preservation or a Council member or employee designated to act for the Council.

(h) *Day or days* means calendar days.

(i) *Effect* means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register.

(j) *Foreclosure* means an action taken by an agency official that effectively precludes the Council from providing comments which the agency official can meaningfully consider prior to the approval of the undertaking.

(k) *Head of the agency* means the chief official of the Federal agency responsible for all aspects of the agency's actions. If a State, local or tribal government has assumed or has

been delegated responsibility for section 106 compliance, the head of that unit of government shall be considered the head of the agency.

(l)(1) *Historic property* means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

(2) The term *eligible for inclusion in the National Register* includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the National Register criteria.

(m) *Indian tribe* means an Indian tribe, band, nation, or other organized group or community, including a native village, regional corporation or village corporation, as those terms are defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

(n) *Local government* means a city, county, parish, township, municipality, borough, or other general purpose political subdivision of a State.

(o) *Memorandum of agreement* means the document that records the terms and conditions agreed upon to resolve the adverse effects of an undertaking upon historic properties.

(p) *National Historic Landmark* means a historic property that the Secretary of the Interior has designated a National Historic Landmark.

(q) *National Register* means the National Register of Historic Places maintained by the Secretary of the Interior.

(r) *National Register criteria* means the criteria established by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register (36 CFR part 60).

(s)(1) *Native Hawaiian organization* means any organization which serves and represents the interests of Native Hawaiians; has as a primary and stated purpose the provision of services to Native Hawaiians; and has demonstrated expertise in aspects of



historic preservation that are significant to Native Hawaiians.

(2) *Native Hawaiian* means any individual who is a descendant of the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the State of Hawaii.

(t) *Programmatic agreement* means a document that records the terms and conditions agreed upon to resolve the potential adverse effects of a Federal agency program, complex undertaking or other situations in accordance with § 800.14(b).

(u) *Secretary* means the Secretary of the Interior acting through the Director of the National Park Service except where otherwise specified.

(v) *State Historic Preservation Officer (SHPO)* means the official appointed or designated pursuant to section 101(b)(1) of the act to administer the State historic preservation program or a representative designated to act for the State historic preservation officer.

(w) *Tribal Historic Preservation Officer (THPO)* means the tribal official appointed by the tribe's chief governing authority or designated by a tribal ordinance or preservation program who has assumed the responsibilities of the SHPO for purposes of section 106 compliance on tribal lands in accordance with section 101(d)(2) of the act.

(x) *Tribal lands* means all lands within the exterior boundaries of any Indian reservation and all dependent Indian communities.

(y) *Undertaking* means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.

(z) *Senior policy official* means the senior policy level official designated by the head of the agency pursuant to section 3(e) of Executive Order 13287.

#### **Appendix A to Part 800 -- Criteria for Council Involvement in Reviewing Individual section 106 Cases**

(a) *Introduction.* This appendix sets forth the criteria that will be used by the Council to determine whether to enter an individual section 106 review that it normally would not be involved in.

(b) *General policy.* The Council may choose to exercise its authorities under

the section 106 regulations to participate in an individual project pursuant to the following criteria. However, the Council will not always elect to participate even though one or more of the criteria may be met.

(c) *Specific criteria.* The Council is likely to enter the section 106 process at the steps specified in the regulations in this part when an undertaking:

(1) *Has substantial impacts on important historic properties.* This may include adverse effects on properties that possess a national level of significance or on properties that are of unusual or noteworthy importance or are a rare property type; or adverse effects to large numbers of historic properties, such as impacts to multiple properties within a historic district.

(2) *Presents important questions of policy or interpretation.* This may include questions about how the Council's regulations are being applied or interpreted, including possible foreclosure or anticipatory demolition situations; situations where the outcome will set a precedent affecting Council policies or program goals; or the development of programmatic agreements that alter the way the section 106 process is applied to a group or type of undertakings.

(3) *Has the potential for presenting procedural problems.* This may include cases with substantial public controversy that is related to historic preservation issues; with disputes among or about consulting parties which the Council's involvement could help resolve; that are involved or likely to be involved in litigation on the basis of section 106; or carried out by a Federal agency, in a State or locality, or on tribal lands where the Council has previously identified problems with section 106 compliance pursuant to § 800.9(d)(2).

(4) *Presents issues of concern to Indian tribes or Native Hawaiian organizations.* This may include cases where there have been concerns raised about the identification of, evaluation of or assessment of effects on historic properties to which an Indian tribe or Native Hawaiian organization attaches religious and cultural significance; where an Indian tribe or Native Hawaiian organization has requested Council involvement to assist in the resolution of adverse effects; or where there are questions relating to policy, interpretation or precedent under section 106 or its relation to other

authorities, such as the Native American Graves Protection and Repatriation Act.





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

5090  
Ser N44/1807  
August 31, 2016

Dr. Allyson Brooks  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
1110 South Capital Way, Suite 30  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: LOG NO. 102214-23-USN: CLARIFICATION OF THE SECTION 106 PROCESS FOR THE CONTINUATION AND INCREASE OF EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

In order to facilitate your participation in the section 106 consultation process for the proposed continuation and increase of EA-18G Growler operations at Naval Air Station Whidbey Island (NAS Whidbey Island), the Navy would like to offer you this overview of the section 106 consultation process and a description of our proposed plan to meet federal statutory responsibilities under the National Historic Preservation Act (NHPA) of 1966, as amended.

Per the NHPA, and its implementing regulations 36 CFR 800, the Navy, as a federal agency, is required to take into account the effects of an undertaking on historic properties included in or eligible for inclusion in the National Register of Historic Places (NRHP). Given the nature and scope of this undertaking, and the public interest in historic properties within the Area of Potential Effect (APE), the Navy will be offering ample opportunity for consulting parties to comment throughout the section 106 consultation process. The section 106 process consists of four steps:

**1. DETERMINING THE UNDERTAKING:**

The Navy has determined that the proposed action qualifies as an undertaking that is of a type that has the potential to effect historic properties.

**2. DEFINING THE AREA OF POTENTIAL EFFECT (APE):**

Currently, the Navy is requesting comments on the proposed approach to defining the Area of Potential Effect (APE). After comments have been received, and when updated noise model studies for the Environmental Impact Statement (EIS) have been completed, the Navy will define the APE, provide maps to all consulting parties for further comment, and request SHPO concurrence on the APE.

**3. IDENTIFY AND EVALUATE HISTORIC PROPERTIES WITHIN THE APE:**

Following defining the APE, the Navy will introduce their methodology for identifying historic properties and assessing the historic significance of resources that have not yet been evaluated for eligibility in the NRHP. All consulting parties will have the opportunity to comment on the proposed methodology prior to the Navy identifying and evaluating historic properties within the APE and requesting SHPO concurrence on determinations of eligibility.

**4. DETERMINATION OF EFFECT:**

The fourth step in the section 106 consultation process is to determine if the undertaking has an adverse effect on the identified historic properties within the APE. The Navy will provide our finding of effect to all consulting parties for comment prior to preparing a final finding of effect for SHPO concurrence.

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For a more detailed explanation of this process and the federal regulations and requirements that guide it please refer to Enclosures 1 and 2. Please find a copy of the implementing regulations 36 CFR 800 in Enclosure 3.

The time required to complete the section 106 consultation process can be influenced by other federal regulations and requirements outside of the NHPA. For the proposed continuation and increase of EA-18G Growler operations at NAS Whidbey Island section 106 consultation is being done in coordination with the National Environmental Policy Act (NEPA) review and preparation of an Environmental Impact Statement (EIS). The EIS will analyze the potential socio/economic, health, natural resource, and cultural resource impacts, whereas the section 106 process focuses specifically on potential effects to historic properties. Through coordination of these two federal processes the Navy seeks to increase the efficiency and effectiveness of each process by sharing information and documents while decreasing duplication of effort. In addition, coordinating the NHPA and NEPA processes allows for the promotion of greater transparency and potential for public involvement.

For this undertaking the section 106 consultation will provide the EIS team information to ensure historic properties are appropriately analyzed in the NEPA review. The EIS provides specialized studies to fill data gaps that meet information standards for the section 106 consultation. For this undertaking, the EIS will provide updated noise study models for the proposed action, which are necessary to facilitate section 106 consultation, particularly in defining the APE.

If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil). We appreciate your comments on the continuation and increase of EA-18G Growler operations at NAS Whidbey Island and look forward to continued section 106 consultation.

Sincerely,



KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer

Enclosures:    1. Continuation and Increase of Growler Operation Section 106 Consultation Process / Strategy  
                    2. Continuation and Increase of Growler Operation Section 106 Consultation Process / Strategy  
                    Flow Chart  
                    3. 36 CFR 800

## Continuation and Increase of EA-18G Growler Operations: Section 106 Consultation Process / Strategy

**1. Establish Undertaking [36 CFR 800.3(a)]:** An undertaking is a “project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency...” [36 CFR 800.16(y)].

- The undertaking for the Continuation and Increase to Growler Operations is to:
  - continue and expand existing Growler operations at the Naval Air Station (NAS) Whidbey Island complex , which includes field carrier landing practice by Growler aircraft that occurs at Ault Field and Outlying Landing Field (OLF) Coupeville;
  - increase electronic attack capabilities (provide for an increase of 35 or 36 aircraft) to support an expanded U.S. Department of Defense mission for identifying, tracking, and targeting in a complex electronic warfare environment;
  - construct and renovate facilities at Ault Field to accommodate additional Growler aircraft; and
  - station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community, beginning as early as 2017.
- Navy Cultural Resource staff determined this undertaking to be the type of activity that “has the potential to cause effects on historic properties” [36 CFR 800.3(a)]. In October 2014, the Navy initiated section 106 consultation and invited interested parties to consult on the undertaking. Navy Cultural Resource staff were present at National Environmental Policy Act (NEPA) scoping meetings seeking public comments on the undertaking.

**2. Determine the Area of Potential Effect [36 CFR 800.4(a)]:** The Area of Potential Effect (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking” [36 CFR 800.16(d)].

- Given the nature and size of the undertaking, as well as coordination with the NEPA review process, the Navy asked consulting parties for comments on the proposed approach to defining the APE in June and July of 2016.
- When the Draft EIS is released to the public for comment (anticipated 30 September 2016), noise model studies included in the EIS will be used to define the APE and create a map of the APE based on the most expansive 65 dB DNL contours for all of the combined proposed alternatives. Maps of the proposed finalized APE will be sent to consulting parties for additional comments and considerations. The Washington State Historic Preservation Office (SHPO) will be asked to concur on the proposed finalized definition of the APE.
  - *The proposed and final definition of the APE is subject to Federal Aviation Administration (FAA) regulations (14 CFR 150).*

**3. Identify Historic Properties and Evaluate Historic Significance [36 CFR 800.4(b) & 36 CFR 800.4(c)]:** Based on comments received from consulting parties on the definition of the APE, the Navy will “make a reasonable and good faith effort to carry out appropriate identification efforts” of historic properties within the APE [36 CFR 800.4(b)(1)]. The Navy will also “apply National Register criteria (36 CFR 63) to properties identified within the [APE] that have not been previously evaluated for National Register eligibility” [36 CFR 800.4(c)(1)].

- A historic property “means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places...” [36 CFR 800.16(1)(1)]
- Once the APE has been defined and the Washington SHPO has concurred, the Navy will send out their proposed methodology for identifying historic properties and evaluating historic significance to all consulting parties. Consulting parties will have the opportunity to comment on the proposed methodology.
- Once comments have been received and taken into consideration, the Navy will identify historic properties and evaluate historic significance based on the finalized methodology. The final identification and evaluation report will be submitted to consulting parties.
  - Due to confidentiality requirements for archaeological sites and properties of traditional, religious, and cultural importance, the status of some historic properties may be withheld from consulting parties [36 CFR 800.11(c)].

**4. Finding of Effect [36 CFR 800.4(d)]:** If the Navy “finds that there are historic properties which may be affected by the undertaking, the [Navy] shall notify all consulting parties...and assess adverse effects, if any, in accordance, with 36 CFR 800.5” [36 CFR 800.4.(d)(2)].

- The Navy “shall apply the criteria of adverse effect to historic properties within the [APE]” [36 CFR 800.5(a)] and report their findings to all consulting parties for comments.
- Once comments have been received and taken into consideration, the Navy will send out the final finding of effect to all consulting parties and ask for Washington SHPO concurrence.
- In the event the Navy determines an Adverse Effect, the Navy shall follow 36 CFR 800.6 to resolve adverse effects to historic properties through avoidance, minimization, or mitigation.

ENCLOSURE 1.





# Section 106 Consultation Process for the Continuation and Increase of EA-18G Growler Operations at NAS Whidbey Island / Strategy Flow Chart

**Navy:** Established the proposed continuation and increase of EA-18G Growlers at NAS Whidbey Island is an undertaking of the type that “has the potential to cause effects on historic properties”. Began section 106 consultation by notifying SHPO, ACHP, and consulting parties. (October 2014)

**Public Consultation:** To meet section 106 public notification requirements, public comments on section 106 were solicited and accepted at NEPA scoping meetings. (October/December 2014)



**Navy:** Consult with SHPO, ACHP, and consulting parties on the proposed approach to defining the Area of Potential Effect (APE) and ask for comments. (June/July 2016)

**Consulting Parties:** Provide Navy comments on proposed approach to defining the APE.

**Navy:** Take comments into consideration and using updated noise modeling maps from the Draft EIS, define the APE. Provide final APE to consulting parties for further comments and ask for SHPO concurrence. (Fall 2016)

**Public Consultation:** Navy will solicit and accept public comments on section 106 consultation during public meetings on the Draft EIS.

**Consulting Parties:** Provide Navy comments on the definition of the APE. SHPO has 30 days to respond to the Navy.



**Navy:** Make a “good and reasonable faith” effort to identify historic properties within the APE and apply National Register eligibility criteria to unevaluated properties within the APE. Share proposed methodology for identification and evaluation with SHPO, ACHP, and consulting parties for comments.

**Consulting Parties:** Provide Navy comments on proposed methodology for identifying and evaluating historic properties within the APE.

**Navy:** Take comments into consideration and identify and evaluate historic properties within the APE. Submit findings to consulting parties for comments and ask for SHPO concurrence.

**Consulting Parties:** Provide Navy comments on the identification and evaluation of historic properties. SHPO has 30 days to respond to the Navy.



**Navy:** Apply the criteria of adverse effect to determine if the undertaking will have an adverse effect to historic properties. Share proposed finding with SHPO, ACHP, and consulting parties for comments.

**Consulting Parties:** Provide Navy comments on the proposed finding of effect.

**Navy:** Take comments into consideration and submit final finding of effect to consulting parties and ask for SHPO concurrence.

**Consulting Parties:** Provide Navy comments on the finding of effect. SHPO has 30 days to respond to the Navy.

**Public Consultation:** Navy will accept public comments on section 106 consultation during the comment period for the Final EIS.



**Navy:** In the event Navy determines an Adverse Effect finding, the Navy shall follow 36 CFR 800.6 to resolve adverse effects to historic properties through avoidance, minimization, or mitigation.

**Public Consultation:** Please note, Navy will accept comments on section 106 consultation at anytime.



**36 CFR PART 800 -- PROTECTION OF HISTORIC PROPERTIES (incorporating amendments effective August 5, 2004)**

**Subpart A -- Purposes and Participants**

- Sec.
- 800.1 Purposes.
- 800.2 Participants in the Section 106 process.

**Subpart B -- The Section 106 Process**

- 800.3 Initiation of the section 106 process.
- 800.4 Identification of historic properties.
- 800.5 Assessment of adverse effects.
- 800.6 Resolution of adverse effects.
- 800.7 Failure to resolve adverse effects.
- 800.8 Coordination with the National Environmental Policy act.
- 800.9 Council review of Section 106 compliance.
- 800.10 Special requirements for protecting National Historic Landmarks.
- 800.11 Documentation standards.
- 800.12 Emergency situations.
- 800.13 Post-review discoveries.

**Subpart C -- Program Alternatives**

- 800.14 Federal agency program alternatives.
- 800.15 Tribal, State and Local Program Alternatives. (Reserved)
- 800.16 Definitions.
- Appendix A – Criteria for Council involvement in reviewing individual section 106 cases

**Authority:** 16 U.S.C. 470s.

**Subpart A-Purposes and Participants**

**§ 800.1 Purposes.**

(a) *Purposes of the section 106 process.* Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings. The procedures in this part define how Federal agencies meet these statutory responsibilities. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of

project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

(b) *Relation to other provisions of the act.* Section 106 is related to other provisions of the act designed to further the national policy of historic preservation. References to those provisions are included in this part to identify circumstances where they may affect actions taken to meet section 106 requirements. Such provisions may have their own implementing regulations or guidelines and are not intended to be implemented by the procedures in this part except insofar as they relate to the section 106 process. Guidelines, policies and procedures issued by other agencies, including the Secretary, have been cited in this part for ease of access and are not incorporated by reference.

(c) *Timing.* The agency official must complete the section 106 process "prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license." This does not prohibit agency official from conducting or authorizing nondestructive project planning activities before completing compliance with section 106, provided that such actions do not restrict the subsequent consideration of alternatives to avoid, minimize or mitigate the undertaking's adverse effects on historic properties. The agency official shall ensure that the section 106 process is initiated early in the undertaking's planning, so that a broad range of alternatives may be considered during the planning process for the undertaking.

**§ 800.2 Participants in the Section 106 process.**

(a) *Agency official.* It is the statutory obligation of the Federal agency to fulfill the requirements of section 106 and to ensure that an agency official with jurisdiction over an undertaking takes legal and financial responsibility for section 106 compliance in accordance with subpart B of this part. The agency official has approval authority for the undertaking and can commit the Federal agency to take appropriate action for a specific undertaking as a result of section 106 compliance. For the purposes of subpart C of this part, the agency official has the authority to commit the Federal agency to any obligation it may assume in the

implementation of a program alternative. The agency official may be a State, local, or tribal government official who has been delegated legal responsibility for compliance with section 106 in accordance with Federal law.

(1) *Professional standards.* Section 112(a)(1)(A) of the act requires each Federal agency responsible for the protection of historic resources, including archeological resources, to ensure that all actions taken by employees or contractors of the agency shall meet professional standards under regulations developed by the Secretary.

(2) *Lead Federal agency.* If more than one Federal agency is involved in an undertaking, some or all the agencies may designate a lead Federal agency, which shall identify the appropriate official to serve as the agency official who shall act on their behalf, fulfilling their collective responsibilities under section 106. Those Federal agencies that do not designate a lead Federal agency remain individually responsible for their compliance with this part.

(3) *Use of contractors.* Consistent with applicable conflict of interest laws, the agency official may use the services of applicants, consultants, or designees to prepare information, analyses and recommendations under this part. The agency official remains legally responsible for all required findings and determinations. If a document or study is prepared by a non-Federal party, the agency official is responsible for ensuring that its content meets applicable standards and guidelines.

(4) *Consultation.* The agency official shall involve the consulting parties described in paragraph (c) of this section in findings and determinations made during the section 106 process. The agency official should plan consultations appropriate to the scale of the undertaking and the scope of Federal involvement and coordinated with other requirements of other statutes, as applicable, such as the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archeological Resources Protection Act and agency-specific legislation. The Council encourages the agency official to use to the extent possible existing agency procedures and mechanisms to fulfill the consultation requirements of this part.

(b) *Council.* The Council issues regulations to implement section 106,

provides guidance and advice on the application of the procedures in this part, and generally oversees the operation of the section 106 process. The Council also consults with and comments to agency officials on individual undertakings and programs that affect historic properties.

(1) *Council entry into the section 106 process.* When the Council determines that its involvement is necessary to ensure that the purposes of section 106 and the act are met, the Council may enter the section 106 process. Criteria guiding Council decisions to enter the section 106 process are found in appendix A to this part. The Council will document that the criteria have been met and notify the parties to the section 106 process as required by this part.

(2) *Council assistance.* Participants in the section 106 process may seek advice, guidance and assistance from the Council on the application of this part to specific undertakings, including the resolution of disagreements, whether or not the Council is formally involved in the review of the undertaking. If questions arise regarding the conduct of the section 106 process, participants are encouraged to obtain the Council's advice on completing the process.

(c) *Consulting parties.* The following parties have consultative roles in the section 106 process.

(1) *State historic preservation officer.*

(i) The State historic preservation officer (SHPO) reflects the interests of the State and its citizens in the preservation of their cultural heritage. In accordance with section 101(b)(3) of the act, the SHPO advises and assists Federal agencies in carrying out their section 106 responsibilities and cooperates with such agencies, local governments and organizations and individuals to ensure that historic properties are taking into consideration at all levels of planning and development.

(ii) If an Indian tribe has assumed the functions of the SHPO in the section 106 process for undertakings on tribal lands, the SHPO shall participate as a consulting party if the undertaking takes place on tribal lands but affects historic properties off tribal lands, if requested in accordance with § 800.3(c)(1), or if the Indian tribe agrees to include the SHPO pursuant to § 800.3(f)(3).

(2) *Indian tribes and Native Hawaiian organizations.*

(i) *Consultation on tribal lands.*

(A) *Tribal historic preservation officer.* For a tribe that has assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act, the tribal historic preservation officer (THPO) appointed or designated in accordance with the act is the official representative for the purposes of section 106. The agency official shall consult with the THPO in lieu of the SHPO regarding undertakings occurring on or affecting historic properties on tribal lands.

(B) *Tribes that have not assumed SHPO functions.* When an Indian tribe has not assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act, the agency official shall consult with a representative designated by such Indian tribe in addition to the SHPO regarding undertakings occurring on or affecting historic properties on its tribal lands. Such Indian tribes have the same rights of consultation and concurrence that the THPOs are given throughout subpart B of this part, except that such consultations shall be in addition to and on the same basis as consultation with the SHPO.

(ii) *Consultation on historic properties of significance to Indian tribes and Native Hawaiian organizations.* Section 101(d)(6)(B) of the act requires the agency official to consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by an undertaking. This requirement applies regardless of the location of the historic property. Such Indian tribe or Native Hawaiian organization shall be a consulting party.

(A) The agency official shall ensure that consultation in the section 106 process provides the Indian tribe or Native Hawaiian organization a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects. It is the responsibility of the agency official to make a reasonable and good faith effort to identify Indian tribes and Native Hawaiian organizations that shall be consulted in the section 106 process. Consultation should commence early in the planning process, in order to identify and discuss relevant

preservation issues and resolve concerns about the confidentiality of information on historic properties.

(B) The Federal Government has a unique legal relationship with Indian tribes set forth in the Constitution of the United States, treaties, statutes, and court decisions. Consultation with Indian tribes should be conducted in a sensitive manner respectful of tribal sovereignty. Nothing in this part alters, amends, repeals, interprets or modifies tribal sovereignty, any treaty rights, or other rights of an Indian tribe, or preempts, modifies or limits the exercise of any such rights.

(C) Consultation with an Indian tribe must recognize the government-to-government relationship between the Federal Government and Indian tribes. The agency official shall consult with representatives designated or identified by the tribal government or the governing body of a Native Hawaiian organization. Consultation with Indian tribes and Native Hawaiian organizations should be conducted in a manner sensitive to the concerns and needs of the Indian tribe or Native Hawaiian organization.

(D) When Indian tribes and Native Hawaiian organizations attach religious and cultural significance to historic properties off tribal lands, section 101(d)(6)(B) of the act requires Federal agencies to consult with such Indian tribes and Native Hawaiian organizations in the section 106 process. Federal agencies should be aware that frequently historic properties of religious and cultural significance are located on ancestral, aboriginal, or ceded lands of Indian tribes and Native Hawaiian organizations and should consider that when complying with the procedures in this part.

(E) An Indian tribe or a Native Hawaiian organization may enter into an agreement with an agency official that specifies how they will carry out responsibilities under this part, including concerns over the confidentiality of information. An agreement may cover all aspects of tribal participation in the section 106 process, provided that no modification may be made in the roles of other parties to the section 106 process without their consent. An agreement may grant the Indian tribe or Native Hawaiian organization additional rights to participate or concur in agency decisions in the section 106 process beyond those specified in subpart B of this part. The agency official shall



provide a copy of any such agreement to the Council and the appropriate SHPOs.

(F) An Indian tribe that has not assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act may notify the agency official in writing that it is waiving its rights under § 800.6(c)(1) to execute a memorandum of agreement.

(3) *Representatives of local governments.* A representative of a local government with jurisdiction over the area in which the effects of an undertaking may occur is entitled to participate as a consulting party. Under other provisions of Federal law, the local government may be authorized to act as the agency official for purposes of section 106.

(4) *Applicants for Federal assistance, permits, licenses and other approvals.* An applicant for Federal assistance or for a Federal permit, license or other approval is entitled to participate as a consulting party as defined in this part. The agency official may authorize an applicant or group of applicants to initiate consultation with the SHPO/THPO and others, but remains legally responsible for all findings and determinations charged to the agency official. The agency official shall notify the SHPO/THPO when an applicant or group of applicants is so authorized. A Federal agency may authorize all applicants in a specific program pursuant to this section by providing notice to all SHPO/THPOs. Federal agencies that provide authorizations to applicants remain responsible for their government to government relationships with Indian tribes.

(5) *Additional consulting parties.* Certain individuals and organizations with a demonstrated interest in the undertaking may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties.

(d) *The public.*

(1) *Nature of involvement.* The views of the public are essential to informed Federal decisionmaking in the section 106 process. The agency official shall seek and consider the views of the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties, the likely interest of the public in the effects on historic properties, confidentiality concerns of private individuals and businesses, and

the relationship of the Federal involvement to the undertaking.

(2) *Providing notice and information.* The agency official must, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about an undertaking and its effects on historic properties and seek public comment and input. Members of the public may also provide views on their own initiative for the agency official to consider in decisionmaking.

(3) *Use of agency procedures.* The agency official may use the agency's procedures for public involvement under the National Environmental Policy Act or other program requirements in lieu of public involvement requirements in subpart B of this part, if they provide adequate opportunities for public involvement consistent with this subpart.

#### **Subpart B-The section 106 Process**

##### **§ 800.3 Initiation of the section 106 process.**

(a) *Establish undertaking.* The agency official shall determine whether the proposed Federal action is an undertaking as defined in § 800.16(y) and, if so, whether it is a type of activity that has the potential to cause effects on historic properties.

(1) *No potential to cause effects.* If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, the agency official has no further obligations under section 106 or this part.

(2) *Program alternatives.* If the review of the undertaking is governed by a Federal agency program alternative established under § 800.14 or a programmatic agreement in existence before January 11, 2001, the agency official shall follow the program alternative.

(b) *Coordinate with other reviews.* The agency official should coordinate the steps of the section 106 process, as appropriate, with the overall planning schedule for the undertaking and with any reviews required under other authorities such as the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archeological Resources Protection Act and agency-specific legislation, such as section 4(f) of the Department of

Transportation Act. Where consistent with the procedures in this subpart, the agency official may use information developed for other reviews under Federal, State or tribal law to meet the requirements of section 106.

(c) *Identify the appropriate SHPO and/or THPO.* As part of its initial planning, the agency official shall determine the appropriate SHPO or SHPOs to be involved in the section 106 process. The agency official shall also determine whether the undertaking may occur on or affect historic properties on any tribal lands and, if so, whether a THPO has assumed the duties of the SHPO. The agency official shall then initiate consultation with the appropriate officer or officers.

(1) *Tribal assumption of SHPO responsibilities.* Where an Indian tribe has assumed the section 106 responsibilities of the SHPO on tribal lands pursuant to section 101(d)(2) of the act, consultation for undertakings occurring on tribal land or for effects on tribal land is with the THPO for the Indian tribe in lieu of the SHPO. Section 101(d)(2)(D)(iii) of the act authorizes owners of properties on tribal lands which are neither owned by a member of the tribe nor held in trust by the Secretary for the benefit of the tribe to request the SHPO to participate in the section 106 process in addition to the THPO.

(2) *Undertakings involving more than one State.* If more than one State is involved in an undertaking, the involved SHPOs may agree to designate a lead SHPO to act on their behalf in the section 106 process, including taking actions that would conclude the section 106 process under this subpart.

(3) *Conducting consultation.* The agency official should consult with the SHPO/THPO in a manner appropriate to the agency planning process for the undertaking and to the nature of the undertaking and its effects on historic properties.

(4) *Failure of the SHPO/THPO to respond.* If the SHPO/THPO fails to respond within 30 days of receipt of a request for review of a finding or determination, the agency official may either proceed to the next step in the process based on the finding or determination or consult with the Council in lieu of the SHPO/THPO. If the SHPO/THPO re-enters the section 106 process, the agency official shall continue the consultation without being required to reconsider previous findings or determinations.

(d) *Consultation on tribal lands.*

Where the Indian tribe has not assumed the responsibilities of the SHPO on tribal lands, consultation with the Indian tribe regarding undertakings occurring on such tribe's lands or effects on such tribal lands shall be in addition to and on the same basis as consultation with the SHPO. If the SHPO has withdrawn from the process, the agency official may complete the section 106 process with the Indian tribe and the Council, as appropriate. An Indian tribe may enter into an agreement with a SHPO or SHPOs specifying the SHPO's participation in the section 106 process for undertakings occurring on or affecting historic properties on tribal lands.

(e) *Plan to involve the public.* In consultation with the SHPO/THPO, the agency official shall plan for involving the public in the section 106 process. The agency official shall identify the appropriate points for seeking public input and for notifying the public of proposed actions, consistent with § 800.2(d).

(f) *Identify other consulting parties.* In consultation with the SHPO/THPO, the agency official shall identify any other parties entitled to be consulting parties and invite them to participate as such in the section 106 process. The agency official may invite others to participate as consulting parties as the section 106 process moves forward.

(1) *Involving local governments and applicants.* The agency official shall invite any local governments or applicants that are entitled to be consulting parties under § 800.2(c).

(2) *Involving Indian tribes and Native Hawaiian organizations.* The agency official shall make a reasonable and good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties. Such Indian tribe or Native Hawaiian organization that requests in writing to be a consulting party shall be one.

(3) *Requests to be consulting parties.* The agency official shall consider all written requests of individuals and organizations to participate as consulting parties and, in consultation with the SHPO/THPO and any Indian tribe upon whose tribal lands an undertaking occurs or affects historic properties, determine which should be consulting parties.

(g) *Expediting consultation.* A consultation by the agency official with the SHPO/THPO and other consulting parties may address multiple steps in §§ 800.3 through 800.6 where the agency official and the SHPO/THPO agree it is appropriate as long as the consulting parties and the public have an adequate opportunity to express their views as provided in § 800.2(d).

**§ 800.4 Identification of historic properties.**

(a) *Determine scope of identification efforts.* In consultation with the SHPO/THPO, the agency official shall:

(1) Determine and document the area of potential effects, as defined in § 800.16(d);

(2) Review existing information on historic properties within the area of potential effects, including any data concerning possible historic properties not yet identified;

(3) Seek information, as appropriate, from consulting parties, and other individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area, and identify issues relating to the undertaking's potential effects on historic properties; and

(4) Gather information from any Indian tribe or Native Hawaiian organization identified pursuant to § 800.3(f) to assist in identifying properties, including those located off tribal lands, which may be of religious and cultural significance to them and may be eligible for the National Register, recognizing that an Indian tribe or Native Hawaiian organization may be reluctant to divulge specific information regarding the location, nature, and activities associated with such sites. The agency official should address concerns raised about confidentiality pursuant to § 800.11(c).

(b) *Identify historic properties.* Based on the information gathered under paragraph (a) of this section, and in consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to properties within the area of potential effects, the agency official shall take the steps necessary to identify historic properties within the area of potential effects.

(1) *Level of effort.* The agency official shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews,

sample field investigation, and field survey. The agency official shall take into account past planning, research and studies, the magnitude and nature of the undertaking and the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the area of potential effects. The Secretary's Standards and Guidelines for Identification provide guidance on this subject. The agency official should also consider other applicable professional, State, tribal and local laws, standards and guidelines. The agency official shall take into account any confidentiality concerns raised by Indian tribes or Native Hawaiian organizations during the identification process.

(2) *Phased identification and evaluation.* Where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process to conduct identification and evaluation efforts. The agency official may also defer final identification and evaluation of historic properties if it is specifically provided for in a memorandum of agreement executed pursuant to § 800.6, a programmatic agreement executed pursuant to § 800.14 (b), or the documents used by an agency official to comply with the National Environmental Policy Act pursuant to § 800.8. The process should establish the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation, taking into account the number of alternatives under consideration, the magnitude of the undertaking and its likely effects, and the views of the SHPO/THPO and any other consulting parties. As specific aspects or locations of an alternative are refined or access is gained, the agency official shall proceed with the identification and evaluation of historic properties in accordance with paragraphs (b)(1) and (c) of this section.

(c) *Evaluate historic significance.*

(1) *Apply National Register criteria.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified properties and guided by the Secretary's Standards and Guidelines for Evaluation, the agency official shall

apply the National Register criteria (36 CFR part 63) to properties identified within the area of potential effects that have not been previously evaluated for National Register eligibility. The passage of time, changing perceptions of significance, or incomplete prior evaluations may require the agency official to reevaluate properties previously determined eligible or ineligible. The agency official shall acknowledge that Indian tribes and Native Hawaiian organizations possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them.

(2) *Determine whether a property is eligible.* If the agency official determines any of the National Register criteria are met and the SHPO/THPO agrees, the property shall be considered eligible for the National Register for section 106 purposes. If the agency official determines the criteria are not met and the SHPO/THPO agrees, the property shall be considered not eligible. If the agency official and the SHPO/THPO do not agree, or if the Council or the Secretary so request, the agency official shall obtain a determination of eligibility from the Secretary pursuant to 36 CFR part 63. If an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to a property off tribal lands does not agree, it may ask the Council to request the agency official to obtain a determination of eligibility.

(d) *Results of identification and evaluation.*

(1) *No historic properties affected.* If the agency official finds that either there are no historic properties present or there are historic properties present but the undertaking will have no effect upon them as defined in § 800.16(i), the agency official shall provide documentation of this finding, as set forth in § 800.11(d), to the SHPO/THPO. The agency official shall notify all consulting parties, including Indian tribes and Native Hawaiian organizations, and make the documentation available for public inspection prior to approving the undertaking.

(i) If the SHPO/THPO, or the Council if it has entered the section 106 process, does not object within 30 days of receipt of an adequately documented finding, the agency official's responsibilities under section 106 are fulfilled.

(ii) If the SHPO/THPO objects within 30 days of receipt of an adequately documented finding, the agency official shall either consult with the objecting party to resolve the disagreement, or forward the finding and supporting documentation to the Council and request that the Council review the finding pursuant to paragraphs (d)(1)(iv)(A) through (d)(1)(iv)(C) of this section. When an agency official forwards such requests for review to the Council, the agency official shall concurrently notify all consulting parties that such a request has been made and make the request documentation available to the public.

(iii) During the SHPO/THPO 30 day review period, the Council may object to the finding and provide its opinion regarding the finding to the agency official and, if the Council determines the issue warrants it, the head of the agency. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The agency shall then proceed according to paragraphs (d)(1)(iv)(B) and (d)(1)(iv)(C) of this section.

(iv)(A) Upon receipt of the request under paragraph (d)(1)(ii) of this section, the Council will have 30 days in which to review the finding and provide the agency official and, if the Council determines the issue warrants it, the head of the agency with the Council's opinion regarding the finding. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. If the Council does not respond within 30 days of receipt of the request, the agency official's responsibilities under section 106 are fulfilled.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion before the agency reaches a final decision on the finding.

(C) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall then prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council, the SHPO/THPO, and the consulting parties. The head of the agency may delegate his or her duties under this paragraph to the agency's senior policy official. If the agency official's initial finding will be revised, the agency official shall proceed in

accordance with the revised finding. If the final decision of the agency is to affirm the initial agency finding of no historic properties affected, once the summary of the decision has been sent to the Council, the SHPO/THPO, and the consulting parties, the agency official's responsibilities under section 106 are fulfilled.

(D) The Council shall retain a record of agency responses to Council opinions on their findings of no historic properties affected. The Council shall make this information available to the public.

(2) *Historic properties affected.* If the agency official finds that there are historic properties which may be affected by the undertaking, the agency official shall notify all consulting parties, including Indian tribes or Native Hawaiian organizations, invite their views on the effects and assess adverse effects, if any, in accordance with § 800.5.

#### § 800.5 Assessment of adverse effects.

(a) *Apply criteria of adverse effect.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

(1) *Criteria of adverse effect.* An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

(2) *Examples of adverse effects.* Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

(3) *Phased application of criteria.* Where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process in applying the criteria of adverse effect consistent with phased identification and evaluation efforts conducted pursuant to § 800.4(b)(2).

(b) *Finding of no adverse effect.* The agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines, to avoid adverse effects.

(c) *Consulting party review.* If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

(1) *Agreement with, or no objection to, finding.* Unless the Council is reviewing the finding pursuant to paragraph (c)(3) of this section, the agency official may proceed after the close of the 30 day review period if the SHPO/THPO has agreed with the finding or has not provided a response, and no consulting party has objected. The agency official shall then carry out the undertaking in accordance with paragraph (d)(1) of this section.

(2) *Disagreement with finding.*

(i) If within the 30 day review period the SHPO/THPO or any consulting party notifies the agency official in writing that it disagrees with the finding and specifies the reasons for the disagreement in the notification, the agency official shall either consult with the party to resolve the disagreement, or request the Council to review the finding pursuant to paragraphs (c)(3)(i) and (c)(3)(ii) of this section. The agency official shall include with such request the documentation specified in § 800.11(e). The agency official shall also concurrently notify all consulting parties that such a submission has been made and make the submission documentation available to the public.

(ii) If within the 30 day review period the Council provides the agency official and, if the Council determines the issue warrants it, the head of the agency, with a written opinion objecting to the finding, the agency shall then proceed according to paragraph (c)(3)(ii) of this section. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part.

(iii) The agency official should seek the concurrence of any Indian tribe or Native Hawaiian organization that has made known to the agency official that it attaches religious and cultural significance to a historic property subject to the finding. If such Indian tribe or Native Hawaiian organization disagrees with the finding, it may within the 30 day review period specify the reasons for disagreeing with the finding and request the Council to review and object to the finding pursuant to paragraph (c)(2)(ii) of this section.

(3) *Council review of findings.*

(i) When a finding is submitted to the Council pursuant to paragraph (c)(2)(i) of this section, the Council shall review the finding and provide the agency official and, if the Council determines the issue warrants it, the head of the agency with its opinion as to whether the adverse effect criteria have

been correctly applied. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The Council will provide its opinion within 15 days of receiving the documented finding from the agency official. The Council at its discretion may extend that time period for 15 days, in which case it shall notify the agency of such extension prior to the end of the initial 15 day period. If the Council does not respond within the applicable time period, the agency official's responsibilities under section 106 are fulfilled.

(ii)(A) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion in reaching a final decision on the finding.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council, the SHPO/THPO, and the consulting parties. The head of the agency may delegate his or her duties under this paragraph to the agency's senior policy official. If the agency official's initial finding will be revised, the agency official shall proceed in accordance with the revised finding. If the final decision of the agency is to affirm the initial finding of no adverse effect, once the summary of the decision has been sent to the Council, the SHPO/THPO, and the consulting parties, the agency official's responsibilities under section 106 are fulfilled.

(C) The Council shall retain a record of agency responses to Council opinions on their findings of no adverse effects. The Council shall make this information available to the public.

(d) *Results of assessment.*

(1) *No adverse effect.* The agency official shall maintain a record of the finding and provide information on the finding to the public on request, consistent with the confidentiality provisions of § 800.11(c). Implementation of the undertaking in accordance with the finding as documented fulfills the agency official's responsibilities under section 106 and this part. If the agency official will not conduct the undertaking as proposed in the finding, the agency official shall reopen consultation under paragraph (a) of this section.

(2) *Adverse effect.* If an adverse effect is found, the agency official shall consult further to resolve the adverse effect pursuant to § 800.6.

**§ 800.6 Resolution of adverse effects.**

(a) *Continue consultation.* The agency official shall consult with the SHPO/THPO and other consulting parties, including Indian tribes and Native Hawaiian organizations, to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties.

(1) *Notify the Council and determine Council participation.* The agency official shall notify the Council of the adverse effect finding by providing the documentation specified in § 800.11(e).

(i) The notice shall invite the Council to participate in the consultation when:

(A) The agency official wants the Council to participate;

(B) The undertaking has an adverse effect upon a National Historic Landmark; or

(C) A programmatic agreement under § 800.14(b) will be prepared;

(ii) The SHPO/THPO, an Indian tribe or Native Hawaiian organization, or any other consulting party may at any time independently request the Council to participate in the consultation.

(iii) The Council shall advise the agency official and all consulting parties whether it will participate within 15 days of receipt of notice or other request. Prior to entering the process, the Council shall provide written notice to the agency official and the consulting parties that its decision to participate meets the criteria set forth in appendix A to this part. The Council shall also advise the head of the agency of its decision to enter the process. Consultation with Council participation is conducted in accordance with paragraph (b)(2) of this section.

(iv) If the Council does not join the consultation, the agency official shall proceed with consultation in accordance with paragraph (b)(1) of this section.

(2) *Involve consulting parties.* In addition to the consulting parties identified under § 800.3(f), the agency official, the SHPO/THPO and the Council, if participating, may agree to invite other individuals or organizations to become consulting parties. The agency official shall invite any individual or organization that will assume a specific role or responsibility

in a memorandum of agreement to participate as a consulting party.

(3) *Provide documentation.* The agency official shall provide to all consulting parties the documentation specified in § 800.11(e), subject to the confidentiality provisions of § 800.11(c), and such other documentation as may be developed during the consultation to resolve adverse effects.

(4) *Involve the public.* The agency official shall make information available to the public, including the documentation specified in § 800.11(e), subject to the confidentiality provisions of § 800.11(c). The agency official shall provide an opportunity for members of the public to express their views on resolving adverse effects of the undertaking. The agency official should use appropriate mechanisms, taking into account the magnitude of the undertaking and the nature of its effects upon historic properties, the likely effects on historic properties, and the relationship of the Federal involvement to the undertaking to ensure that the public's views are considered in the consultation. The agency official should also consider the extent of notice and information concerning historic preservation issues afforded the public at earlier steps in the section 106 process to determine the appropriate level of public involvement when resolving adverse effects so that the standards of § 800.2(d) are met.

(5) *Restrictions on disclosure of information.* Section 304 of the act and other authorities may limit the disclosure of information under paragraphs (a)(3) and (a)(4) of this section. If an Indian tribe or Native Hawaiian organization objects to the disclosure of information or if the agency official believes that there are other reasons to withhold information, the agency official shall comply with § 800.11(c) regarding the disclosure of such information.

(b) *Resolve adverse effects.*

(1) *Resolution without the Council.*

(i) The agency official shall consult with the SHPO/THPO and other consulting parties to seek ways to avoid, minimize or mitigate the adverse effects.

(ii) The agency official may use standard treatments established by the Council under § 800.14(d) as a basis for a memorandum of agreement.

(iii) If the Council decides to join the consultation, the agency official shall follow paragraph (b)(2) of this section.

(iv) If the agency official and the SHPO/THPO agree on how the adverse

effects will be resolved, they shall execute a memorandum of agreement. The agency official must submit a copy of the executed memorandum of agreement, along with the documentation specified in § 800.11(f), to the Council prior to approving the undertaking in order to meet the requirements of section 106 and this subpart.

(v) If the agency official, and the SHPO/THPO fail to agree on the terms of a memorandum of agreement, the agency official shall request the Council to join the consultation and provide the Council with the documentation set forth in § 800.11(g). If the Council decides to join the consultation, the agency official shall proceed in accordance with paragraph (b)(2) of this section. If the Council decides not to join the consultation, the Council will notify the agency and proceed to comment in accordance with § 800.7(c).

(2) *Resolution with Council participation.* If the Council decides to participate in the consultation, the agency official shall consult with the SHPO/THPO, the Council, and other consulting parties, including Indian tribes and Native Hawaiian organizations under § 800.2(c)(3), to seek ways to avoid, minimize or mitigate the adverse effects. If the agency official, the SHPO/THPO, and the Council agree on how the adverse effects will be resolved, they shall execute a memorandum of agreement.

(c) *Memorandum of agreement.* A memorandum of agreement executed and implemented pursuant to this section evidences the agency official's compliance with section 106 and this part and shall govern the undertaking and all of its parts. The agency official shall ensure that the undertaking is carried out in accordance with the memorandum of agreement.

(1) *Signatories.* The signatories have sole authority to execute, amend or terminate the agreement in accordance with this subpart.

(i) The agency official and the SHPO/THPO are the signatories to a memorandum of agreement executed pursuant to paragraph (b)(1) of this section.

(ii) The agency official, the SHPO/THPO, and the Council are the signatories to a memorandum of agreement executed pursuant to paragraph (b)(2) of this section.

(iii) The agency official and the Council are signatories to a

memorandum of agreement executed pursuant to § 800.7(a)(2).

(2) *Invited signatories.*

(i) The agency official may invite additional parties to be signatories to a memorandum of agreement. Any such party that signs the memorandum of agreement shall have the same rights with regard to seeking amendment or termination of the memorandum of agreement as other signatories.

(ii) The agency official may invite an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties located off tribal lands to be a signatory to a memorandum of agreement concerning such properties.

(iii) The agency official should invite any party that assumes a responsibility under a memorandum of agreement to be a signatory.

(iv) The refusal of any party invited to become a signatory to a memorandum of agreement pursuant to paragraph (c)(2) of this section does not invalidate the memorandum of agreement.

(3) *Concurrence by others.* The agency official may invite all consulting parties to concur in the memorandum of agreement. The signatories may agree to invite others to concur. The refusal of any party invited to concur in the memorandum of agreement does not invalidate the memorandum of agreement.

(4) *Reports on implementation.* Where the signatories agree it is appropriate, a memorandum of agreement shall include a provision for monitoring and reporting on its implementation.

(5) *Duration.* A memorandum of agreement shall include provisions for termination and for reconsideration of terms if the undertaking has not been implemented within a specified time.

(6) *Discoveries.* Where the signatories agree it is appropriate, a memorandum of agreement shall include provisions to deal with the subsequent discovery or identification of additional historic properties affected by the undertaking.

(7) *Amendments.* The signatories to a memorandum of agreement may amend it. If the Council was not a signatory to the original agreement and the signatories execute an amended agreement, the agency official shall file it with the Council.

(8) *Termination.* If any signatory determines that the terms of a memorandum of agreement cannot be or are not being carried out, the signatories

shall consult to seek amendment of the agreement. If the agreement is not amended, any signatory may terminate it. The agency official shall either execute a memorandum of agreement with signatories under paragraph (c)(1) of this section or request the comments of the Council under § 800.7(a).

(9) *Copies.* The agency official shall provide each consulting party with a copy of any memorandum of agreement executed pursuant to this subpart.

**§ 800.7 Failure to resolve adverse effects.**

(a) *Termination of consultation.* After consulting to resolve adverse effects pursuant to § 800.6(b)(2), the agency official, the SHPO/THPO, or the Council may determine that further consultation will not be productive and terminate consultation. Any party that terminates consultation shall notify the other consulting parties and provide them the reasons for terminating in writing.

(1) If the agency official terminates consultation, the head of the agency or an Assistant Secretary or other officer with major department-wide or agency-wide responsibilities shall request that the Council comment pursuant to paragraph (c) of this section and shall notify all consulting parties of the request.

(2) If the SHPO terminates consultation, the agency official and the Council may execute a memorandum of agreement without the SHPO's involvement.

(3) If a THPO terminates consultation regarding an undertaking occurring on or affecting historic properties on its tribal lands, the Council shall comment pursuant to paragraph (c) of this section.

(4) If the Council terminates consultation, the Council shall notify the agency official, the agency's Federal preservation officer and all consulting parties of the termination and comment under paragraph (c) of this section. The Council may consult with the agency's Federal preservation officer prior to terminating consultation to seek to resolve issues concerning the undertaking and its effects on historic properties.

(b) *Comments without termination.* The Council may determine that it is appropriate to provide additional advisory comments upon an undertaking for which a memorandum of agreement will be executed. The Council shall provide them to the

agency official when it executes the memorandum of agreement.

(c) *Comments by the Council.*

(1) *Preparation.* The Council shall provide an opportunity for the agency official, all consulting parties, and the public to provide their views within the time frame for developing its comments. Upon request of the Council, the agency official shall provide additional existing information concerning the undertaking and assist the Council in arranging an onsite inspection and an opportunity for public participation.

(2) *Timing.* The Council shall transmit its comments within 45 days of receipt of a request under paragraph (a)(1) or (a)(3) of this section or § 800.8(c)(3), or termination by the Council under § 800.6(b)(1)(v) or paragraph (a)(4) of this section, unless otherwise agreed to by the agency official.

(3) *Transmittal.* The Council shall provide its comments to the head of the agency requesting comment with copies to the agency official, the agency's Federal preservation officer, all consulting parties, and others as appropriate.

(4) *Response to Council comment.* The head of the agency shall take into account the Council's comments in reaching a final decision on the undertaking. Section 110(l) of the act directs that the head of the agency shall document this decision and may not delegate his or her responsibilities pursuant to section 106. Documenting the agency head's decision shall include:

(i) Preparing a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's comments and providing it to the Council prior to approval of the undertaking;

(ii) Providing a copy of the summary to all consulting parties; and

(iii) Notifying the public and making the record available for public inspection.

**§ 800.8 Coordination With the National Environmental Policy Act.**

(a) *General principles.*

(1) *Early coordination.* Federal agencies are encouraged to coordinate compliance with section 106 and the procedures in this part with any steps taken to meet the requirements of the National Environmental Policy Act (NEPA). Agencies should consider their section 106 responsibilities as early as possible in the NEPA process, and plan

their public participation, analysis, and review in such a way that they can meet the purposes and requirements of both statutes in a timely and efficient manner. The determination of whether an undertaking is a "major Federal action significantly affecting the quality of the human environment," and therefore requires preparation of an environmental impact statement (EIS) under NEPA, should include consideration of the undertaking's likely effects on historic properties. A finding of adverse effect on a historic property does not necessarily require an EIS under NEPA.

(2) *Consulting party roles.* SHPO/THPOs, Indian tribes and Native Hawaiian organizations, other consulting parties, and organizations and individuals who may be concerned with the possible effects of an agency action on historic properties should be prepared to consult with agencies early in the NEPA process, when the purpose of and need for the proposed action as well as the widest possible range of alternatives are under consideration.

(3) *Inclusion of historic preservation issues.* Agency officials should ensure that preparation of an environmental assessment (EA) and finding of no significant impact (FONSI) or an EIS and record of decision (ROD) includes appropriate scoping, identification of historic properties, assessment of effects upon them, and consultation leading to resolution of any adverse effects.

(b) *Actions categorically excluded under NEPA.* If a project, activity or program is categorically excluded from NEPA review under an agency's NEPA procedures, the agency official shall determine if it still qualifies as an undertaking requiring review under section 106 pursuant to § 800.3(a). If so, the agency official shall proceed with section 106 review in accordance with the procedures in this subpart.

(c) *Use of the NEPA process for section 106 purposes.* An agency official may use the process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with section 106 in lieu of the procedures set forth in §§ 800.3 through 800.6 if the agency official has notified in advance the SHPO/THPO and the Council that it intends to do so and the following standards are met.

(1) *Standards for developing environmental documents to comply with Section 106.* During preparation of the EA or draft EIS (DEIS) the agency official shall:

(i) Identify consulting parties either pursuant to § 800.3(f) or through the NEPA scoping process with results consistent with § 800.3(f);

(ii) Identify historic properties and assess the effects of the undertaking on such properties in a manner consistent with the standards and criteria of §§ 800.4 through 800.5, provided that the scope and timing of these steps may be phased to reflect the agency official's consideration of project alternatives in the NEPA process and the effort is commensurate with the assessment of other environmental factors;

(iii) Consult regarding the effects of the undertaking on historic properties with the SHPO/THPO, Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to affected historic properties, other consulting parties, and the Council, where appropriate, during NEPA scoping, environmental analysis, and the preparation of NEPA documents;

(iv) Involve the public in accordance with the agency's published NEPA procedures; and

(v) Develop in consultation with identified consulting parties alternatives and proposed measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the EA or DEIS.

(2) *Review of environmental documents.*

(i) The agency official shall submit the EA, DEIS or EIS to the SHPO/THPO, Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to affected historic properties, and other consulting parties prior to or when making the document available for public comment. If the document being prepared is a DEIS or EIS, the agency official shall also submit it to the Council.

(ii) Prior to or within the time allowed for public comment on the document, a SHPO/THPO, an Indian tribe or Native Hawaiian organization, another consulting party or the Council may object to the agency official that preparation of the EA, DEIS or EIS has not met the standards set forth in paragraph (c)(1) of this section or that the substantive resolution of the effects on historic properties proposed in an EA, DEIS or EIS is inadequate. If the agency official receives such an objection, the agency official shall refer the matter to the Council.

(3) *Resolution of objections.* Within 30 days of the agency official's referral of an objection under paragraph (c)(2)(ii) of this section, the Council shall review the objection and notify the agency as to its opinion on the objection.

(i) If the Council agrees with the objection:

(A) The Council shall provide the agency official and, if the Council determines the issue warrants it, the head of the agency with the Council's opinion regarding the objection. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion in reaching a final decision on the issue of the objection.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council. The head of the agency may delegate his or her duties under this paragraph to the agency's senior Policy Official. If the agency official's initial decision regarding the matter that is the subject of the objection will be revised, the agency official shall proceed in accordance with the revised decision. If the final decision of the agency is to affirm the initial agency decision, once the summary of the final decision has been sent to the Council, the agency official shall continue its compliance with this section.

(ii) If the Council disagrees with the objection, the Council shall so notify the agency official, in which case the agency official shall continue its compliance with this section.

(iii) If the Council fails to respond to the objection within the 30 day period, the agency official shall continue its compliance with this section.

(4) *Approval of the undertaking.* If the agency official has found, during the preparation of an EA or EIS that the effects of an undertaking on historic properties are adverse, the agency official shall develop measures in the EA, DEIS, or EIS to avoid, minimize, or mitigate such effects in accordance with paragraph (c)(1)(v) of this section. The agency official's responsibilities under section 106 and the procedures in this



subpart shall then be satisfied when either:

- (i) a binding commitment to such proposed measures is incorporated in
  - (A) the ROD, if such measures were proposed in a DEIS or EIS; or
  - (B) an MOA drafted in compliance with § 800.6(c); or
- (ii) the Council has commented under § 800.7 and received the agency's response to such comments.

(5) *Modification of the undertaking.* If the undertaking is modified after approval of the FONSI or the ROD in a manner that changes the undertaking or alters its effects on historic properties, or if the agency official fails to ensure that the measures to avoid, minimize or mitigate adverse effects (as specified in either the FONSI or the ROD, or in the binding commitment adopted pursuant to paragraph (c)(4) of this section) are carried out, the agency official shall notify the Council and all consulting parties that supplemental environmental documents will be prepared in compliance with NEPA or that the procedures in §§ 800.3 through 800.6 will be followed as necessary.

#### **§ 800.9 Council review of section 106 compliance.**

(a) *Assessment of agency official compliance for individual undertakings.* The Council may provide to the agency official its advisory opinion regarding the substance of any finding, determination or decision or regarding the adequacy of the agency official's compliance with the procedures under this part. The Council may provide such advice at any time at the request of any individual, agency or organization or on its own initiative. The agency official shall consider the views of the Council in reaching a decision on the matter in question.

(b) *Agency foreclosure of the Council's opportunity to comment.* Where an agency official has failed to complete the requirements of section 106 in accordance with the procedures in this part prior to the approval of an undertaking, the Council's opportunity to comment may be foreclosed. The Council may review a case to determine whether a foreclosure has occurred. The Council shall notify the agency official and the agency's Federal preservation officer and allow 30 days for the agency official to provide information as to whether foreclosure has occurred. If the Council determines foreclosure has occurred, the Council shall transmit the determination to the

agency official and the head of the agency. The Council shall also make the determination available to the public and any parties known to be interested in the undertaking and its effects upon historic properties.

(c) *Intentional adverse effects by applicants.*

(1) *Agency responsibility.* Section 110(k) of the act prohibits a Federal agency from granting a loan, loan guarantee, permit, license or other assistance to an applicant who, with intent to avoid the requirements of section 106, has intentionally significantly adversely affected a historic property to which the grant would relate, or having legal power to prevent it, has allowed such significant adverse effect to occur, unless the agency, after consultation with the Council, determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. Guidance issued by the Secretary pursuant to section 110 of the act governs its implementation.

(2) *Consultation with the Council.* When an agency official determines, based on the actions of an applicant, that section 110(k) is applicable and that circumstances may justify granting the assistance, the agency official shall notify the Council and provide documentation specifying the circumstances under which the adverse effects to the historic property occurred and the degree of damage to the integrity of the property. This documentation shall include any views obtained from the applicant, SHPO/THPO, an Indian tribe if the undertaking occurs on or affects historic properties on tribal lands, and other parties known to be interested in the undertaking.

(i) Within thirty days of receiving the agency official's notification, unless otherwise agreed to by the agency official, the Council shall provide the agency official with its opinion as to whether circumstances justify granting assistance to the applicant and any possible mitigation of the adverse effects.

(ii) The agency official shall consider the Council's opinion in making a decision on whether to grant assistance to the applicant, and shall notify the Council, the SHPO/THPO, and other parties known to be interested in the undertaking prior to granting the assistance.

(3) *Compliance with Section 106.* If an agency official, after consulting with

the Council, determines to grant the assistance, the agency official shall comply with §§ 800.3 through 800.6 to take into account the effects of the undertaking on any historic properties.

(d) *Evaluation of Section 106 operations.* The Council may evaluate the operation of the section 106 process by periodic reviews of how participants have fulfilled their legal responsibilities and how effectively the outcomes reached advance the purposes of the act.

(1) *Information from participants.* Section 203 of the act authorizes the Council to obtain information from Federal agencies necessary to conduct evaluation of the section 106 process. The agency official shall make documentation of agency policies, operating procedures and actions taken to comply with section 106 available to the Council upon request. The Council may request available information and documentation from other participants in the section 106 process.

(2) *Improving the operation of section 106.* Based upon any evaluation of the section 106 process, the Council may make recommendations to participants, the heads of Federal agencies, and the Secretary of actions to improve the efficiency and effectiveness of the process. Where the Council determines that an agency official or a SHPO/THPO has failed to properly carry out the responsibilities assigned under the process in this part, the Council may participate in individual case reviews conducted under such process in addition to the SHPO/THPO for such period that it determines is necessary to improve performance or correct deficiencies. If the Council finds a pattern of failure by a Federal agency in carrying out its responsibilities under section 106, the Council may review the policies and programs of the agency related to historic preservation pursuant to section 202(a)(6) of the act and recommend methods to improve the effectiveness, coordination, and consistency of those policies and programs with section 106.

#### **§ 800.10 Special requirements for protecting National Historic Landmarks.**

(a) *Statutory requirement.* Section 110(f) of the act requires that the agency official, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to any National Historic Landmark that may be directly and adversely affected by an undertaking. When



commenting on such undertakings, the Council shall use the process set forth in §§ 800.6 through 800.7 and give special consideration to protecting National Historic Landmarks as specified in this section.

(b) *Resolution of adverse effects.* The agency official shall request the Council to participate in any consultation to resolve adverse effects on National Historic Landmarks conducted under § 800.6.

(c) *Involvement of the Secretary.* The agency official shall notify the Secretary of any consultation involving a National Historic Landmark and invite the Secretary to participate in the consultation where there may be an adverse effect. The Council may request a report from the Secretary under section 213 of the act to assist in the consultation.

(d) *Report of outcome.* When the Council participates in consultation under this section, it shall report the outcome of the section 106 process, providing its written comments or any memoranda of agreement to which it is a signatory, to the Secretary and the head of the agency responsible for the undertaking.

#### § 800.11 Documentation standards.

(a) *Adequacy of documentation.* The agency official shall ensure that a determination, finding, or agreement under the procedures in this subpart is supported by sufficient documentation to enable any reviewing parties to understand its basis. The agency official shall provide such documentation to the extent permitted by law and within available funds. When an agency official is conducting phased identification or evaluation under this subpart, the documentation standards regarding description of historic properties may be applied flexibly. If the Council, or the SHPO/THPO when the Council is not involved, determines the applicable documentation standards are not met, the Council or the SHPO/THPO, as appropriate, shall notify the agency official and specify the information needed to meet the standard. At the request of the agency official or any of the consulting parties, the Council shall review any disputes over whether documentation standards are met and provide its views to the agency official and the consulting parties.

(b) *Format.* The agency official may use documentation prepared to comply with other laws to fulfill the

requirements of the procedures in this subpart, if that documentation meets the standards of this section.

#### (c) *Confidentiality.*

(1) *Authority to withhold information.* Section 304 of the act provides that the head of a Federal agency or other public official receiving grant assistance pursuant to the act, after consultation with the Secretary, shall withhold from public disclosure information about the location, character, or ownership of a historic property when disclosure may cause a significant invasion of privacy; risk harm to the historic property; or impede the use of a traditional religious site by practitioners. When the head of a Federal agency or other public official has determined that information should be withheld from the public pursuant to these criteria, the Secretary, in consultation with such Federal agency head or official, shall determine who may have access to the information for the purposes of carrying out the act.

#### (2) *Consultation with the Council.*

When the information in question has been developed in the course of an agency's compliance with this part, the Secretary shall consult with the Council in reaching determinations on the withholding and release of information. The Federal agency shall provide the Council with available information, including views of the SHPO/THPO, Indian tribes and Native Hawaiian organizations, related to the confidentiality concern. The Council shall advise the Secretary and the Federal agency within 30 days of receipt of adequate documentation.

(3) *Other authorities affecting confidentiality.* Other Federal laws and program requirements may limit public access to information concerning an undertaking and its effects on historic properties. Where applicable, those authorities shall govern public access to information developed in the section 106 process and may authorize the agency official to protect the privacy of non-governmental applicants.

#### (d) *Finding of no historic properties affected.* Documentation shall include:

(1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary;

(2) A description of the steps taken to identify historic properties, including, as appropriate, efforts to seek information pursuant to § 800.4(b); and

(3) The basis for determining that no historic properties are present or affected.

(e) *Finding of no adverse effect or adverse effect.* Documentation shall include:

(1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, and drawings, as necessary;

(2) A description of the steps taken to identify historic properties;

(3) A description of the affected historic properties, including information on the characteristics that qualify them for the National Register;

(4) A description of the undertaking's effects on historic properties;

(5) An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects; and

(6) Copies or summaries of any views provided by consulting parties and the public.

(f) *Memorandum of agreement.* When a memorandum of agreement is filed with the Council, the documentation shall include, any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1), an evaluation of any measures considered to avoid or minimize the undertaking's adverse effects and a summary of the views of consulting parties and the public.

(g) *Requests for comment without a memorandum of agreement.* Documentation shall include:

(1) A description and evaluation of any alternatives or mitigation measures that the agency official proposes to resolve the undertaking's adverse effects;

(2) A description of any reasonable alternatives or mitigation measures that were considered but not chosen, and the reasons for their rejection;

(3) Copies or summaries of any views submitted to the agency official concerning the adverse effects of the undertaking on historic properties and alternatives to reduce or avoid those effects; and

(4) Any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1).

#### § 800.12 Emergency situations.

(a) *Agency procedures.* The agency official, in consultation with the appropriate SHPOs/THPOs, affected Indian tribes and Native Hawaiian organizations, and the Council, is encouraged to develop procedures for taking historic properties into account during operations which respond to a disaster or emergency declared by the President, a tribal government, or the Governor of a State or which respond to other immediate threats to life or property. If approved by the Council, the procedures shall govern the agency's historic preservation responsibilities during any disaster or emergency in lieu of §§ 800.3 through 800.6.

(b) *Alternatives to agency procedures.* In the event an agency official proposes an emergency undertaking as an essential and immediate response to a disaster or emergency declared by the President, a tribal government, or the Governor of a State or another immediate threat to life or property, and the agency has not developed procedures pursuant to paragraph (a) of this section, the agency official may comply with section 106 by:

(1) Following a programmatic agreement developed pursuant to § 800.14(b) that contains specific provisions for dealing with historic properties in emergency situations; or

(2) Notifying the Council, the appropriate SHPO/THPO and any Indian tribe or Native Hawaiian organization that may attach religious and cultural significance to historic properties likely to be affected prior to the undertaking and affording them an opportunity to comment within seven days of notification. If the agency official determines that circumstances do not permit seven days for comment, the agency official shall notify the Council, the SHPO/THPO and the Indian tribe or Native Hawaiian organization and invite any comments within the time available.

(c) *Local governments responsible for section 106 compliance.* When a local government official serves as the agency official for section 106 compliance, paragraphs (a) and (b) of this section also apply to an imminent threat to public health or safety as a result of a natural disaster or emergency declared by a local government's chief executive officer or legislative body, provided that if the Council or SHPO/THPO objects to the proposed action within seven days, the agency official shall comply with §§ 800.3 through 800.6.

(d) *Applicability.* This section applies only to undertakings that will be implemented within 30 days after the disaster or emergency has been formally declared by the appropriate authority. An agency may request an extension of the period of applicability from the Council prior to the expiration of the 30 days. Immediate rescue and salvage operations conducted to preserve life or property are exempt from the provisions of section 106 and this part.

#### § 800.13 Post-review discoveries.

(a) *Planning for subsequent discoveries.*

(1) *Using a programmatic agreement.* An agency official may develop a programmatic agreement pursuant to § 800.14(b) to govern the actions to be taken when historic properties are discovered during the implementation of an undertaking.

(2) *Using agreement documents.* When the agency official's identification efforts in accordance with § 800.4 indicate that historic properties are likely to be discovered during implementation of an undertaking and no programmatic agreement has been developed pursuant to paragraph (a)(1) of this section, the agency official shall include in any finding of no adverse effect or memorandum of agreement a process to resolve any adverse effects upon such properties. Actions in conformance with the process satisfy the agency official's responsibilities under section 106 and this part.

(b) *Discoveries without prior planning.* If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties and:

(1) If the agency official has not approved the undertaking or if construction on an approved undertaking has not commenced, consult to resolve adverse effects pursuant to § 800.6; or

(2) If the agency official, the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property agree that such property is of value solely for its scientific, prehistoric, historic or archeological data, the agency official may comply with the

Archeological and Historic Preservation Act instead of the procedures in this part and provide the Council, the SHPO/THPO, and the Indian tribe or Native Hawaiian organization with a report on the actions within a reasonable time after they are completed; or

(3) If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.

(c) *Eligibility of properties.* The agency official, in consultation with the SHPO/THPO, may assume a newly-discovered property to be eligible for the National Register for purposes of section 106. The agency official shall specify the National Register criteria used to assume the property's eligibility so that information can be used in the resolution of adverse effects.

(d) *Discoveries on tribal lands.* If historic properties are discovered on tribal lands, or there are unanticipated effects on historic properties found on tribal lands, after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section and construction has commenced, the agency official shall comply with applicable tribal regulations and procedures and obtain the concurrence of the Indian tribe on the proposed action.

#### Subpart C-Program Alternatives

#### § 800.14 Federal agency program alternatives.

(a) *Alternate procedures.* An agency official may develop procedures to implement section 106 and substitute them for all or part of subpart B of this part if they are consistent with the Council's regulations pursuant to section 110(a)(2)(E) of the act.

(1) *Development of procedures.* The agency official shall consult with the Council, the National Conference of State Historic Preservation Officers or individual SHPO/THPOs, as appropriate, and Indian tribes and Native Hawaiian organizations, as specified in paragraph (f) of this section, in the development of alternate procedures, publish notice of the availability of proposed alternate procedures in the Federal Register and take other appropriate steps to seek public input during the development of alternate procedures.

(2) *Council review.* The agency official shall submit the proposed alternate procedures to the Council for a 60-day review period. If the Council finds the procedures to be consistent with this part, it shall notify the agency official and the agency official may adopt them as final alternate procedures.

(3) *Notice.* The agency official shall notify the parties with which it has consulted and publish notice of final alternate procedures in the Federal Register.

(4) *Legal effect.* Alternate procedures adopted pursuant to this subpart substitute for the Council's regulations for the purposes of the agency's compliance with section 106, except that where an Indian tribe has entered into an agreement with the Council to substitute tribal historic preservation regulations for the Council's regulations under section 101(d)(5) of the act, the agency shall follow those regulations in lieu of the agency's procedures regarding undertakings on tribal lands. Prior to the Council entering into such agreements, the Council will provide Federal agencies notice and opportunity to comment on the proposed substitute tribal regulations.

(b) *Programmatic agreements.* The Council and the agency official may negotiate a programmatic agreement to govern the implementation of a particular program or the resolution of adverse effects from certain complex project situations or multiple undertakings.

(1) *Use of programmatic agreements.* A programmatic agreement may be used:

(i) When effects on historic properties are similar and repetitive or are multi-State or regional in scope;

(ii) When effects on historic properties cannot be fully determined prior to approval of an undertaking;

(iii) When nonfederal parties are delegated major decisionmaking responsibilities;

(iv) Where routine management activities are undertaken at Federal installations, facilities, or other land-management units; or

(v) Where other circumstances warrant a departure from the normal section 106 process.

(2) *Developing programmatic agreements for agency programs.*

(i) The consultation shall involve, as appropriate, SHPO/THPOs, the National Conference of State Historic Preservation Officers (NCSHPO), Indian tribes and Native Hawaiian organizations, other Federal agencies, and members of the public. If the programmatic agreement has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the agency official shall also follow paragraph (f) of this section.

(ii) *Public Participation.* The agency official shall arrange for public participation appropriate to the subject matter and the scope of the program and in accordance with subpart A of this part. The agency official shall consider the nature of the program and its likely effects on historic properties and take steps to involve the individuals, organizations and entities likely to be interested.

(iii) *Effect.* The programmatic agreement shall take effect when executed by the Council, the agency official and the appropriate SHPOs/THPOs when the programmatic agreement concerns a specific region or the president of NCSHPO when NCSHPO has participated in the consultation. A programmatic agreement shall take effect on tribal lands only when the THPO, Indian tribe or a designated representative of the tribe is a signatory to the agreement. Compliance with the procedures established by an approved programmatic agreement satisfies the agency's section 106 responsibilities for all individual undertakings of the program covered by the agreement until

it expires or is terminated by the agency, the president of NCSHPO when a signatory, or the Council. Termination by an individual SHPO/THPO shall only terminate the application of a regional programmatic agreement within the jurisdiction of the SHPO/THPO. If a THPO assumes the responsibilities of a SHPO pursuant to section 101(d)(2) of the act and the SHPO is signatory to programmatic agreement, the THPO assumes the role of a signatory, including the right to terminate a regional programmatic agreement on lands under the jurisdiction of the tribe.

(iv) *Notice.* The agency official shall notify the parties with which it has consulted that a programmatic agreement has been executed under paragraph (b) of this section, provide appropriate public notice before it takes effect, and make any internal agency procedures implementing the agreement readily available to the Council, SHPO/THPOs, and the public.

(v) If the Council determines that the terms of a programmatic agreement are not being carried out, or if such an agreement is terminated, the agency official shall comply with subpart B of this part with regard to individual undertakings of the program covered by the agreement.

(3) *Developing programmatic agreements for complex or multiple undertakings.* Consultation to develop a programmatic agreement for dealing with the potential adverse effects of complex projects or multiple undertakings shall follow § 800.6. If consultation pertains to an activity involving multiple undertakings and the parties fail to reach agreement, then the agency official shall comply with the provisions of subpart B of this part for each individual undertaking.

(4) *Prototype programmatic agreements.* The Council may designate an agreement document as a prototype programmatic agreement that may be used for the same type of program or undertaking in more than one case or area. When an agency official uses such a prototype programmatic agreement, the agency official may develop and execute the agreement with the appropriate SHPO/THPO and the agreement shall become final without need for Council participation in consultation or Council signature.

(c) *Exempted categories.*

(1) *Criteria for establishing.* The Council or an agency official may propose a program or category of undertakings that may be exempted

from review under the provisions of subpart B of this part, if the program or category meets the following criteria:

(i) The actions within the program or category would otherwise qualify as "undertakings" as defined in § 800.16;

(ii) The potential effects of the undertakings within the program or category upon historic properties are foreseeable and likely to be minimal or not adverse; and

(iii) Exemption of the program or category is consistent with the purposes of the act.

(2) *Public participation.* The proponent of the exemption shall arrange for public participation appropriate to the subject matter and the scope of the exemption and in accordance with the standards in subpart A of this part. The proponent of the exemption shall consider the nature of the exemption and its likely effects on historic properties and take steps to involve individuals, organizations and entities likely to be interested.

(3) *Consultation with SHPOs/THPOs.* The proponent of the exemption shall notify and consider the views of the SHPOs/THPOs on the exemption.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the exempted program or category of undertakings has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Council review of proposed exemptions.* The Council shall review an exemption proposal that is supported by documentation describing the program or category for which the exemption is sought, demonstrating that the criteria of paragraph (c)(1) of this section have been met, describing the methods used to seek the views of the public, and summarizing any views submitted by the SHPO/THPOs, the public, and any others consulted. Unless it requests further information, the Council shall approve or reject the proposed exemption within 30 days of receipt, and thereafter notify the relevant agency official and SHPO/THPOs of the decision. The decision shall be based on the consistency of the exemption with the purposes of the act, taking into consideration the magnitude of the exempted undertaking or program and the likelihood of impairment of historic

properties in accordance with section 214 of the act.

(6) *Legal consequences.* Any undertaking that falls within an approved exempted program or category shall require no further review pursuant to subpart B of this part, unless the agency official or the Council determines that there are circumstances under which the normally excluded undertaking should be reviewed under subpart B of this part.

(7) *Termination.* The Council may terminate an exemption at the request of the agency official or when the Council determines that the exemption no longer meets the criteria of paragraph (c)(1) of this section. The Council shall notify the agency official 30 days before termination becomes effective.

(8) *Notice.* The proponent of the exemption shall publish notice of any approved exemption in the Federal Register.

(d) *Standard treatments.*

(1) *Establishment.* The Council, on its own initiative or at the request of another party, may establish standard methods for the treatment of a category of historic properties, a category of undertakings, or a category of effects on historic properties to assist Federal agencies in satisfying the requirements of subpart B of this part. The Council shall publish notice of standard treatments in the Federal Register.

(2) *Public participation.* The Council shall arrange for public participation appropriate to the subject matter and the scope of the standard treatment and consistent with subpart A of this part. The Council shall consider the nature of the standard treatment and its likely effects on historic properties and the individuals, organizations and entities likely to be interested. Where an agency official has proposed a standard treatment, the Council may request the agency official to arrange for public involvement.

(3) *Consultation with SHPOs/THPOs.* The Council shall notify and consider the views of SHPOs/THPOs on the proposed standard treatment.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the proposed standard treatment has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Termination.* The Council may terminate a standard treatment by publication of a notice in the Federal Register 30 days before the termination takes effect.

(e) *Program comments.* An agency official may request the Council to comment on a category of undertakings in lieu of conducting individual reviews under §§ 800.4 through 800.6. The Council may provide program comments at its own initiative.

(1) *Agency request.* The agency official shall identify the category of undertakings, specify the likely effects on historic properties, specify the steps the agency official will take to ensure that the effects are taken into account, identify the time period for which the comment is requested and summarize any views submitted by the public.

(2) *Public participation.* The agency official shall arrange for public participation appropriate to the subject matter and the scope of the category and in accordance with the standards in subpart A of this part. The agency official shall consider the nature of the undertakings and their likely effects on historic properties and the individuals, organizations and entities likely to be interested.

(3) *Consultation with SHPOs/THPOs.* The Council shall notify and consider the views of SHPOs/THPOs on the proposed program comment.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the program comment has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Council action.* Unless the Council requests additional documentation, notifies the agency official that it will decline to comment, or obtains the consent of the agency official to extend the period for providing comment, the Council shall comment to the agency official within 45 days of the request.

(i) If the Council comments, the agency official shall take into account the comments of the Council in carrying out the undertakings within the category and publish notice in the Federal Register of the Council's comments and steps the agency will take to ensure that effects to historic properties are taken into account.

(ii) If the Council declines to comment, the agency official shall continue to comply with the requirements of §§ 800.3 through 800.6 for the individual undertakings.

(6) *Withdrawal of comment.* If the Council determines that the consideration of historic properties is not being carried out in a manner consistent with the program comment, the Council may withdraw the comment and the agency official shall comply with the requirements of §§ 800.3 through 800.6 for the individual undertakings.

(f) *Consultation with Indian tribes and Native Hawaiian organizations when developing program alternatives.* Whenever an agency official proposes a program alternative pursuant to paragraphs (a) through (e) of this section, the agency official shall ensure that development of the program alternative includes appropriate government-to-government consultation with affected Indian tribes and consultation with affected Native Hawaiian organizations.

(1) *Identifying affected Indian tribes and Native Hawaiian organizations.* If any undertaking covered by a proposed program alternative has the potential to affect historic properties on tribal lands, the agency official shall identify and consult with the Indian tribes having jurisdiction over such lands. If a proposed program alternative has the potential to affect historic properties of religious and cultural significance to an Indian tribe or a Native Hawaiian organization which are located off tribal lands, the agency official shall identify those Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to such properties and consult with them. When a proposed program alternative has nationwide applicability, the agency official shall identify an appropriate government to government consultation with Indian tribes and consult with Native Hawaiian organizations in accordance with existing Executive orders, Presidential memoranda and applicable provisions of law.

(2) *Results of consultation.* The agency official shall provide summaries of the views, along with copies of any written comments, provided by affected Indian tribes and Native Hawaiian organizations to the Council as part of the documentation for the proposed program alternative. The agency official and the Council shall take those views

into account in reaching a final decision on the proposed program alternative.

#### **§ 800.15 Tribal, State, and local program alternatives. (Reserved)**

#### **§ 800.16 Definitions.**

(a) *Act* means the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470w-6.

(b) *Agency* means agency as defined in 5 U.S.C. 551.

(c) *Approval of the expenditure of funds* means any final agency decision authorizing or permitting the expenditure of Federal funds or financial assistance on an undertaking, including any agency decision that may be subject to an administrative appeal.

(d) *Area of potential effects* means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

(e) *Comment* means the findings and recommendations of the Council formally provided in writing to the head of a Federal agency under section 106.

(f) *Consultation* means the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the section 106 process. The Secretary's "Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act" provide further guidance on consultation.

(g) *Council* means the Advisory Council on Historic Preservation or a Council member or employee designated to act for the Council.

(h) *Day or days* means calendar days.

(i) *Effect* means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register.

(j) *Foreclosure* means an action taken by an agency official that effectively precludes the Council from providing comments which the agency official can meaningfully consider prior to the approval of the undertaking.

(k) *Head of the agency* means the chief official of the Federal agency responsible for all aspects of the agency's actions. If a State, local or tribal government has assumed or has

been delegated responsibility for section 106 compliance, the head of that unit of government shall be considered the head of the agency.

(l)(1) *Historic property* means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

(2) The term *eligible for inclusion in the National Register* includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the National Register criteria.

(m) *Indian tribe* means an Indian tribe, band, nation, or other organized group or community, including a native village, regional corporation or village corporation, as those terms are defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

(n) *Local government* means a city, county, parish, township, municipality, borough, or other general purpose political subdivision of a State.

(o) *Memorandum of agreement* means the document that records the terms and conditions agreed upon to resolve the adverse effects of an undertaking upon historic properties.

(p) *National Historic Landmark* means a historic property that the Secretary of the Interior has designated a National Historic Landmark.

(q) *National Register* means the National Register of Historic Places maintained by the Secretary of the Interior.

(r) *National Register criteria* means the criteria established by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register (36 CFR part 60).

(s)(1) *Native Hawaiian organization* means any organization which serves and represents the interests of Native Hawaiians; has as a primary and stated purpose the provision of services to Native Hawaiians; and has demonstrated expertise in aspects of

historic preservation that are significant to Native Hawaiians.

(2) *Native Hawaiian* means any individual who is a descendant of the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the State of Hawaii.

(t) *Programmatic agreement* means a document that records the terms and conditions agreed upon to resolve the potential adverse effects of a Federal agency program, complex undertaking or other situations in accordance with § 800.14(b).

(u) *Secretary* means the Secretary of the Interior acting through the Director of the National Park Service except where otherwise specified.

(v) *State Historic Preservation Officer (SHPO)* means the official appointed or designated pursuant to section 101(b)(1) of the act to administer the State historic preservation program or a representative designated to act for the State historic preservation officer.

(w) *Tribal Historic Preservation Officer (THPO)* means the tribal official appointed by the tribe's chief governing authority or designated by a tribal ordinance or preservation program who has assumed the responsibilities of the SHPO for purposes of section 106 compliance on tribal lands in accordance with section 101(d)(2) of the act.

(x) *Tribal lands* means all lands within the exterior boundaries of any Indian reservation and all dependent Indian communities.

(y) *Undertaking* means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.

(z) *Senior policy official* means the senior policy level official designated by the head of the agency pursuant to section 3(e) of Executive Order 13287.

#### **Appendix A to Part 800 -- Criteria for Council Involvement in Reviewing Individual section 106 Cases**

(a) *Introduction.* This appendix sets forth the criteria that will be used by the Council to determine whether to enter an individual section 106 review that it normally would not be involved in.

(b) *General policy.* The Council may choose to exercise its authorities under

the section 106 regulations to participate in an individual project pursuant to the following criteria. However, the Council will not always elect to participate even though one or more of the criteria may be met.

(c) *Specific criteria.* The Council is likely to enter the section 106 process at the steps specified in the regulations in this part when an undertaking:

(1) *Has substantial impacts on important historic properties.* This may include adverse effects on properties that possess a national level of significance or on properties that are of unusual or noteworthy importance or are a rare property type; or adverse effects to large numbers of historic properties, such as impacts to multiple properties within a historic district.

(2) *Presents important questions of policy or interpretation.* This may include questions about how the Council's regulations are being applied or interpreted, including possible foreclosure or anticipatory demolition situations; situations where the outcome will set a precedent affecting Council policies or program goals; or the development of programmatic agreements that alter the way the section 106 process is applied to a group or type of undertakings.

(3) *Has the potential for presenting procedural problems.* This may include cases with substantial public controversy that is related to historic preservation issues; with disputes among or about consulting parties which the Council's involvement could help resolve; that are involved or likely to be involved in litigation on the basis of section 106; or carried out by a Federal agency, in a State or locality, or on tribal lands where the Council has previously identified problems with section 106 compliance pursuant to § 800.9(d)(2).

(4) *Presents issues of concern to Indian tribes or Native Hawaiian organizations.* This may include cases where there have been concerns raised about the identification of, evaluation of or assessment of effects on historic properties to which an Indian tribe or Native Hawaiian organization attaches religious and cultural significance; where an Indian tribe or Native Hawaiian organization has requested Council involvement to assist in the resolution of adverse effects; or where there are questions relating to policy, interpretation or precedent under section 106 or its relation to other

authorities, such as the Native American Graves Protection and Repatriation Act.





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

5090  
Ser N44/1826  
August 31, 2016

Mr. David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Mr. Brownell:

**SUBJECT: CLARIFICATION OF THE SECTION 106 PROCESS FOR THE CONTINUATION AND INCREASE OF EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

In order to facilitate your participation in the section 106 consultation process for the proposed continuation and increase of EA-18G Growler operations at Naval Air Station Whidbey Island (NAS Whidbey Island), the Navy would like to offer you this overview of the section 106 consultation process and a description of our proposed plan to meet federal statutory responsibilities under the National Historic Preservation Act (NHPA) of 1966, as amended.

Per the NHPA, and its implementing regulations 36 CFR 800, the Navy, as a federal agency, is required to take into account the effects of an undertaking on historic properties included in or eligible for inclusion in the National Register of Historic Places (NRHP). Given the nature and scope of this undertaking, and the public interest in historic properties within the Area of Potential Effect (APE), the Navy will be offering ample opportunity for consulting parties to comment throughout the section 106 consultation process. The section 106 process consists of four steps:

**1. DETERMINING THE UNDERTAKING:**

The Navy has determined that the proposed action qualifies as an undertaking that is of a type that has the potential to effect historic properties.

**2. DEFINING THE AREA OF POTENTIAL EFFECT (APE):**

Currently, the Navy is requesting comments on the proposed approach to defining the Area of Potential Effect (APE). After comments have been received, and when updated noise model studies for the Environmental Impact Statement (EIS) have been completed, the Navy will define the APE, provide maps to all consulting parties for further comment, and request SHPO concurrence on the APE.

**3. IDENTIFY AND EVALUATE HISTORIC PROPERTIES WITHIN THE APE:**

Following defining the APE, the Navy will introduce their methodology for identifying historic properties and assessing the historic significance of resources that have not yet been evaluated for eligibility in the NRHP. All consulting parties will have the opportunity to comment on the proposed methodology prior to the Navy identifying and evaluating historic properties within the APE and requesting SHPO concurrence on determinations of eligibility.

**4. DETERMINATION OF EFFECT:**

The fourth step in the section 106 consultation process is to determine if the undertaking has an adverse effect on the identified historic properties within the APE. The Navy will provide our finding of effect to all consulting parties for comment prior to preparing a final finding of effect for SHPO concurrence.

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August 31, 2016

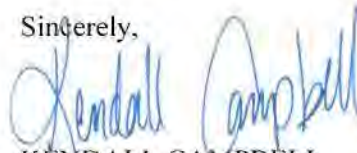
For a more detailed explanation of this process and the federal regulations and requirements that guide it please refer to Enclosures 1 and 2. Please find a copy of the implementing regulations 36 CFR 800 in Enclosure 3.

The time required to complete the section 106 consultation process can be influenced by other federal regulations and requirements outside of the NHPA. For the proposed continuation and increase of EA-18G Growler operations at NAS Whidbey Island section 106 consultation is being done in coordination with the National Environmental Policy Act (NEPA) review and preparation of an Environmental Impact Statement (EIS). The EIS will analyze the potential socio/economic, health, natural resource, and cultural resource impacts, whereas the section 106 process focuses specifically on potential effects to historic properties. Through coordination of these two federal processes the Navy seeks to increase the efficiency and effectiveness of each process by sharing information and documents while decreasing duplication of effort. In addition, coordinating the NHPA and NEPA processes allows for the promotion of greater transparency and potential for public involvement.

For this undertaking the section 106 consultation will provide the EIS team information to ensure historic properties are appropriately analyzed in the NEPA review. The EIS provides specialized studies to fill data gaps that meet information standards for the section 106 consultation. For this undertaking, the EIS will provide updated noise study models for the proposed action, which are necessary to facilitate section 106 consultation, particularly in defining the APE.

If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil). We appreciate your comments on the continuation and increase of EA-18G Growler operations at NAS Whidbey Island and look forward to continued section 106 consultation.

Sincerely,



KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer

Enclosures:    1. Continuation and Increase of Growler Operation Section 106 Consultation Process / Strategy  
                    2. Continuation and Increase of Growler Operation Section 106 Consultation Process / Strategy  
                    Flow Chart  
                    3. 36 CFR 800



## **Continuation and Increase of EA-18G Growler Operations: Section 106 Consultation Process / Strategy**

**1. Establish Undertaking [36 CFR 800.3(a)]:** An undertaking is a “project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency...” [36 CFR 800.16(y)].

- The undertaking for the Continuation and Increase to Growler Operations is to:
  - continue and expand existing Growler operations at the Naval Air Station (NAS) Whidbey Island complex , which includes field carrier landing practice by Growler aircraft that occurs at Ault Field and Outlying Landing Field (OLF) Coupeville;
  - increase electronic attack capabilities (provide for an increase of 35 or 36 aircraft) to support an expanded U.S. Department of Defense mission for identifying, tracking, and targeting in a complex electronic warfare environment;
  - construct and renovate facilities at Ault Field to accommodate additional Growler aircraft; and
  - station additional personnel and their family members at the NAS Whidbey Island complex and in the surrounding community, beginning as early as 2017.
- Navy Cultural Resource staff determined this undertaking to be the type of activity that “has the potential to cause effects on historic properties” [36 CFR 800.3(a)]. In October 2014, the Navy initiated section 106 consultation and invited interested parties to consult on the undertaking. Navy Cultural Resource staff were present at National Environmental Policy Act (NEPA) scoping meetings seeking public comments on the undertaking.

**2. Determine the Area of Potential Effect [36 CFR 800.4(a)]:** The Area of Potential Effect (APE) is “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking” [36 CFR 800.16(d)].

- Given the nature and size of the undertaking, as well as coordination with the NEPA review process, the Navy asked consulting parties for comments on the proposed approach to defining the APE in June and July of 2016.
- When the Draft EIS is released to the public for comment (anticipated 30 September 2016), noise model studies included in the EIS will be used to define the APE and create a map of the APE based on the most expansive 65 dB DNL contours for all of the combined proposed alternatives. Maps of the proposed finalized APE will be sent to consulting parties for additional comments and considerations. The Washington State Historic Preservation Office (SHPO) will be asked to concur on the proposed finalized definition of the APE.
  - *The proposed and final definition of the APE is subject to Federal Aviation Administration (FAA) regulations (14 CFR 150).*

**3. Identify Historic Properties and Evaluate Historic Significance [36 CFR 800.4(b) & 36 CFR 800.4(c)]:** Based on comments received from consulting parties on the definition of the APE, the Navy will “make a reasonable and good faith effort to carry out appropriate identification efforts” of historic properties within the APE [36 CFR 800.4(b)(1)]. The Navy will also “apply National Register criteria (36 CFR 63) to properties identified within the [APE] that have not been previously evaluated for National Register eligibility” [36 CFR 800.4(c)(1)].

- A historic property “means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places...” [36 CFR 800.16(1)(1)]
- Once the APE has been defined and the Washington SHPO has concurred, the Navy will send out their proposed methodology for identifying historic properties and evaluating historic significance to all consulting parties. Consulting parties will have the opportunity to comment on the proposed methodology.
- Once comments have been received and taken into consideration, the Navy will identify historic properties and evaluate historic significance based on the finalized methodology. The final identification and evaluation report will be submitted to consulting parties.
  - Due to confidentiality requirements for archaeological sites and properties of traditional, religious, and cultural importance, the status of some historic properties may be withheld from consulting parties [36 CFR 800.11(c)].

**4. Finding of Effect [36 CFR 800.4(d)]:** If the Navy “finds that there are historic properties which may be affected by the undertaking, the [Navy] shall notify all consulting parties...and assess adverse effects, if any, in accordance, with 36 CFR 800.5” [36 CFR 800.4.(d)(2)].

- The Navy “shall apply the criteria of adverse effect to historic properties within the [APE]” [36 CFR 800.5(a)] and report their findings to all consulting parties for comments.
- Once comments have been received and taken into consideration, the Navy will send out the final finding of effect to all consulting parties and ask for Washington SHPO concurrence.
- In the event the Navy determines an Adverse Effect, the Navy shall follow 36 CFR 800.6 to resolve adverse effects to historic properties through avoidance, minimization, or mitigation.

ENCLOSURE 1.



# Section 106 Consultation Process for the Continuation and Increase of EA-18G Growler Operations at NAS Whidbey Island / Strategy Flow Chart

**Navy:** Established the proposed continuation and increase of EA-18G Growlers at NAS Whidbey Island is an undertaking of the type that “has the potential to cause effects on historic properties”. Began section 106 consultation by notifying SHPO, ACHP, and consulting parties. (October 2014)

**Public Consultation:** To meet section 106 public notification requirements, public comments on section 106 were solicited and accepted at NEPA scoping meetings. (October/December 2014)



**Navy:** Consult with SHPO, ACHP, and consulting parties on the proposed approach to defining the Area of Potential Effect (APE) and ask for comments. (June/July 2016)

**Consulting Parties:** Provide Navy comments on proposed approach to defining the APE.

**Navy:** Take comments into consideration and using updated noise modeling maps from the Draft EIS, define the APE. Provide final APE to consulting parties for further comments and ask for SHPO concurrence. (Fall 2016)

**Public Consultation:** Navy will solicit and accept public comments on section 106 consultation during public meetings on the Draft EIS.

**Consulting Parties:** Provide Navy comments on the definition of the APE. SHPO has 30 days to respond to the Navy.



**Navy:** Make a “good and reasonable faith” effort to identify historic properties within the APE and apply National Register eligibility criteria to unevaluated properties within the APE. Share proposed methodology for identification and evaluation with SHPO, ACHP, and consulting parties for comments.

**Consulting Parties:** Provide Navy comments on proposed methodology for identifying and evaluating historic properties within the APE.

**Navy:** Take comments into consideration and identify and evaluate historic properties within the APE. Submit findings to consulting parties for comments and ask for SHPO concurrence.

**Consulting Parties:** Provide Navy comments on the identification and evaluation of historic properties. SHPO has 30 days to respond to the Navy.



**Navy:** Apply the criteria of adverse effect to determine if the undertaking will have an adverse effect to historic properties. Share proposed finding with SHPO, ACHP, and consulting parties for comments.

**Consulting Parties:** Provide Navy comments on the proposed finding of effect.

**Navy:** Take comments into consideration and submit final finding of effect to consulting parties and ask for SHPO concurrence.

**Public Consultation:** Navy will accept public comments on section 106 consultation during the comment period for the Final EIS.

**Consulting Parties:** Provide Navy comments on the finding of effect. SHPO has 30 days to respond to the Navy.



**Navy:** In the event Navy determines an Adverse Effect finding, the Navy shall follow 36 CFR 800.6 to resolve adverse effects to historic properties through avoidance, minimization, or mitigation.

**Public Consultation:** Please note, Navy will accept comments on section 106 consultation at anytime.



**36 CFR PART 800 -- PROTECTION OF HISTORIC PROPERTIES (incorporating amendments effective August 5, 2004)**

**Subpart A -- Purposes and Participants**

- Sec.
- 800.1 Purposes.
- 800.2 Participants in the Section 106 process.

**Subpart B -- The Section 106 Process**

- 800.3 Initiation of the section 106 process.
- 800.4 Identification of historic properties.
- 800.5 Assessment of adverse effects.
- 800.6 Resolution of adverse effects.
- 800.7 Failure to resolve adverse effects.
- 800.8 Coordination with the National Environmental Policy act.
- 800.9 Council review of Section 106 compliance.
- 800.10 Special requirements for protecting National Historic Landmarks.
- 800.11 Documentation standards.
- 800.12 Emergency situations.
- 800.13 Post-review discoveries.

**Subpart C -- Program Alternatives**

- 800.14 Federal agency program alternatives.
- 800.15 Tribal, State and Local Program Alternatives. (Reserved)
- 800.16 Definitions.
- Appendix A – Criteria for Council involvement in reviewing individual section 106 cases

**Authority:** 16 U.S.C. 470s.

**Subpart A-Purposes and Participants**

**§ 800.1 Purposes.**

(a) *Purposes of the section 106 process.* Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings. The procedures in this part define how Federal agencies meet these statutory responsibilities. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of

project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

(b) *Relation to other provisions of the act.* Section 106 is related to other provisions of the act designed to further the national policy of historic preservation. References to those provisions are included in this part to identify circumstances where they may affect actions taken to meet section 106 requirements. Such provisions may have their own implementing regulations or guidelines and are not intended to be implemented by the procedures in this part except insofar as they relate to the section 106 process. Guidelines, policies and procedures issued by other agencies, including the Secretary, have been cited in this part for ease of access and are not incorporated by reference.

(c) *Timing.* The agency official must complete the section 106 process “prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license.” This does not prohibit agency official from conducting or authorizing nondestructive project planning activities before completing compliance with section 106, provided that such actions do not restrict the subsequent consideration of alternatives to avoid, minimize or mitigate the undertaking’s adverse effects on historic properties. The agency official shall ensure that the section 106 process is initiated early in the undertaking’s planning, so that a broad range of alternatives may be considered during the planning process for the undertaking.

**§ 800.2 Participants in the Section 106 process.**

(a) *Agency official.* It is the statutory obligation of the Federal agency to fulfill the requirements of section 106 and to ensure that an agency official with jurisdiction over an undertaking takes legal and financial responsibility for section 106 compliance in accordance with subpart B of this part. The agency official has approval authority for the undertaking and can commit the Federal agency to take appropriate action for a specific undertaking as a result of section 106 compliance. For the purposes of subpart C of this part, the agency official has the authority to commit the Federal agency to any obligation it may assume in the

implementation of a program alternative. The agency official may be a State, local, or tribal government official who has been delegated legal responsibility for compliance with section 106 in accordance with Federal law.

(1) *Professional standards.* Section 112(a)(1)(A) of the act requires each Federal agency responsible for the protection of historic resources, including archeological resources, to ensure that all actions taken by employees or contractors of the agency shall meet professional standards under regulations developed by the Secretary.

(2) *Lead Federal agency.* If more than one Federal agency is involved in an undertaking, some or all the agencies may designate a lead Federal agency, which shall identify the appropriate official to serve as the agency official who shall act on their behalf, fulfilling their collective responsibilities under section 106. Those Federal agencies that do not designate a lead Federal agency remain individually responsible for their compliance with this part.

(3) *Use of contractors.* Consistent with applicable conflict of interest laws, the agency official may use the services of applicants, consultants, or designees to prepare information, analyses and recommendations under this part. The agency official remains legally responsible for all required findings and determinations. If a document or study is prepared by a non-Federal party, the agency official is responsible for ensuring that its content meets applicable standards and guidelines.

(4) *Consultation.* The agency official shall involve the consulting parties described in paragraph (c) of this section in findings and determinations made during the section 106 process. The agency official should plan consultations appropriate to the scale of the undertaking and the scope of Federal involvement and coordinated with other requirements of other statutes, as applicable, such as the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archeological Resources Protection Act and agency-specific legislation. The Council encourages the agency official to use to the extent possible existing agency procedures and mechanisms to fulfill the consultation requirements of this part.

(b) *Council.* The Council issues regulations to implement section 106,

provides guidance and advice on the application of the procedures in this part, and generally oversees the operation of the section 106 process. The Council also consults with and comments to agency officials on individual undertakings and programs that affect historic properties.

(1) *Council entry into the section 106 process.* When the Council determines that its involvement is necessary to ensure that the purposes of section 106 and the act are met, the Council may enter the section 106 process. Criteria guiding Council decisions to enter the section 106 process are found in appendix A to this part. The Council will document that the criteria have been met and notify the parties to the section 106 process as required by this part.

(2) *Council assistance.* Participants in the section 106 process may seek advice, guidance and assistance from the Council on the application of this part to specific undertakings, including the resolution of disagreements, whether or not the Council is formally involved in the review of the undertaking. If questions arise regarding the conduct of the section 106 process, participants are encouraged to obtain the Council's advice on completing the process.

(c) *Consulting parties.* The following parties have consultative roles in the section 106 process.

(1) *State historic preservation officer.*

(i) The State historic preservation officer (SHPO) reflects the interests of the State and its citizens in the preservation of their cultural heritage. In accordance with section 101(b)(3) of the act, the SHPO advises and assists Federal agencies in carrying out their section 106 responsibilities and cooperates with such agencies, local governments and organizations and individuals to ensure that historic properties are taking into consideration at all levels of planning and development.

(ii) If an Indian tribe has assumed the functions of the SHPO in the section 106 process for undertakings on tribal lands, the SHPO shall participate as a consulting party if the undertaking takes place on tribal lands but affects historic properties off tribal lands, if requested in accordance with § 800.3(c)(1), or if the Indian tribe agrees to include the SHPO pursuant to § 800.3(f)(3).

(2) *Indian tribes and Native Hawaiian organizations.*

(i) *Consultation on tribal lands.*

(A) *Tribal historic preservation officer.* For a tribe that has assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act, the tribal historic preservation officer (THPO) appointed or designated in accordance with the act is the official representative for the purposes of section 106. The agency official shall consult with the THPO in lieu of the SHPO regarding undertakings occurring on or affecting historic properties on tribal lands.

(B) *Tribes that have not assumed SHPO functions.* When an Indian tribe has not assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act, the agency official shall consult with a representative designated by such Indian tribe in addition to the SHPO regarding undertakings occurring on or affecting historic properties on its tribal lands. Such Indian tribes have the same rights of consultation and concurrence that the THPOs are given throughout subpart B of this part, except that such consultations shall be in addition to and on the same basis as consultation with the SHPO.

(ii) *Consultation on historic properties of significance to Indian tribes and Native Hawaiian organizations.* Section 101(d)(6)(B) of the act requires the agency official to consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by an undertaking. This requirement applies regardless of the location of the historic property. Such Indian tribe or Native Hawaiian organization shall be a consulting party.

(A) The agency official shall ensure that consultation in the section 106 process provides the Indian tribe or Native Hawaiian organization a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects. It is the responsibility of the agency official to make a reasonable and good faith effort to identify Indian tribes and Native Hawaiian organizations that shall be consulted in the section 106 process. Consultation should commence early in the planning process, in order to identify and discuss relevant

preservation issues and resolve concerns about the confidentiality of information on historic properties.

(B) The Federal Government has a unique legal relationship with Indian tribes set forth in the Constitution of the United States, treaties, statutes, and court decisions. Consultation with Indian tribes should be conducted in a sensitive manner respectful of tribal sovereignty. Nothing in this part alters, amends, repeals, interprets or modifies tribal sovereignty, any treaty rights, or other rights of an Indian tribe, or preempts, modifies or limits the exercise of any such rights.

(C) Consultation with an Indian tribe must recognize the government-to-government relationship between the Federal Government and Indian tribes. The agency official shall consult with representatives designated or identified by the tribal government or the governing body of a Native Hawaiian organization. Consultation with Indian tribes and Native Hawaiian organizations should be conducted in a manner sensitive to the concerns and needs of the Indian tribe or Native Hawaiian organization.

(D) When Indian tribes and Native Hawaiian organizations attach religious and cultural significance to historic properties off tribal lands, section 101(d)(6)(B) of the act requires Federal agencies to consult with such Indian tribes and Native Hawaiian organizations in the section 106 process. Federal agencies should be aware that frequently historic properties of religious and cultural significance are located on ancestral, aboriginal, or ceded lands of Indian tribes and Native Hawaiian organizations and should consider that when complying with the procedures in this part.

(E) An Indian tribe or a Native Hawaiian organization may enter into an agreement with an agency official that specifies how they will carry out responsibilities under this part, including concerns over the confidentiality of information. An agreement may cover all aspects of tribal participation in the section 106 process, provided that no modification may be made in the roles of other parties to the section 106 process without their consent. An agreement may grant the Indian tribe or Native Hawaiian organization additional rights to participate or concur in agency decisions in the section 106 process beyond those specified in subpart B of this part. The agency official shall

provide a copy of any such agreement to the Council and the appropriate SHPOs.

(F) An Indian tribe that has not assumed the responsibilities of the SHPO for section 106 on tribal lands under section 101(d)(2) of the act may notify the agency official in writing that it is waiving its rights under § 800.6(c)(1) to execute a memorandum of agreement.

(3) *Representatives of local governments.* A representative of a local government with jurisdiction over the area in which the effects of an undertaking may occur is entitled to participate as a consulting party. Under other provisions of Federal law, the local government may be authorized to act as the agency official for purposes of section 106.

(4) *Applicants for Federal assistance, permits, licenses and other approvals.* An applicant for Federal assistance or for a Federal permit, license or other approval is entitled to participate as a consulting party as defined in this part. The agency official may authorize an applicant or group of applicants to initiate consultation with the SHPO/THPO and others, but remains legally responsible for all findings and determinations charged to the agency official. The agency official shall notify the SHPO/THPO when an applicant or group of applicants is so authorized. A Federal agency may authorize all applicants in a specific program pursuant to this section by providing notice to all SHPO/THPOs. Federal agencies that provide authorizations to applicants remain responsible for their government to government relationships with Indian tribes.

(5) *Additional consulting parties.* Certain individuals and organizations with a demonstrated interest in the undertaking may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties.

(d) *The public.*

(1) *Nature of involvement.* The views of the public are essential to informed Federal decisionmaking in the section 106 process. The agency official shall seek and consider the views of the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties, the likely interest of the public in the effects on historic properties, confidentiality concerns of private individuals and businesses, and

the relationship of the Federal involvement to the undertaking.

(2) *Providing notice and information.* The agency official must, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about an undertaking and its effects on historic properties and seek public comment and input. Members of the public may also provide views on their own initiative for the agency official to consider in decisionmaking.

(3) *Use of agency procedures.* The agency official may use the agency's procedures for public involvement under the National Environmental Policy Act or other program requirements in lieu of public involvement requirements in subpart B of this part, if they provide adequate opportunities for public involvement consistent with this subpart.

#### **Subpart B-The section 106 Process**

##### **§ 800.3 Initiation of the section 106 process.**

(a) *Establish undertaking.* The agency official shall determine whether the proposed Federal action is an undertaking as defined in § 800.16(y) and, if so, whether it is a type of activity that has the potential to cause effects on historic properties.

(1) *No potential to cause effects.* If the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, the agency official has no further obligations under section 106 or this part.

(2) *Program alternatives.* If the review of the undertaking is governed by a Federal agency program alternative established under § 800.14 or a programmatic agreement in existence before January 11, 2001, the agency official shall follow the program alternative.

(b) *Coordinate with other reviews.* The agency official should coordinate the steps of the section 106 process, as appropriate, with the overall planning schedule for the undertaking and with any reviews required under other authorities such as the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, the American Indian Religious Freedom Act, the Archeological Resources Protection Act and agency-specific legislation, such as section 4(f) of the Department of

Transportation Act. Where consistent with the procedures in this subpart, the agency official may use information developed for other reviews under Federal, State or tribal law to meet the requirements of section 106.

(c) *Identify the appropriate SHPO and/or THPO.* As part of its initial planning, the agency official shall determine the appropriate SHPO or SHPOs to be involved in the section 106 process. The agency official shall also determine whether the undertaking may occur on or affect historic properties on any tribal lands and, if so, whether a THPO has assumed the duties of the SHPO. The agency official shall then initiate consultation with the appropriate officer or officers.

(1) *Tribal assumption of SHPO responsibilities.* Where an Indian tribe has assumed the section 106 responsibilities of the SHPO on tribal lands pursuant to section 101(d)(2) of the act, consultation for undertakings occurring on tribal land or for effects on tribal land is with the THPO for the Indian tribe in lieu of the SHPO. Section 101(d)(2)(D)(iii) of the act authorizes owners of properties on tribal lands which are neither owned by a member of the tribe nor held in trust by the Secretary for the benefit of the tribe to request the SHPO to participate in the section 106 process in addition to the THPO.

(2) *Undertakings involving more than one State.* If more than one State is involved in an undertaking, the involved SHPOs may agree to designate a lead SHPO to act on their behalf in the section 106 process, including taking actions that would conclude the section 106 process under this subpart.

(3) *Conducting consultation.* The agency official should consult with the SHPO/THPO in a manner appropriate to the agency planning process for the undertaking and to the nature of the undertaking and its effects on historic properties.

(4) *Failure of the SHPO/THPO to respond.* If the SHPO/THPO fails to respond within 30 days of receipt of a request for review of a finding or determination, the agency official may either proceed to the next step in the process based on the finding or determination or consult with the Council in lieu of the SHPO/THPO. If the SHPO/THPO re-enters the section 106 process, the agency official shall continue the consultation without being required to reconsider previous findings or determinations.

(d) *Consultation on tribal lands.*

Where the Indian tribe has not assumed the responsibilities of the SHPO on tribal lands, consultation with the Indian tribe regarding undertakings occurring on such tribe's lands or effects on such tribal lands shall be in addition to and on the same basis as consultation with the SHPO. If the SHPO has withdrawn from the process, the agency official may complete the section 106 process with the Indian tribe and the Council, as appropriate. An Indian tribe may enter into an agreement with a SHPO or SHPOs specifying the SHPO's participation in the section 106 process for undertakings occurring on or affecting historic properties on tribal lands.

(e) *Plan to involve the public.* In consultation with the SHPO/THPO, the agency official shall plan for involving the public in the section 106 process. The agency official shall identify the appropriate points for seeking public input and for notifying the public of proposed actions, consistent with § 800.2(d).

(f) *Identify other consulting parties.* In consultation with the SHPO/THPO, the agency official shall identify any other parties entitled to be consulting parties and invite them to participate as such in the section 106 process. The agency official may invite others to participate as consulting parties as the section 106 process moves forward.

(1) *Involving local governments and applicants.* The agency official shall invite any local governments or applicants that are entitled to be consulting parties under § 800.2(c).

(2) *Involving Indian tribes and Native Hawaiian organizations.* The agency official shall make a reasonable and good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties. Such Indian tribe or Native Hawaiian organization that requests in writing to be a consulting party shall be one.

(3) *Requests to be consulting parties.* The agency official shall consider all written requests of individuals and organizations to participate as consulting parties and, in consultation with the SHPO/THPO and any Indian tribe upon whose tribal lands an undertaking occurs or affects historic properties, determine which should be consulting parties.

(g) *Expediting consultation.* A consultation by the agency official with the SHPO/THPO and other consulting parties may address multiple steps in §§ 800.3 through 800.6 where the agency official and the SHPO/THPO agree it is appropriate as long as the consulting parties and the public have an adequate opportunity to express their views as provided in § 800.2(d).

**§ 800.4 Identification of historic properties.**

(a) *Determine scope of identification efforts.* In consultation with the SHPO/THPO, the agency official shall:

(1) Determine and document the area of potential effects, as defined in § 800.16(d);

(2) Review existing information on historic properties within the area of potential effects, including any data concerning possible historic properties not yet identified;

(3) Seek information, as appropriate, from consulting parties, and other individuals and organizations likely to have knowledge of, or concerns with, historic properties in the area, and identify issues relating to the undertaking's potential effects on historic properties; and

(4) Gather information from any Indian tribe or Native Hawaiian organization identified pursuant to § 800.3(f) to assist in identifying properties, including those located off tribal lands, which may be of religious and cultural significance to them and may be eligible for the National Register, recognizing that an Indian tribe or Native Hawaiian organization may be reluctant to divulge specific information regarding the location, nature, and activities associated with such sites. The agency official should address concerns raised about confidentiality pursuant to § 800.11(c).

(b) *Identify historic properties.* Based on the information gathered under paragraph (a) of this section, and in consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to properties within the area of potential effects, the agency official shall take the steps necessary to identify historic properties within the area of potential effects.

(1) *Level of effort.* The agency official shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews,

sample field investigation, and field survey. The agency official shall take into account past planning, research and studies, the magnitude and nature of the undertaking and the degree of Federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the area of potential effects. The Secretary's Standards and Guidelines for Identification provide guidance on this subject. The agency official should also consider other applicable professional, State, tribal and local laws, standards and guidelines. The agency official shall take into account any confidentiality concerns raised by Indian tribes or Native Hawaiian organizations during the identification process.

(2) *Phased identification and evaluation.* Where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process to conduct identification and evaluation efforts. The agency official may also defer final identification and evaluation of historic properties if it is specifically provided for in a memorandum of agreement executed pursuant to § 800.6, a programmatic agreement executed pursuant to § 800.14 (b), or the documents used by an agency official to comply with the National Environmental Policy Act pursuant to § 800.8. The process should establish the likely presence of historic properties within the area of potential effects for each alternative or inaccessible area through background research, consultation and an appropriate level of field investigation, taking into account the number of alternatives under consideration, the magnitude of the undertaking and its likely effects, and the views of the SHPO/THPO and any other consulting parties. As specific aspects or locations of an alternative are refined or access is gained, the agency official shall proceed with the identification and evaluation of historic properties in accordance with paragraphs (b)(1) and (c) of this section.

(c) *Evaluate historic significance.*

(1) *Apply National Register criteria.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified properties and guided by the Secretary's Standards and Guidelines for Evaluation, the agency official shall



apply the National Register criteria (36 CFR part 63) to properties identified within the area of potential effects that have not been previously evaluated for National Register eligibility. The passage of time, changing perceptions of significance, or incomplete prior evaluations may require the agency official to reevaluate properties previously determined eligible or ineligible. The agency official shall acknowledge that Indian tribes and Native Hawaiian organizations possess special expertise in assessing the eligibility of historic properties that may possess religious and cultural significance to them.

(2) *Determine whether a property is eligible.* If the agency official determines any of the National Register criteria are met and the SHPO/THPO agrees, the property shall be considered eligible for the National Register for section 106 purposes. If the agency official determines the criteria are not met and the SHPO/THPO agrees, the property shall be considered not eligible. If the agency official and the SHPO/THPO do not agree, or if the Council or the Secretary so request, the agency official shall obtain a determination of eligibility from the Secretary pursuant to 36 CFR part 63. If an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to a property off tribal lands does not agree, it may ask the Council to request the agency official to obtain a determination of eligibility.

(d) *Results of identification and evaluation.*

(1) *No historic properties affected.* If the agency official finds that either there are no historic properties present or there are historic properties present but the undertaking will have no effect upon them as defined in § 800.16(i), the agency official shall provide documentation of this finding, as set forth in § 800.11(d), to the SHPO/THPO. The agency official shall notify all consulting parties, including Indian tribes and Native Hawaiian organizations, and make the documentation available for public inspection prior to approving the undertaking.

(i) If the SHPO/THPO, or the Council if it has entered the section 106 process, does not object within 30 days of receipt of an adequately documented finding, the agency official's responsibilities under section 106 are fulfilled.

(ii) If the SHPO/THPO objects within 30 days of receipt of an adequately documented finding, the agency official shall either consult with the objecting party to resolve the disagreement, or forward the finding and supporting documentation to the Council and request that the Council review the finding pursuant to paragraphs (d)(1)(iv)(A) through (d)(1)(iv)(C) of this section. When an agency official forwards such requests for review to the Council, the agency official shall concurrently notify all consulting parties that such a request has been made and make the request documentation available to the public.

(iii) During the SHPO/THPO 30 day review period, the Council may object to the finding and provide its opinion regarding the finding to the agency official and, if the Council determines the issue warrants it, the head of the agency. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The agency shall then proceed according to paragraphs (d)(1)(iv)(B) and (d)(1)(iv)(C) of this section.

(iv)(A) Upon receipt of the request under paragraph (d)(1)(ii) of this section, the Council will have 30 days in which to review the finding and provide the agency official and, if the Council determines the issue warrants it, the head of the agency with the Council's opinion regarding the finding. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. If the Council does not respond within 30 days of receipt of the request, the agency official's responsibilities under section 106 are fulfilled.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion before the agency reaches a final decision on the finding.

(C) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall then prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council, the SHPO/THPO, and the consulting parties. The head of the agency may delegate his or her duties under this paragraph to the agency's senior policy official. If the agency official's initial finding will be revised, the agency official shall proceed in

accordance with the revised finding. If the final decision of the agency is to affirm the initial agency finding of no historic properties affected, once the summary of the decision has been sent to the Council, the SHPO/THPO, and the consulting parties, the agency official's responsibilities under section 106 are fulfilled.

(D) The Council shall retain a record of agency responses to Council opinions on their findings of no historic properties affected. The Council shall make this information available to the public.

(2) *Historic properties affected.* If the agency official finds that there are historic properties which may be affected by the undertaking, the agency official shall notify all consulting parties, including Indian tribes or Native Hawaiian organizations, invite their views on the effects and assess adverse effects, if any, in accordance with § 800.5.

#### § 800.5 Assessment of adverse effects.

(a) *Apply criteria of adverse effect.* In consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.

(1) *Criteria of adverse effect.* An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

(2) *Examples of adverse effects.* Adverse effects on historic properties include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

(3) *Phased application of criteria.* Where alternatives under consideration consist of corridors or large land areas, or where access to properties is restricted, the agency official may use a phased process in applying the criteria of adverse effect consistent with phased identification and evaluation efforts conducted pursuant to § 800.4(b)(2).

(b) *Finding of no adverse effect.* The agency official, in consultation with the SHPO/THPO, may propose a finding of no adverse effect when the undertaking's effects do not meet the criteria of paragraph (a)(1) of this section or the undertaking is modified or conditions are imposed, such as the subsequent review of plans for rehabilitation by the SHPO/THPO to ensure consistency with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines, to avoid adverse effects.

(c) *Consulting party review.* If the agency official proposes a finding of no adverse effect, the agency official shall notify all consulting parties of the finding and provide them with the documentation specified in § 800.11(e). The SHPO/THPO shall have 30 days from receipt to review the finding.

(1) *Agreement with, or no objection to, finding.* Unless the Council is reviewing the finding pursuant to paragraph (c)(3) of this section, the agency official may proceed after the close of the 30 day review period if the SHPO/THPO has agreed with the finding or has not provided a response, and no consulting party has objected. The agency official shall then carry out the undertaking in accordance with paragraph (d)(1) of this section.

(2) *Disagreement with finding.*

(i) If within the 30 day review period the SHPO/THPO or any consulting party notifies the agency official in writing that it disagrees with the finding and specifies the reasons for the disagreement in the notification, the agency official shall either consult with the party to resolve the disagreement, or request the Council to review the finding pursuant to paragraphs (c)(3)(i) and (c)(3)(ii) of this section. The agency official shall include with such request the documentation specified in § 800.11(e). The agency official shall also concurrently notify all consulting parties that such a submission has been made and make the submission documentation available to the public.

(ii) If within the 30 day review period the Council provides the agency official and, if the Council determines the issue warrants it, the head of the agency, with a written opinion objecting to the finding, the agency shall then proceed according to paragraph (c)(3)(ii) of this section. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part.

(iii) The agency official should seek the concurrence of any Indian tribe or Native Hawaiian organization that has made known to the agency official that it attaches religious and cultural significance to a historic property subject to the finding. If such Indian tribe or Native Hawaiian organization disagrees with the finding, it may within the 30 day review period specify the reasons for disagreeing with the finding and request the Council to review and object to the finding pursuant to paragraph (c)(2)(ii) of this section.

(3) *Council review of findings.*

(i) When a finding is submitted to the Council pursuant to paragraph (c)(2)(i) of this section, the Council shall review the finding and provide the agency official and, if the Council determines the issue warrants it, the head of the agency with its opinion as to whether the adverse effect criteria have

been correctly applied. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The Council will provide its opinion within 15 days of receiving the documented finding from the agency official. The Council at its discretion may extend that time period for 15 days, in which case it shall notify the agency of such extension prior to the end of the initial 15 day period. If the Council does not respond within the applicable time period, the agency official's responsibilities under section 106 are fulfilled.

(ii)(A) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion in reaching a final decision on the finding.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council, the SHPO/THPO, and the consulting parties. The head of the agency may delegate his or her duties under this paragraph to the agency's senior policy official. If the agency official's initial finding will be revised, the agency official shall proceed in accordance with the revised finding. If the final decision of the agency is to affirm the initial finding of no adverse effect, once the summary of the decision has been sent to the Council, the SHPO/THPO, and the consulting parties, the agency official's responsibilities under section 106 are fulfilled.

(C) The Council shall retain a record of agency responses to Council opinions on their findings of no adverse effects. The Council shall make this information available to the public.

(d) *Results of assessment.*

(1) *No adverse effect.* The agency official shall maintain a record of the finding and provide information on the finding to the public on request, consistent with the confidentiality provisions of § 800.11(c). Implementation of the undertaking in accordance with the finding as documented fulfills the agency official's responsibilities under section 106 and this part. If the agency official will not conduct the undertaking as proposed in the finding, the agency official shall reopen consultation under paragraph (a) of this section.

(2) *Adverse effect.* If an adverse effect is found, the agency official shall consult further to resolve the adverse effect pursuant to § 800.6.

**§ 800.6 Resolution of adverse effects.**

(a) *Continue consultation.* The agency official shall consult with the SHPO/THPO and other consulting parties, including Indian tribes and Native Hawaiian organizations, to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties.

(1) *Notify the Council and determine Council participation.* The agency official shall notify the Council of the adverse effect finding by providing the documentation specified in § 800.11(e).

(i) The notice shall invite the Council to participate in the consultation when:

(A) The agency official wants the Council to participate;

(B) The undertaking has an adverse effect upon a National Historic Landmark; or

(C) A programmatic agreement under § 800.14(b) will be prepared;

(ii) The SHPO/THPO, an Indian tribe or Native Hawaiian organization, or any other consulting party may at any time independently request the Council to participate in the consultation.

(iii) The Council shall advise the agency official and all consulting parties whether it will participate within 15 days of receipt of notice or other request. Prior to entering the process, the Council shall provide written notice to the agency official and the consulting parties that its decision to participate meets the criteria set forth in appendix A to this part. The Council shall also advise the head of the agency of its decision to enter the process. Consultation with Council participation is conducted in accordance with paragraph (b)(2) of this section.

(iv) If the Council does not join the consultation, the agency official shall proceed with consultation in accordance with paragraph (b)(1) of this section.

(2) *Involve consulting parties.* In addition to the consulting parties identified under § 800.3(f), the agency official, the SHPO/THPO and the Council, if participating, may agree to invite other individuals or organizations to become consulting parties. The agency official shall invite any individual or organization that will assume a specific role or responsibility

in a memorandum of agreement to participate as a consulting party.

(3) *Provide documentation.* The agency official shall provide to all consulting parties the documentation specified in § 800.11(e), subject to the confidentiality provisions of § 800.11(c), and such other documentation as may be developed during the consultation to resolve adverse effects.

(4) *Involve the public.* The agency official shall make information available to the public, including the documentation specified in § 800.11(e), subject to the confidentiality provisions of § 800.11(c). The agency official shall provide an opportunity for members of the public to express their views on resolving adverse effects of the undertaking. The agency official should use appropriate mechanisms, taking into account the magnitude of the undertaking and the nature of its effects upon historic properties, the likely effects on historic properties, and the relationship of the Federal involvement to the undertaking to ensure that the public's views are considered in the consultation. The agency official should also consider the extent of notice and information concerning historic preservation issues afforded the public at earlier steps in the section 106 process to determine the appropriate level of public involvement when resolving adverse effects so that the standards of § 800.2(d) are met.

(5) *Restrictions on disclosure of information.* Section 304 of the act and other authorities may limit the disclosure of information under paragraphs (a)(3) and (a)(4) of this section. If an Indian tribe or Native Hawaiian organization objects to the disclosure of information or if the agency official believes that there are other reasons to withhold information, the agency official shall comply with § 800.11(c) regarding the disclosure of such information.

(b) *Resolve adverse effects.*

(1) *Resolution without the Council.*

(i) The agency official shall consult with the SHPO/THPO and other consulting parties to seek ways to avoid, minimize or mitigate the adverse effects.

(ii) The agency official may use standard treatments established by the Council under § 800.14(d) as a basis for a memorandum of agreement.

(iii) If the Council decides to join the consultation, the agency official shall follow paragraph (b)(2) of this section.

(iv) If the agency official and the SHPO/THPO agree on how the adverse

effects will be resolved, they shall execute a memorandum of agreement. The agency official must submit a copy of the executed memorandum of agreement, along with the documentation specified in § 800.11(f), to the Council prior to approving the undertaking in order to meet the requirements of section 106 and this subpart.

(v) If the agency official, and the SHPO/THPO fail to agree on the terms of a memorandum of agreement, the agency official shall request the Council to join the consultation and provide the Council with the documentation set forth in § 800.11(g). If the Council decides to join the consultation, the agency official shall proceed in accordance with paragraph (b)(2) of this section. If the Council decides not to join the consultation, the Council will notify the agency and proceed to comment in accordance with § 800.7(c).

(2) *Resolution with Council participation.* If the Council decides to participate in the consultation, the agency official shall consult with the SHPO/THPO, the Council, and other consulting parties, including Indian tribes and Native Hawaiian organizations under § 800.2(c)(3), to seek ways to avoid, minimize or mitigate the adverse effects. If the agency official, the SHPO/THPO, and the Council agree on how the adverse effects will be resolved, they shall execute a memorandum of agreement.

(c) *Memorandum of agreement.* A memorandum of agreement executed and implemented pursuant to this section evidences the agency official's compliance with section 106 and this part and shall govern the undertaking and all of its parts. The agency official shall ensure that the undertaking is carried out in accordance with the memorandum of agreement.

(1) *Signatories.* The signatories have sole authority to execute, amend or terminate the agreement in accordance with this subpart.

(i) The agency official and the SHPO/THPO are the signatories to a memorandum of agreement executed pursuant to paragraph (b)(1) of this section.

(ii) The agency official, the SHPO/THPO, and the Council are the signatories to a memorandum of agreement executed pursuant to paragraph (b)(2) of this section.

(iii) The agency official and the Council are signatories to a

memorandum of agreement executed pursuant to § 800.7(a)(2).

(2) *Invited signatories.*

(i) The agency official may invite additional parties to be signatories to a memorandum of agreement. Any such party that signs the memorandum of agreement shall have the same rights with regard to seeking amendment or termination of the memorandum of agreement as other signatories.

(ii) The agency official may invite an Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties located off tribal lands to be a signatory to a memorandum of agreement concerning such properties.

(iii) The agency official should invite any party that assumes a responsibility under a memorandum of agreement to be a signatory.

(iv) The refusal of any party invited to become a signatory to a memorandum of agreement pursuant to paragraph (c)(2) of this section does not invalidate the memorandum of agreement.

(3) *Concurrence by others.* The agency official may invite all consulting parties to concur in the memorandum of agreement. The signatories may agree to invite others to concur. The refusal of any party invited to concur in the memorandum of agreement does not invalidate the memorandum of agreement.

(4) *Reports on implementation.* Where the signatories agree it is appropriate, a memorandum of agreement shall include a provision for monitoring and reporting on its implementation.

(5) *Duration.* A memorandum of agreement shall include provisions for termination and for reconsideration of terms if the undertaking has not been implemented within a specified time.

(6) *Discoveries.* Where the signatories agree it is appropriate, a memorandum of agreement shall include provisions to deal with the subsequent discovery or identification of additional historic properties affected by the undertaking.

(7) *Amendments.* The signatories to a memorandum of agreement may amend it. If the Council was not a signatory to the original agreement and the signatories execute an amended agreement, the agency official shall file it with the Council.

(8) *Termination.* If any signatory determines that the terms of a memorandum of agreement cannot be or are not being carried out, the signatories

shall consult to seek amendment of the agreement. If the agreement is not amended, any signatory may terminate it. The agency official shall either execute a memorandum of agreement with signatories under paragraph (c)(1) of this section or request the comments of the Council under § 800.7(a).

(9) *Copies.* The agency official shall provide each consulting party with a copy of any memorandum of agreement executed pursuant to this subpart.

**§ 800.7 Failure to resolve adverse effects.**

(a) *Termination of consultation.* After consulting to resolve adverse effects pursuant to § 800.6(b)(2), the agency official, the SHPO/THPO, or the Council may determine that further consultation will not be productive and terminate consultation. Any party that terminates consultation shall notify the other consulting parties and provide them the reasons for terminating in writing.

(1) If the agency official terminates consultation, the head of the agency or an Assistant Secretary or other officer with major department-wide or agency-wide responsibilities shall request that the Council comment pursuant to paragraph (c) of this section and shall notify all consulting parties of the request.

(2) If the SHPO terminates consultation, the agency official and the Council may execute a memorandum of agreement without the SHPO's involvement.

(3) If a THPO terminates consultation regarding an undertaking occurring on or affecting historic properties on its tribal lands, the Council shall comment pursuant to paragraph (c) of this section.

(4) If the Council terminates consultation, the Council shall notify the agency official, the agency's Federal preservation officer and all consulting parties of the termination and comment under paragraph (c) of this section. The Council may consult with the agency's Federal preservation officer prior to terminating consultation to seek to resolve issues concerning the undertaking and its effects on historic properties.

(b) *Comments without termination.* The Council may determine that it is appropriate to provide additional advisory comments upon an undertaking for which a memorandum of agreement will be executed. The Council shall provide them to the

agency official when it executes the memorandum of agreement.

(c) *Comments by the Council.*

(1) *Preparation.* The Council shall provide an opportunity for the agency official, all consulting parties, and the public to provide their views within the time frame for developing its comments. Upon request of the Council, the agency official shall provide additional existing information concerning the undertaking and assist the Council in arranging an onsite inspection and an opportunity for public participation.

(2) *Timing.* The Council shall transmit its comments within 45 days of receipt of a request under paragraph (a)(1) or (a)(3) of this section or § 800.8(c)(3), or termination by the Council under § 800.6(b)(1)(v) or paragraph (a)(4) of this section, unless otherwise agreed to by the agency official.

(3) *Transmittal.* The Council shall provide its comments to the head of the agency requesting comment with copies to the agency official, the agency's Federal preservation officer, all consulting parties, and others as appropriate.

(4) *Response to Council comment.* The head of the agency shall take into account the Council's comments in reaching a final decision on the undertaking. Section 110(l) of the act directs that the head of the agency shall document this decision and may not delegate his or her responsibilities pursuant to section 106. Documenting the agency head's decision shall include:

(i) Preparing a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's comments and providing it to the Council prior to approval of the undertaking;

(ii) Providing a copy of the summary to all consulting parties; and

(iii) Notifying the public and making the record available for public inspection.

**§ 800.8 Coordination With the National Environmental Policy Act.**

(a) *General principles.*

(1) *Early coordination.* Federal agencies are encouraged to coordinate compliance with section 106 and the procedures in this part with any steps taken to meet the requirements of the National Environmental Policy Act (NEPA). Agencies should consider their section 106 responsibilities as early as possible in the NEPA process, and plan

their public participation, analysis, and review in such a way that they can meet the purposes and requirements of both statutes in a timely and efficient manner. The determination of whether an undertaking is a "major Federal action significantly affecting the quality of the human environment," and therefore requires preparation of an environmental impact statement (EIS) under NEPA, should include consideration of the undertaking's likely effects on historic properties. A finding of adverse effect on a historic property does not necessarily require an EIS under NEPA.

(2) *Consulting party roles.* SHPO/THPOs, Indian tribes and Native Hawaiian organizations, other consulting parties, and organizations and individuals who may be concerned with the possible effects of an agency action on historic properties should be prepared to consult with agencies early in the NEPA process, when the purpose of and need for the proposed action as well as the widest possible range of alternatives are under consideration.

(3) *Inclusion of historic preservation issues.* Agency officials should ensure that preparation of an environmental assessment (EA) and finding of no significant impact (FONSI) or an EIS and record of decision (ROD) includes appropriate scoping, identification of historic properties, assessment of effects upon them, and consultation leading to resolution of any adverse effects.

(b) *Actions categorically excluded under NEPA.* If a project, activity or program is categorically excluded from NEPA review under an agency's NEPA procedures, the agency official shall determine if it still qualifies as an undertaking requiring review under section 106 pursuant to § 800.3(a). If so, the agency official shall proceed with section 106 review in accordance with the procedures in this subpart.

(c) *Use of the NEPA process for section 106 purposes.* An agency official may use the process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with section 106 in lieu of the procedures set forth in §§ 800.3 through 800.6 if the agency official has notified in advance the SHPO/THPO and the Council that it intends to do so and the following standards are met.

(1) *Standards for developing environmental documents to comply with Section 106.* During preparation of the EA or draft EIS (DEIS) the agency official shall:

(i) Identify consulting parties either pursuant to § 800.3(f) or through the NEPA scoping process with results consistent with § 800.3(f);

(ii) Identify historic properties and assess the effects of the undertaking on such properties in a manner consistent with the standards and criteria of §§ 800.4 through 800.5, provided that the scope and timing of these steps may be phased to reflect the agency official's consideration of project alternatives in the NEPA process and the effort is commensurate with the assessment of other environmental factors;

(iii) Consult regarding the effects of the undertaking on historic properties with the SHPO/THPO, Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to affected historic properties, other consulting parties, and the Council, where appropriate, during NEPA scoping, environmental analysis, and the preparation of NEPA documents;

(iv) Involve the public in accordance with the agency's published NEPA procedures; and

(v) Develop in consultation with identified consulting parties alternatives and proposed measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the EA or DEIS.

(2) *Review of environmental documents.*

(i) The agency official shall submit the EA, DEIS or EIS to the SHPO/THPO, Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to affected historic properties, and other consulting parties prior to or when making the document available for public comment. If the document being prepared is a DEIS or EIS, the agency official shall also submit it to the Council.

(ii) Prior to or within the time allowed for public comment on the document, a SHPO/THPO, an Indian tribe or Native Hawaiian organization, another consulting party or the Council may object to the agency official that preparation of the EA, DEIS or EIS has not met the standards set forth in paragraph (c)(1) of this section or that the substantive resolution of the effects on historic properties proposed in an EA, DEIS or EIS is inadequate. If the agency official receives such an objection, the agency official shall refer the matter to the Council.

(3) *Resolution of objections.* Within 30 days of the agency official's referral of an objection under paragraph (c)(2)(ii) of this section, the Council shall review the objection and notify the agency as to its opinion on the objection.

(i) If the Council agrees with the objection:

(A) The Council shall provide the agency official and, if the Council determines the issue warrants it, the head of the agency with the Council's opinion regarding the objection. A Council decision to provide its opinion to the head of an agency shall be guided by the criteria in appendix A to this part. The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall take into account the Council's opinion in reaching a final decision on the issue of the objection.

(B) The person to whom the Council addresses its opinion (the agency official or the head of the agency) shall prepare a summary of the decision that contains the rationale for the decision and evidence of consideration of the Council's opinion, and provide it to the Council. The head of the agency may delegate his or her duties under this paragraph to the agency's senior Policy Official. If the agency official's initial decision regarding the matter that is the subject of the objection will be revised, the agency official shall proceed in accordance with the revised decision. If the final decision of the agency is to affirm the initial agency decision, once the summary of the final decision has been sent to the Council, the agency official shall continue its compliance with this section.

(ii) If the Council disagrees with the objection, the Council shall so notify the agency official, in which case the agency official shall continue its compliance with this section.

(iii) If the Council fails to respond to the objection within the 30 day period, the agency official shall continue its compliance with this section.

(4) *Approval of the undertaking.* If the agency official has found, during the preparation of an EA or EIS that the effects of an undertaking on historic properties are adverse, the agency official shall develop measures in the EA, DEIS, or EIS to avoid, minimize, or mitigate such effects in accordance with paragraph (c)(1)(v) of this section. The agency official's responsibilities under section 106 and the procedures in this

subpart shall then be satisfied when either:

- (i) a binding commitment to such proposed measures is incorporated in
  - (A) the ROD, if such measures were proposed in a DEIS or EIS; or
  - (B) an MOA drafted in compliance with § 800.6(c); or
- (ii) the Council has commented under § 800.7 and received the agency's response to such comments.

(5) *Modification of the undertaking.* If the undertaking is modified after approval of the FONSI or the ROD in a manner that changes the undertaking or alters its effects on historic properties, or if the agency official fails to ensure that the measures to avoid, minimize or mitigate adverse effects (as specified in either the FONSI or the ROD, or in the binding commitment adopted pursuant to paragraph (c)(4) of this section) are carried out, the agency official shall notify the Council and all consulting parties that supplemental environmental documents will be prepared in compliance with NEPA or that the procedures in §§ 800.3 through 800.6 will be followed as necessary.

#### **§ 800.9 Council review of section 106 compliance.**

(a) *Assessment of agency official compliance for individual undertakings.* The Council may provide to the agency official its advisory opinion regarding the substance of any finding, determination or decision or regarding the adequacy of the agency official's compliance with the procedures under this part. The Council may provide such advice at any time at the request of any individual, agency or organization or on its own initiative. The agency official shall consider the views of the Council in reaching a decision on the matter in question.

(b) *Agency foreclosure of the Council's opportunity to comment.* Where an agency official has failed to complete the requirements of section 106 in accordance with the procedures in this part prior to the approval of an undertaking, the Council's opportunity to comment may be foreclosed. The Council may review a case to determine whether a foreclosure has occurred. The Council shall notify the agency official and the agency's Federal preservation officer and allow 30 days for the agency official to provide information as to whether foreclosure has occurred. If the Council determines foreclosure has occurred, the Council shall transmit the determination to the

agency official and the head of the agency. The Council shall also make the determination available to the public and any parties known to be interested in the undertaking and its effects upon historic properties.

(c) *Intentional adverse effects by applicants.*

(1) *Agency responsibility.* Section 110(k) of the act prohibits a Federal agency from granting a loan, loan guarantee, permit, license or other assistance to an applicant who, with intent to avoid the requirements of section 106, has intentionally significantly adversely affected a historic property to which the grant would relate, or having legal power to prevent it, has allowed such significant adverse effect to occur, unless the agency, after consultation with the Council, determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. Guidance issued by the Secretary pursuant to section 110 of the act governs its implementation.

(2) *Consultation with the Council.* When an agency official determines, based on the actions of an applicant, that section 110(k) is applicable and that circumstances may justify granting the assistance, the agency official shall notify the Council and provide documentation specifying the circumstances under which the adverse effects to the historic property occurred and the degree of damage to the integrity of the property. This documentation shall include any views obtained from the applicant, SHPO/THPO, an Indian tribe if the undertaking occurs on or affects historic properties on tribal lands, and other parties known to be interested in the undertaking.

(i) Within thirty days of receiving the agency official's notification, unless otherwise agreed to by the agency official, the Council shall provide the agency official with its opinion as to whether circumstances justify granting assistance to the applicant and any possible mitigation of the adverse effects.

(ii) The agency official shall consider the Council's opinion in making a decision on whether to grant assistance to the applicant, and shall notify the Council, the SHPO/THPO, and other parties known to be interested in the undertaking prior to granting the assistance.

(3) *Compliance with Section 106.* If an agency official, after consulting with

the Council, determines to grant the assistance, the agency official shall comply with §§ 800.3 through 800.6 to take into account the effects of the undertaking on any historic properties.

(d) *Evaluation of Section 106 operations.* The Council may evaluate the operation of the section 106 process by periodic reviews of how participants have fulfilled their legal responsibilities and how effectively the outcomes reached advance the purposes of the act.

(1) *Information from participants.* Section 203 of the act authorizes the Council to obtain information from Federal agencies necessary to conduct evaluation of the section 106 process. The agency official shall make documentation of agency policies, operating procedures and actions taken to comply with section 106 available to the Council upon request. The Council may request available information and documentation from other participants in the section 106 process.

(2) *Improving the operation of section 106.* Based upon any evaluation of the section 106 process, the Council may make recommendations to participants, the heads of Federal agencies, and the Secretary of actions to improve the efficiency and effectiveness of the process. Where the Council determines that an agency official or a SHPO/THPO has failed to properly carry out the responsibilities assigned under the process in this part, the Council may participate in individual case reviews conducted under such process in addition to the SHPO/THPO for such period that it determines is necessary to improve performance or correct deficiencies. If the Council finds a pattern of failure by a Federal agency in carrying out its responsibilities under section 106, the Council may review the policies and programs of the agency related to historic preservation pursuant to section 202(a)(6) of the act and recommend methods to improve the effectiveness, coordination, and consistency of those policies and programs with section 106.

#### **§ 800.10 Special requirements for protecting National Historic Landmarks.**

(a) *Statutory requirement.* Section 110(f) of the act requires that the agency official, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to any National Historic Landmark that may be directly and adversely affected by an undertaking. When

commenting on such undertakings, the Council shall use the process set forth in §§ 800.6 through 800.7 and give special consideration to protecting National Historic Landmarks as specified in this section.

(b) *Resolution of adverse effects.* The agency official shall request the Council to participate in any consultation to resolve adverse effects on National Historic Landmarks conducted under § 800.6.

(c) *Involvement of the Secretary.* The agency official shall notify the Secretary of any consultation involving a National Historic Landmark and invite the Secretary to participate in the consultation where there may be an adverse effect. The Council may request a report from the Secretary under section 213 of the act to assist in the consultation.

(d) *Report of outcome.* When the Council participates in consultation under this section, it shall report the outcome of the section 106 process, providing its written comments or any memoranda of agreement to which it is a signatory, to the Secretary and the head of the agency responsible for the undertaking.

#### § 800.11 Documentation standards.

(a) *Adequacy of documentation.* The agency official shall ensure that a determination, finding, or agreement under the procedures in this subpart is supported by sufficient documentation to enable any reviewing parties to understand its basis. The agency official shall provide such documentation to the extent permitted by law and within available funds. When an agency official is conducting phased identification or evaluation under this subpart, the documentation standards regarding description of historic properties may be applied flexibly. If the Council, or the SHPO/THPO when the Council is not involved, determines the applicable documentation standards are not met, the Council or the SHPO/THPO, as appropriate, shall notify the agency official and specify the information needed to meet the standard. At the request of the agency official or any of the consulting parties, the Council shall review any disputes over whether documentation standards are met and provide its views to the agency official and the consulting parties.

(b) *Format.* The agency official may use documentation prepared to comply with other laws to fulfill the

requirements of the procedures in this subpart, if that documentation meets the standards of this section.

#### (c) *Confidentiality.*

(1) *Authority to withhold information.* Section 304 of the act provides that the head of a Federal agency or other public official receiving grant assistance pursuant to the act, after consultation with the Secretary, shall withhold from public disclosure information about the location, character, or ownership of a historic property when disclosure may cause a significant invasion of privacy; risk harm to the historic property; or impede the use of a traditional religious site by practitioners. When the head of a Federal agency or other public official has determined that information should be withheld from the public pursuant to these criteria, the Secretary, in consultation with such Federal agency head or official, shall determine who may have access to the information for the purposes of carrying out the act.

#### (2) *Consultation with the Council.*

When the information in question has been developed in the course of an agency's compliance with this part, the Secretary shall consult with the Council in reaching determinations on the withholding and release of information. The Federal agency shall provide the Council with available information, including views of the SHPO/THPO, Indian tribes and Native Hawaiian organizations, related to the confidentiality concern. The Council shall advise the Secretary and the Federal agency within 30 days of receipt of adequate documentation.

(3) *Other authorities affecting confidentiality.* Other Federal laws and program requirements may limit public access to information concerning an undertaking and its effects on historic properties. Where applicable, those authorities shall govern public access to information developed in the section 106 process and may authorize the agency official to protect the privacy of non-governmental applicants.

#### (d) *Finding of no historic properties affected.* Documentation shall include:

(1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, drawings, as necessary;

(2) A description of the steps taken to identify historic properties, including, as appropriate, efforts to seek information pursuant to § 800.4(b); and

(3) The basis for determining that no historic properties are present or affected.

(e) *Finding of no adverse effect or adverse effect.* Documentation shall include:

(1) A description of the undertaking, specifying the Federal involvement, and its area of potential effects, including photographs, maps, and drawings, as necessary;

(2) A description of the steps taken to identify historic properties;

(3) A description of the affected historic properties, including information on the characteristics that qualify them for the National Register;

(4) A description of the undertaking's effects on historic properties;

(5) An explanation of why the criteria of adverse effect were found applicable or inapplicable, including any conditions or future actions to avoid, minimize or mitigate adverse effects; and

(6) Copies or summaries of any views provided by consulting parties and the public.

(f) *Memorandum of agreement.* When a memorandum of agreement is filed with the Council, the documentation shall include, any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1), an evaluation of any measures considered to avoid or minimize the undertaking's adverse effects and a summary of the views of consulting parties and the public.

(g) *Requests for comment without a memorandum of agreement.* Documentation shall include:

(1) A description and evaluation of any alternatives or mitigation measures that the agency official proposes to resolve the undertaking's adverse effects;

(2) A description of any reasonable alternatives or mitigation measures that were considered but not chosen, and the reasons for their rejection;

(3) Copies or summaries of any views submitted to the agency official concerning the adverse effects of the undertaking on historic properties and alternatives to reduce or avoid those effects; and

(4) Any substantive revisions or additions to the documentation provided the Council pursuant to § 800.6(a)(1).

#### § 800.12 Emergency situations.



(a) *Agency procedures.* The agency official, in consultation with the appropriate SHPOs/THPOs, affected Indian tribes and Native Hawaiian organizations, and the Council, is encouraged to develop procedures for taking historic properties into account during operations which respond to a disaster or emergency declared by the President, a tribal government, or the Governor of a State or which respond to other immediate threats to life or property. If approved by the Council, the procedures shall govern the agency's historic preservation responsibilities during any disaster or emergency in lieu of §§ 800.3 through 800.6.

(b) *Alternatives to agency procedures.* In the event an agency official proposes an emergency undertaking as an essential and immediate response to a disaster or emergency declared by the President, a tribal government, or the Governor of a State or another immediate threat to life or property, and the agency has not developed procedures pursuant to paragraph (a) of this section, the agency official may comply with section 106 by:

(1) Following a programmatic agreement developed pursuant to § 800.14(b) that contains specific provisions for dealing with historic properties in emergency situations; or

(2) Notifying the Council, the appropriate SHPO/THPO and any Indian tribe or Native Hawaiian organization that may attach religious and cultural significance to historic properties likely to be affected prior to the undertaking and affording them an opportunity to comment within seven days of notification. If the agency official determines that circumstances do not permit seven days for comment, the agency official shall notify the Council, the SHPO/THPO and the Indian tribe or Native Hawaiian organization and invite any comments within the time available.

(c) *Local governments responsible for section 106 compliance.* When a local government official serves as the agency official for section 106 compliance, paragraphs (a) and (b) of this section also apply to an imminent threat to public health or safety as a result of a natural disaster or emergency declared by a local government's chief executive officer or legislative body, provided that if the Council or SHPO/THPO objects to the proposed action within seven days, the agency official shall comply with §§ 800.3 through 800.6.

(d) *Applicability.* This section applies only to undertakings that will be implemented within 30 days after the disaster or emergency has been formally declared by the appropriate authority. An agency may request an extension of the period of applicability from the Council prior to the expiration of the 30 days. Immediate rescue and salvage operations conducted to preserve life or property are exempt from the provisions of section 106 and this part.

#### § 800.13 Post-review discoveries.

(a) *Planning for subsequent discoveries.*

(1) *Using a programmatic agreement.* An agency official may develop a programmatic agreement pursuant to § 800.14(b) to govern the actions to be taken when historic properties are discovered during the implementation of an undertaking.

(2) *Using agreement documents.* When the agency official's identification efforts in accordance with § 800.4 indicate that historic properties are likely to be discovered during implementation of an undertaking and no programmatic agreement has been developed pursuant to paragraph (a)(1) of this section, the agency official shall include in any finding of no adverse effect or memorandum of agreement a process to resolve any adverse effects upon such properties. Actions in conformance with the process satisfy the agency official's responsibilities under section 106 and this part.

(b) *Discoveries without prior planning.* If historic properties are discovered or unanticipated effects on historic properties found after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section, the agency official shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties and:

(1) If the agency official has not approved the undertaking or if construction on an approved undertaking has not commenced, consult to resolve adverse effects pursuant to § 800.6; or

(2) If the agency official, the SHPO/THPO and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property agree that such property is of value solely for its scientific, prehistoric, historic or archeological data, the agency official may comply with the

Archeological and Historic Preservation Act instead of the procedures in this part and provide the Council, the SHPO/THPO, and the Indian tribe or Native Hawaiian organization with a report on the actions within a reasonable time after they are completed; or

(3) If the agency official has approved the undertaking and construction has commenced, determine actions that the agency official can take to resolve adverse effects, and notify the SHPO/THPO, any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to the affected property, and the Council within 48 hours of the discovery. The notification shall describe the agency official's assessment of National Register eligibility of the property and proposed actions to resolve the adverse effects. The SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council shall respond within 48 hours of the notification. The agency official shall take into account their recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. The agency official shall provide the SHPO/THPO, the Indian tribe or Native Hawaiian organization and the Council a report of the actions when they are completed.

(c) *Eligibility of properties.* The agency official, in consultation with the SHPO/THPO, may assume a newly-discovered property to be eligible for the National Register for purposes of section 106. The agency official shall specify the National Register criteria used to assume the property's eligibility so that information can be used in the resolution of adverse effects.

(d) *Discoveries on tribal lands.* If historic properties are discovered on tribal lands, or there are unanticipated effects on historic properties found on tribal lands, after the agency official has completed the section 106 process without establishing a process under paragraph (a) of this section and construction has commenced, the agency official shall comply with applicable tribal regulations and procedures and obtain the concurrence of the Indian tribe on the proposed action.

#### Subpart C-Program Alternatives

#### § 800.14 Federal agency program alternatives.



(a) *Alternate procedures.* An agency official may develop procedures to implement section 106 and substitute them for all or part of subpart B of this part if they are consistent with the Council's regulations pursuant to section 110(a)(2)(E) of the act.

(1) *Development of procedures.* The agency official shall consult with the Council, the National Conference of State Historic Preservation Officers or individual SHPO/THPOs, as appropriate, and Indian tribes and Native Hawaiian organizations, as specified in paragraph (f) of this section, in the development of alternate procedures, publish notice of the availability of proposed alternate procedures in the Federal Register and take other appropriate steps to seek public input during the development of alternate procedures.

(2) *Council review.* The agency official shall submit the proposed alternate procedures to the Council for a 60-day review period. If the Council finds the procedures to be consistent with this part, it shall notify the agency official and the agency official may adopt them as final alternate procedures.

(3) *Notice.* The agency official shall notify the parties with which it has consulted and publish notice of final alternate procedures in the Federal Register.

(4) *Legal effect.* Alternate procedures adopted pursuant to this subpart substitute for the Council's regulations for the purposes of the agency's compliance with section 106, except that where an Indian tribe has entered into an agreement with the Council to substitute tribal historic preservation regulations for the Council's regulations under section 101(d)(5) of the act, the agency shall follow those regulations in lieu of the agency's procedures regarding undertakings on tribal lands. Prior to the Council entering into such agreements, the Council will provide Federal agencies notice and opportunity to comment on the proposed substitute tribal regulations.

(b) *Programmatic agreements.* The Council and the agency official may negotiate a programmatic agreement to govern the implementation of a particular program or the resolution of adverse effects from certain complex project situations or multiple undertakings.

(1) *Use of programmatic agreements.* A programmatic agreement may be used:

(i) When effects on historic properties are similar and repetitive or are multi-State or regional in scope;

(ii) When effects on historic properties cannot be fully determined prior to approval of an undertaking;

(iii) When nonfederal parties are delegated major decisionmaking responsibilities;

(iv) Where routine management activities are undertaken at Federal installations, facilities, or other land-management units; or

(v) Where other circumstances warrant a departure from the normal section 106 process.

(2) *Developing programmatic agreements for agency programs.*

(i) The consultation shall involve, as appropriate, SHPO/THPOs, the National Conference of State Historic Preservation Officers (NCSHPO), Indian tribes and Native Hawaiian organizations, other Federal agencies, and members of the public. If the programmatic agreement has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the agency official shall also follow paragraph (f) of this section.

(ii) *Public Participation.* The agency official shall arrange for public participation appropriate to the subject matter and the scope of the program and in accordance with subpart A of this part. The agency official shall consider the nature of the program and its likely effects on historic properties and take steps to involve the individuals, organizations and entities likely to be interested.

(iii) *Effect.* The programmatic agreement shall take effect when executed by the Council, the agency official and the appropriate SHPOs/THPOs when the programmatic agreement concerns a specific region or the president of NCSHPO when NCSHPO has participated in the consultation. A programmatic agreement shall take effect on tribal lands only when the THPO, Indian tribe or a designated representative of the tribe is a signatory to the agreement. Compliance with the procedures established by an approved programmatic agreement satisfies the agency's section 106 responsibilities for all individual undertakings of the program covered by the agreement until

it expires or is terminated by the agency, the president of NCSHPO when a signatory, or the Council. Termination by an individual SHPO/THPO shall only terminate the application of a regional programmatic agreement within the jurisdiction of the SHPO/THPO. If a THPO assumes the responsibilities of a SHPO pursuant to section 101(d)(2) of the act and the SHPO is signatory to programmatic agreement, the THPO assumes the role of a signatory, including the right to terminate a regional programmatic agreement on lands under the jurisdiction of the tribe.

(iv) *Notice.* The agency official shall notify the parties with which it has consulted that a programmatic agreement has been executed under paragraph (b) of this section, provide appropriate public notice before it takes effect, and make any internal agency procedures implementing the agreement readily available to the Council, SHPO/THPOs, and the public.

(v) If the Council determines that the terms of a programmatic agreement are not being carried out, or if such an agreement is terminated, the agency official shall comply with subpart B of this part with regard to individual undertakings of the program covered by the agreement.

(3) *Developing programmatic agreements for complex or multiple undertakings.* Consultation to develop a programmatic agreement for dealing with the potential adverse effects of complex projects or multiple undertakings shall follow § 800.6. If consultation pertains to an activity involving multiple undertakings and the parties fail to reach agreement, then the agency official shall comply with the provisions of subpart B of this part for each individual undertaking.

(4) *Prototype programmatic agreements.* The Council may designate an agreement document as a prototype programmatic agreement that may be used for the same type of program or undertaking in more than one case or area. When an agency official uses such a prototype programmatic agreement, the agency official may develop and execute the agreement with the appropriate SHPO/THPO and the agreement shall become final without need for Council participation in consultation or Council signature.

(c) *Exempted categories.*

(1) *Criteria for establishing.* The Council or an agency official may propose a program or category of undertakings that may be exempted

from review under the provisions of subpart B of this part, if the program or category meets the following criteria:

(i) The actions within the program or category would otherwise qualify as "undertakings" as defined in § 800.16;

(ii) The potential effects of the undertakings within the program or category upon historic properties are foreseeable and likely to be minimal or not adverse; and

(iii) Exemption of the program or category is consistent with the purposes of the act.

(2) *Public participation.* The proponent of the exemption shall arrange for public participation appropriate to the subject matter and the scope of the exemption and in accordance with the standards in subpart A of this part. The proponent of the exemption shall consider the nature of the exemption and its likely effects on historic properties and take steps to involve individuals, organizations and entities likely to be interested.

(3) *Consultation with SHPOs/THPOs.* The proponent of the exemption shall notify and consider the views of the SHPOs/THPOs on the exemption.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the exempted program or category of undertakings has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Council review of proposed exemptions.* The Council shall review an exemption proposal that is supported by documentation describing the program or category for which the exemption is sought, demonstrating that the criteria of paragraph (c)(1) of this section have been met, describing the methods used to seek the views of the public, and summarizing any views submitted by the SHPO/THPOs, the public, and any others consulted. Unless it requests further information, the Council shall approve or reject the proposed exemption within 30 days of receipt, and thereafter notify the relevant agency official and SHPO/THPOs of the decision. The decision shall be based on the consistency of the exemption with the purposes of the act, taking into consideration the magnitude of the exempted undertaking or program and the likelihood of impairment of historic

properties in accordance with section 214 of the act.

(6) *Legal consequences.* Any undertaking that falls within an approved exempted program or category shall require no further review pursuant to subpart B of this part, unless the agency official or the Council determines that there are circumstances under which the normally excluded undertaking should be reviewed under subpart B of this part.

(7) *Termination.* The Council may terminate an exemption at the request of the agency official or when the Council determines that the exemption no longer meets the criteria of paragraph (c)(1) of this section. The Council shall notify the agency official 30 days before termination becomes effective.

(8) *Notice.* The proponent of the exemption shall publish notice of any approved exemption in the Federal Register.

(d) *Standard treatments.*

(1) *Establishment.* The Council, on its own initiative or at the request of another party, may establish standard methods for the treatment of a category of historic properties, a category of undertakings, or a category of effects on historic properties to assist Federal agencies in satisfying the requirements of subpart B of this part. The Council shall publish notice of standard treatments in the Federal Register.

(2) *Public participation.* The Council shall arrange for public participation appropriate to the subject matter and the scope of the standard treatment and consistent with subpart A of this part. The Council shall consider the nature of the standard treatment and its likely effects on historic properties and the individuals, organizations and entities likely to be interested. Where an agency official has proposed a standard treatment, the Council may request the agency official to arrange for public involvement.

(3) *Consultation with SHPOs/THPOs.* The Council shall notify and consider the views of SHPOs/THPOs on the proposed standard treatment.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the proposed standard treatment has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Termination.* The Council may terminate a standard treatment by publication of a notice in the Federal Register 30 days before the termination takes effect.

(e) *Program comments.* An agency official may request the Council to comment on a category of undertakings in lieu of conducting individual reviews under §§ 800.4 through 800.6. The Council may provide program comments at its own initiative.

(1) *Agency request.* The agency official shall identify the category of undertakings, specify the likely effects on historic properties, specify the steps the agency official will take to ensure that the effects are taken into account, identify the time period for which the comment is requested and summarize any views submitted by the public.

(2) *Public participation.* The agency official shall arrange for public participation appropriate to the subject matter and the scope of the category and in accordance with the standards in subpart A of this part. The agency official shall consider the nature of the undertakings and their likely effects on historic properties and the individuals, organizations and entities likely to be interested.

(3) *Consultation with SHPOs/THPOs.* The Council shall notify and consider the views of SHPOs/THPOs on the proposed program comment.

(4) *Consultation with Indian tribes and Native Hawaiian organizations.* If the program comment has the potential to affect historic properties on tribal lands or historic properties of religious and cultural significance to an Indian tribe or Native Hawaiian organization, the Council shall follow the requirements for the agency official set forth in paragraph (f) of this section.

(5) *Council action.* Unless the Council requests additional documentation, notifies the agency official that it will decline to comment, or obtains the consent of the agency official to extend the period for providing comment, the Council shall comment to the agency official within 45 days of the request.

(i) If the Council comments, the agency official shall take into account the comments of the Council in carrying out the undertakings within the category and publish notice in the Federal Register of the Council's comments and steps the agency will take to ensure that effects to historic properties are taken into account.

(ii) If the Council declines to comment, the agency official shall continue to comply with the requirements of §§ 800.3 through 800.6 for the individual undertakings.

(6) *Withdrawal of comment.* If the Council determines that the consideration of historic properties is not being carried out in a manner consistent with the program comment, the Council may withdraw the comment and the agency official shall comply with the requirements of §§ 800.3 through 800.6 for the individual undertakings.

(f) *Consultation with Indian tribes and Native Hawaiian organizations when developing program alternatives.* Whenever an agency official proposes a program alternative pursuant to paragraphs (a) through (e) of this section, the agency official shall ensure that development of the program alternative includes appropriate government-to-government consultation with affected Indian tribes and consultation with affected Native Hawaiian organizations.

(1) *Identifying affected Indian tribes and Native Hawaiian organizations.* If any undertaking covered by a proposed program alternative has the potential to affect historic properties on tribal lands, the agency official shall identify and consult with the Indian tribes having jurisdiction over such lands. If a proposed program alternative has the potential to affect historic properties of religious and cultural significance to an Indian tribe or a Native Hawaiian organization which are located off tribal lands, the agency official shall identify those Indian tribes and Native Hawaiian organizations that might attach religious and cultural significance to such properties and consult with them. When a proposed program alternative has nationwide applicability, the agency official shall identify an appropriate government to government consultation with Indian tribes and consult with Native Hawaiian organizations in accordance with existing Executive orders, Presidential memoranda and applicable provisions of law.

(2) *Results of consultation.* The agency official shall provide summaries of the views, along with copies of any written comments, provided by affected Indian tribes and Native Hawaiian organizations to the Council as part of the documentation for the proposed program alternative. The agency official and the Council shall take those views

into account in reaching a final decision on the proposed program alternative.

#### **§ 800.15 Tribal, State, and local program alternatives. (Reserved)**

#### **§ 800.16 Definitions.**

(a) *Act* means the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470w-6.

(b) *Agency* means agency as defined in 5 U.S.C. 551.

(c) *Approval of the expenditure of funds* means any final agency decision authorizing or permitting the expenditure of Federal funds or financial assistance on an undertaking, including any agency decision that may be subject to an administrative appeal.

(d) *Area of potential effects* means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

(e) *Comment* means the findings and recommendations of the Council formally provided in writing to the head of a Federal agency under section 106.

(f) *Consultation* means the process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the section 106 process. The Secretary's "Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act" provide further guidance on consultation.

(g) *Council* means the Advisory Council on Historic Preservation or a Council member or employee designated to act for the Council.

(h) *Day or days* means calendar days.

(i) *Effect* means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register.

(j) *Foreclosure* means an action taken by an agency official that effectively precludes the Council from providing comments which the agency official can meaningfully consider prior to the approval of the undertaking.

(k) *Head of the agency* means the chief official of the Federal agency responsible for all aspects of the agency's actions. If a State, local or tribal government has assumed or has

been delegated responsibility for section 106 compliance, the head of that unit of government shall be considered the head of the agency.

(l)(1) *Historic property* means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

(2) The term *eligible for inclusion in the National Register* includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the National Register criteria.

(m) *Indian tribe* means an Indian tribe, band, nation, or other organized group or community, including a native village, regional corporation or village corporation, as those terms are defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

(n) *Local government* means a city, county, parish, township, municipality, borough, or other general purpose political subdivision of a State.

(o) *Memorandum of agreement* means the document that records the terms and conditions agreed upon to resolve the adverse effects of an undertaking upon historic properties.

(p) *National Historic Landmark* means a historic property that the Secretary of the Interior has designated a National Historic Landmark.

(q) *National Register* means the National Register of Historic Places maintained by the Secretary of the Interior.

(r) *National Register criteria* means the criteria established by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register (36 CFR part 60).

(s)(1) *Native Hawaiian organization* means any organization which serves and represents the interests of Native Hawaiians; has as a primary and stated purpose the provision of services to Native Hawaiians; and has demonstrated expertise in aspects of

historic preservation that are significant to Native Hawaiians.

(2) *Native Hawaiian* means any individual who is a descendant of the aboriginal people who, prior to 1778, occupied and exercised sovereignty in the area that now constitutes the State of Hawaii.

(t) *Programmatic agreement* means a document that records the terms and conditions agreed upon to resolve the potential adverse effects of a Federal agency program, complex undertaking or other situations in accordance with § 800.14(b).

(u) *Secretary* means the Secretary of the Interior acting through the Director of the National Park Service except where otherwise specified.

(v) *State Historic Preservation Officer (SHPO)* means the official appointed or designated pursuant to section 101(b)(1) of the act to administer the State historic preservation program or a representative designated to act for the State historic preservation officer.

(w) *Tribal Historic Preservation Officer (THPO)* means the tribal official appointed by the tribe's chief governing authority or designated by a tribal ordinance or preservation program who has assumed the responsibilities of the SHPO for purposes of section 106 compliance on tribal lands in accordance with section 101(d)(2) of the act.

(x) *Tribal lands* means all lands within the exterior boundaries of any Indian reservation and all dependent Indian communities.

(y) *Undertaking* means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license or approval.

(z) *Senior policy official* means the senior policy level official designated by the head of the agency pursuant to section 3(e) of Executive Order 13287.

#### **Appendix A to Part 800 -- Criteria for Council Involvement in Reviewing Individual section 106 Cases**

(a) *Introduction.* This appendix sets forth the criteria that will be used by the Council to determine whether to enter an individual section 106 review that it normally would not be involved in.

(b) *General policy.* The Council may choose to exercise its authorities under

the section 106 regulations to participate in an individual project pursuant to the following criteria. However, the Council will not always elect to participate even though one or more of the criteria may be met.

(c) *Specific criteria.* The Council is likely to enter the section 106 process at the steps specified in the regulations in this part when an undertaking:

(1) *Has substantial impacts on important historic properties.* This may include adverse effects on properties that possess a national level of significance or on properties that are of unusual or noteworthy importance or are a rare property type; or adverse effects to large numbers of historic properties, such as impacts to multiple properties within a historic district.

(2) *Presents important questions of policy or interpretation.* This may include questions about how the Council's regulations are being applied or interpreted, including possible foreclosure or anticipatory demolition situations; situations where the outcome will set a precedent affecting Council policies or program goals; or the development of programmatic agreements that alter the way the section 106 process is applied to a group or type of undertakings.

(3) *Has the potential for presenting procedural problems.* This may include cases with substantial public controversy that is related to historic preservation issues; with disputes among or about consulting parties which the Council's involvement could help resolve; that are involved or likely to be involved in litigation on the basis of section 106; or carried out by a Federal agency, in a State or locality, or on tribal lands where the Council has previously identified problems with section 106 compliance pursuant to § 800.9(d)(2).

(4) *Presents issues of concern to Indian tribes or Native Hawaiian organizations.* This may include cases where there have been concerns raised about the identification of, evaluation of or assessment of effects on historic properties to which an Indian tribe or Native Hawaiian organization attaches religious and cultural significance; where an Indian tribe or Native Hawaiian organization has requested Council involvement to assist in the resolution of adverse effects; or where there are questions relating to policy, interpretation or precedent under section 106 or its relation to other

authorities, such as the Native American Graves Protection and Repatriation Act.

## Kirchler-Owen, Leslie

---

**From:** Campbell, Kendall D CIV NAVFAC NW, PRW4 <kendall.campbell1@navy.mil>  
**Sent:** Friday, October 21, 2016 4:17 PM  
**To:** Kirchler-Owen, Leslie  
**Subject:** FW: Growler Section 106 Thank You and further information  
**Signed By:** kendall.campbell1@navy.mil

-----Original Message-----

From: Campbell, Kendall D CIV NAVFAC NW, PRW4  
Sent: Thursday, September 01, 2016 12:23 PM  
To: 'Brooks, Allyson (DAHP)'; 'Katharine R. Kerr'  
Subject: Growler Section 106 Thank You and further information

Consultation Partners,

Thank you to those who provided comments on the Navy's proposed approach to defining the Area of Potential Effect (APE) for the proposed continuation and increase of EA-18G Growlers at NAS Whidbey Island. We appreciate your participation in the 106 consultation process and your comments are being taken into consideration as we define the APE and consider the effects of the undertaking on historic properties.

For those who were not able to provide us comments, or if you would like to offer additional comments, please feel free to do so at anytime. Section 106 is an ongoing consultation, and we accept comments from all consulting parties and the public at any time.

We are also sending all consulting parties a letter with resources and materials to refer to throughout this process to facilitate your participation in and provide a better understanding of the section 106 consultation process for this undertaking. These resources include guidelines as to the process the Navy will be taking to fulfill our section 106 responsibilities, as well as the regulations (36 CFR 800) guiding this process. If you do not receive these materials by 15 September, please let me know and we will resend them.

Please feel free to contact me at any time with questions either by phone at (360) 257-6780 or email. Thank you again for your comments and we look forward to continuing consultation.

Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexinton Dr.  
Oak Harbor, WA 98278-3500  
Kendall.campbell1@navy.mil  
360-257-6780





Allyson Brooks Ph.D., Director  
State Historic Preservation Officer

September 30, 2016

Ms. Kendall Campbell  
Cultural Resources  
US Dept. of the Navy  
NASWI  
3730 North Charles Porter Ave.  
Oak Harbor, WA 98278-5000

In future correspondence please refer to:  
Project Tracking Code: 102214-23-USN  
Re: Proposed Increase of EA-18G Growler Aircraft and Aircraft Operations and  
Development of Support Facilities

Dear Ms. Campbell:

Thank you for your letter of August 31, 2016 regarding the above referenced proposal. We have reviewed the clarification process for the Continuation and Increase of EA-18G Growler Operations at Naval Station Whidbey Island (NASWI) that includes Ault Field and OLF Coupeville. In response, we are providing the following comments and recommendations:

1. In general, we concur with the section 106 process as outlined in your letter as adhering to the implementing regulations found in 36 CFR 800. We understand that the Navy has made the determination that the proposed action qualifies as an undertaking that has potential to affect historic properties.
2. In regard to step 2 (Defining the Area of Potential Effect (APE)), following are comments and recommendations for defining the APE from the State Historic Preservation Officer's July 7, 2016 letter to Captain G.C. Moore:

We specifically need to understand the location of areas that are proposed to contain flight paths associated with Growlers operations at Ault Field and OLF Coupeville. This additional information for the purposes of developing the APE should include the identification of areas containing the flight paths for the return to Ault Field after field carrier landing practice and any areas of general flight Growler practices. These routes may generate noise impacts for the neighboring communities in the San Juan Islands, Port Townsend, and the Olympic Peninsula and may need to be considered part of the APE.



While we appreciate that for security reasons you may not be able to supply us with actual flight paths, you should be able to identify large areas that will contain the flights for the purpose of the APE. Again, we need to understand the noise impacts from practice flights whether touch and go at OLF or general practice from Ault Field.

We also need the additional information and maps detailing actual construction areas that due to increased operations will result in increased personnel and family members at NAS Whidbey and the surrounding communities.

3. Given the high public interest and large area that potentially could be affected by this proposal, we recommend a robust public involvement process. A section 106 public involvement plan is recommended to be developed that will specifically outline how the public will be engaged and provide comments. A draft of the plan should be circulated to the SHPO and other interested parties for review and comment.
4. Interested and affected Tribes also must be consulted regarding the effects of the proposal including defining the APE since areas of cultural importance to tribes may be off-shore or perhaps in international waters. Tribal consultation should be ongoing and meaningful and any comments received by Tribal representatives should be carefully considered and responded to.
5. Thank you for the discussion about the distinction between the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). Please keep in mind that the SHPO typically does not respond to NEPA correspondence/documents unless the SHPO is formally notified that the Navy has decided to combine the two processes.
6. In the event that the Navy reaches a determination that the proposal will have an adverse effect on National Register eligible and/or eligible resources, it will be important for the Navy to be prepared to commit and provide for an adequate level of mitigation including off-site and creative mitigation measures.
7. In drafting a memorandum of agreement (MOA) to mitigate for adverse effects, DAHP will look for alternative dispute resolution language that will bring about greater collaboration and transparency in resolving disputes that might arise over the course of implementing mitigation measure.

These comments are based on the information in your letter and on behalf of the SHPO in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR 800. We appreciate receiving copies of any correspondence or comments from concerned tribes and other parties that you receive as you consult under the requirements of 36 CFR 800.4(a)(4). Should additional information become available, our assessment may be revised.

Finally, please note that in order to streamline our responses, DAHP requires that all documents related to project reviews be submitted electronically. Correspondence, reports, notices, photos, etc. must now be submitted in PDF or JPG format. For more information about how to submit documents to DAHP please visit: <http://www.dahp.wa.gov/programs/shpo-compliance>. To assist you in conducting a cultural resource survey and inventory effort, DAHP has developed guidelines including requirements for survey reports. You can view or download a copy from our website.





Ms. Kendall Campbell  
September 30, 2016  
Page Three

Thank you for the opportunity to review and comment. If you have any questions, please contact me.

Sincerely,



Greg Griffith.  
Deputy State Historic Preservation Officer  
[Greg.griffith@dahp.wa.gov](mailto:Greg.griffith@dahp.wa.gov)  
360-586-3073

c: Jim Baumgart, Governor's Office  
Larry Campbell, Swinomish THPO  
Jackie Ferry, Samish Indian Nation, THPO  
Kristen Griffin, EBLA Reserve Manager  
Josephine Peters, Swinomish, Cultural Resource Protection  
Richard Young, Tulalip Tribes, Cultural Resources







DEPARTMENT OF THE NAVY

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

5090  
Ser N44/2354  
November 10, 2016

John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

Dear Mr. Fowler:

SUBJECT: PUBLIC INVOLVEMENT IN SECTION 106 FOR THE CONTINUATION AND INCREASE OF EA-18G OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

This letter is to notify you that the Navy, per 36 CFR 800.8(a), intends to utilize the Draft EIS public meetings to partially fulfill the section 106 public notification and consultation requirements. The Navy first notified the Advisory Council on Historic Preservation of this intent on 10 October 2014.

Five meetings will be held on the following days and locations:

- Monday, 5 December 2016: Fort Worden State Park-Conference Center USO Hall, Port Townsend, WA. 3:00 PM to 6:00 PM
- Tuesday, 6 December 2016: Oak Harbor Elks Lodge- Grande Hall, Oak Harbor, WA. 4:00 PM to 7:00 PM
- Wednesday, 7 December 2016: Lopez Center for Community and the Arts, Lopez Island, WA. 3:00 PM to 6:00 PM
- Thursday, 8 December 2016: Seafarer's Memorial Park Building, Anacortes, WA. 3:00 PM to 6:00 PM
- Friday, 9 December 2016: Coupeville High School Commons, Coupeville, WA. 4:00 PM to 7:00 PM

At these meetings cultural resource staff from NAS Whidbey Island will have a poster and handouts dedicated to discussing the section 106 consultation for this undertaking, the cultural resource analysis in the EIS, and tribal resources. The EIS team will provide NAS Whidbey Island cultural resource staff with all comments collected pertaining to cultural resources for consideration in the section 106 process.

If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer





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

5090  
Ser N44/2353  
November 10, 2016

Allyson Brooks, PhD  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
1110 South Capital Way, Suite 30  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

SUBJECT: LOG NO. 102214-23-USN: PUBLIC INVOLVEMENT IN SECTION 106 FOR THE CONTINUATION AND INCREASE OF EA-18G OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

This letter is to notify you that the Navy, per 36 CFR 800.8(a), intends to utilize the Draft EIS public meetings to partially fulfill the section 106 public notification and consultation requirements. The Navy first notified the Washington State Historic Preservation Officer (SHPO) of this intent on 10 October 2014 (Log No. 102214-23-USN).

Five meetings will be held on the following days and locations:

- Monday, 5 December 2016: Fort Worden State Park-Conference Center USO Hall, Port Townsend, WA. 3:00 PM to 6:00 PM
- Tuesday, 6 December 2016: Oak Harbor Elks Lodge- Grande Hall, Oak Harbor, WA. 4:00 PM to 7:00 PM
- Wednesday, 7 December 2016: Lopez Center for Community and the Arts, Lopez Island, WA. 3:00 PM to 6:00 PM
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If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer







DEPARTMENT OF THE NAVY

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

5090  
Ser N44/2373  
November 10, 2016

Mr. David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Mr. Brownell:

SUBJECT: PUBLIC INVOLVEMENT IN SECTION 106 FOR THE CONTINUATION AND INCREASE OF EA-18G OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

This letter is to notify you that the Navy, per 36 CFR 800.8(a), intends to utilize the Draft EIS public meetings to partially fulfill the section 106 public notification and consultation requirements.

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- Friday, 9 December 2016: Coupeville High School Commons, Coupeville, WA. 4:00 PM to 7:00 PM

At these meetings cultural resource staff from NAS Whidbey Island will have a poster and handouts dedicated to discussing the section 106 consultation for this undertaking, the cultural resource analysis in the EIS, and tribal resources. The EIS team will provide NAS Whidbey Island cultural resource staff with all comments collected pertaining to cultural resources for consideration in the section 106 process.

If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer







DEPARTMENT OF THE NAVY

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

5090  
Ser N44/2365  
November 10, 2016

Mr. Ken Pickard  
President  
Citizens of Ebey's Reserve  
P.O. Box 202  
Coupeville, WA 98239-0202

Dear Mr. Pickard:

SUBJECT: PUBLIC INVOLVEMENT IN SECTION 106 FOR THE CONTINUATION AND INCREASE OF EA-18G OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

This letter is to notify you that the Navy, per 36 CFR 800.8(a), intends to utilize the Draft EIS public meetings to partially fulfill the section 106 public notification and consultation requirements.

Five meetings will be held on the following days and locations:

- Monday, 5 December 2016: Fort Worden State Park-Conference Center USO Hall, Port Townsend, WA. 3:00 PM to 6:00 PM
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At these meetings cultural resource staff from NAS Whidbey Island will have a poster and handouts dedicated to discussing the section 106 consultation for this undertaking, the cultural resource analysis in the EIS, and tribal resources. The EIS team will provide NAS Whidbey Island cultural resource staff with all comments collected pertaining to cultural resources for consideration in the section 106 process.

If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer



**From:** Schwartz, Tracy CTR NAVFAC NW, EV2  
**To:** ["106 \(DAHP\)"; Brooks, Allyson \(DAHP\)](#)  
**Cc:** [Campbell, Kendall D CIV NAVFAC NW, PRW4](#)  
**Subject:** Log No. 102214-23-USN: 106 and NEPA Coordination for the Proposed Increase of EA-18G Operations, NAS Whidbey Island  
**Date:** Monday, November 14, 2016 8:00:00  
**Attachments:** [NEPA 106 Coordination, dtd 10 Nov 16 \(SHPO\).pdf](#)

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Good Morning Dr. Brooks,

Please find attached our letter with regard to the coordination of section 106 consultation and EIS NEPA public meetings for the proposed increase of EA-18G Growler aircraft operations and development of support facilities at Naval Air Station (NAS) Whidbey Island (Log No. 102214-23-USN).

Please CC Kendall Campbell on all correspondence.

Thank you and have a wonderful Monday!

-Tracy Schwartz

Cultural Resource Contract Support  
Naval Air Station Whidbey Island

Phone: 360.257.5742

Email: [tracy.schwartz.ctr@navy.mil](mailto:tracy.schwartz.ctr@navy.mil)



**Kirchler-Owen, Leslie**

---

**From:** Campbell, Kendall D CIV NAVFAC NW, PRW4 <kendall.campbell1@navy.mil>  
**Sent:** Tuesday, January 3, 2017 7:26 PM  
**To:** Padgett, Lisa M CIV USFF, N46; Romero, Joseph CAPT USFF, N01L; Stallings, Sarah CIV NAVFAC Atlantic  
**Cc:** Williamson, Todd H CIV NAVFAC LANT, EV; Bianchi, Michael C NAVFAC NW, PRW4; Shurling, Cynthia; Lyz Ellis  
**Subject:** FW: [Non-DoD Source] NPS comment on proposed APE for Growler Operations at NASWI  
**Attachments:** NPS Comment to Navy RE Growler APE\_3Jan2017.pdf

-----Original Message-----

From: Zipp, Roy [mailto:roy\_zipp@nps.gov]  
Sent: Tuesday, January 03, 2017 4:37 PM  
To: Campbell, Kendall D CIV NAVFAC NW, PRW4  
Cc: Griffin, Kristen; greg.griffith@dahp.wa.gov  
Subject: [Non-DoD Source] NPS comment on proposed APE for Growler Operations at NASWI

Hi Kendall,

Thanks for the opportunity to comment on the proposed APE. Sorry for the delayed response--we needed to review the full DEIS before we could fully comment on this undertaking.

Per the attached letter that I am mailing to you today, we do not believe the 65dB DNL sufficiently captures the APE.

We suggest you delineate the APE by modeling and mapping the 60db Sound Exposure Level and using that polygon as the basis for delineating the APE.

Best Regards,  
Roy

<<http://>>

\*\*\*\*\*  
Roy M. Zipp  
Superintendent, National Park Service Operations Ebey's Landing National Historical Reserve Reuble Farmstead

593 Fort Casey Road  
Coupeville, Washington 98239  
W: 360-678-5787

C: 360-630-1119  
[www.nps.gov/ebla](http://www.nps.gov/ebla)

\*\*\*\*\*

<<http://www.nps.gov/subjects/centennial/images/NPS-Centennial-E-Mail-Signature-with-Goal-11-24-14.jpg>>







# United States Department of the Interior

NATIONAL PARK SERVICE  
Ebey's Landing National Historical Reserve  
Reuble Farmstead  
593 Fort Casey Road  
Coupeville, Washington 98239

IN REPLY REFER TO:

January 3, 2017

Department of the Navy  
Whidbey Naval Air Station  
Attention: Kendall Campbell, Cultural Resources  
3730 North Charles Porter Avenue  
Oak Harbor, WA 98278-5000

RE: Area of Potential Affect for proposed increase of EA-18G Growler aircraft operations

Dear Ms Campbell: *Kendall*

As you know we are concerned about the proposed expansion of Growler operations at Outlying Field Coupeville (OLF) given the extreme noise from current conditions, and the understanding that circumstances would worsen significantly if Growler operations are increased as proposed. We are specifically concerned about the impacts to the nationally significant historic resources of the Reserve, especially the Reserve's cultural landscape, and we do not believe the proposal to delineate the APE using the 65dB Day-Night Average Sound Level (DNL) captures the spatial extent of historic resources that would be affected by this undertaking.

Growlers produce intense noise, across broad geographic areas, that is often louder than thunder. This extreme noise permeates the atmosphere of the Reserve well beyond the proposed 65dB DNL Area of Potential Affect (APE). For example, at the historic Ferry House near Ebey's Landing, acoustic monitoring conducted by NPS in summer 2015 documented 1,436 Growler overflight events that were audible for more than 28 hours over the one month monitoring timeframe. These events produced Sound Pressure Levels (SPL) up to 85 dB, and Sound Exposure Levels (SEL) as high as 96 dB (<https://irma.nps.gov/DataStore/Reference/Profile/2233340>). In spite of these findings, the Ferry House and adjacent historic resources would be excluded from the APE as presently proposed.

The Reserve's cultural landscape is a fundamental resource, as documented in the July 7, 1998 amendment to National Register Nomination for the Central Whidbey Island Historic District. As the lead federal preservation agency, the NPS has established cultural resource management policy and guidance for cultural landscapes that has been adopted by other agencies and preservation organizations. The Reserve was one of the first cultural landscapes recognized by the NPS, and the early 1980's research conducted here influenced the development of policy and professional procedures for the analysis and evaluation of the historic integrity of cultural landscapes throughout the United States (Susan Dolan, NPS Cultural Landscapes Program Manager, personal communication).

The cultural landscape within the Reserve enables visitors and residents to experience patterns of settlement, historic homes, and pastoral farmsteads that are still within their original farm, forest and marine settings. The cultural landscape includes prehistoric and historic settlement patterns and natural features that reflect human history and the unique northwest character of the area. Views and perceptual qualities, including the soundscape, contribute to the authenticity of the cultural landscape and enable one

to imagine what it was like to be here hundreds if not thousands of years ago. The Reserve is a nationally significant cultural landscape and unit of the NPS system. A more conservative metric for delineating the APE should be applied in deference to the nationally significant historical resources within the Reserve.

The Department of Defense Noise Working Group has identified supplemental metrics to the DNL, which averages noise and does not mirror the actual magnitude of individual noise events or the human experience of those events in real time. Research conducted by the U.S. Environmental Protection Agency (EPA) demonstrates that noise greater than 60 dB Sound Pressure Level (SPL) disrupts speech during normal conversation. In light of this EPA research and our monitoring results, we believe the APE should be delineated by modeling and mapping the 60 dB SPL contour line for Growler aircraft and using that polygon as the basis for the APE. This would be a much more appropriate surrogate metric for analyzing impacts to the sights, sounds, feelings and associations of place that are essential qualities of the cultural landscape and will be adversely impacted by this undertaking.

Thank you for the opportunity to comment on the proposed APE. I can be reached at 360-678-5787, or [roy\\_zipp@nps.gov](mailto:roy_zipp@nps.gov), if you have any further questions.

Sincerely,



Roy M. Zipp  
Superintendent, NPS Operation

cc: Kristen Griffin, Reserve Manager, Trust Board for Ebey's Landing  
Greg Griffith, Deputy State Historic Preservation Officer





January 25, 2017

Gary A. Mayes  
Rear Admiral  
U.S. Navy  
Commander, Navy Region Northwest  
1100 Hunley Road  
Silverdale, Washington 98315-1100

In future correspondence please refer to:

Project Tracking Code: 102214-23-USN

Re: Draft Environmental Impact Statement for Proposed Increase of EA-18G Growler Aircraft and Aircraft Operations and Development of Support Facilities, NASWI

Dear Rear Admiral Mayes:

Thank you for contacting the Washington State Historic Preservation Officer (SHPO) with notification of the availability of the Draft Environmental Impact Statement (DEIS) for the above referenced action proposed for Naval Air Station Whidbey Island (NASWI). The DEIS analyzes the potential environmental effects that may result from the addition of up to 36 Growler aircraft at NASWI. As a result of our review, we provide the following comments and recommendations for your consideration:

- 1) Based upon our review of the DEIS, we reach the opinion that cultural and historic resources within the area of potential effect (APE) will be adversely affected by implementation of the action as proposed. In reaching this opinion, we note the Criteria of Adverse Effect from 36 CFR 800.5 and cited in Table 4.6-1 is:  
*...found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register [of Historic Places] in a manner that would diminish the integrity of the property's location, setting, design, materials, workmanship, feeling, or association, Consideration shall be given to all qualifying characteristics of a historic property, including those that may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or cumulative.*

In addition, examples of adverse effect that are relevant to this proposal from 36 CFR 800.5 and Table 4.6-1 include, but not limited to:

- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features



- 2) We reiterate our concerns that the project APE defined as "...the area encompassed by the 65 dBA DNL noise contour that would exist in 2021 as represented by the No Action Alternative" (and drawn on Figure 3.6.1) is too restrictive and does not include portions of the region that will face comparable effects from "visual, atmospheric, or audible elements" as those areas within the 65 dBA lines as drawn in Figure 3.6-1. We note that the DEIS states that "...APE boundaries will be updated as consultation continues between the SHPO, consulting parties, American Indian tribes and nations, and other interested parties." Therefore, we recommend including in an expanded APE additional portions of Whidbey Island, Camano Island, Port Townsend vicinity, and San Juan Islands.
- 3) In addition, we are not convinced that the 65 dBA serves as the best or most appropriate measure for quantifying and assessing harmful levels of sound and vibrations from Growler activities. Our concern is based upon what appears to be an averaging of sound levels over long time periods that does not adequately capture the real time experience of brief but more numerous exposures to higher decibel levels, as well as the cumulative effect of these events.
- 4) Further, we note that the U.S. Department of Housing and Urban Development has posted on HUD Exchange (<https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control/>) standards that classify 65 dB as "normally unacceptable" and above 75 as being "unacceptable." Given discussion on page 4-194 of the Kester and Czech 2012 study at NSAWI finding takeoff sounds levels greater than 110 dBC, fosters additional concern of noise levels of historic properties receiving exposure to 75 dB and the need for further, perhaps ongoing, site specific sound testing, data gathering, analysis and a commensurate level of mitigation measures.
- 5) In a related comment, discussion in Chapter 4 on operational impacts of vibration on historic properties states "No significant physical damage as a result of aircraft operations has been reported to these structures as a result of continuous operation of aircraft for over 70 years" (p. 4-195) and "...sound levels damaging to structural components of buildings are not likely to occur." (p. 4-50) Again, our concerns are not allayed by these statement about the cumulative impacts of vibration and sound waves on the structural integrity of historic buildings/structures in the APE and beyond in communities such as Coupeville and Port Townsend.
- 6) Furthermore and even if a consensus were reached that the sound waves and vibration associated with flight operations have only minor impact on structural integrity, there is a concern that historic building owners will take steps to remedy rattling windows and replace cracking walls and ceilings with inappropriate replacement materials and methods, if not total replacement or abandonment, of the structure.
- 7) Overall, our larger concern about this proposal is the long-term and cumulative effects of increased flight operations on the character and qualities of historic places and communities that will experience increased levels and frequencies of noise. We do not see firm evidence in the DEIS that the characteristics and qualities that have drawn generations to the region to live, work, and recreate will not be significantly diminished, if not eventually lost, as a result of increased flight operations.



In summary, our review of the DEIS leads us to the opinion that the project implementation will adversely affect historic properties in the APE. We look forward to further consultation with the SHPO, Tribes, and other affected parties to avoid, minimize, or mitigate the adverse effect.

Thank you for the opportunity to review and comment. If you have any questions, please feel free to contact me.

Sincerely,



Allyson Brooks  
State Historic Preservation Officer  
[Allyson.Brooks@dahp.wa.gov](mailto:Allyson.Brooks@dahp.wa.gov)  
360-586-3066

C: Jim Baumgart, Governor's Office  
Kristin Griffin, Trust Board of Ebey's Landing NHR  
Deborah S. Stinson, Mayor, City of Port Townsend





## Kirchler-Owen, Leslie

---

**From:** Shurling, Cynthia  
**Sent:** Thursday, January 26, 2017 10:13 AM  
**To:** Kirchler-Owen, Leslie  
**Subject:** FW: Growler DEIS Comments  
**Attachments:** image001.jpg; 102214-23-USN\_122916.pdf

-----Original Message-----

From: Campbell, Kendall D CIV NAVFAC NW, PRW4 [mailto:kendall.campbell1@navy.mil]  
Sent: Wednesday, January 25, 2017 8:21 PM  
To: Padgett, Lisa M CIV USFF, N46 <Lisa.Padgett@navy.mil>; Stallings, Sarah CIV NAVFAC Atlantic <sarah.stallings@navy.mil>; Romero, Joseph CAPT USFF, N01L <joseph.romero1@navy.mil>  
Cc: Lyz Ellis <lyzellis@gmail.com>; Bianchi, Michael C NAVFAC NW, PRW4 <michael.bianchi1@navy.mil>; Williamson, Todd H CIV NAVFAC LANT, EV <todd.h.williamson1@navy.mil>; Shurling, Cynthia <CShurling@ene.com>  
Subject: FW: Growler DEIS Comments

I just received SHPO's response to the DEIS. The response is timely for discussion in the proposed CR meeting next week.

I have only had the opportunity to skim the letter, but it does not appear that there is anything unanticipated.

All My Best,  
Kendall

-----Original Message-----

From: Griffith, Greg (DAHP) [mailto:Greg.Griffith@DAHP.WA.GOV]  
Sent: Wednesday, January 25, 2017 4:47 PM  
To: Campbell, Kendall D CIV NAVFAC NW, PRW4  
Cc: Brooks, Allyson (DAHP); Whitlam, Rob (DAHP); Griffith, Greg (DAHP)  
Subject: [Non-DoD Source] Growler DEIS Comments

Hi Kendall, it is my understanding that the comment period on the DEIS on Growler Operations at NASWI has been extended to 2/24/2017. However, just to make sure, I am attaching a pdf of our comments to you as a place holder if I am mistaken on the time extension.

As usual, let us know if you have any questions.

Thank you

Greg Griffith

Deputy State Historic Preservation Officer

Washington State/Department of Archaeology & Historic Preservation

Greg.Griffith@dahp.wa.gov

360-586-3073 (desk)

360-890-2617 (mobile)

POB 48343/Olympia 98504-8343

My regular office hours are Monday through Friday, 8:00 am to 5:00 pm

Get involved! Check out Washington's State Historic Preservation Plan 2014-19: Getting the Future Right at [www.dahp.wa.gov](http://www.dahp.wa.gov) <<http://www.dahp.wa.gov/>>

Description: logo option FINAL - Small

Please note that in order to streamline our responses, DAHP requires that all documents related to project reviews be submitted electronically. Correspondence, reports, notices, photos, etc. must now be submitted in PDF or JPG format. For more information about how to submit documents to DAHP please visit: <http://www.dahp.wa.gov/programs/shpo-compliance>.



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

5090  
Ser N44/1522  
May 1, 2017

Mr. John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

Dear Mr. Fowler:

**SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station (NAS) Whidbey Island is continuing consultation on the definition of the Area of Potential Effect (APE) for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosure 1). The Navy thanks you for your comments and feedback on our initial APE and appreciates your continued participation in the Section 106 consultation.

Per 36 CFR §800.4(a), the Navy defined the APE based on the scale and scope of the undertaking, and after considering the comments received from the Washington State Historic Preservation Officer (SHPO) and the following participating parties, the Navy believes the APE as initially proposed is most appropriate for the reasons discussed on the following pages.

- Advisory Council on Historic Preservation
- Island County Commissioners (Districts 1, 2, and 3)
- Town of Coupeville
- City of Port Townsend
- National Park Service
- Trust Board of Ebey's Landing National Historical Reserve
- Washington State Parks
- Seattle Pacific University
- David Day
- Citizens of Ebey's Reserve (COER)
- Swinomish Indian Tribal Community
- Upper Skagit Tribe
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Lummi Nation

- Tulalip Tribes
- Suquamish Tribe
- Jamestown S'Klallam Tribe

NAS Whidbey Island has supported the Airborne Electronic Attack (AEA) mission since 1970 and is the only home base location of the Navy's AEA community in the continental United States. Today, NAS Whidbey Island provides facilities and support services for nine Carrier Air Wing (CVW) squadrons, three Expeditionary (EXP) squadrons, one Reserve squadron, and one Fleet Replacement Squadron (FRS).

Currently, the only aircraft capable of performing the AEA mission for the entire Department of Defense is the EA-18G, commonly called the Growler. The EA-18G began operations at NAS Whidbey Island in 2007. The full transition from the EA-6B to the EA-18G aircraft was completed on June 27, 2015. The Navy consulted with WA SHPO on the transition of the AEA mission aircraft to the new EA-18G in 2004. SHPO concurred with the Navy's finding of No Historic Properties Affected on November 3, 2004 (Log No. 110304-05-USN).

The proposed undertaking increases the number of EA-18G aircraft operating at NAS Whidbey Island and expands the number of annual airfield operations at NAS Whidbey Island's primary airport, Ault Field, as well as Outlying Landing Field (OLF) Coupeville. Airfield operations at Ault Field and OLF Coupeville occur within airspace controlled by NAS Whidbey Island and all operations are conducted consistent with FAA rules and regulations. Airfield operations specific to this undertaking include EA-18G take offs and landings, inter-facility transit, and Field Carrier Landing Practice (FCLP) at Ault Field and OLF Coupeville (Enclosure 2).

Under the proposed undertaking, the number of operational EA-18G aircraft home-based at NAS Whidbey Island would increase from 82 aircraft by up to 36 aircraft, for a total of up to 118 aircraft. This increase in aircraft requires renovation and construction of facilities at Ault Field to accommodate the additional aircraft. Additionally, annual airfield operations of the EA-18G aircraft would increase by up to 47% (ranging between approximately 40,100 to 41,400 operations). This represents a return to past levels of operations occurring in the 1970's, 1980's and 1990's. Depending on the distribution of FCLPs between the two airfields, the total number of airfield operations at Ault Field would increase between 12,300 and 38,700 operations, while the increase in annual airfield operations at OLF Coupeville would range from 2,200 to 29,000 operations.

As part of the Navy's public outreach, a detailed description and discussion of the APE was included in the Section 106 display and handout material presented at public meetings held December 5, 6, 7, 8, and 9 at Port Townsend, Oak Harbor, Lopez Island, Anacortes, and Coupeville, respectively. A cultural resource expert was present at the meetings to answer questions. Over 1,013 people attended those meetings, and over 4,300 comment submittals were received during the 105-day public comment period. Of the comments received, 12 individual



letters referenced the Navy's proposed APE. The material used at the public meetings remains available on the project website.

In our previous consultation, we proposed the use of the 65 decibel Day Night Sound Level (65 DNL) contour as a basis for the APE, which is the federal standard for land-use planning (Enclosure 3). The Navy carefully considered suggestions to use alternative noise measuring methodologies to define the APE, such as methods to measure noise from single events. However, we believe the use of 65 DNL contour is the most equitable and consistent methodology for defining the APE. Deviation from the 65 DNL had the effect of arbitrarily or preferentially including some historic properties for consideration over others. The Navy believes that the 65 DNL focuses the analysis on those historic properties that are routinely and repeatedly exposed to higher decibel levels of noise from military aircraft noise, as opposed to properties that are only occasionally exposed to aircraft noise or exposed to lower-levels of background noise from other community sources such as road traffic. The 65 DNL also best facilitates the determination of cumulative effects to historic properties as it encompasses areas that are routinely and repeatedly exposed to military aircraft noise.

Use of the 65 DNL to define the APE is consistent with long-standing practice among federal agencies, including the U.S. Environmental Protection Agency (EPA), Office of Housing and Urban Development (HUD), the Federal Aviation Administration (FAA), and the Department of Defense (DoD). Island County has also adopted the 65DNL for their land use planning authorities. It is common practice for noise levels greater than 65 DNL to be considered inconsistent with certain land uses, including the use of certain historic properties. For example, the FAA in 14 CFR Part 150 has created guidelines for evaluating land use compatibility with regard to noise exposure, and in practice, uses these guidelines to identify noise levels in excess of 65 DNL as an indirect impact that potentially diminishes the integrity of the historical property.

During our consultation, the National Park Service expressed concern that some portions of Ebey's Reserve fell outside the 65 DNL and suggested expanding the APE to the 60dB Sound Pressure Level (SPL); however, the 60 dB SPL threshold would capture noise levels consistent with common background noise and even human conversation. Such an overly inclusive threshold would provide little insight into the effects of aircraft noise on the Reserve. When based on the 65 DNL, the APE captures nearly the entirety of Ebey's Reserve. Therefore, the entire reserve will be considered in the Navy's analysis of determination of effects to historic properties (Enclosure 3). We will reconsider our defined APE if our identification of historic properties, determination of eligibility, or assessment of adverse effects reveals properties with significant historic features affected by sound levels.

The Navy has determined that the undertaking has the potential to impact historic properties both directly and indirectly, and has defined the APE by taking into consideration the following three components:

- On-installation Direct Effect Areas: Areas on the installation where historic properties could be directly impacted (i.e. ground disturbance, demolition, alteration).

- On-installation Indirect Effect Area: Areas within the installation bounded by the 65 dB Day Night Sound Level (DNL) noise contours where historic properties could remain undisturbed (i.e. introduction of visual, atmospheric, or audible elements).
- Off-installation Indirect Effect Area: Areas off installation but within operational areas potentially bounded by the 65 DNL noise contours (i.e. introduction of visual, atmospheric, or audible elements).

The Area of Potential Effect (APE) for this undertaking includes the location of all direct and indirect effects both on and off the installation within the 65 DNL contours (Enclosures 4 and 5).

Construction at NAS Whidbey Island, primarily at Ault Field, to accommodate the increase in EA-18G aircraft may have the following direct effects to historic properties:

- “Physical destruction of or damage to all or part of the property” [36 CFR 800.5(a)(2)(i)];
- “Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation” [36 CFR 800.5(a)(2)(ii)];
- “Removal of a property from its historic location” [36 CFR 800.5(a)(2)(iii)]; and
- “Change of the character of the property’s use or of physical features within the property’s settings” [36 CFR 800.5(a)(2)(iv)].

An increase in airfield operations at Ault Field and OLF Coupeville may have the following indirect effects to historic properties both on and off the installation:

- “Change of the character of the property’s use or of physical features within the property’s settings” [36 CFR 800.5(a)(2)(iv)]; and
- “Introduction of visual, atmospheric or audible elements” [36 CFR 800.5(a)(2)(v)].

The Navy also understands that the APE may include properties of cultural importance and significance to members of the traditional cultural groups of Whidbey Island. To identify properties with possible religious or cultural significance to affected tribes, the Navy has initiated consultation with the following tribes:

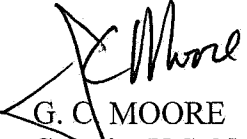
- Swinomish Indian Tribal Community
- Upper Skagit Tribe
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Lummi Nation
- Tulalip Tribes
- Suquamish Tribe
- Jamestown S’Klallam Tribe

The Navy looks forward to continued consultations with you as we begin our historic resource identification effort. If during the identification and evaluation of historic properties the

5090  
Ser N44/1522  
May 1, 2017

Navy determines it necessary to expand the APE, we will consult with SHPO and our other consulting parties to amend the APE. If you require additional information, please contact Kendall Campbell, NAS Whidbey Island Cultural Resources Program Manager at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

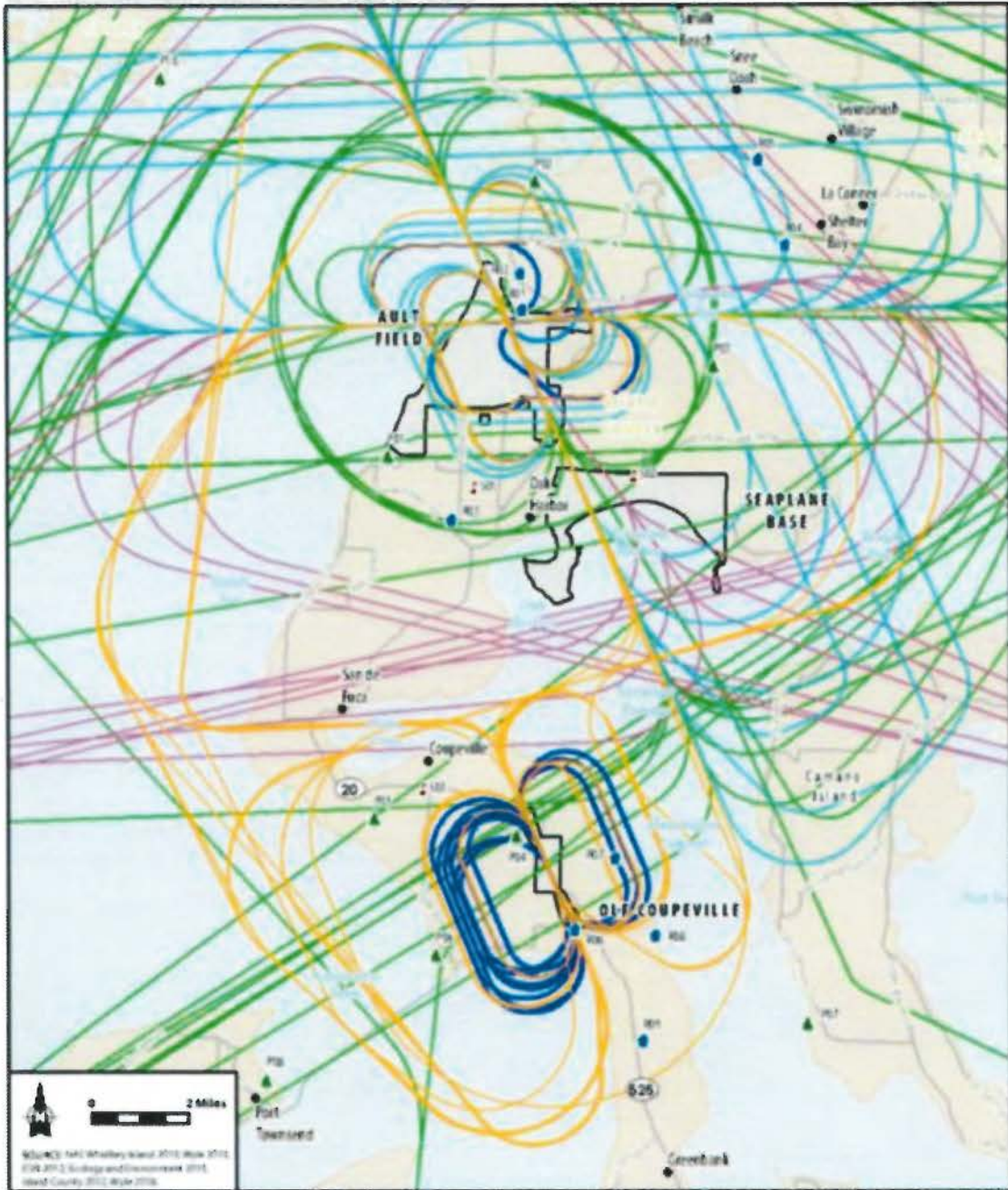
Sincerely,

  
G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

- Enclosures:
1. NAS Whidbey Island Site Locations
  2. Airfield Operations
  3. Most Expansive Aggregate 65 DNL Noise Contour
  4. Area of Potential Direct Effect
  5. Area of Potential Indirect Effects



Enclosure (1)



- City
- County Boundary
- Major Road
- Interfacility Track
- ICLP Flight Tracks
- Pattern Operations Flight Tracks
- Departure Flight Tracks
- Arrival Flight Tracks
- ▭ Installation Area
- Points of Interest (POI)
- ▲ Park
- Residential
- School

**Figure 2**  
**Flight Tracks**  
Whidbey Island, Island County, WA





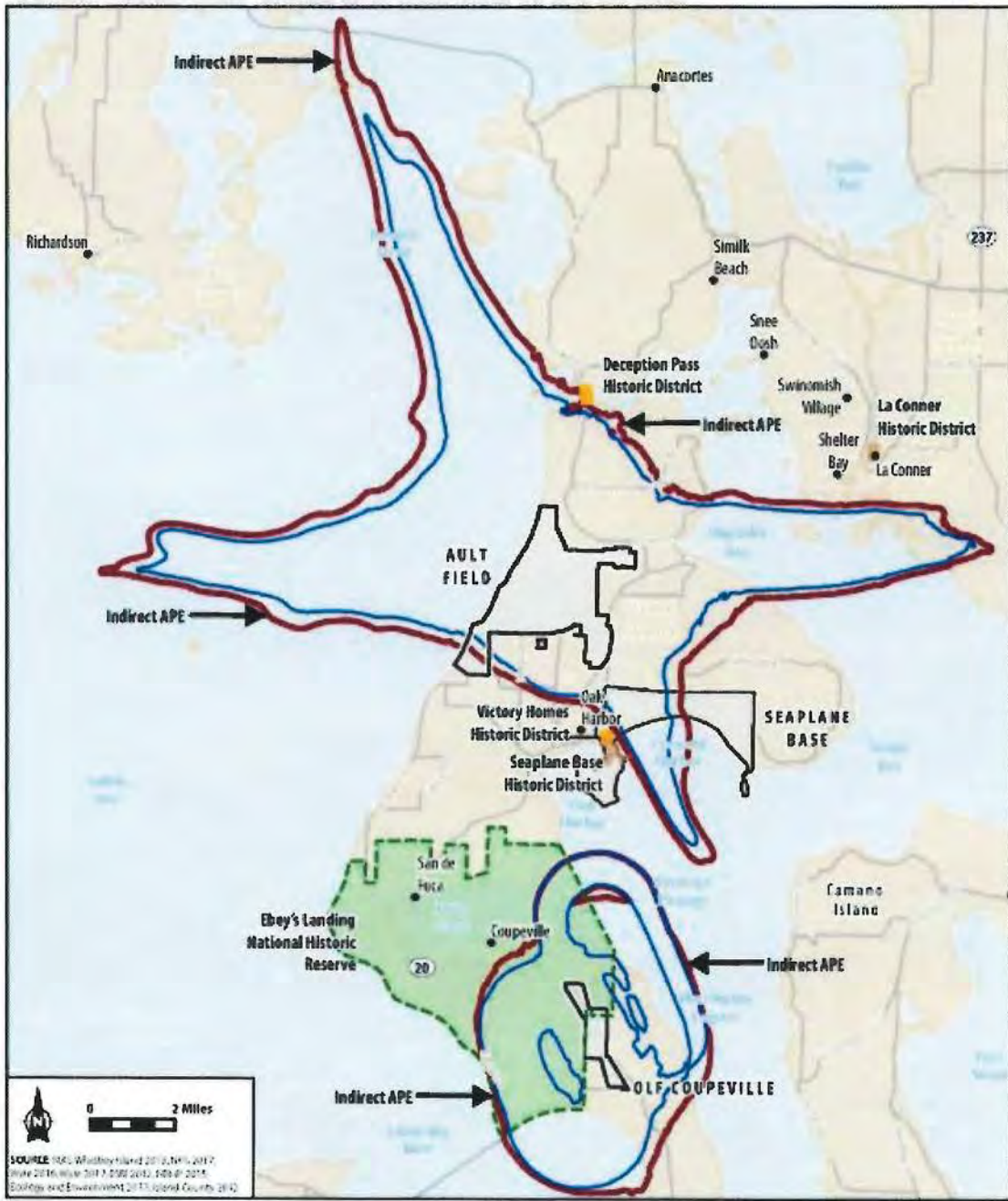
**Figure 1**  
**Aggregate 65 DNL**  
**Noise Contour**  
 Whidbey Island, Island County, WA

● City  
 — County Boundary  
 — Major Road  
 - - - Aggregate 65 DNL (Average) Noise Contour (dotted)  
 ■ Historic District  
 ■ Historic Reserve  
 □ Insulator Area

\*The Aggregate 65 DNL is an area created by combining all Average 65 DNL airports. This is the same as the 65 Area of Potential Effect (APE).







- City
- County Boundary
- Major Road
- Indirect APE Aggregate 65 DNL (Average) Noise Contour IDBt
- No Action 65 DNL (Average) Noise Contour IDBt
- Historic District
- Historic Reserve
- Installation Area

\*The Aggregate 65 DNL is an area created by combining all Average 65 DNL options. This is the same as the 60 Area of Potential Effect (APE).

**Enclosure 5**  
**Indirect APE Aggregate 65 DNL and**  
**No Action 65 DNL Noise Contours**  
 Whidbey Island, Island County, WA





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

5090  
Ser N44/1536  
May 1, 2017

Allyson Brooks, PhD  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
1110 South Capital Way, Suite 30  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: LOG NO. 102214-23-USN: CONTINUING SECTION 106 CONSULTATION ON THE DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

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The Navy has determined that the undertaking has the potential to impact historic properties both directly and indirectly, and has defined the APE by taking into consideration the following three components:

- On-installation Direct Effect Areas: Areas on the installation where historic properties could be directly impacted (i.e. ground disturbance, demolition, alteration).

- On-installation Indirect Effect Area: Areas within the installation bounded by the 65 dB Day Night Sound Level (DNL) noise contours where historic properties could remain undisturbed (i.e. introduction of visual, atmospheric, or audible elements).
- Off-installation Indirect Effect Area: Areas off installation but within operational areas potentially bounded by the 65 DNL noise contours (i.e. introduction of visual, atmospheric, or audible elements).

The Area of Potential Effect (APE) for this undertaking includes the location of all direct and indirect effects both on and off the installation within the 65 DNL contours (Enclosures 4 and 5).

Construction at NAS Whidbey Island, primarily at Ault Field, to accommodate the increase in EA-18G aircraft may have the following direct effects to historic properties:

- “Physical destruction of or damage to all or part of the property” [36 CFR 800.5(a)(2)(i)];
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- “Change of the character of the property’s use or of physical features within the property’s settings” [36 CFR 800.5(a)(2)(iv)].

An increase in airfield operations at Ault Field and OLF Coupeville may have the following indirect effects to historic properties both on and off the installation:

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- “Introduction of visual, atmospheric or audible elements” [36 CFR 800.5(a)(2)(v)].

The Navy also understands that the APE may include properties of cultural importance and significance to members of the traditional cultural groups of Whidbey Island. To identify properties with possible religious or cultural significance to affected tribes, the Navy has initiated consultation with the following tribes:

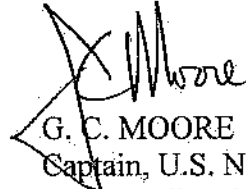
- Swinomish Indian Tribal Community
- Upper Skagit Tribe
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Lummi Nation
- Tulalip Tribes
- Suquamish Tribe
- Jamestown S’Klallam Tribe

The Navy looks forward to continued consultations with you as we begin our historic resource identification effort. If during the identification and evaluation of historic properties the

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May 1, 2017

Navy determines it necessary to expand the APE, we will consult with SHPO and our other consulting parties to amend the APE. If you require additional information, please contact Kendall Campbell, NAS Whidbey Island Cultural Resources Program Manager at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

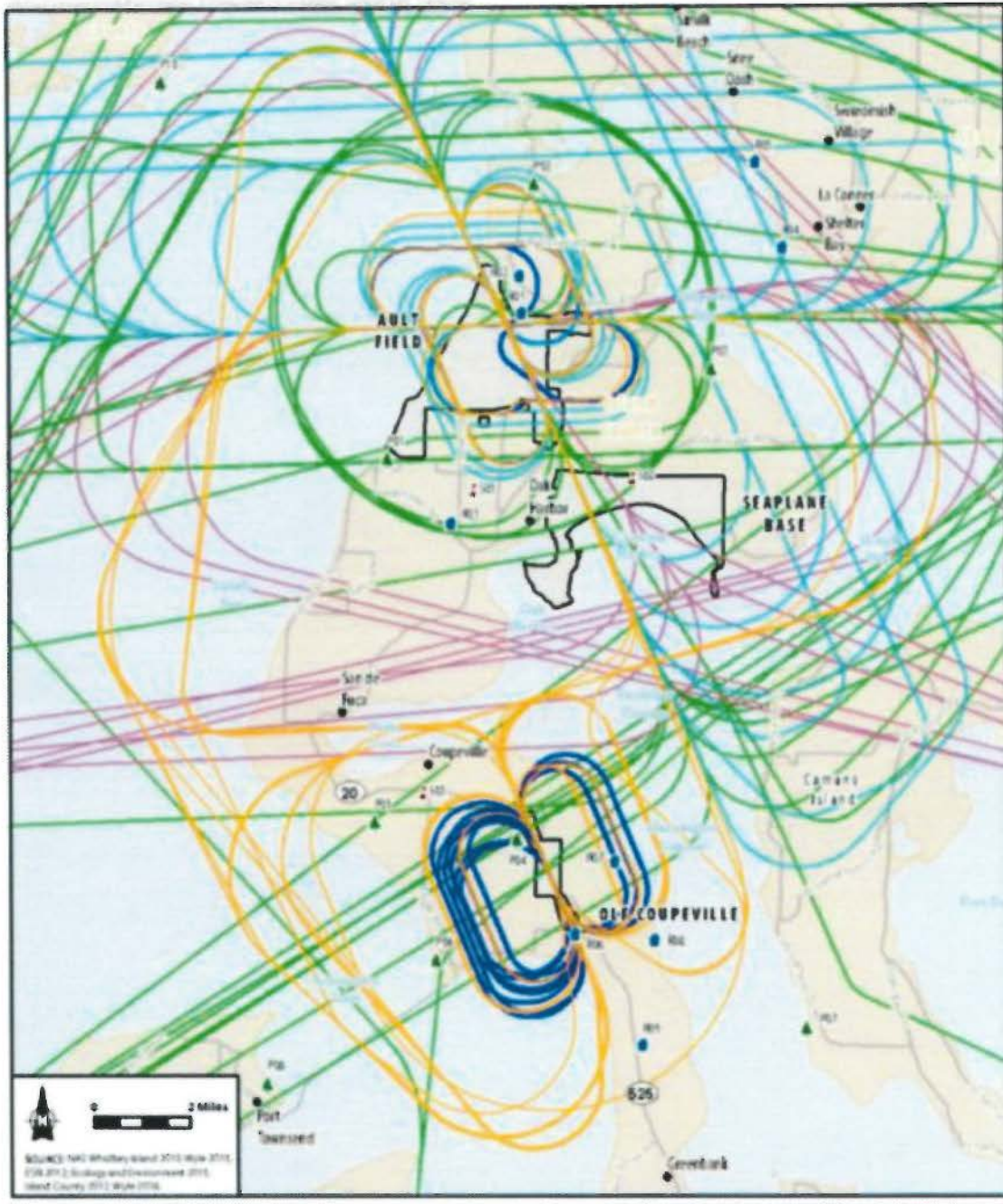


G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

- Enclosures:
1. NAS Whidbey Island Site Locations
  2. Airfield Operations
  3. Most Expansive Aggregate 65 DNL Noise Contour
  4. Area of Potential Direct Effect
  5. Area of Potential Indirect Effects









**Figure 2**  
**Flight Tracks**  
 Whitley Island, Island County, WA





SOURCE: FAA/Whidbey Island 2010, July 2011;  
 RFP 2012, Ecology and Environment 2010;  
 Island County, 2011, July 2014.

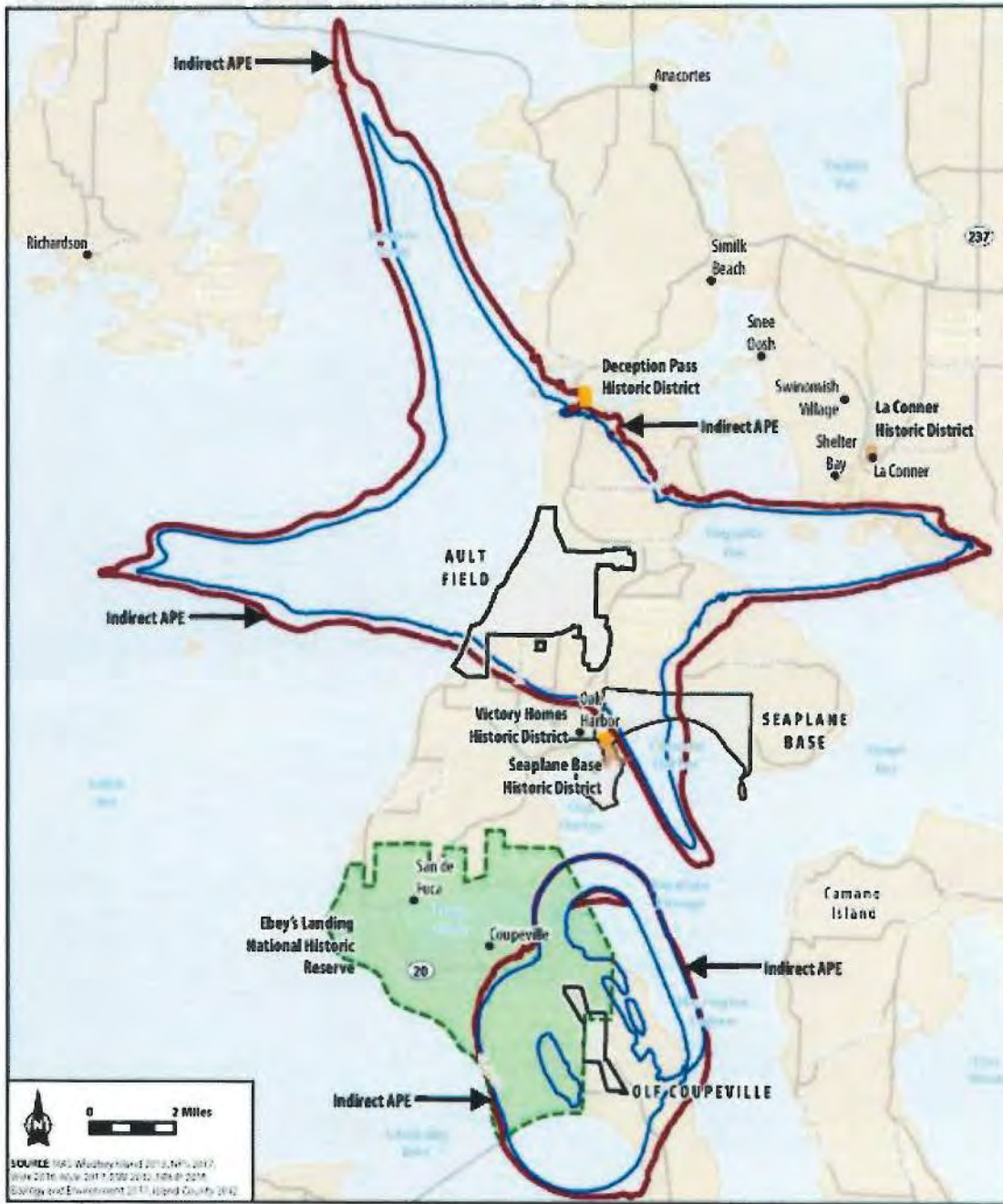
- City
- County Boundary
- Major Road
- Aggregate 65 DNL (Average) Noise Contour (DNL)
- Historic District
- Historic Reserve
- Installation Area

\*The Aggregate 65 DNL noise area created by combining all Average 65 DNL systems. This is the same as the 65 Day of Exceedance (DfE) level.

**Figure 1**  
**Aggregate 65 DNL**  
**Noise Contour**  
 Whidbey Island, Island County, WA







- City
- County Boundary
- Major Road
- Indirect APE Aggregate 65 DNL (Average Noise Contour IDB)
- No Action 65 DNL (Average Noise Contour IDB)
- Historic District
- Historic Reserve
- Installation Area

The Aggregate 65 DNL is an area created by combining all Average 65 DNL updates. This is the same as the 65 Day of Potential Best OARs.

**Enclosure 5  
Indirect APE Aggregate 65 DNL and  
No Action 65 DNL Noise Contours  
Whidbey Island, Island County, WA**



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

5090  
Ser N44/1527  
May 1, 2017

Mr. David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Mr. Brownell:

**SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station (NAS) Whidbey Island is continuing consultation on the definition of the Area of Potential Effect (APE) for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosure 1). The Navy thanks you for your comments and feedback on our initial APE and appreciates your continued participation in the Section 106 consultation.

Per 36 CFR §800.4(a), the Navy defined the APE based on the scale and scope of the undertaking, and after considering the comments received from the Washington State Historic Preservation Officer (SHPO) and the following participating parties, the Navy believes the APE as initially proposed is most appropriate for the reasons discussed on the following pages.

- Advisory Council on Historic Preservation
- Island County Commissioners (Districts 1, 2, and 3)
- Town of Coupeville
- City of Port Townsend
- National Park Service
- Trust Board of Ebey's Landing National Historical Reserve
- Washington State Parks
- Seattle Pacific University
- David Day
- Citizens of Ebey's Reserve (COER)
- Swinomish Indian Tribal Community
- Upper Skagit Tribe
- Samish Indian Nation
- Stillaguamish Tribe of Indians of Washington
- Lummi Nation

- Tulalip Tribes
- Suquamish Tribe
- Jamestown S'Klallam Tribe

NAS Whidbey Island has supported the Airborne Electronic Attack (AEA) mission since 1970 and is the only home base location of the Navy's AEA community in the continental United States. Today, NAS Whidbey Island provides facilities and support services for nine Carrier Air Wing (CVW) squadrons, three Expeditionary (EXP) squadrons, one Reserve squadron, and one Fleet Replacement Squadron (FRS).

Currently, the only aircraft capable of performing the AEA mission for the entire Department of Defense is the EA-18G, commonly called the Growler. The EA-18G began operations at NAS Whidbey Island in 2007. The full transition from the EA-6B to the EA-18G aircraft was completed on June 27, 2015. The Navy consulted with WA SHPO on the transition of the AEA mission aircraft to the new EA-18G in 2004. SHPO concurred with the Navy's finding of No Historic Properties Affected on November 3, 2004 (Log No. 110304-05-USN).

The proposed undertaking increases the number of EA-18G aircraft operating at NAS Whidbey Island and expands the number of annual airfield operations at NAS Whidbey Island's primary airport, Ault Field, as well as Outlying Landing Field (OLF) Coupeville. Airfield operations at Ault Field and OLF Coupeville occur within airspace controlled by NAS Whidbey Island and all operations are conducted consistent with FAA rules and regulations. Airfield operations specific to this undertaking include EA-18G take offs and landings, inter-facility transit, and Field Carrier Landing Practice (FCLP) at Ault Field and OLF Coupeville (Enclosure 2).

Under the proposed undertaking, the number of operational EA-18G aircraft home-based at NAS Whidbey Island would increase from 82 aircraft by up to 36 aircraft, for a total of up to 118 aircraft. This increase in aircraft requires renovation and construction of facilities at Ault Field to accommodate the additional aircraft. Additionally, annual airfield operations of the EA-18G aircraft would increase by up to 47% (ranging between approximately 40,100 to 41,400 operations). This represents a return to past levels of operations occurring in the 1970's, 1980's and 1990's. Depending on the distribution of FCLPs between the two airfields, the total number of airfield operations at Ault Field would increase between 12,300 and 38,700 operations, while the increase in annual airfield operations at OLF Coupeville would range from 2,200 to 29,000 operations.

As part of the Navy's public outreach, a detailed description and discussion of the APE was included in the Section 106 display and handout material presented at public meetings held December 5, 6, 7, 8, and 9 at Port Townsend, Oak Harbor, Lopez Island, Anacortes, and Coupeville, respectively. A cultural resource expert was present at the meetings to answer questions. Over 1,013 people attended those meetings, and over 4,300 comment submittals were received during the 105-day public comment period. Of the comments received, 12 individual

letters referenced the Navy's proposed APE. The material used at the public meetings remains available on the project website.

In our previous consultation, we proposed the use of the 65 decibel Day Night Sound Level (65 DNL) contour as a basis for the APE, which is the federal standard for land-use planning (Enclosure 3). The Navy carefully considered suggestions to use alternative noise measuring methodologies to define the APE, such as methods to measure noise from single events. However, we believe the use of 65 DNL contour is the most equitable and consistent methodology for defining the APE. Deviation from the 65 DNL had the effect of arbitrarily or preferentially including some historic properties for consideration over others. The Navy believes that the 65 DNL focuses the analysis on those historic properties that are routinely and repeatedly exposed to higher decibel levels of noise from military aircraft noise, as opposed to properties that are only occasionally exposed to aircraft noise or exposed to lower-levels of background noise from other community sources such as road traffic. The 65 DNL also best facilitates the determination of cumulative effects to historic properties as it encompasses areas that are routinely and repeatedly exposed to military aircraft noise.

Use of the 65 DNL to define the APE is consistent with long-standing practice among federal agencies, including the U.S. Environmental Protection Agency (EPA), Office of Housing and Urban Development (HUD), the Federal Aviation Administration (FAA), and the Department of Defense (DoD). Island County has also adopted the 65DNL for their land use planning authorities. It is common practice for noise levels greater than 65 DNL to be considered inconsistent with certain land uses, including the use of certain historic properties. For example, the FAA in 14 CFR Part 150 has created guidelines for evaluating land use compatibility with regard to noise exposure, and in practice, uses these guidelines to identify noise levels in excess of 65 DNL as an indirect impact that potentially diminishes the integrity of the historical property.

During our consultation, the National Park Service expressed concern that some portions of Ebey's Reserve fell outside the 65 DNL and suggested expanding the APE to the 60dB Sound Pressure Level (SPL); however, the 60 dB SPL threshold would capture noise levels consistent with common background noise and even human conversation. Such an overly inclusive threshold would provide little insight into the effects of aircraft noise on the Reserve. When based on the 65 DNL, the APE captures nearly the entirety of Ebey's Reserve. Therefore, the entire reserve will be considered in the Navy's analysis of determination of effects to historic properties (Enclosure 3). We will reconsider our defined APE if our identification of historic properties, determination of eligibility, or assessment of adverse effects reveals properties with significant historic features affected by sound levels.

The Navy has determined that the undertaking has the potential to impact historic properties both directly and indirectly, and has defined the APE by taking into consideration the following three components:

- On-installation Direct Effect Areas: Areas on the installation where historic properties could be directly impacted (i.e. ground disturbance, demolition, alteration).



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- Off-installation Indirect Effect Area: Areas off installation but within operational areas potentially bounded by the 65 DNL noise contours (i.e. introduction of visual, atmospheric, or audible elements).

The Area of Potential Effect (APE) for this undertaking includes the location of all direct and indirect effects both on and off the installation within the 65 DNL contours (Enclosures 4 and 5).

Construction at NAS Whidbey Island, primarily at Ault Field, to accommodate the increase in EA-18G aircraft may have the following direct effects to historic properties:

- “Physical destruction of or damage to all or part of the property” [36 CFR 800.5(a)(2)(i)];
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An increase in airfield operations at Ault Field and OLF Coupeville may have the following indirect effects to historic properties both on and off the installation:

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- “Introduction of visual, atmospheric or audible elements” [36 CFR 800.5(a)(2)(v)].

The Navy understands that the project area and its surrounding location may have cultural importance and significance to the Jamestown S’Klallam Tribe. Section 106 of the NHPA requires federal agencies to seek information from tribes likely to have knowledge of, or concerns with, historic resources within the project’s APE. We are specifically seeking your comments on our proposed APE and will continue consultation in the near future to identify properties that may have religious or cultural significance and may be eligible for listing in the National Register of Historic Places, including Traditional Cultural Properties.

We appreciate any assistance you could provide us in our efforts to comply with Section 106 of the NHPA. Please be assured that the Navy will treat any information you share with us with the degree of confidentiality that is required in Section 800.11(c) of the NHPA, or with any other special restrictions you may require.

The Navy looks forward to continued consultations with you as we begin our historic resource identification effort. If during the identification and evaluation of historic properties the Navy determines it necessary to expand the APE, we will consult with SHPO and our other consulting parties to amend the APE. If you require additional information, please contact



5090  
Ser N44/1527  
May 1, 2017

Kendall Campbell, NAS Whidbey Island Cultural Resources Program Manager at (360) 257-6780 or kendall.campbell1@navy.mil.

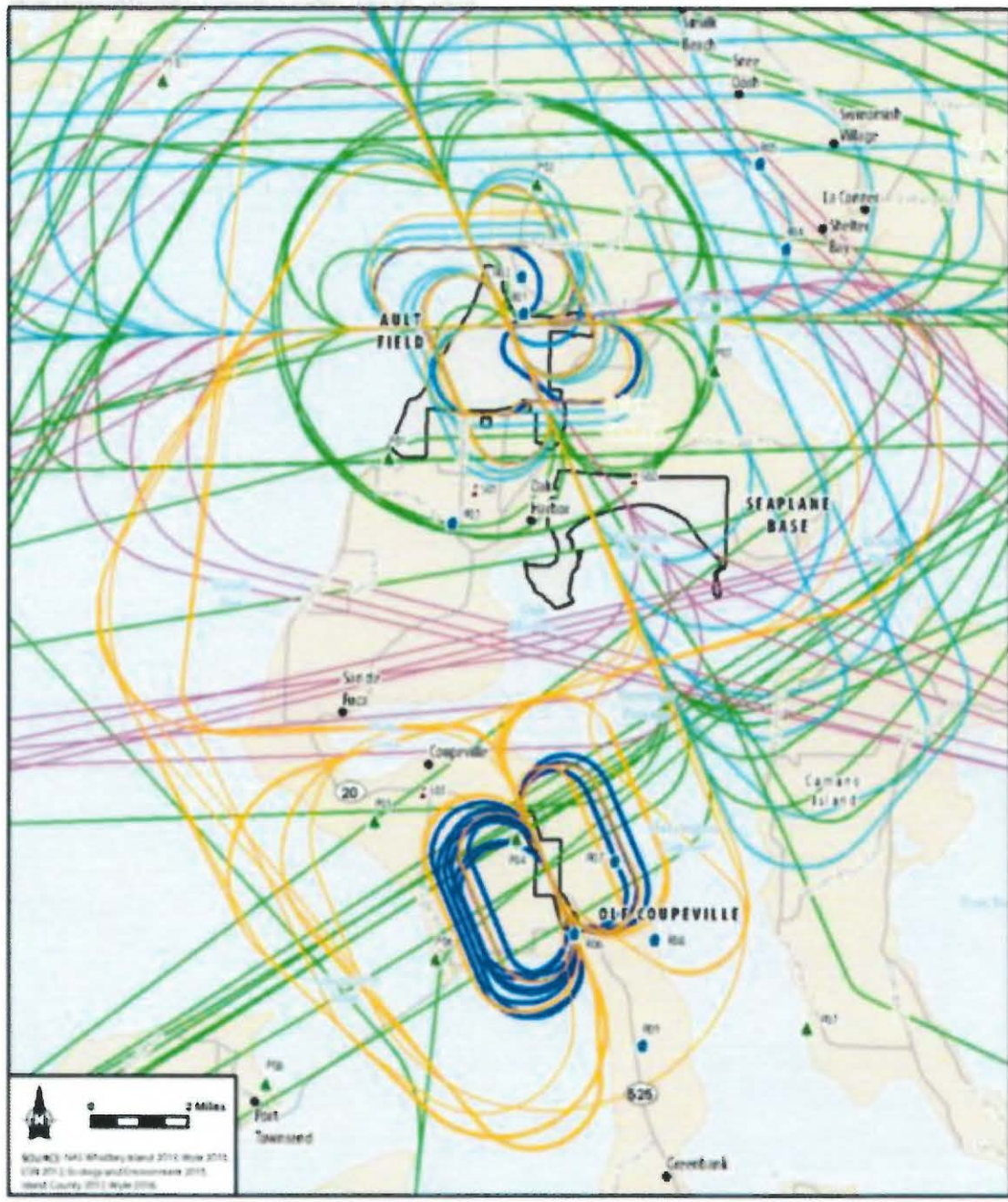
Sincerely,

A handwritten signature in black ink, appearing to read "G. C. Moore". The signature is written in a cursive style with a large, stylized initial "G".

G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

- Enclosures:
1. NAS Whidbey Island Site Locations
  2. Airfield Operations
  3. Most Expansive Aggregate 65 DNL Noise Contour
  4. Area of Potential Direct Effect
  5. Area of Potential Indirect Effects






**Figure 2**  
**Flight Tracks**  
 Whittier Island, Island County, WA






 0 2 Miles  
 SOURCE: Snohomish County 2010, WSP 2011, FWA 2011, Ecology and Environment 2010, Island County 2012, date 07/14

- City
- County Boundary
- Major Road
- Aggregate 65 DNL (Average) Noise Contour (dashed red line)
- Historic District
- Historic Reserve
- Installation Area

\*The Aggregate 65 DNL noise area created by combining all Average 65 DNL options. This is the same as the 65 Area of Potential Noise (APN).

**Figure 1**  
**Aggregate 65 DNL**  
**Noise Contour**  
 Whidbey Island, Island County, WA










SOURCE: IMC, Whidbey Island 2012, 2014, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100.

- City
- County Boundary
- Major Road
- Indirect APE Aggregate 65 DNL (Average) Noise Contour (dBi)
- No Action 65 DNL (Average) Noise Contour (dBi)
- Historic District
- Historic Reserve
- Installation Area

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**Enclosure 5**  
**Indirect APE Aggregate 65 DNL and**  
**No Action 65 DNL Noise Contours**  
 Whidbey Island, Island County, WA



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

5090  
Ser N44/1523  
May 1, 2017

Mr. Ken Pickard  
President  
Citizens of Ebey's Reserve  
P.O. Box 202  
Coupeville, WA 98239

Dear Mr. Pickard:

**SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE DEFINITION OF THE AREA OF POTENTIAL EFFECT FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station (NAS) Whidbey Island is continuing consultation on the definition of the Area of Potential Effect (APE) for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosure 1). The Navy thanks you for your comments and feedback on our initial APE and appreciates your continued participation in the Section 106 consultation.

Per 36 CFR §800.4(a), the Navy defined the APE based on the scale and scope of the undertaking, and after considering the comments received from the Washington State Historic Preservation Officer (SHPO) and the following participating parties, the Navy believes the APE as initially proposed is most appropriate for the reasons discussed on the following pages.

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- Seattle Pacific University
- David Day
- Citizens of Ebey's Reserve (COER)
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- Upper Skagit Tribe
- Samish Indian Nation
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The Navy also understands that the APE may include properties of cultural importance and significance to members of the traditional cultural groups of Whidbey Island. To identify properties with possible religious or cultural significance to affected tribes, the Navy has initiated consultation with the following tribes:

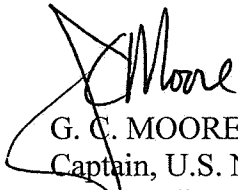
- Swinomish Indian Tribal Community
- Upper Skagit Tribe
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- Stillaguamish Tribe of Indians of Washington
- Lummi Nation
- Tulalip Tribes
- Suquamish Tribe
- Jamestown S’Klallam Tribe

The Navy looks forward to continued consultations with you as we begin our historic resource identification effort. If during the identification and evaluation of historic properties the

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May 1, 2017

Navy determines it necessary to expand the APE, we will consult with SHPO and our other consulting parties to amend the APE. If you require additional information, please contact Kendall Campbell, NAS Whidbey Island Cultural Resources Program Manager at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

  
G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

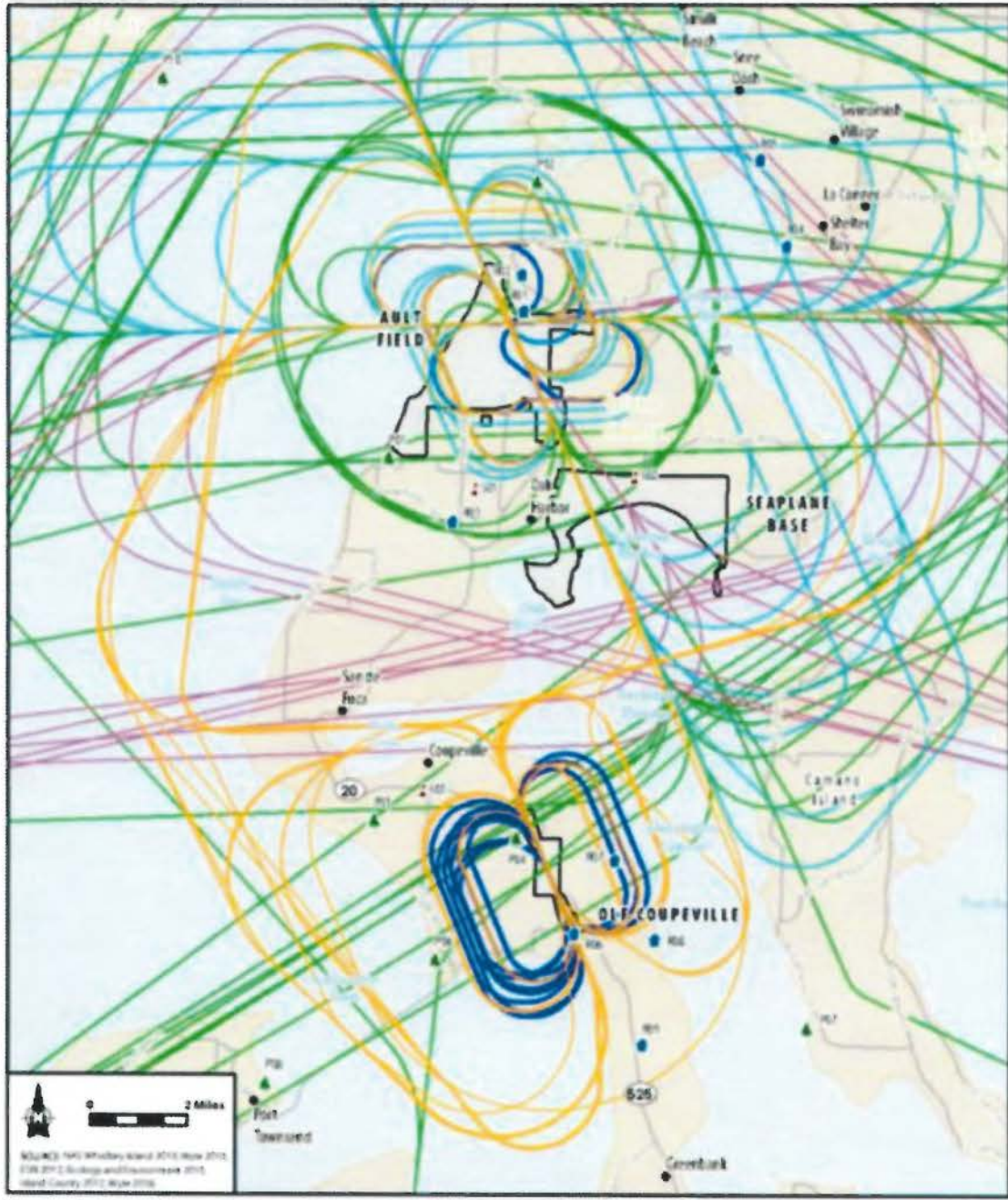
Enclosures: 

1. NAS Whidbey Island Site Locations
2. Airfield Operations
3. Most Expansive Aggregate 65 DNL Noise Contour
4. Area of Potential Direct Effect
5. Area of Potential Indirect Effects



Enclosure (1)





- City
- County Boundary
- Major Road
- Interfacility Track
- ICLP Flight Tracks
- Harbor Operations Flight Tracks
- Departure Flight Tracks
- Arrival Flight Tracks
- ▭ Installation Area
- Points of Interest (POI)
- Park
- Residential
- School

**Figure 2**  
**Flight Tracks**  
Whitby Island, Island County, WA



0 2 Miles
   
 SOURCE: 1) Air Whidbey Island 2010, June 2010.
   
 2) 65 DNL, Acoustic and Environment 2010.
   
 3) Island County, 2011, State 2010.

- City
- County Boundary
- Major Road
- Aggregate 65 DNL (Average) Noise Contour (65)
- Historic District
- Historic Reserve
- Island Area

\* The Aggregate 65 DNL is an area created by combining all Average 65 DNL systems. This is the same as the 65 Area of Increased Effect (AIE).

**Figure 1**  
**Aggregate 65 DNL**  
**Noise Contour**  
 Whidbey Island, Island County, WA







- City
- County Boundary
- Major Road
- Indirect APE Aggregate 65 DNL (Average) Noise Contour (dBi)
- No Action 65 DNL (Average) Noise Contour (dBi)
- Historic District
- Historic Reserve
- Installation Area

\*The Aggregate 65 DNL is an area created by combining all Average 65 DNL contours. This is the same as the RT-Noise of Potential Effect (APE).

**Enclosure 5**  
**Indirect APE Aggregate 65 DNL and**  
**No Action 65 DNL Noise Contours**  
 Whidbey Island, Island County, WA





Allyson Brooks Ph.D., Director  
State Historic Preservation Officer

May 10, 2017

Captain G.C. Moore  
Commanding Officer  
US Dept. of the Navy  
3730 North Charles Porter Ave.  
Oak Harbor, WA98278-5000

In future correspondence please refer to:

Project Tracking Code: 102214-23-USN

Property: Whidbey Island Naval Air Station and OLF Coupeville

Re: Definition of the Area of Potential Effect for the Proposed Increase in EA-18G Growler Operations at Naval Air Station Whidbey Island

Dear Captain Moore:

Thank you for contacting the State Historic Preservation Officer (SHPO) and Department of Archaeology and Historic Preservation (DAHP) regarding the above referenced project. We are responding to your letter of May 1, 2017, providing a description and map of the proposed area of potential effect (APE) for EA-18G Growler operations.

As a result of our review, we **disagree** with the APE in your proposed letter. As a compromise we are proposing a more reasonable and comprehensive APE that is bounded by the yellow Inter Facility Track line, as identified in Figure 2 in your letter of May 1, 2017. We contend that the yellow Inter Facility Tract line is more reasonable based on the nature of the undertaking, recognizes the Naval Air Station Whidbey Island as an interconnected complex, and includes the historic properties that will be affected by this undertaking.

Please provide us with your survey methodology before proceeding with any inventories. Along with the results of the inventory we will need to review your consultation with the concerned tribes, and other interested/affected parties. Please provide any correspondence or comments from concerned tribes and/or other parties that you receive as you consult under the requirements of 36 CFR 800.4(a)(4).

These comments are based on the information available at the time of this review and on behalf of the SHPO in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR 800. Should additional information about the project become available, our assessment may be revised.

Finally, please note that in order to streamline responses, DAHP requires that all documents related to project reviews be submitted electronically. Correspondence, reports, notices, photos, etc. must now be submitted in PDF or JPG format. For more information about how to submit documents to DAHP please visit: <http://www.dahp.wa.gov/programs/shpo-compliance>.



Captain G.C. Moore  
May 10, 2017  
Page Two

To assist you in conducting a cultural resource survey and inventory effort, DAHP has developed guidelines including requirements for survey reports. You can view or download a copy from our website.

Thank you for the opportunity to review and comment. Should you have any questions, please feel free to contact me.

Sincerely,



Allyson Brooks, Ph.D.  
State Historic Preservation Officer  
(360 586-3066  
[Allyson.Brooks@dahp.wa.gov](mailto:Allyson.Brooks@dahp.wa.gov)

C: Jim Baumgart, Governor's Policy Office  
Kendall Campbell, WINAS Cultural Resources  
Katherine Kerr, Advisory Council on Historic Preservation  
Lisa Padgett, WINAS, NEPA Lead





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

5090  
Ser N44/2740  
July 14, 2017

Dr. Allyson Brooks  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
1110 South Capital Way, Suite 30  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: LOG NO. 102214-23-USN: CONTINUING SECTION 106 CONSULTATION ON THE DEFINITION OF THE AREA OF POTENTIAL EFFECTS FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR Part 800, Naval Air Station (NAS) Whidbey Island is continuing consultation on the definition of the Area of Potential Effects (APE) for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington (Enclosure 1).

The Navy appreciates the feedback you provided during our meeting on May 10, 2017 and in your May 10, 2017 letter. The Navy has given careful consideration to the concerns you raised and recognizes the controversial nature of aircraft noise. However, the requirement under 36 CFR 800.4(a) is to define the APE based on the geographic area within which the undertaking may directly or indirectly affect the character or use of historic properties. It is the Navy's decision that 65 decibel (dB) Day Night Sound Level (DNL) contour line remain the basis for the indirect APE because it is the most appropriate standard for assessing potential indirect effects to historic properties for this undertaking.

The Navy carefully considered the proposed alternative APE to use the Inter Facility Track line as opposed to the aggregated 65 dB DNL contour line (Enclosure 2). In assessing the geographic areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, the Navy determined that the Inter Facility Track line did not equitably account for the potential effects to historic properties surrounding both Ault Field and OLF Coupeville. The Inter Facility Track line represents operations that primarily occur over water and are designated to mitigate aircraft noise on the communities surrounding NAS Whidbey Island Air Fields. In addition to adopting local flight noise abatement patterns that direct inter facility flights away from land as much as possible, the NAS Whidbey Island Operations Manual standards for inter facility transit are above minimum flight altitude standards set by the FAA. During inter facility transit the Navy flies at a minimum of 1000 ft. over land



and populated areas. As a result, use of the Inter Facility Track lines would include areas where the undertaking would have no effect on historic properties, and arbitrarily exclude areas where there may be potential effects as shown in enclosure (2).

To ensure the APE fully encompasses any historic properties with a potential be affected by the undertaking, the Navy has chosen the most expansive aggregate 65dB DNL contour, which encompasses all of the proposed alternatives in the DEIS (Enclosure 3). For your awareness, during the consideration of comments on the APE, the Navy updated its noise analysis using the latest approved noise model and has revised portions of the 65 dB DNL contour reflecting slight growth in certain locations. The updated 65 dB DNL contour is reflected in enclosure (2). Finally, the Navy will also include all of the Ebey's Landing National Historic Reserve in the effects analysis to ensure all potential effects to the Central Whidbey Historic District are fully evaluated.

The Navy recognizes that aircraft noise can adversely affect the setting of certain noise-sensitive historic properties. However, 65dB DNL is the widely accepted threshold for assessing potential effects from noise. Moreover, its use to define the APE is consistent with long-standing practice among federal agencies, including the U.S. Environmental Protection Agency (EPA), Office of Housing and Urban Development (HUD), the Federal Aviation Administration (FAA), and the Department of Defense (DoD).

DNL is highly correlated with all standard, sensible measures of aircraft and highway noise. It is a conservative and comprehensive standard that factors the number, frequency, and energy (loudness) of noise events. The 65dB DNL for the DEIS was modeled using the latest approved noise modeling program called NOISEMAP 7.3. NOISEMAP draws from a library of actual aircraft noise measurements and then incorporates site-specific operational data (types of aircraft, number of operations, flight tracks, altitude, speed of aircraft, engine power settings, and engine maintenance run-ups), site specific environmental data (average humidity and temperature), and site specific surface hardness and terrain that contribute to the noise environment. The result is a site specific geographical depiction of levels of noise. Because of the orientation of the runways and flight paths and the altitude of aircraft traveling between Ault Field and OLF Coupeville, the 65 dB DNL is not contiguous.

DNL represents long term noise exposure rather than a level heard at any given time, which makes it appropriate for assessing long-term direct and indirect impacts to historic properties. The DNL values are average quantities, mathematically representing the continuous sound level that would be present if all of the variations in sound level that occur over a 24-hour period were averaged to have the same total sound energy. The DNL metric quantifies the total sound energy received and is therefore a cumulative measure, but it does not provide specific information on

the number of noise events or the individual sound levels that occur during the 24-hour day. The DNL metric also adds an additional 10 dB to nighttime (10:00 p.m. to 7:00 a.m., also known as “acoustic night”) sound levels to account for heightened human sensitivity to noise when ambient sound levels are low, such as when sleep disturbance could occur. See enclosure (4) for examples of sound levels (in dB) from typical sources. For more information about noise metrics and modeling, see section 3.2.2 and Appendix A of the DEIS.

In summary, after careful review and consideration, the Navy finds that the objective, industry standard is the most reliable basis of analyzing potential indirect effects and has accordingly selected the 65 dB DNL to delineate the APE. To fully evaluate the potential direct and indirect effects of the undertaking on historic properties, the Navy has included the most expansive aggregate 65 dB DNL contour within the APE to assess indirect effects and all on-installation areas where historic properties could be directly impacted by future construction activities within the APE to assess direct effects (Enclosures 5 and 6). Accordingly, the APE includes the following three components:

- On-installation Direct Effect Areas: Areas on the installation where historic properties could be directly impacted (i.e. ground disturbance, demolition, alteration).
- On-installation Indirect Effect Area: Areas within the installation bounded by the 65 dB DNL noise contours where historic properties could remain undisturbed (i.e. introduction of visual, atmospheric, or audible elements).
- Off-installation Indirect Effect Area: Areas off installation but within operational areas potentially bounded by the noise contours (i.e. introduction of visual, atmospheric, or audible elements).

Due to the unique nature of Ebey’s Landing National Historic Reserve and because the 65 dB DNL contour covers a large portion of the Reserve, the Navy will include all of the Reserve in the effects analysis to ensure all potential effects to the historic district are fully evaluated.

The Navy looks forward to continued consultations with you as we begin our historic resource identification effort. If during the identification and evaluation of historic properties the Navy determines it necessary to expand the APE, we will consult with SHPO and our other consulting parties to amend the APE.



5090  
Ser N44/2740  
July 14, 2017

If you require additional information, please contact Mrs. Kendall Campbell, NAS Whidbey Island Cultural Resources Program Manager at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

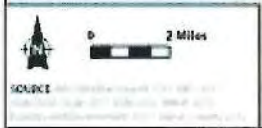


G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

- Enclosures:
1. NAS Whidbey Island Site Locations
  2. Most Expansive Aggregate 65 dB DNL Noise Contour and Inter Facility Tracks
  3. Most Expansive Aggregate 65 dB DNL Noise Contour
  4. Sound Levels from Typical Sources
  5. Area of Potential Direct Effect
  6. Area of Potential Indirect Effects



Enclosure (1)



- City
- Interstate track
- County Boundary
- Major Road
- Aggregate 65 DNL (Average) Noise Contour (dB)
- Historic District
- Historic Reserve
- Installation Area
- MRC proposed APE

**Enclosure 3**  
**Aggregate 65 DNL**  
**Noise Contour**  
 Whidbey Island, Island County, WA

\*The Aggregate 65 DNL noise contours are based on the following assumptions:  
 Average of 2000-2020 aircraft operations at the island's airports.

Enclosure (2)



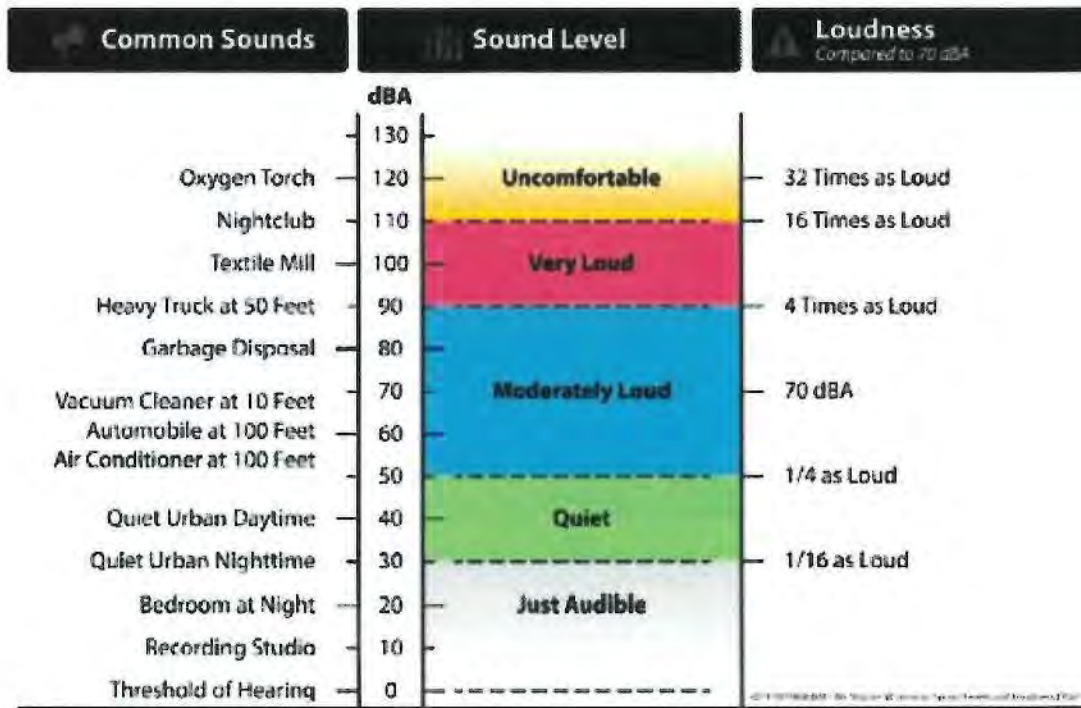
● City  
 — County Boundary  
 — Major Road  
 ■ Aggregate 65 DNL (Average) Noise Contour (dBL)  
 ■ Historic District  
 ■ Historic Reserve  
 ■ Installations Area

SOURCE: FAA, Whidbey Island, WA, 2011  
 © 2011, Ecology and Environment, LLC  
 Island County, WA, 2011

\*The Aggregate 65 DNL is an area created by combining all Areas of Concern (AOC) together. This is the common 65 dBL Area of Potential Effect (APE).

**Figure 1**  
**Aggregate 65 DNL**  
**Noise Contour**  
 Whidbey Island, Island County, WA





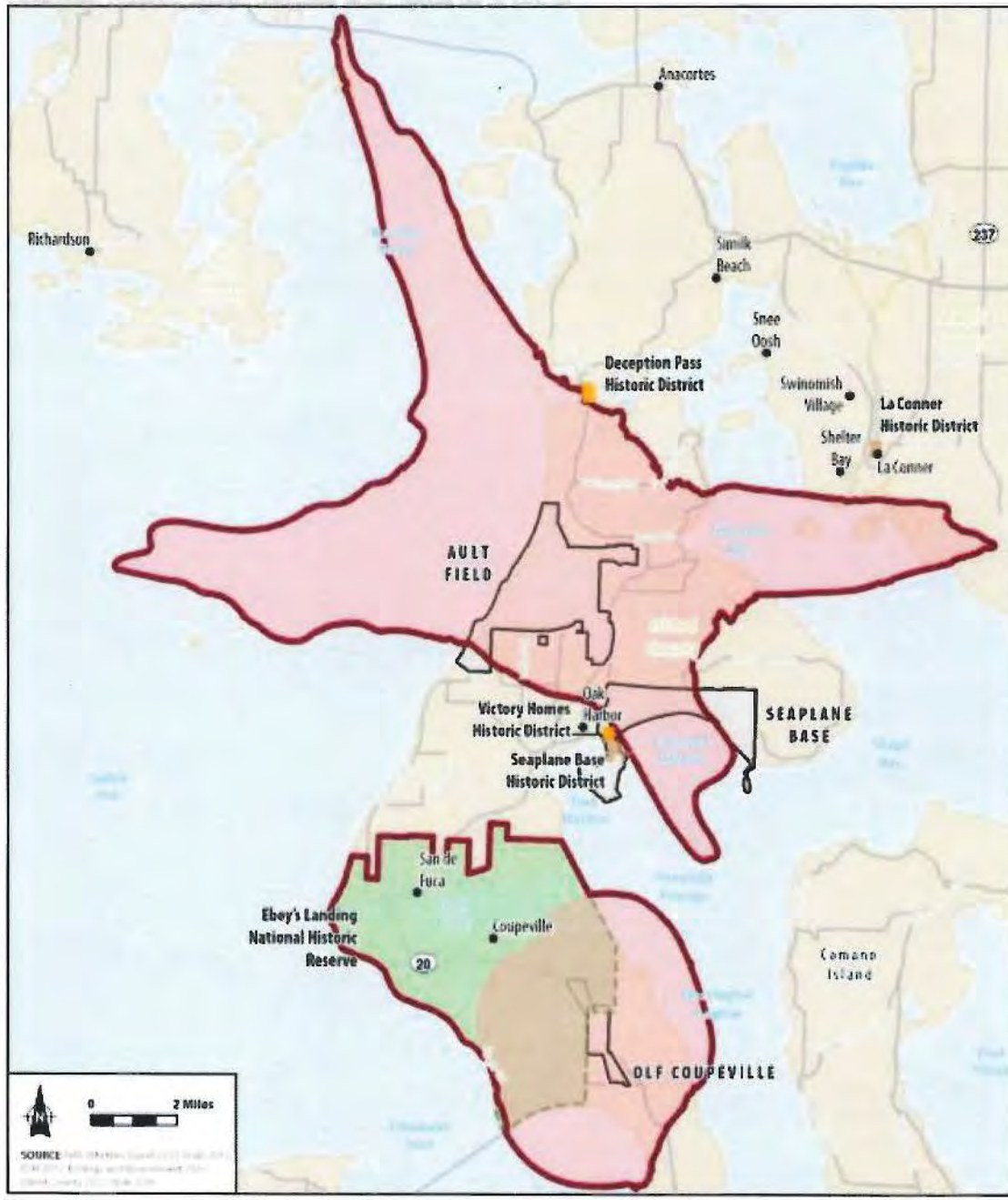
Sources: Harris, 1979; FICAN (Federal Interagency Committee on Aviation Noise), 1997

Enclosure (4)



Enclosure (5)





**Figure 1**  
**Aggregate 65 DNL**  
**Noise Contour**  
 Whidbey Island, Island County, WA

\*The Aggregate 65 DNL noise area created by combining all Average 65 DNL contours. This is the same as the 65 Area of Potential Effect (APE).





July 14, 2017

Ms. Kendall Campbell  
Cultural Resources  
US Dept. of the Navy  
3730 North Charles Porter Ave.  
Oak Harbor, WA98278-5000

In future correspondence please refer to:

Project Tracking Code: 102214-23-USN

Re: Proposed Survey Methodology: Proposed Increase of EA-18G Growler Aircraft and Aircraft Operations and Development of Support Facilities

Dear Ms. Campbell:

Thank you for your letter of June 14, 2017 to the State Historic Preservation Officer (SHPO) in continuation of the U.S. Navy's Section 106 consultation on the definition of the Area of Potential Effect (APE) and Scope of Identification Effort for the proposed increase in EA-18G Growler Operations at Naval Air Station Whidbey Island (NASWI). Your letter is in response to our request for your methodology for identifying cultural and historic resources within the proposed APE. The above referenced project has been reviewed on behalf of the SHPO under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. As a result of our review, we concur with the seven identification tasks listed in your letter. In addition, we provide the following comments and recommendations for your consideration:

- 1) We note that the draft methodology focuses on existing data already captured in various databases like WISAARD and by the National Park Service for Ebey's Landing National Historical Reserve (EBLA). What is not clear is the anticipated extent of updating existing site forms and recording newly identified historic properties. Therefore, we request a survey planning meeting with you to review maps and the properties you have identified to date so that we each have a clear understanding of the actual acreage and number of site forms that will need to be updated/completed to current standards.
- 2) Developing a historic context document and associated sub-themes is an important first step in understanding the pre-contact and historical development of the APE and also evaluating inventoried properties. There is likely a substantial level of contextual information already established for the study area.
- 3) In the first bullet point in your letter, the correct reference would be to the "Washington Heritage Register" and the Washington Heritage Barn Register.
- 4) Updating existing and creating new Archaeology Site forms and Historic Property Inventory (HPIP forms shall be completed in DAHP's WISAARD database. Completing inventory forms shall follow DAHP's Standards for Cultural Resources Reporting found



at this link:

<http://dahp.wa.gov/sites/default/files/CR%20Update%20February%202017.pdf>. Also, personnel conducting the survey and inventory effort shall meet National Park Service Professional Qualification Standards as found in 36 CFR Part 61([https://www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](https://www.nps.gov/history/local-law/arch_stnds_9.htm)) in the appropriate area of expertise.

- 5) Given that Ebey's Landing comprises much of the proposed APE, the National Park Service and the Trust Board of Ebey's Landing are considered important sources of information for survey and inventory identification and evaluation of cultural and historic resources.
- 6) Also, the presence of EBLA underscores the importance of historic landscapes and landscape features in the proposed APE; landscapes should be recorded in their entirety even if they extend beyond APE boundaries.
- 7) Survey and inventory efforts should include Traditional Cultural Places (TCPs). In regard to your identification effort of TCPs, we strongly recommend that the U.S. Navy follow tribal consultation protocols to engage with Tribal Historic Preservation Officers (THPOs), their staff/cultural resource committee members, and appropriate tribal officials for an effective and efficient process to identify TCPs.
- 8) Please do not overlook good and intact examples of mid-20<sup>th</sup> Century resources constructed after World War II and up to 1970; there may be examples in the APE especially in Oak Harbor and vicinity.
- 9) Please plan to incorporate time and a process for review and comment by DAHP staff of draft materials such as context documents and inventory forms.

The above comments are made on behalf of the State Historic Preservation Officer (SHPO) in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR 800. Also, we appreciate receiving copies of any correspondence or comments from concerned tribes and other parties that you receive as you consult under the requirements of 36 CFR 800.4(a)(4). Should additional information become available, our assessment may be revised.

Finally, please note that in order to streamline our responses, DAHP requires that all documents related to project reviews be submitted electronically. Correspondence, reports, notices, photos, etc. must now be submitted in PDF or JPG format. For more information about how to submit documents to DAHP please visit: <http://www.dahp.wa.gov/programs/shpo-compliance>. To assist you in conducting a cultural resource survey and inventory effort, DAHP has developed guidelines including requirements for survey reports. You can view or download a copy from our website.



Ms. Kendall Campbell  
July 17, 2017  
Page Two

Thank you for the opportunity to review and comment on your draft survey methodology. If you have any questions, please contact me at 360-586-3073 or [greg.griffith@dahp.wa.gov](mailto:greg.griffith@dahp.wa.gov).

Sincerely,



Gregory Griffith  
Deputy State Historic Preservation Officer

C: Kristen Griffin, Trust Board of Ebey's Landing







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

5090  
Ser N44/2786  
July 19, 2017

Mr. John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

Dear Mr. Fowler:

SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE IDENTIFICATION EFFORT FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. This letter is to provide you an update on our effort to identify historic properties within the area of potential effect (APE). The Navy welcomes your comments or any further information about historic properties in the area.

We are currently in the process of gathering information on historic properties in the APE. To date, we have compiled data from the Washington State Department of Archaeology and Historic Preservation (DAHP) Geographic Information System (GIS) data, the National Register of Historic Places (NRHP), NAS Whidbey Island records, and the 2016 Ebey's Landing National Historical Reserve (ELNHR) Historic Building Inventory Update (Enclosures 1-4). The summary tables comprise data gathered from existing information and provided by consulting parties. The summary tables include:

Enclosure 1. Historic properties identified in the 65 dB DNL contour line.

Enclosure 2. Historic buildings identified in the ELNHR derived from the ELNHR's 2016 Inventory Update.

Enclosure 3. Historic properties identified in the ELNHR.

Enclosure 4. All listed historic properties in the NRHP.

Data provided in enclosures (2) and (3) may be duplicate in some instances for buildings and structures.

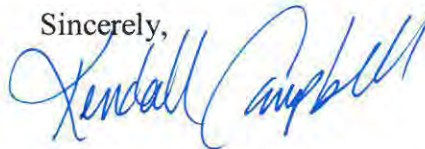


5090  
Ser N44/2786  
July 19, 2017

In addition, the Navy invites you to comment on our preliminary context bibliography (Enclosure 5). The unique juxtaposition of federal properties and the ELNHR, with a community that celebrates the local and national historic setting provides a wealth of contextual information to expand upon. The enclosed bibliography draws upon existing information and provides a foundation to elaborate upon the broad description and patterns of historical development within the APE.

The Navy looks forward to continued consultations with you. If during the identification and evaluation of historic properties the Navy determines it necessary to expand the APE or revise our inventory plan, we will consult with SHPO and our other consulting parties. If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,



KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer

- Enclosures:
1. Historic properties in the 65 dB DNL contour line
  2. Historic buildings in the ELNHR derived from the ELNHR's 2016 Inventory
  3. Historic properties identified in the ELNHR
  4. All listed historic properties in the NRHP
  5. Historic Context Bibliography

## Historic Properties on DAHP GIS Data

HISTORIC_I	ResourceID	SiteNameHi	Loc_FullAd	TaxParcel	RegisterTy	BuiltYear
112742	65789	Private	Oak Harbor		Determined Not Eligible	1954
669783	616624	Island Property Management	Oak Harbor		Determined Not Eligible	1940
671319	618039	Private	Oak Harbor		Determined Not Eligible	1952
671568	618271	Building 985 - Survival Equipment Shop, Building 985 - Survival Equipment Shop	NAS Whidbey Island		Determined Not Eligible	1967
115030	67745	Buildings 360-363, Fuel Storage	NAS Whidbey Island		Determined Not Eligible	1952
115031	67746	Fuel Tanks, Fuel Tanks Building 235-236	NAS Whidbey Island		Determined Not Eligible	1942
115033	67748	Building 368, Electrical Utility Vault	NAS Whidbey Island		Determined Not Eligible	1955
115034	67749	Building 369, Warehouse, Warehouse	NAS Whidbey Island		Determined Not Eligible	1954
115146	67861	Pier Approach and Fuel Pier, Facility 479, Pier/Breakwater	NAS Whidbey Island		Determined Not Eligible	1943
115149	67864	Mess Hall, Building 113, IRM/NMCI/PSD/ENV	NAS Whidbey Island		Determined Not Eligible	1943
115150	67865	Maintenance Shop, Building 115, Weapons/AIMD/Supply	NAS Whidbey Island		Determined Not Eligible	1942
115151	67866	Garage, Building 124, CDC Vehicle Maintenance &#x0D; HW Storage	NAS Whidbey Island		Determined Not Eligible	1942
115152	67867	Free Gunnery Range Gate House, Building 128, Ladies Golf Clubhouse	NAS Whidbey Island		Determined Not Eligible	1942
115153	67868	Ordnance Building, Building 130, Duffer's Cove / Golf Clubhouse	NAS Whidbey Island		Determined Not Eligible	1942
115155	67870	High Explosive Magazine, Building 137, High Explosive Magazine	NAS Whidbey Island		Determined Not Eligible	1943
115156	67871	Chief Petty Officer's Club (CPO), Building 138, Chief Petty Officer's Club (CPO)	NAS Whidbey Island		Determined Not Eligible	1943
115157	67872	Skeet and Trap Shooting Office, Building 170, Rod and Gun Club Office	NAS Whidbey Island		Determined Not Eligible	1943
115158	67873	Skeet and Trap Range, Facility 171, Vacant/Not in Use	NAS Whidbey Island		Determined Not Eligible	1943
115159	67874	Ready Locker, Building 175, Rod and Gun Club Storehouse	NAS Whidbey Island		Determined Not Eligible	1943
115160	67875	Agricultural Barn, Building 189, MVR Warehouse	NAS Whidbey Island		Determined Not Eligible	1920
115161	67876	Granary, Building 206, Skookum Storage/ Maintenance Building	NAS Whidbey Island		Determined Not Eligible	1930
115163	67878	Original function unknown, Building 278, A/C Refueler Contract Building	NAS Whidbey Island		Determined Not Eligible	1945
115164	67879	Electrical Utility Building, Building 281, Electric Support at FF3	NAS Whidbey Island		Determined Not Eligible	1942
115165	67880	Water Pump House, Building 284, Water Pump House	NAS Whidbey Island		Determined Not Eligible	1942
115166	67881	Water Pump House, Building 337, Water Pump House	NAS Whidbey Island		Determined Not Eligible	1943
115167	67882	Ready Locker Magazines, Building 353, 462-466, 469-471 Ready Locker Magazines	NAS Whidbey Island		Determined Not Eligible	1949
115168	67883	Hangar 5, Building 386, Hangar 5	NAS Whidbey Island		Determined Eligible	1953
115170	67885	Airfield Utility Vault, Building 2678, Low Frequency Homer Beacon	NAS Whidbey Island		Determined Not Eligible	1945
115171	67886	CPO Club Utility Building, Building 492, CPO Club Storage	NAS Whidbey Island		Determined Not Eligible	1943
115172	67887	OLF Coupeville Runway, OLF Coupeville Runway	NAS Whidbey Island		Determined Not Eligible	1943
102224	57706	Ault Field - Building 371, BOSC Maintenance Shops	NAS Whidbey Island		Determined Not Eligible	1954
102244	57726	Ault Field - Building 2525, Jet Engine Test Cell	NAS Whidbey Island		Determined Not Eligible	1971
102267	57749	Ault Field - Site 201211, Golf Course	NAS Whidbey Island		Determined Not Eligible	1945



HISTORIC I	ResourceID	SiteNameHi	Loc FullAd	TaxParcel	RegisterTy	BuiltYear
102303	57785	Ault Field - Administration and Instruction Building, Building 126, Applied Instruction Building	NAS Whidbey Island		Determined Not Eligible	1942
102355	57837	Ault Field - Agricultural Barn, Building 262, NMCI Computer Warehouse	NAS Whidbey Island		Determined Not Eligible	1935
672688	619317	Private	Coupeville		Determined Eligible	1890
158782	106646				Not Determined	1941
158783	106647				Not Determined	1941
158784	106648				Not Determined	1941
158785	106649				Not Determined	1941
158788	106652				Not Determined	1941
158789	106653				Not Determined	1941
158790	106654				Not Determined	1941
158791	106655				Not Determined	1941
158794	106658				Not Determined	1921
158798	106662				Not Determined	1904
158806	106670				Not Determined	1904
158807	106671				Not Determined	1904
158811	106675				Not Determined	1904
158812	106676				Not Determined	1900
159241	107092	Fort Casey Barracks	Coupeville		Not Determined	1940, 1941
159242	107093	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159244	107095	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159245	107096		Coupeville		Not Determined	1941
159247	107098	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159248	107099	Fort Casey Company Quarters	Coupeville		Not Determined	1941
673907	620464	Ault Field - Operational Storage, Building 2704	NAS Whidbey Island		Determined Not Eligible	1984
673908	620465	Ault Field - Shop Space, Building R-14	NAS Whidbey Island		Determined Not Eligible	1976
673909	620466	Ault Field - Shop Space, Building R-12	NAS Whidbey Island		Determined Not Eligible	1976
673910	620467	Ault Field - LOX Cart Shelter, Building 2732	NAS Whidbey Island		Determined Not Eligible	1987
673911	620468	Ault Field - Pump House/Air Craft Rince Facility, Building 2635	NAS Whidbey Island		Determined Not Eligible	1978
673912	620469	Ault Field - Inert Store House, Building 2666	NAS Whidbey Island		Determined Not Eligible	1984
673913	620470	Ault Field - Airfield Taxiways and Aprons	NAS Whidbey Island		Determined Not Eligible	1954, 1964
674221	620767	Fort Casey Building 2, Campground Comfort Station	NAS Whidbey Island		Determined Not Eligible	1964
672825	619442	Ault Field - Quarters G, Building 3230	NAS Whidbey Island		Determined Eligible	1935
672826	619443	Ault Field - Quarters R, Building 3220	NAS Whidbey Island		Determined Eligible	1930
672828	619445	Ault Field - Quarters P, Building 1140	NAS Whidbey Island		Determined Eligible	1900

HISTORIC I	ResourceID	SiteNameHi	Loc FullAd	TaxParcel	RegisterTy	BuiltYear
672829	619446	Ault Field - Riksen Farm House, Quarters O, Building 920	NAS Whidbey Island		Determined Eligible	1900
672830	619447	Ault Field - Quarters F, Building 3305	NAS Whidbey Island		Determined Eligible	1935
672831	619448	Ault Field - Quarters E, Building 3295	NAS Whidbey Island		Determined Eligible	1935
673039	619640	Naval Air Station Whidbey - Whidbey Lanes Bowling Alley, BUILDING 2510	NAS Whidbey Island		Determined Not Eligible	1969
209252	157064				Not Determined	1941
209253	157065				Not Determined	1941
209257	157069				Not Determined	1941
209259	157071				Not Determined	1941
209260	157072				Not Determined	1941
209261	157073				Not Determined	1941
209262	157074				Not Determined	1941
209265	157077				Not Determined	1941
209266	157078				Not Determined	1941
209267	157079				Not Determined	1941
209268	157080				Not Determined	1941
209271	157083				Not Determined	1921
209275	157087				Not Determined	1904
209283	157095				Not Determined	1904
209284	157096				Not Determined	1904
209288	157100				Not Determined	1904
209289	157101				Not Determined	1900
672297	618956	NAS Whidbey Island- Building 2699, Hangar 10	NAS Whidbey Island		Determined Not Eligible	1986
672298	618957	OLF Coupeville, Aircraft Operations Tower (Building 1), Building 1, Aircraft Operations Tower	NAS Whidbey Island		Determined Eligible	1944
672355	619010	Building 219 - Airplane Parts Storehouse, Building 219 - VAQ Storage, Naval Depot, and ISR Depot	NAS Whidbey Island		Determined Not Eligible	1944
672367	619020	Ground Support Equipment (GSE) Shop, GSE Compound - Building 995	NAS Whidbey Island		Determined Not Eligible	1969
672368	619021	South Parking Shed, Ground Support Equipment (GSE) Compound - Building 995A	NAS Whidbey Island		Determined Not Eligible	1969
672417	619067	Equipment Shelter, Building 2577 - Ault Field Equipment Shelter	NAS Whidbey Island		Determined Not Eligible	1974
672419	619069	AN/SPN 42T3 Generator Building , Building 2524 - Ault Field AN/SPN 42T3 Generator Building	NAS Whidbey Island		Determined Not Eligible	1970
672420	619070	Precision Approach Radar (PAR) , Facility 201821 - Ault Field PAR	NAS Whidbey Island		Determined Not Eligible	1963
672423	619073	WWII-era navigation marker , Ault Field - WWII-era navigation marker	NAS Whidbey Island		Determined Not Eligible	1942
672433	619083	Building 2734, Air Passenger Terminal, Building 2734, Air Passenger Terminal	NAS Whidbey Island		Determined Not Eligible	1988
672434	619084	Building 2631, Building 2631 - VP AW Training	NAS Whidbey Island		Determined Not Eligible	1978
672435	619085	Building 2584, POD Administration/Avionics and Storage, Building 2584, POD Administration/Avionics and Storage	NAS Whidbey Island		Determined Not Eligible	1975
672436	619086	Building 2621 - Liquid Oxygen (LOX) Facility, Building 2621 - LOX Facility	NAS Whidbey Island		Determined Not Eligible	1978

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672437	619087	OLF Coupeville - Building 10, Runway Lighting Vault, Building 10, Runway Lighting Vault	NAS Whidbey Island		Determined Not Eligible	1967
672438	619088	OLF Coupeville - Building 11, Potable Water Well Pump House, Building 11, Potable Water Well Pump House	NAS Whidbey Island		Determined Not Eligible	1967
672439	619089	OLF Coupeville - Building 2709, Crash Truck Shelter, Building 2709, Crash Truck Shelter	NAS Whidbey Island		Determined Not Eligible	1986
672440	619090	OLF Coupeville - Radome, Radome	NAS Whidbey Island		Determined Not Eligible	0
672441	619091	OLF Coupeville, Runway 14-32, Runway 14-32	NAS Whidbey Island		Determined Eligible	1943
672445	619095	Low Frequency Homer Beacon Building , Ault Field - Building 2678, Low Frequency Homer Beacon Building	NAS Whidbey Island		Determined Not Eligible	1945
672446	619096	Tactical Air Navigation (TACAN) Building , Building 2596 - Ault Field TACAN Building	NAS Whidbey Island		Determined Not Eligible	1976
672447	619097	Jet Aircraft Power Check Facility , Facility 201796 - Ault Field Jet Aircraft Power Check Facility	NAS Whidbey Island		Determined Not Eligible	1944
672449	619099	Chaff Build-Up Facility , Building 2561 - Ault Field Chaff Build-Up Facility	NAS Whidbey Island		Determined Not Eligible	1973
672450	619100	Building 976 - Systems Training Building , Building 976 - Aircraft Systems Training Building	NAS Whidbey Island		Determined Not Eligible	1966
126904	74818		WA		Not Determined	1941
126905	74819		WA		Not Determined	1941
126906	74820		WA		Not Determined	1941
126907	74821		WA		Not Determined	1941
126910	74824		WA		Not Determined	1941
126911	74825		WA		Not Determined	1941
126912	74826		WA		Not Determined	1941
126913	74827		WA		Not Determined	1941
126916	74830		WA		Not Determined	1921
126920	74834		WA		Not Determined	1904
126928	74842		WA		Not Determined	1904
126929	74843		WA		Not Determined	1904
126933	74847		WA		Not Determined	1904
126934	74848		WA		Not Determined	1900
674532	621065	Campground Comfort Station, Comfort Station #6	Oak Harbor		Determined Not Eligible	1965
625488	572741		Coupeville	R13103-361-0370	Not Determined	1863
625514	572755		Coupeville	R13104-098-3880	Not Determined	1890
471	463	Bearss House, Barrett House	Coupeville	R13104-280-4190	Not Determined	1890
467	459	Wanamaker, James, House, Martin House	Coupeville	R13104-331-4200	Not Determined	1890
625527	572760	Frain House/Burton-Engle House	Coupeville	R13104-373-3330	Not Determined	1892
625529	572761		Coupeville	R13104-323-3820	Not Determined	1893
458	450	Sergeant Clark House, Madsen House	Coupeville	R13104-493-4210	Not Determined	1895
625535	572764	Keith, Sam, Farm	Coupeville	R13103-078-2490	Not Determined, Washington Heritage Barn Register	1898

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625537	572766		Coupeville	R13111-248-4630	Not Determined	1900
625538	572767		Coupeville	S8150-00-01008-0	Not Determined	1900
625644	572858		Coupeville	R23106-082-3080	Not Determined	1938
625649	572863		Coupeville	S8010-00-00070-0	Not Determined	1940
625652	572866		Coupeville	R13234-382-4130	Not Determined	1940
625653	572867	Private	Coupeville	S8010-00-00061-0	Determined Not Eligible, Not Determined	1941, 1953
625655	572869		Coupeville	R13103-485-4710	Not Determined	1941
625657	572871		Coupeville	R13115-333-2810	Not Determined	1942
625666	572880		Coupeville	S8010-00-00089-0	Not Determined	1943
625667	572881		Coupeville	S7095-01-00009-0	Not Determined	1943
625668	572882		Coupeville	S8010-00-00022-0	Not Determined	1943
625670	572884		Coupeville	S8010-00-00006-0	Not Determined	1943
625679	572893		Coupeville	S8010-00-00084-0	Not Determined	1945
625684	572898		Coupeville	S8010-00-00064-0	Not Determined	1946
625685	572899		Coupeville	S7365-00-00004-0	Not Determined	1946
625688	572902		Coupeville	S8150-00-01009-0	Not Determined	1947
625689	572903		Coupeville	S8150-00-01010-0	Not Determined	1947
625690	572904		Coupeville	S8010-00-00018-0	Not Determined	1947
625694	572908		Coupeville	R13103-251-2330	Not Determined	1947
625698	572912		Coupeville	S8010-00-00039-0	Not Determined	1947
625704	572918		Coupeville	S8010-00-00085-0	Not Determined	1948
625705	572919		Coupeville	S8010-00-00001-2	Not Determined	1948
625706	572920		Coupeville	R13103-231-2300	Not Determined	1948
625708	572922		Coupeville	R13110-175-4500	Not Determined	1949
625709	572923		Coupeville	R23117-442-0700	Not Determined	1949
625710	572924		Coupeville	S8010-00-00015-2	Not Determined	1949
625715	572929		Coupeville	S8150-00-01014-0	Not Determined	1950
625716	572930		Coupeville	S7095-01-00015-0	Not Determined	1950
625718	572932	Private	Coupeville	S8010-00-00062-0	Determined Not Eligible, Not Determined	1941, 1950
625719	572933		Coupeville	R23106-090-3040	Not Determined	1950
625722	572936		Coupeville	S8010-00-00063-0	Not Determined	1950
625723	572937		Coupeville	R13103-200-2670	Not Determined	1950
625725	572939		Coupeville	S7490-00-00003-0	Not Determined	1950
625727	572941		Coupeville	S8440-00-00014-0	Not Determined	1950

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625730	572944	Private	Coupeville	R13103-270-2450	Determined Not Eligible, Not Determined	1950
625731	572945		Coupeville	R23107-459-3200	Not Determined	1950
625733	572947		Coupeville	R13103-245-1530	Not Determined	1950
625734	572948		Coupeville	R13113-212-0210	Not Determined	1951
625735	572949		Coupeville	R13114-204-3780	Not Determined	1951
625737	572951		Coupeville	S7365-00-00006-0	Not Determined	1951
625738	572952		Coupeville	S7365-00-00005-0	Not Determined	1951
625832	573044		Coupeville	R13103-120-2950	Not Determined	1958
625834	573046		Coupeville	S7400-00-03003-0	Not Determined	1958
625835	573047		Coupeville	S7400-00-02014-0	Not Determined	1958
625837	573049		Coupeville	R13235-326-0200	Not Determined	1958
625838	573050		Coupeville	R23107-523-3320	Not Determined	1958
625839	573051		Coupeville	S7400-00-01005-0	Not Determined	1958
625841	573053		Coupeville	S7400-00-01011-0	Not Determined	1958
625845	573057		Coupeville	S7400-00-03002-0	Not Determined	1958
625849	573061		Coupeville	R13104-109-4100	Not Determined	1958
625850	573062		Coupeville	R13110-222-4560	Not Determined	1959
625851	573063		Coupeville	S8300-00-01007-0	Not Determined	1959
625856	573068		Coupeville	R13103-110-3240	Not Determined	1959
625865	573077	Private	Coupeville	R13103-150-3420	Determined Not Eligible, Not Determined	1959
625867	573079		Coupeville	S7350-00-0A006-0	Not Determined	1959
625872	573084		Coupeville	S8300-00-02021-0	Not Determined	1960
625874	573086		Coupeville	R13109-005-3830	Not Determined	1960
625875	573087		Coupeville	R23107-080-5240	Not Determined	1960
625876	573088		Coupeville	S8300-00-01027-0	Not Determined	1960
625877	573089		Coupeville	R13116-507-3830	Not Determined	1960
625878	573090		Coupeville	S8010-00-00037-0	Not Determined	1960
625889	573101		Coupeville	S8010-00-00066-0	Not Determined	1960
625893	573105		Coupeville	S8010-00-00083-0	Not Determined	1960
625894	573106		Coupeville	S7400-00-01010-0	Not Determined	1960
625896	573108		Coupeville	S7400-00-02008-0	Not Determined	1960
625897	573109	Private	Coupeville	R13103-183-3330	Determined Not Eligible, Not Determined	1960
625900	573112		Coupeville	S8300-00-01017-0	Not Determined	1961
625904	573116		Coupeville	S8300-00-01037-0	Not Determined	1961

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625905	573117		Coupeville	S8300-00-01021-0	Not Determined	1961
625909	573121		Coupeville	S7490-00-00027-0	Not Determined	1961
625910	573122		Coupeville	S7095-01-00008-0	Not Determined	1961
625911	573123		Coupeville	S7400-00-01043-0	Not Determined	1961
625912	573124		Coupeville	S7400-00-01045-0	Not Determined	1961
625913	573125		Coupeville	S8010-00-00001-1	Not Determined	1961
625916	573128		Coupeville	S8300-00-01026-0	Not Determined	1962
625917	573129		Coupeville	S6370-00-58010-0	Not Determined	1962
625919	573131		Coupeville	S8150-00-01004-0	Not Determined	1962
625920	573132		Coupeville	S7400-00-02002-0	Not Determined	1962
625921	573133		Coupeville	S7400-00-01016-0	Not Determined	1962
470	462	Private	Coupeville	R13104-310-3980	Not Determined	1962
625923	573134		Coupeville	S7095-01-00006-0	Not Determined	1962
625924	573135		Coupeville	S7350-00-0A022-0	Not Determined	1962
625925	573136		Coupeville	S8150-00-01003-0	Not Determined	1963
626020	573231		Coupeville	S6010-00-01005-0	Not Determined	1967
626024	573235		Coupeville	S6010-00-01021-0	Not Determined	1967
626026	573237		Coupeville	S7400-00-01006-0	Not Determined	1967
626028	573239		Coupeville	R13234-333-4800	Not Determined	1967
626031	573242		Coupeville	S7350-00-0A016-0	Not Determined	1967
626033	573244		Coupeville	S7400-00-01001-0	Not Determined	1967
626035	573246		Coupeville	S6010-00-01042-0	Not Determined	1968
626036	573247		Coupeville	S6010-03-00171-0	Not Determined	1968
626037	573248		Coupeville	S6010-00-02024-0	Not Determined	1968
626038	573249		Coupeville	S6010-00-04033-0	Not Determined	1968
626039	573250		Coupeville	S8300-00-01006-0	Not Determined	1968
626040	573251		Coupeville	S6010-00-01023-0	Not Determined	1968
626042	573253		Coupeville	S6010-06-00073-0	Not Determined	1968
626043	573254		Coupeville	S6010-05-00092-0	Not Determined	1968
626044	573255		Coupeville	S6010-00-01004-0	Not Determined	1968
626045	573256		Coupeville	S6010-00-01041-0	Not Determined	1968
626046	573257		Coupeville	S8300-00-01029-0	Not Determined	1968
626047	573258		Coupeville	S6010-03-00027-0	Not Determined	1968
626050	573261		Coupeville	S6010-03-00147-0	Not Determined	1968
626051	573262		Coupeville	S8300-00-01009-0	Not Determined	1968

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626053	573264		Coupeville	S8150-02-03020-0	Not Determined	1968
626054	573265		Coupeville	S6010-00-03013-0	Not Determined	1968
626055	573266		Coupeville	S6010-00-02030-0	Not Determined	1968
626056	573267		Coupeville	S6010-02-04009-0	Not Determined	1968
626057	573268		Coupeville	S6010-00-03021-0	Not Determined	1968
626059	573270		Coupeville	S6010-00-04039-0	Not Determined	1968
626060	573271		Coupeville	S8150-00-02011-0	Not Determined	1968
626064	573275		Coupeville	R13101-315-0190	Not Determined	1968
626067	573278		Coupeville	R13103-457-1910	Not Determined	1968
626068	573279		Coupeville	S8010-00-00091-0	Not Determined	1968
626070	573281		Coupeville	S8010-00-00023-0	Not Determined	1968
626071	573282		Coupeville	R13235-440-0630	Not Determined	1968
626074	573285		Coupeville	S7365-00-00003-0	Not Determined	1968
626075	573286		Coupeville	R13110-403-2890	Not Determined	1968
626077	573288		Coupeville	S7490-00-00029-0	Not Determined	1968
626078	573289		Coupeville	S7365-00-00002-0	Not Determined	1968
626079	573290		Coupeville	S6010-04-00019-0	Not Determined	1969
626081	573292		Coupeville	S6010-03-00038-0	Not Determined	1969
626082	573293		Coupeville	S8300-00-01032-0	Not Determined	1969
626085	573296		Coupeville	S6010-00-01013-0	Not Determined	1969
626087	573298		Coupeville	S6010-00-01035-0	Not Determined	1969
627599	574810		Oak Harbor	R13302-247-5150	Not Determined	1895
627600	574811		Oak Harbor	R13336-465-2400	Not Determined	1899
627603	574814		Oak Harbor	S7650-00-00001-0	Not Determined	1900
627604	574815		Oak Harbor	R23330-157-1110	Not Determined	1900
627608	574819	Private	Oak Harbor	R13436-479-1170	Not Determined	1910, 1913
627613	574824		Oak Harbor	R13301-230-1710	Not Determined	1906
627616	574827		Oak Harbor	R23330-375-4690	Not Determined	1907
627618	574829		Oak Harbor	R23306-269-2380	Not Determined	1908
627712	574923		Oak Harbor	R23307-191-3230	Not Determined	1925
627714	574925		Oak Harbor	R13335-487-0700	Not Determined	1925
627716	574927		Oak Harbor	R13436-106-0110	Not Determined	1925
627720	574931		Oak Harbor	R13312-146-1110	Not Determined	1925
627721	574932		Oak Harbor	R13312-345-5100	Not Determined	1925
627734	574945		Oak Harbor	R23318-350-4160	Not Determined	1925



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627736	574947		Oak Harbor	R23318-402-5080	Not Determined	1927
627740	574951		Oak Harbor	R13336-119-0350	Not Determined	1927
627742	574953		Oak Harbor	R13324-242-2140	Not Determined	1928
627743	574954		Oak Harbor	R13324-069-2030	Not Determined	1928
627745	574956		Oak Harbor	R23318-186-0260	Not Determined	1928
627748	574959		Oak Harbor	R13301-282-3520	Not Determined	1928
627751	574962		Oak Harbor	R23308-268-0780	Not Determined	1928
627756	574967		Oak Harbor	R13313-299-0810	Not Determined	1928
627758	574969		Oak Harbor	R13312-243-0490	Not Determined	1929
627759	574970		Oak Harbor	R23330-324-4240	Not Determined	1929
627760	574971		Oak Harbor	R13311-028-1950	Not Determined	1929
627762	574973		Oak Harbor	R13311-495-4600	Not Determined	1930
627765	574976		Oak Harbor	R13327-293-1200	Not Determined	1930
627771	574982	Private	Oak Harbor	R13303-210-4850	Determined Not Eligible, Not Determined	1931
627773	574984		Oak Harbor	R23308-429-0900	Not Determined	1932
627778	574989		Oak Harbor	R23318-162-0360	Not Determined	1933
627779	574990		Oak Harbor	R13323-046-2810	Not Determined	1933
627780	574991		Oak Harbor	R13324-020-3510	Not Determined	1933
627784	574995		Oak Harbor	R13302-040-4840	Not Determined	1933
627788	574999		Oak Harbor	R13436-440-1590	Not Determined	1935
627789	575000		Oak Harbor	R23320-266-0390	Not Determined	1935
627791	575002		Oak Harbor	R13311-288-3200	Not Determined	1935
627796	575007		Oak Harbor	R13311-305-2050	Not Determined	1936
627802	575013		Oak Harbor	R13311-309-2840	Not Determined	1936
627908	575119		Oak Harbor	R23320-517-0300	Not Determined	1945
627911	575122		Oak Harbor	R13302-121-4750	Not Determined	1945
627923	575134		Oak Harbor	R23329-246-0260	Not Determined	1946
627925	575136		Oak Harbor	R23319-154-3290	Not Determined	1946
627927	575138		Oak Harbor	R13312-062-2900	Not Determined	1946
627931	575142		Oak Harbor	R23330-290-4390	Not Determined	1946
627932	575143		Oak Harbor	R23319-070-4950	Not Determined	1946
627942	575153		Oak Harbor	R13303-181-3890	Not Determined	1947
627950	575161		Oak Harbor	R23307-161-4440	Not Determined	1948
627952	575163		Oak Harbor	R23307-505-1000	Not Determined	1948

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627956	575167		Oak Harbor	R13335-227-3990	Not Determined	1948
627963	575174		Oak Harbor	R13335-221-4330	Not Determined	1948
627972	575183		Oak Harbor	R13323-081-2520	Not Determined	1948
627977	575188		Oak Harbor	S7740-00-00041-0	Not Determined	1948
627982	575193		Oak Harbor	R23318-033-4910	Not Determined	1948
627992	575203		Oak Harbor	R13311-141-1940	Not Determined	1949
628093	575304		Oak Harbor	R23307-303-4470	Not Determined	1950
628094	575305		Oak Harbor	R13313-313-0150	Not Determined	1950
628096	575307		Oak Harbor	R23330-385-4220	Not Determined	1950
628098	575309		Oak Harbor	S7575-00-01024-0	Not Determined	1950
628101	575312		Oak Harbor	R23330-385-4920	Not Determined	1950
628104	575315		Oak Harbor	R13313-030-2320	Not Determined	1951
628111	575322		Oak Harbor	R13302-198-0680	Not Determined	1951
628123	575334		Oak Harbor	S7575-00-01028-0	Not Determined	1951
628132	575343		Oak Harbor	R13312-200-2450	Not Determined	1951
628133	575344		Oak Harbor	S7740-00-00043-0	Not Determined	1951
628140	575351		Oak Harbor	S7020-00-00001-1	Not Determined	1951
628146	575357		Oak Harbor	R13335-427-3400	Not Determined	1951
628164	575375		Oak Harbor	R13312-146-2380	Not Determined	1952
628170	575381		Oak Harbor	S6055-00-01008-0	Not Determined	1952
628171	575382		Oak Harbor	S7285-30-03008-0	Not Determined	1952
628173	575384		Oak Harbor	R13313-152-0130	Not Determined	1952
628181	575392		Oak Harbor	R13313-030-1990	Not Determined	1952
628182	575393		Oak Harbor	R13435-081-1760	Not Determined	1952
628279	575490		Oak Harbor	S6055-00-02002-0	Not Determined	1953
628283	575494		Oak Harbor	R23330-282-0700	Not Determined	1953
628285	575496		Oak Harbor	R13335-259-1300	Not Determined	1953
628290	575501		Oak Harbor	S7575-00-01029-0	Not Determined	1953
628299	575510		Oak Harbor	R23307-135-1920	Not Determined	1953
628300	575511		Oak Harbor	S6335-00-00013-0	Not Determined	1953
628301	575512		Oak Harbor	S6055-00-01007-0	Not Determined	1953
628306	575517		Oak Harbor	R13436-450-1370	Not Determined	1954
628308	575519		Oak Harbor	S6055-00-02007-0	Not Determined	1954
628314	575525		Oak Harbor	S8055-00-00003-0	Not Determined	1954
628315	575526		Oak Harbor	S6055-00-03006-0	Not Determined	1954

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
628318	575529		Oak Harbor	R13313-233-2820	Not Determined	1954
628327	575538		Oak Harbor	R23307-129-1430	Not Determined	1954
628329	575540		Oak Harbor	R13302-297-5120	Not Determined	1954
628331	575542		Oak Harbor	R13436-462-1370	Not Determined	1954
628332	575543		Oak Harbor	S8055-00-00009-0	Not Determined	1954
628333	575544		Oak Harbor	S6055-00-03004-0	Not Determined	1954
628334	575545		Oak Harbor	S7295-00-00029-0	Not Determined	1954
628340	575551		Oak Harbor	R13436-414-1760	Not Determined	1954
628347	575558		Oak Harbor	S6055-00-03002-0	Not Determined	1954
628350	575561		Oak Harbor	R13323-063-2810	Not Determined	1954
628351	575562		Oak Harbor	R13335-427-3300	Not Determined	1954
628355	575566		Oak Harbor	S6055-00-01006-0	Not Determined	1954
628356	575567		Oak Harbor	R13436-017-0190	Not Determined	1954
628357	575568		Oak Harbor	R13436-445-2100	Not Determined	1954
628359	575570		Oak Harbor	S7295-00-00005-0	Not Determined	1955
628360	575571		Oak Harbor	S7295-00-00023-0	Not Determined	1955
628362	575573		Oak Harbor	S7295-00-00017-0	Not Determined	1955
628366	575577		Oak Harbor	R13302-313-0330	Not Determined	1955
628370	575581		Oak Harbor	S6055-00-02010-0	Not Determined	1955
628371	575582		Oak Harbor	S7295-00-00016-0	Not Determined	1955
628466	575677		Oak Harbor	S6600-00-01002-0	Not Determined	1956
628467	575678		Oak Harbor	S6055-00-02001-0	Not Determined	1956
628469	575680		Oak Harbor	R23307-250-0200	Not Determined	1956
628473	575684		Oak Harbor	R13313-106-2430	Not Determined	1956
628476	575687		Oak Harbor	S6055-00-02009-0	Not Determined	1956
628477	575688		Oak Harbor	S7295-00-00008-0	Not Determined	1956
628478	575689		Oak Harbor	S7295-00-00011-0	Not Determined	1956
628485	575696		Oak Harbor	S6055-00-03003-0	Not Determined	1956
628487	575698		Oak Harbor	S6600-00-05011-0	Not Determined	1956
628488	575699		Oak Harbor	S6055-00-03009-0	Not Determined	1956
628489	575700		Oak Harbor	S7295-00-00024-0	Not Determined	1956
628490	575701		Oak Harbor	R13336-210-0620	Not Determined	1956
628497	575708		Oak Harbor	S6600-00-02009-0	Not Determined	1957
628504	575715		Oak Harbor	S7285-21-00036-0	Not Determined	1957
628508	575719		Oak Harbor	S7285-21-00041-0	Not Determined	1957

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
628510	575721		Oak Harbor	R13311-166-3870	Not Determined	1957
628513	575724		Oak Harbor	R13336-218-0190	Not Determined	1957
628531	575742		Oak Harbor	R23329-102-0060	Not Determined	1957
628539	575750		Oak Harbor	S7285-21-00037-0	Not Determined	1957
628556	575767		Oak Harbor	R13313-253-0590	Not Determined	1957
628558	575769		Oak Harbor	R23319-415-4900	Not Determined	1957
628657	575868		Oak Harbor	S6055-00-02004-0	Not Determined	1957
628662	575873		Oak Harbor	R13335-275-0940	Not Determined	1957
628663	575874		Oak Harbor	R23307-115-0260	Not Determined	1957
628665	575876		Oak Harbor	S6055-00-04009-0	Not Determined	1957
628674	575885		Oak Harbor	R13303-173-3900	Not Determined	1958
628676	575887		Oak Harbor	S7520-00-02016-0	Not Determined	1958
628678	575889		Oak Harbor	S7285-30-05006-0	Not Determined	1958
628680	575891		Oak Harbor	S7285-30-09005-0	Not Determined	1958
628681	575892		Oak Harbor	S7285-30-09008-0	Not Determined	1958
628684	575895		Oak Harbor	S7065-00-00008-0	Not Determined	1958
628685	575896		Oak Harbor	R23318-186-0510	Not Determined	1958
628688	575899		Oak Harbor	S7065-00-00002-0	Not Determined	1958
628690	575901		Oak Harbor	S7285-30-03009-0	Not Determined	1958
628691	575902		Oak Harbor	S7285-30-08005-0	Not Determined	1958
628692	575903		Oak Harbor	R13336-235-0190	Not Determined	1958
628693	575904		Oak Harbor	S7065-00-00016-0	Not Determined	1958
628695	575906		Oak Harbor	S7285-30-05003-0	Not Determined	1958
628696	575907		Oak Harbor	S7285-30-09002-0	Not Determined	1958
628698	575909		Oak Harbor	S6055-00-03005-0	Not Determined	1958
628699	575910		Oak Harbor	S7065-00-00006-0	Not Determined	1958
628700	575911		Oak Harbor	S7285-40-00002-0	Not Determined	1958
628701	575912		Oak Harbor	S7285-30-10002-0	Not Determined	1958
628702	575913		Oak Harbor	S7285-30-05002-0	Not Determined	1958
628703	575914		Oak Harbor	S7065-00-00011-0	Not Determined	1958
628704	575915		Oak Harbor	R13325-019-1000	Not Determined	1958
628708	575919		Oak Harbor	S7520-00-03004-0	Not Determined	1958
628712	575923		Oak Harbor	S7740-00-00026-0	Not Determined	1958
628713	575924		Oak Harbor	S7285-30-05001-0	Not Determined	1958
628716	575927		Oak Harbor	R13336-235-0080	Not Determined	1958

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628722	575933		Oak Harbor	S7065-00-00007-0	Not Determined	1958
628723	575934		Oak Harbor	S7285-40-00008-0	Not Determined	1958
628726	575937		Oak Harbor	S7285-30-09007-0	Not Determined	1958
628728	575939		Oak Harbor	S7520-00-02014-0	Not Determined	1958
628730	575941		Oak Harbor	S7285-40-00004-0	Not Determined	1958
628732	575943		Oak Harbor	S7065-00-00014-0	Not Determined	1958
628738	575949		Oak Harbor	R13313-055-0680	Not Determined	1958
628740	575951		Oak Harbor	S7285-30-03016-0	Not Determined	1958
628741	575952		Oak Harbor	S7295-00-00009-0	Not Determined	1958
628745	575956		Oak Harbor	R13436-445-0590	Not Determined	1958
628747	575958		Oak Harbor	S7065-00-00001-3	Not Determined	1958
628842	576053		Oak Harbor	R13336-218-0080	Not Determined	1958
628843	576054		Oak Harbor	S7065-00-00012-0	Not Determined	1958
628848	576059		Oak Harbor	S7655-00-01006-0	Not Determined	1958
628849	576060		Oak Harbor	S7285-30-04008-0	Not Determined	1958
628850	576061		Oak Harbor	S7285-30-08004-0	Not Determined	1958
628861	576072		Oak Harbor	S7065-00-00005-0	Not Determined	1958
628862	576073		Oak Harbor	S7285-30-04004-0	Not Determined	1958
628868	576079		Oak Harbor	S7065-00-00013-0	Not Determined	1958
628875	576086		Oak Harbor	S7285-30-04005-0	Not Determined	1958
628876	576087		Oak Harbor	S7285-30-06001-0	Not Determined	1958
628877	576088		Oak Harbor	S7285-30-03012-0	Not Determined	1958
628880	576091		Oak Harbor	S7295-00-00012-2	Not Determined	1958
628884	576095		Oak Harbor	S7655-00-01007-0	Not Determined	1958
628885	576096		Oak Harbor	S7285-30-10003-0	Not Determined	1958
628887	576098		Oak Harbor	S7285-40-00003-0	Not Determined	1958
628888	576099		Oak Harbor	R23319-039-2810	Not Determined	1958
628889	576100		Oak Harbor	S8055-00-00005-0	Not Determined	1958
628891	576102		Oak Harbor	R13336-461-4370	Not Determined	1958
628892	576103		Oak Harbor	S7065-00-00004-0	Not Determined	1958
628893	576104		Oak Harbor	S7655-00-01008-0	Not Determined	1958
628897	576108		Oak Harbor	S7285-30-04011-0	Not Determined	1958
628900	576111		Oak Harbor	S6055-00-02005-0	Not Determined	1958
628902	576113		Oak Harbor	S7285-30-03011-0	Not Determined	1958
628903	576114		Oak Harbor	S7520-00-03003-0	Not Determined	1958

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628904	576115		Oak Harbor	S7285-30-06002-0	Not Determined	1958
628907	576118		Oak Harbor	S8297-00-00009-0	Not Determined	1958
628908	576119		Oak Harbor	S7285-30-08002-0	Not Determined	1959
628913	576124		Oak Harbor	S6600-00-01005-0	Not Determined	1959
628916	576127		Oak Harbor	S6600-00-02005-0	Not Determined	1959
628920	576131		Oak Harbor	S7285-30-04012-0	Not Determined	1959
628925	576136		Oak Harbor	S7285-30-07001-0	Not Determined	1959
628926	576137		Oak Harbor	S6535-00-00012-0	Not Determined	1959
628927	576138		Oak Harbor	S7285-30-07004-0	Not Determined	1959
628929	576140		Oak Harbor	S7655-00-01010-0	Not Determined	1959
628930	576141		Oak Harbor	S7655-00-01009-0	Not Determined	1959
628935	576146		Oak Harbor	S6600-00-01011-0	Not Determined	1959
629029	576240		Oak Harbor	R13302-151-1520	Not Determined	1959
629030	576241		Oak Harbor	S6535-00-00015-0	Not Determined	1959
629032	576243		Oak Harbor	S7285-30-03014-0	Not Determined	1959
629035	576246		Oak Harbor	R13301-292-0100	Not Determined	1959
629037	576248		Oak Harbor	R13302-067-0530	Not Determined	1960
629039	576250		Oak Harbor	S6600-00-01009-0	Not Determined	1960
629041	576252		Oak Harbor	R23308-318-1000	Not Determined	1960
629045	576256		Oak Harbor	S7295-00-00019-0	Not Determined	1960
629046	576257		Oak Harbor	R13311-391-1770	Not Determined	1960
629052	576263		Oak Harbor	R23319-342-5150	Not Determined	1960
629053	576264		Oak Harbor	S7285-30-05010-0	Not Determined	1960
629055	576266		Oak Harbor	R23331-484-1370	Not Determined	1960
629056	576267		Oak Harbor	S7520-00-02018-0	Not Determined	1960
629057	576268		Oak Harbor	S7285-30-03002-0	Not Determined	1960
629058	576269		Oak Harbor	S6535-00-00006-0	Not Determined	1960
629059	576270		Oak Harbor	S8055-00-00007-0	Not Determined	1960
629069	576280		Oak Harbor	S7520-00-02019-0	Not Determined	1960
629070	576281		Oak Harbor	R13301-196-2760	Not Determined	1960
629073	576284	Private	Oak Harbor	S7655-02-03007-0	Determined Not Eligible, Not Determined	1960
629077	576288		Oak Harbor	R13436-408-1490	Not Determined	1960
629079	576290		Oak Harbor	S6515-00-03007-0	Not Determined	1960
629082	576293		Oak Harbor	R13303-122-4920	Not Determined	1960

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
629083	576294		Oak Harbor	R23317-236-3500	Not Determined	1960
629084	576295		Oak Harbor	S6535-00-00008-0	Not Determined	1960
629085	576296		Oak Harbor	S6600-00-05006-0	Not Determined	1960
629086	576297		Oak Harbor	S7295-00-00004-0	Not Determined	1960
629088	576299		Oak Harbor	S7285-40-00006-0	Not Determined	1960
629089	576300		Oak Harbor	R13326-185-0060	Not Determined	1960
629091	576302		Oak Harbor	S7285-30-05012-0	Not Determined	1960
629093	576304		Oak Harbor	R13302-013-1210	Not Determined	1960
629094	576305		Oak Harbor	S6515-00-03002-0	Not Determined	1960
629095	576306		Oak Harbor	R13335-429-3050	Not Determined	1960
629096	576307		Oak Harbor	R23317-434-3570	Not Determined	1960
629097	576308		Oak Harbor	S6515-00-02004-0	Not Determined	1960
629100	576311		Oak Harbor	S6535-00-00001-0	Not Determined	1960
629105	576316		Oak Harbor	S7285-30-02014-0	Not Determined	1960
629107	576318		Oak Harbor	S7285-30-04002-0	Not Determined	1960
629108	576319		Oak Harbor	S6535-00-00007-0	Not Determined	1960
629109	576320		Oak Harbor	S7655-02-03006-0	Not Determined	1960
629110	576321		Oak Harbor	R13301-411-0100	Not Determined	1960
629111	576322		Oak Harbor	S7285-21-00033-0	Not Determined	1960
629112	576323		Oak Harbor	S6535-00-00005-0	Not Determined	1960
629114	576325		Oak Harbor	R13325-011-1850	Not Determined	1960
629115	576326		Oak Harbor	R13436-460-1660	Not Determined	1960
629116	576327		Oak Harbor	S6535-00-00017-2	Not Determined	1960
629117	576328		Oak Harbor	R23318-296-1240	Not Determined	1960
629118	576329		Oak Harbor	R13328-191-4110	Not Determined	1960
629119	576330		Oak Harbor	S7520-00-02020-0	Not Determined	1960
629120	576331		Oak Harbor	R13311-198-2970	Not Determined	1960
629123	576334		Oak Harbor	S7655-00-01012-0	Not Determined	1960
629218	576429		Oak Harbor	S7655-02-02000-0	Not Determined	1962
629219	576430		Oak Harbor	S7285-30-01007-0	Not Determined	1962
629225	576436		Oak Harbor	S7285-30-03005-0	Not Determined	1962
629226	576437		Oak Harbor	S6410-02-00002-0	Not Determined	1962
629227	576438		Oak Harbor	S7285-30-03004-0	Not Determined	1962
629230	576441		Oak Harbor	S6535-00-00016-0	Not Determined	1962
629232	576443		Oak Harbor	S7285-30-05013-0	Not Determined	1962



<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
629234	576445		Oak Harbor	S7285-30-02010-0	Not Determined	1962
629235	576446		Oak Harbor	R13325-010-2500	Not Determined	1962
629236	576447		Oak Harbor	S7285-30-02009-0	Not Determined	1962
629238	576449		Oak Harbor	S7655-02-03004-0	Not Determined	1962
629240	576451		Oak Harbor	S7285-30-02004-0	Not Determined	1962
629241	576452		Oak Harbor	S6515-00-01004-0	Not Determined	1962
629242	576453		Oak Harbor	S7285-30-03003-0	Not Determined	1962
629243	576454		Oak Harbor	S6515-00-04011-0	Not Determined	1962
629246	576457		Oak Harbor	S7285-30-04010-0	Not Determined	1962
629251	576462		Oak Harbor	R23318-306-0300	Not Determined	1962
629252	576463		Oak Harbor	R13335-454-3221	Not Determined	1963
629253	576464		Oak Harbor	R13302-317-1150	Not Determined	1963
629255	576466		Oak Harbor	S6515-02-08003-0	Not Determined	1963
629256	576467		Oak Harbor	R13327-265-1490	Not Determined	1963
629259	576470		Oak Harbor	S7520-00-03008-0	Not Determined	1963
629260	576471		Oak Harbor	R23320-062-0660	Not Determined	1963
629262	576473		Oak Harbor	S8140-00-01006-0	Not Determined	1963
629269	576480		Oak Harbor	R13436-148-0330	Not Determined	1963
629270	576481		Oak Harbor	R23306-016-2470	Not Determined	1963
629275	576486		Oak Harbor	S7655-02-03005-0	Not Determined	1963
629276	576487		Oak Harbor	S6535-00-00018-0	Not Determined	1963
629281	576492		Oak Harbor	R13301-232-0670	Not Determined	1963
629285	576496		Oak Harbor	S7520-00-02003-0	Not Determined	1963
629291	576502		Oak Harbor	S6535-00-00021-0	Not Determined	1963
629294	576505		Oak Harbor	S7520-00-02001-0	Not Determined	1963
629295	576506		Oak Harbor	S6535-00-00002-0	Not Determined	1963
629296	576507		Oak Harbor	S7655-02-04001-0	Not Determined	1963
629299	576510		Oak Harbor	R23319-384-5210	Not Determined	1963
629301	576512		Oak Harbor	S7295-00-00027-0	Not Determined	1963
629303	576514		Oak Harbor	S7285-30-05011-0	Not Determined	1963
629304	576515		Oak Harbor	R13336-238-0530	Not Determined	1963
629306	576517		Oak Harbor	R23318-036-4270	Not Determined	1963
629307	576518		Oak Harbor	R13336-238-0620	Not Determined	1963
629308	576519		Oak Harbor	S7520-00-03007-0	Not Determined	1963
629309	576520		Oak Harbor	S6525-00-03019-0	Not Determined	1963

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629310	576521		Oak Harbor	S7285-30-02003-0	Not Determined	1963
629406	576617		Oak Harbor	S6515-03-12010-0	Not Determined	1965
629414	576625		Oak Harbor	S8015-00-00007-0	Not Determined	1965
629417	576628		Oak Harbor	S7740-00-00002-0	Not Determined	1965
629418	576629		Oak Harbor	R13327-302-1500	Not Determined	1965
629423	576634		Oak Harbor	S6600-00-05003-0	Not Determined	1966
629427	576638		Oak Harbor	R23330-382-1480	Not Determined	1966
629429	576640		Oak Harbor	R23305-165-1200	Not Determined	1966
629433	576644		Oak Harbor	S7655-02-04004-0	Not Determined	1966
629436	576647		Oak Harbor	S6515-00-01007-0	Not Determined	1966
629438	576649		Oak Harbor	S6535-00-00019-0	Not Determined	1966
629439	576650		Oak Harbor	S7740-00-00006-0	Not Determined	1966
629441	576652		Oak Harbor	R13336-111-0340	Not Determined	1966
629442	576653		Oak Harbor	R23330-252-4280	Not Determined	1966
629443	576654		Oak Harbor	S6515-03-11004-0	Not Determined	1966
629444	576655		Oak Harbor	S7285-30-05008-0	Not Determined	1966
629446	576657		Oak Harbor	S7415-00-00002-0	Not Determined	1966
629450	576661		Oak Harbor	R13434-229-4010	Not Determined	1966
629451	576662		Oak Harbor	S7415-00-00004-0	Not Determined	1966
629453	576664		Oak Harbor	R23320-495-1180	Not Determined	1966
629455	576666		Oak Harbor	R13326-144-0680	Not Determined	1966
629456	576667		Oak Harbor	R23319-156-2230	Not Determined	1966
629457	576668		Oak Harbor	S8015-00-00006-0	Not Determined	1966
629459	576670		Oak Harbor	S6515-03-11003-0	Not Determined	1966
629461	576672		Oak Harbor	S7655-02-03008-0	Not Determined	1966
629464	576675		Oak Harbor	S7520-00-02011-0	Not Determined	1966
629467	576678		Oak Harbor	R13313-055-0970	Not Determined	1966
629470	576681		Oak Harbor	S7655-00-01002-0	Not Determined	1967
629473	576684		Oak Harbor	S7655-00-01004-0	Not Determined	1967
629477	576688		Oak Harbor	S6600-00-05005-0	Not Determined	1967
629482	576693		Oak Harbor	S6515-04-00020-0	Not Determined	1967
629484	576695		Oak Harbor	S8015-00-00011-0	Not Determined	1967
629492	576703		Oak Harbor	S8015-00-00005-0	Not Determined	1967
629498	576709		Oak Harbor	R13312-072-4180	Not Determined	1967
629593	576804		Oak Harbor	R13327-302-1820	Not Determined	1968

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
629594	576805		Oak Harbor	R13311-099-1880	Not Determined	1968
629601	576812		Oak Harbor	S8140-00-02021-0	Not Determined	1968
629605	576816		Oak Harbor	S8140-00-01003-0	Not Determined	1968
629607	576818		Oak Harbor	R13434-200-4000	Not Determined	1968
629609	576820		Oak Harbor	S8140-00-02013-0	Not Determined	1968
629610	576821		Oak Harbor	S7575-00-01002-0	Not Determined	1968
629613	576824		Oak Harbor	S8015-02-00013-0	Not Determined	1968
629614	576825		Oak Harbor	S8015-02-00020-0	Not Determined	1968
629616	576827		Oak Harbor	R13301-228-2110	Not Determined	1968
629617	576828		Oak Harbor	S8055-00-00008-0	Not Determined	1968
629618	576829		Oak Harbor	S8015-00-00009-0	Not Determined	1968
629619	576830		Oak Harbor	R13335-269-2310	Not Determined	1968
629620	576831		Oak Harbor	S8140-00-02001-0	Not Determined	1968
629621	576832		Oak Harbor	S8140-00-02020-0	Not Determined	1968
629624	576835		Oak Harbor	S8140-00-01004-0	Not Determined	1968
629626	576837		Oak Harbor	S8140-00-02024-0	Not Determined	1968
629628	576839		Oak Harbor	S7285-40-00005-0	Not Determined	1968
629630	576841		Oak Harbor	S8140-00-05012-0	Not Determined	1968
629631	576842		Oak Harbor	S6515-03-12008-0	Not Determined	1968
629633	576844		Oak Harbor	R13311-448-0820	Not Determined	1968
629637	576848		Oak Harbor	S8140-00-02018-0	Not Determined	1968
629638	576849		Oak Harbor	S8140-00-01002-0	Not Determined	1968
629639	576850		Oak Harbor	S6455-00-00021-0	Not Determined	1968
629640	576851		Oak Harbor	S8015-02-00022-0	Not Determined	1968
629644	576855		Oak Harbor	R13434-179-4010	Not Determined	1968
629648	576859		Oak Harbor	S8140-00-02017-0	Not Determined	1968
629652	576863		Oak Harbor	S8140-00-01001-0	Not Determined	1968
629654	576865		Oak Harbor	S6430-00-00003-0	Not Determined	1968
629655	576866		Oak Harbor	S6455-00-00020-0	Not Determined	1968
629658	576869		Oak Harbor	S8140-00-05013-0	Not Determined	1968
629660	576871		Oak Harbor	S8140-00-02014-0	Not Determined	1968
629662	576873		Oak Harbor	S8140-00-02015-0	Not Determined	1968
629666	576877		Oak Harbor	R13327-316-0980	Not Determined	1968
629668	576879		Oak Harbor	S8140-00-02019-0	Not Determined	1968
629670	576881		Oak Harbor	S8140-00-02002-0	Not Determined	1968

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629671	576882		Oak Harbor	S8015-02-00018-0	Not Determined	1968
629673	576884		Oak Harbor	S8140-00-05005-0	Not Determined	1968
629675	576886		Oak Harbor	S8140-00-05001-0	Not Determined	1968
629676	576887		Oak Harbor	S8140-00-02016-0	Not Determined	1968
629678	576889		Oak Harbor	S8140-00-05004-0	Not Determined	1968
629679	576890		Oak Harbor	S8140-00-05009-0	Not Determined	1968
629682	576893		Oak Harbor	R13303-254-3900	Not Determined	1968
629683	576894		Oak Harbor	S8140-00-02022-0	Not Determined	1968
629685	576896		Oak Harbor	S8015-00-00008-0	Not Determined	1968
629781	576992		Oak Harbor	S8140-00-01016-0	Not Determined	1969
629783	576994		Oak Harbor	R13301-008-3590	Not Determined	1969
629785	576996		Oak Harbor	R23307-123-0720	Not Determined	1969
629790	577001		Oak Harbor	S8140-00-04005-0	Not Determined	1969
629792	577003		Oak Harbor	S8140-00-01008-0	Not Determined	1969
629796	577007		Oak Harbor	S7575-00-01023-0	Not Determined	1969
629800	577011		Oak Harbor	R23307-380-0640	Not Determined	1969
629801	577012		Oak Harbor	R13311-021-3190	Not Determined	1969
629823	577033		Oak Harbor	R13335-422-0770	Not Determined	1913
629832	577042		Oak Harbor	R23329-068-0130	Not Determined	1935
629836	577046		Oak Harbor	R13312-248-5080	Not Determined	1940
629837	577047		Oak Harbor	R13326-150-0250	Not Determined	1942
629838	577048		Oak Harbor	R23318-307-2030	Not Determined	1943
629839	577049		Oak Harbor	R13312-256-5200	Not Determined	1943
629841	577051		Oak Harbor	S7740-00-00012-0	Not Determined	1943
629842	577052		Oak Harbor	R23308-359-0150	Not Determined	1943
629843	577053		Oak Harbor	S6525-00-03012-0	Not Determined	1943
629844	577054		Oak Harbor	S7740-00-00004-0	Not Determined	1943
629845	577055		Oak Harbor	R13311-505-1270	Not Determined	1943
629846	577056		Oak Harbor	S6525-00-0300A-0	Not Determined	1943
629847	577057		Oak Harbor	R13336-508-0550	Not Determined	1946
679857	626100	Building 2848: McDonald's,	NAS Whidbey Island		Determined Not Eligible	1984
629849	577059		Oak Harbor	R13336-511-0360	Not Determined	1946
629861	577071		Oak Harbor	R13335-483-4090	Not Determined	1958
629864	577074		Oak Harbor	S7740-00-00029-0	Not Determined	1960
629865	577075		Oak Harbor	R13325-017-1560	Not Determined	1960

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629873	577083		Oak Harbor	R13327-334-1130	Not Determined	1963
629886	577096		Oak Harbor	S8265-00-02004-0	Not Determined	1967
629982	577187		Oak Harbor	S7285-00-0A001-2	Not Determined	1958
629999	577203		Oak Harbor	S7285-00-0A001-4	Not Determined	1956
630048	577251		Oak Harbor	R13335-402-3810	Not Determined	1950
630049	577252		Oak Harbor	S7740-00-0000A-5	Not Determined	1953
630050	577253		Oak Harbor	S7740-00-0000A-4	Not Determined	1953
630054	577257		Oak Harbor	S7285-00-0A002-0	Not Determined	1956
630057	577260		Oak Harbor	S7740-00-0000B-3	Not Determined	1958
630061	577264		Oak Harbor	R13435-336-3050	Not Determined	1963
630062	577265		Oak Harbor	R13302-251-1430	Not Determined	1964
630063	577266		Oak Harbor	S7020-00-00009-2	Not Determined	1964
630064	577267		Oak Harbor	S7740-00-0000B-4	Not Determined	1965
630070	577273		Oak Harbor	S7020-01-00003-0	Not Determined	1969
630184	577379		Oak Harbor	R13326-314-2460	Not Determined	1945
630189	577384		Coupeville	R13104-375-5250	Not Determined	1950
630235	577430		Coupeville	R13109-465-4760	Not Determined	1891
630236	577431		Coupeville	R13110-085-1980	Not Determined	1902
630237	577432		Coupeville	R13103-332-1790	Not Determined	1910
630238	577433		Coupeville	R13109-500-4220	Not Determined	1948
630239	577434		Coupeville	R23119-235-0880	Not Determined	1963
630240	577435		Coupeville	R13103-502-4800	Not Determined	1969
630251	577446		Oak Harbor	R23332-443-0120	Not Determined	1917
630254	577449		Oak Harbor	R13435-064-3640	Not Determined	1924
630257	577452		Oak Harbor	R23330-143-4350	Not Determined	1926
630259	577454		Oak Harbor	R13436-065-1990	Not Determined	1930
630261	577456		Oak Harbor	R13313-305-3320	Not Determined	1945
630264	577459		Oak Harbor	R23330-312-0600	Not Determined	1956
630265	577460		Oak Harbor	R13325-184-3900	Not Determined	1957
665755	612872	Reynolds House	Coupeville	231403	Determined Not Eligible	1928
666001	613111	Private	Coupeville		Determined Not Eligible	1951
174	166	Old Al Comstock Place	Coupeville		Determined Eligible	1935
176	168	Gallagher/Schreck/Sherman Farm, Sherman, A., House	Coupeville		Not Determined, Washington Heritage Barn Register	1917
177	169	Aloha Farms, Hancock, Samuel E., House	Coupeville		Not Determined, Washington Heritage Barn Register	1953

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186	178	Gus Reuble Farm	Coupeville		Not Determined, Washington Heritage Barn Register	1930
676138	622569	Naval Base - MWR Storage, Building 2511	NAS Whidbey Island		Determined Not Eligible	1968
675127	621612	R-21, Medical Storage	NAS Whidbey Island		Not Determined	1977
678955	625254	R-25, A/C Line Maintenance (6d)	NAS Whidbey Island		Determined Not Eligible	1976
678956	625255	R-24, A/C Line Maintenance (6d)	NAS Whidbey Island		Determined Not Eligible	1976
678957	625256	R-31, A/C Line Maintenance	NAS Whidbey Island		Determined Not Eligible	1976
678958	625257	Building 2511, Morale, Welfare, Recreation Storage	NAS Whidbey Island		Determined Not Eligible	1968
678959	625258	Building 2640, Compressor Building	NAS Whidbey Island		Determined Not Eligible	1972
51578	41581	Naval Air Station Whidbey Island - Building 386, Hangar 5	NAS Whidbey Island	Federal - NA	Determined Eligible	1953, 1955
677631	623985	WATER TANK-2712	NAS Whidbey Island		Determined Not Eligible	1965
677632	623986	Potable Water Tank - 867	NAS Whidbey Island		Not Determined	1986
677633	623987	Potable Water Reservoir 388/389	NAS Whidbey Island		Not Determined	1970
677634	623988	POTABLE WATER TANK - 2849	NAS Whidbey Island		Not Determined	2004
676884	623274	TAXIWAY, FACILITY 201422	NAS Whidbey Island		Determined Not Eligible	1951
676890	623280	CHAIN ARRESTING GEAR, FACILITY 201926	NAS Whidbey Island		Determined Not Eligible	1967
676891	623281	CARRIER DECK LIGHTING, FACILITY 201926	NAS Whidbey Island		Determined Not Eligible	1968
676892	623282	RUNWAY EDGE LIGHTING, FACILITY 201929	NAS Whidbey Island		Determined Not Eligible	1968
676893	623283	OPTICAL LANDING SYSTEM, FACILITY 201961	NAS Whidbey Island		Determined Not Eligible	1971
679301	625579	Building 2549: Automotive Hobby Shop, Building 2549: Automotive Hobby Shop	NAS Whidbey Island		Determined Not Eligible	1974
679302	625580	Building 2555: Public Works Storage, Building 2555: Ault Field Recycling Center	NAS Whidbey Island		Determined Not Eligible	1974
679303	625581	Building 2595: Navy Exchange Gas Station, Building 2595: Navy Exchange Gas Station	NAS Whidbey Island		Determined Not Eligible	1978
679304	625582	Building 2641: Arts and Crafts Hobby Shop, Building 2641: Security Training	NAS Whidbey Island		Determined Not Eligible	1980
679309	625587	Building 2537, Storage Tank Non Potable	NAS Whidbey Island		Determined Not Eligible	1970
678416	624736	HOSPITAL, BUILDING 993	NAS Whidbey Island		Determined Not Eligible	1969
178	170	Jenne, Edward and Agnes, Farm	Coupeville	R13109-330-4240	Not Determined, Washington Heritage Barn Register	1908
102306	57788	Ault Field - Celestial Navigation Training Facility, Building 180, Security	NAS Whidbey Island		Determined Eligible	1944
102307	57789	Ault Field - Boiler House, Building 209, Boiler House	NAS Whidbey Island		Determined Not Eligible	1944
102308	57790	Ault Field - Celestial Navigation Training Facility, Building 220, Security	NAS Whidbey Island		Determined Eligible	1945
102309	57791	Ault Field - Dispensary and Dental Clinic, Building 243, Legal	NAS Whidbey Island		Determined Not Eligible	1945
102310	57792	OLF Coupeville - Aircraft Control Tower, Building 1, Aircraft Operations Control Tower	NAS Whidbey Island		Determined Not Eligible	1944
102311	57793	OLF Coupeville - Building 2, Equipment Storage Building, Building 2, Equipment Storage Building	NAS Whidbey Island		Determined Eligible, Determined Not Eligible	1944
102321	57803	Sea Plane Base - Igloo Magazines, Buildings 35, 432-445, Inert Storehouses	NAS Whidbey Island		Determined Not Eligible	1942
102335	57817	Sea Plane Base - Water Pumphouse, Building 328, Water Pumphouse Well No. 5	NAS Whidbey Island		Determined Not Eligible	1943

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102338	57820	Seaplane Base Pier and Breakwater, Facility 479 - Mooring Pier	NAS Whidbey Island		Determined Eligible	1943
102341	57823	Ault Field - Mess Hall, Building 113, IRM/NMCI/PSD/ENV	NAS Whidbey Island		Determined Not Eligible	1943
102342	57824	Ault Field - Maintenance Shop, Building 115, Weapons/AIMD/Supply	NAS Whidbey Island		Determined Not Eligible	1942
102343	57825	Ault Field - Garage, Building 124, CDC Vehicle Maintenance HW Storage	NAS Whidbey Island		Determined Not Eligible	1942
102344	57826	Ault Field - Free Gunnery Range Gate House, Building 128, Ladies Golf Clubhouse	NAS Whidbey Island		Determined Not Eligible	1942
102345	57827	Ault Field - Ordnance Building, Building 130, Duffer's Cove / Golf Clubhouse	NAS Whidbey Island		Determined Not Eligible	1942
102347	57829	Ault Field - High Explosive Magazine, Building 137, High Explosive Magazine	NAS Whidbey Island		Determined Not Eligible	1943
102348	57830	Ault Field - Chief Petty Officer's Club (CPO), Building 138, Chief Petty Officer's Club (CPO)	NAS Whidbey Island		Determined Not Eligible	1943
102349	57831	Ault Field - Skeet and Trap Shooting Office, Building 170, Rod and Gun Club Office, Bowman's Club	NAS Whidbey Island		Determined Not Eligible	1943
102350	57832	Ault Field - Skeet and Trap Range, Facility 171, Vacant/Not in Use	NAS Whidbey Island		Determined Not Eligible	1943
102351	57833	Ault Field - Ready Locker, Building 175, Rod and Gun Club Storehouse	NAS Whidbey Island		Determined Not Eligible	1943
102352	57834	Ault Field - Agricultural Barn, Building 189, MVR Warehouse	NAS Whidbey Island		Determined Not Eligible	1920
102353	57835	Ault Field - Granary, Building 206, Skookum Storage/ Maintenance Building	NAS Whidbey Island		Determined Not Eligible	1930
102354	57836	Ault Field - VAQ Storage, Building 219, VAQ Storage/NADEP ISR Depot RPR	NAS Whidbey Island		Determined Not Eligible	1944
102356	57838	Ault Field - Building 278,, A/C Refueler Contract Building	NAS Whidbey Island		Determined Not Eligible	1945
102357	57839	Ault Field - Electrical Utility Building, Building 281, Electric Support at FF3	NAS Whidbey Island		Determined Not Eligible	1942
102358	57840	Ault Field - Water Pump House, Building 284, Water Pump House	NAS Whidbey Island		Determined Not Eligible	1942
102359	57841	Ault Field - Water Pump House, Building 337, Water Pump House	NAS Whidbey Island		Determined Not Eligible	1943
102360	57842	Ault Field - Ready Locker Magazines, Building 353, 462-466, 469-471 Ready Locker Magazines	NAS Whidbey Island		Determined Not Eligible	1949
102362	57843	Ault Field - Homoja Huts, Buildings 402-403, Golf Cart Storage	NAS Whidbey Island		Determined Not Eligible	1945
102363	57844	Ault Field - Airfield Utility Vault, Building 2678, Low Frequency Homer Beacon	NAS Whidbey Island		Determined Not Eligible	1945
102364	57845	Ault Field - CPO Club Utility Building, Building 492, CPO Club Storage	NAS Whidbey Island		Determined Not Eligible	1943
671585	618288	Building 112, Hangar 1, Building 112, Hangar 1	NAS Whidbey Island		Determined Eligible	1942
671589	618292	Building 2681, Hangar 9, Building 2681, Hangar 9	NAS Whidbey Island		Determined Not Eligible	1984
680638	626833	Forest Loop Campground Comfort Station No. 2, Building 2	NAS Whidbey Island		Determined Not Eligible	1964
115036	67751	Buildings 373, 374, 375, 376, 377, 378, 379, Barracks/Olympic Hall	NAS Whidbey Island		Covered under PC	1954
115037	67752	Building 382, Admiral Nimitz Hall	NAS Whidbey Island		Determined Not Eligible	1954
115038	67753	Building 384, Central Heating Plant	NAS Whidbey Island		Determined Not Eligible	1954
115039	67754	Building 411, Contractor Storage	NAS Whidbey Island		Determined Not Eligible	1956
115040	67755	Building 414, Utility Vault	NAS Whidbey Island		Determined Not Eligible	1956
115041	67756	Building 415, Utility Vault, Storage	NAS Whidbey Island		Determined Not Eligible	1956
115042	67757	Building 420, Sewage Treatment, Classified Shredder Facility	NAS Whidbey Island		Determined Not Eligible	1958
115043	67758	Building 421, Sewage Pumping Station	NAS Whidbey Island		Determined Not Eligible	1958
115044	67759	Building 856, Air to Ground Communications Equipment Vault	NAS Whidbey Island		Determined Not Eligible	1959



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115045	67760	Building 860, Storage	NAS Whidbey Island		Determined Not Eligible	1959
115046	67761	Building 873, Can Do Inn	NAS Whidbey Island		Determined Not Eligible	1961
115047	67762	Building 874, Communications Equipment Vault	NAS Whidbey Island		Determined Not Eligible	1961
115048	67763	Building 894, Generator Building	NAS Whidbey Island		Determined Not Eligible	1963
115049	67764	Building 895, Smoking Shelter	NAS Whidbey Island		Determined Not Eligible	1948
115050	67765	Airfield Lighting Vault , Building 889 - Ault Field Airfield Lighting Vault	NAS Whidbey Island		Determined Not Eligible	1962
115053	67768	Building 2593 - Electronic Attack Simulator, Building 2593 - Electronic Attack Simulator	NAS Whidbey Island		Determined Not Eligible	1976
115055	67770	Building 994, Calibration Lab	NAS Whidbey Island		Determined Not Eligible	1966
115056	67771	Building 976, Aircraft Systems Training	NAS Whidbey Island		Determined Not Eligible	1966
115057	67772	Building 2643, Shop Building/Office	NAS Whidbey Island		Determined Not Eligible	1960
115058	67773	Building 2738 - Flight Simulator Building , Building 2738 - Flight Simulator Building	NAS Whidbey Island		Determined Not Eligible	1989
115059	67774	Building 2544, Hangar 7	NAS Whidbey Island		Determined Not Eligible	1973
115060	67775	Building 2642, Hangar 8	NAS Whidbey Island		Determined Not Eligible	1980
115061	67776	Building 2681, Hangar 9	NAS Whidbey Island		Determined Not Eligible	1984
115062	67777	Building 2699, Hangar 10	NAS Whidbey Island		Determined Not Eligible	1986
115063	67778	Building 2733 - Hangar 11 , Building 2733 - Hangar 11	NAS Whidbey Island		Determined Not Eligible	1988
115064	67779	Building 2737, Hangar 12, Building 2737, Hangar 12	NAS Whidbey Island		Determined Not Eligible	1989
115068	67783	Facility 201705, Seawall	NAS Whidbey Island		Determined Eligible	1942
115070	67785	Building 390, Water Treatment Plant	NAS Whidbey Island		Determined Not Eligible	1954
115071	67786	Building 853, Alarm Control Center	NAS Whidbey Island		Determined Not Eligible	1958
115072	67787	Building 423, Ordnance Operations Building	NAS Whidbey Island		Determined Not Eligible	1958
115073	67788	Building 424 and 425, Magazines	NAS Whidbey Island		Determined Not Eligible	1958
115074	67789	Building 430, Generator Building	NAS Whidbey Island		Determined Not Eligible	1958
115075	67790	Building 487, Pressure Washing Facility	NAS Whidbey Island		Determined Not Eligible	1943
115078	67793	Building 340, Public Toilet/Shower, Rocky Point Recreation Area	NAS Whidbey Island		Determined Not Eligible	1949
115079	67794	Building 198, Water Treatment Plant	NAS Whidbey Island		Determined Not Eligible	1959
115081	67796	Building 946, Maintenance Garage for Whidbey Apartments	NAS Whidbey Island		Determined Not Eligible	1952
115082	67797	Building 2700 - Naval Facility Whidbey Island, Building 2700, Building 2700 - Naval Facility Whidbey Island, Building 2700 - Naval Ocean Processing Facility	NAS Whidbey Island		Determined Eligible	1986
115084	67799	Building 388, Water Reservoir	NAS Whidbey Island		Determined Not Eligible	1954
115085	67800	Garage, Building R-38	NAS Whidbey Island		Determined Not Eligible	1925
115086	67801	Runway 7-25 and Taxiways, Facilities 201247-201248	NAS Whidbey Island		Determined Not Eligible	1952
115087	67802	Runway 13-31, Facility 201715, Runway 14-32	NAS Whidbey Island		Determined Not Eligible	1962
115089	67804	Storage Building, Building 285	NAS Whidbey Island		Determined Not Eligible	1948
115090	67805	Building 353, Ordnance Storage	NAS Whidbey Island		Determined Not Eligible	1949

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115091	67806	Inert Storehouse, Building 37	NAS Whidbey Island		Determined Not Eligible	1942
115092	67807	Ault Theater, Skywarrior Theater, Building 118	NAS Whidbey Island		Determined Eligible	1942
115107	67822	Barracks #8, Building 100, Post Office/Training/Weapons	NAS Whidbey Island		Determined Not Eligible	1942
115108	67823	Barracks # 11, Building 103, Public Works/ROICC	NAS Whidbey Island		Determined Not Eligible	1942
115109	67824	Barracks #16, Building 108, Marine Aviation Training Support Group/Poa	NAS Whidbey Island		Determined Not Eligible	1942
115110	67825	Hangar 1, Ready Lockers, Building 112 and Support Buildings 457 and 458, Hangar 1 and Ready Lockers	NAS Whidbey Island		Determined Eligible	1942
115111	67826	Recreation Building, Building 117, Recreation Building	NAS Whidbey Island		Determined Not Eligible	1942
115116	67831	Boiler House, Building 209, Boiler House	NAS Whidbey Island		Determined Not Eligible	1944
115118	67833	Dispensary and Dental Clinic, Building 243, Legal	NAS Whidbey Island		Determined Not Eligible	1945
115119	67834	Aircraft Control Tower, Building 1, Aircraft Operations Control Tower	NAS Whidbey Island		Determined Not Eligible	1944
115120	67835	Airfield Operations Building, Building 2, Airfield Equipment Storage Building	NAS Whidbey Island		Determined Not Eligible	1944
115130	67845	Magazines, Buildings 35, 432-445, Inert Storehouses	NAS Whidbey Island		Determined Not Eligible	1942
115035	67750	Building 371, BOSM Maintenance Shops	NAS Whidbey Island		Determined Not Eligible	1954
671824	618503	Building 126 - Administration and Instruction Building, Building 126 - Applied Instruction Building	NAS Whidbey Island		Determined Not Eligible	1942
159314	107163	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159319	107168	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159320	107169	Fort Casey Company Quarters	Coupeville		Not Determined	1940
159321	107170		Coupeville		Not Determined	1941
159322	107171	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159323	107172	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159327	107174		Coupeville		Not Determined	1921
159328	107175	Fort Casey Quartermaster Workshop: Building 22	Coupeville		Not Determined	1921
159329	107176	Fort Casey Guard House: Building 8	Coupeville		Not Determined	1921
159330	107177	Fort Casey Administration Building: Building 1	Coupeville		Not Determined	1940
159331	107178	Fort Casey Bachelor Officers Quarters	Coupeville		Not Determined	1940
159332	107179		Coupeville		Not Determined	1904, 1906
159333	107180		Coupeville		Not Determined	1930
159334	107181		Coupeville		Not Determined	1900, 1962
159335	107182	Fort Casey Munitions Bunkers	Coupeville		Not Determined	1900
159336	107183	Fort Casey Chapel	Coupeville		Not Determined	1941
159337	107184	Fort Casey Quarter Master and Storehouse: Building 21	Coupeville		Not Determined	1921
159338	107185	Fort Casey Firehouse: Building 15	Coupeville		Not Determined	1904
159339	107186	Fort Casey Commanding Officer's Quarters	Coupeville		Not Determined	1904
159340	107187	Fort Casey Officer's Quarters	Coupeville		Not Determined	1904

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159341	107188	Fort Casey Officer's Quarters: Building 3	Coupeville		Not Determined	1904
159342	107189		Coupeville		Not Determined	1904
159343	107190		Coupeville		Not Determined	1904
159344	107191		Coupeville		Not Determined	1904
159345	107192		Coupeville		Not Determined	1904
184804	132628				Not Determined	1941
184805	132629				Not Determined	1941
184809	132633				Not Determined	1941
184811	132635				Not Determined	1941
184812	132636				Not Determined	1941
184813	132637				Not Determined	1941
184814	132638				Not Determined	1941
184817	132641				Not Determined	1941
184818	132642				Not Determined	1941
184819	132643				Not Determined	1941
184820	132644				Not Determined	1941
184823	132647				Not Determined	1921
184827	132651				Not Determined	1904
184835	132659				Not Determined	1904
184836	132660				Not Determined	1904
184840	132664				Not Determined	1904
184841	132665				Not Determined	1900
672587	619227	Whidbey Island Game Farm, Pacific Rim Institute for Environmental Stewardship	Coupeville		Determined Eligible	1946
672370	619023	North Parking Shed, Ground Support Equipment (GSE) Compound - Building 995B	NAS Whidbey Island		Determined Not Eligible	1969
672371	619024	Ground Support Equipment (GSE) Powder Coat Facility, GSE Compound - Building 995C	NAS Whidbey Island		Determined Not Eligible	1969
672379	619031	Facility 2525 - Turbo Fan Jet Engine Test Facility, Facility 2525 - Aircraft Turbo Jet Test Cell	NAS Whidbey Island		Determined Not Eligible	1971
672380	619032	Test Cell Fuel Storage Tanks , Facility 2525A - Test Cell Fuel Storage Tanks	NAS Whidbey Island		Determined Not Eligible	1971
672382	619034	Racon Hill - Building 2665, ASR-8 Radar Building	NAS Whidbey Island		Determined Not Eligible	1982
672399	619050	Building 2740 - Medium Attack Weapons School, Pacific, Building 2740 - Fleet Aviation Specialized Operational (FASO) Academic Training Building	NAS Whidbey Island		Determined Not Eligible	1988
672401	619051	Building 2528 - Air Start Building, Building 2528 - Air Start Building	NAS Whidbey Island		Determined Not Eligible	1970
672402	619052	Building 2557, South Wash Rack Control Building, Building 2557, South Wash Rack Control Building	NAS Whidbey Island		Determined Not Eligible	1973
672403	619053	Racon Hill - Facility 2664, Facility 2664 - Radar Tower	NAS Whidbey Island		Determined Not Eligible	1982
672404	619054	Building 2558, North Wash Rack Control Building, Building 2558, North Wash Rack Control Building	NAS Whidbey Island		Determined Not Eligible	1973

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672405	619055	Building 2581, Air Start/Compression Building, Building 2581, Air Start/Compression Building	NAS Whidbey Island		Determined Not Eligible	1975
672415	619065	Fire and Rescue, Vehicle Alert , Facility 201714 - Ault Field Fire and Rescue, Vehicle Alert	NAS Whidbey Island		Determined Not Eligible	1962
26	20	Naval Air Station Whidbey Island - Outlying Field, Coupeville, NAS Building 1 & 2	NAS Whidbey Island		Determined Not Eligible	1944
674821	621340	R-13	NAS Whidbey Island		Determined Not Eligible	1976
674429	620963	Auto Hobby Shop, Bldg 2549	NAS Whidbey Island		Determined Not Eligible	1974
674430	620964	PER SUPPORT, 2641	NAS Whidbey Island		Determined Not Eligible	1980
674432	620966	CHILD DEVELOPMENT CENTER, BLDG 2679	NAS Whidbey Island		Determined Not Eligible	1984
674433	620967	MT RAINIER BLDG, BARRACKS #13, BLDG 2701	NAS Whidbey Island		Covered under 2006 ACHP PC	1988
665633	612759	North Fork Levee, North Fork Levee	N/A N/A, Skagit City, WA N/A	33030900140003/P 15559	Not Determined	1885, 1935
665634	612760	Dugualla Bay Levee, Dugualla Bay Levee	N/A N/A, Whidbey Island, WA N/A	R233070734030	Not Determined	1920
665641	612766	NASW Pump Station, NASW Pump Station	N/A N/A, Oak Harbor, WA		Not Determined	1952
623312	570568		Oak Harbor	R23330-102-1130	Not Determined	1900
623319	570575		Oak Harbor	S6430-00-00013-0	Not Determined	1900
623330	570586		Oak Harbor	R23330-037-1130	Not Determined	1900
623332	570588		Oak Harbor	R13326-092-0250	Not Determined	1912
623333	570589		Oak Harbor	R23330-095-2210	Not Determined	1920
623336	570592		Oak Harbor	R13326-272-3510	Not Determined	1943
623337	570593		Oak Harbor	R13312-167-2960	Not Determined	1952
623338	570594		Oak Harbor	R13312-146-2130	Not Determined	1959
623340	570596		Oak Harbor	R13312-235-4300	Not Determined	1962
623342	570598		Oak Harbor	R23320-096-0500	Not Determined	1963
623343	570599		Oak Harbor	R13312-450-0650	Not Determined	1966
623344	570600		Oak Harbor	R13323-074-2810	Not Determined	1966
623346	570602		Oak Harbor	R23330-484-0180	Not Determined	1967
623347	570603		Oak Harbor	R23308-369-1170	Not Determined	1967
623350	570606		Oak Harbor	S8265-00-01001-2	Not Determined	1968
623351	570607		Oak Harbor	R23319-386-2750	Not Determined	1968
623353	570609		Oak Harbor	S8265-02-03003-1	Not Determined	1969
623354	570610		Oak Harbor	R23307-419-0980	Not Determined	1969
623355	570611		Oak Harbor	R13328-363-4120	Not Determined	1969
623356	570612		Oak Harbor	R23319-302-3820	Not Determined	1969
625553	572777		Coupeville	R13114-120-5030	Not Determined	1910
625554	572778		Coupeville	R13115-273-1780	Not Determined	1910

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625555	572779	Schulke House/Steadman House, Valentine House	Coupeville	S6370-00-61005-0	Determined Eligible, Not Determined	1910
625557	572781		Coupeville	R13103-126-3340	Not Determined	1910
625563	572785		Coupeville	R13103-266-1530	Not Determined	1910
625565	572787	Frank Newberry House	Coupeville	R13104-471-4210	Not Determined	1912
625567	572789		Coupeville	R13110-338-3570	Not Determined	1912
625571	572793		Coupeville	R13101-343-4020	Not Determined	1915
625576	572796		Coupeville	R13102-500-0500	Not Determined	1918
625582	572801		Coupeville	R13103-410-2190	Not Determined	1920
625585	572804		Coupeville	R23107-391-0270	Not Determined	1925
625589	572808	Private	Coupeville	R13103-290-2150	Determined Not Eligible, Not Determined	1924, 1925
625591	572810		Coupeville	S8440-00-00025-0	Not Determined	1925
625597	572814		Coupeville	R13103-378-2330	Not Determined	1927
625600	572816		Coupeville	R13114-333-2200	Not Determined	1928
625602	572818		Coupeville	S6370-00-61010-0	Not Determined	1928
625608	572824		Coupeville	R13113-363-4620	Not Determined	1932
625615	572831		Coupeville	R13103-357-0630	Not Determined	1932
625617	572833		Coupeville	R13103-157-2690	Not Determined	1932
625620	572836		Coupeville	S8150-00-01006-0	Not Determined	1933
625621	572837		Coupeville	R13114-410-1250	Not Determined	1933
625624	572839		Coupeville	R23106-508-1720	Not Determined	1933
625625	572840		Coupeville	R23106-501-1840	Not Determined	1934
625626	572841		Coupeville	S8150-00-01015-0	Not Determined	1935
625629	572844		Coupeville	S8150-02-03001-2	Not Determined	1935
625636	572851		Coupeville	R23106-076-3100	Not Determined	1936
625740	572954		Coupeville	S8150-02-03001-1	Not Determined	1952
625744	572957		Coupeville	R13103-128-2840	Not Determined	1952
625745	572958		Coupeville	S8010-00-00093-0	Not Determined	1952
625748	572961		Coupeville	R13103-045-1700	Not Determined	1952
625750	572963		Coupeville	S7095-01-00010-0	Not Determined	1952
625751	572964		Coupeville	S8010-00-00096-0	Not Determined	1952
625752	572965		Coupeville	S8010-00-00065-0	Not Determined	1952
625753	572966		Coupeville	R13111-060-0100	Not Determined	1953
625754	572967	Private	Coupeville	S7400-00-01026-0	Determined Not Eligible, Not Determined	1953
625756	572969		Coupeville	S8010-00-00004-0	Not Determined	1953

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625758	572971		Coupeville	S8010-00-00015-1	Not Determined	1953
625760	572973		Coupeville	S8010-00-00016-1	Not Determined	1953
625761	572974		Coupeville	R13103-274-1870	Not Determined	1953
625763	572976		Coupeville	R13115-345-4930	Not Determined	1954
625764	572977		Coupeville	S7400-00-04002-0	Not Determined	1954
625765	572978		Coupeville	S7400-00-03001-0	Not Determined	1954
625766	572979		Coupeville	S7400-00-01019-0	Not Determined	1954
625768	572981		Coupeville	S8010-00-00019-0	Not Determined	1954
625770	572983		Coupeville	S7400-00-01022-0	Not Determined	1954
625777	572990		Coupeville	R13115-269-1350	Not Determined	1955
625778	572991		Coupeville	R13103-375-1830	Not Determined	1955
625781	572994		Coupeville	S7490-00-00025-0	Not Determined	1955
625783	572996		Coupeville	S7400-00-01008-0	Not Determined	1955
625787	572999		Coupeville	R23117-435-1680	Not Determined	1956
625788	573000		Coupeville	S7400-00-01015-0	Not Determined	1956
625789	573001		Coupeville	S7400-00-01012-0	Not Determined	1956
625794	573006		Coupeville	S7400-00-03007-0	Not Determined	1956
625796	573008		Coupeville	S7400-00-01037-0	Not Determined	1956
625799	573011		Coupeville	S7400-00-01027-0	Not Determined	1956
625801	573013		Coupeville	R13113-422-4920	Not Determined	1957
625803	573015		Coupeville	R23106-029-3200	Not Determined	1957
625804	573016		Coupeville	R23107-450-3210	Not Determined	1957
625808	573020		Coupeville	S7400-00-05004-0	Not Determined	1957
625810	573022		Coupeville	S7400-00-03025-0	Not Determined	1957
625811	573023		Coupeville	S7400-00-01031-0	Not Determined	1957
625812	573024		Coupeville	S7400-00-02003-0	Not Determined	1957
625816	573028		Coupeville	S7400-00-03006-0	Not Determined	1957
625822	573034		Coupeville	S8300-00-01024-0	Not Determined	1958
625823	573035		Coupeville	S7400-00-02015-0	Not Determined	1958
625826	573038		Coupeville	S7400-00-02004-0	Not Determined	1958
625827	573039		Coupeville	S7490-00-00026-0	Not Determined	1958
625831	573043		Coupeville	S7400-00-03008-0	Not Determined	1958
625928	573139		Coupeville	S8150-02-03021-0	Not Determined	1963
625931	573142		Coupeville	S8150-00-01005-0	Not Determined	1963
625933	573144		Coupeville	S8440-00-00017-0	Not Determined	1963

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625936	573147		Coupeville	S7400-00-05012-0	Not Determined	1963
625937	573148		Coupeville	R13103-049-5150	Not Determined	1963
625942	573153		Coupeville	S8440-00-00028-0	Not Determined	1963
625945	573156		Coupeville	S6010-00-01016-0	Not Determined	1964
625946	573157		Coupeville	S6010-00-04028-0	Not Determined	1964
625947	573158		Coupeville	S6010-00-01028-0	Not Determined	1964
625948	573159		Coupeville	S8150-00-02005-0	Not Determined	1964
625949	573160		Coupeville	S6010-00-04019-0	Not Determined	1964
625950	573161		Coupeville	S6010-00-01025-0	Not Determined	1964
625951	573162		Coupeville	S8150-02-03011-0	Not Determined	1964
625952	573163		Coupeville	S8150-00-02004-0	Not Determined	1964
625953	573164		Coupeville	S6010-00-03029-0	Not Determined	1964
625954	573165		Coupeville	S6010-00-02025-0	Not Determined	1964
625956	573167		Coupeville	S6010-00-05016-0	Not Determined	1964
625957	573168		Coupeville	S8150-02-03008-0	Not Determined	1964
625958	573169		Coupeville	S6370-00-61008-0	Not Determined	1964
625959	573170		Coupeville	S6010-00-01010-0	Not Determined	1964
625960	573171		Coupeville	S6010-00-01015-0	Not Determined	1964
625961	573172		Coupeville	S8150-00-01012-0	Not Determined	1964
625962	573173		Coupeville	S8440-00-00032-0	Not Determined	1964
625963	573174		Coupeville	S8440-00-00016-0	Not Determined	1964
625964	573175		Coupeville	S8010-00-00082-0	Not Determined	1964
625966	573177		Coupeville	S7490-00-00010-0	Not Determined	1964
625967	573178		Coupeville	R13103-115-4620	Not Determined	1964
625969	573180		Coupeville	S7350-00-0A023-0	Not Determined	1964
625970	573181		Coupeville	S7400-00-05001-1	Not Determined	1964
625973	573184		Coupeville	S8150-02-04002-0	Not Determined	1965
625978	573189		Coupeville	S8300-00-01004-0	Not Determined	1965
625979	573190		Coupeville	S8150-02-03002-0	Not Determined	1965
625980	573191		Coupeville	S6010-00-02005-0	Not Determined	1965
625983	573194		Coupeville	S8010-00-00036-0	Not Determined	1965
625984	573195		Coupeville	S8440-00-00007-0	Not Determined	1965
625985	573196		Coupeville	S7365-00-00007-0	Not Determined	1965
625987	573198		Coupeville	S8440-00-00030-0	Not Determined	1965
625988	573199		Coupeville	R13103-270-2050	Not Determined	1965



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625990	573201		Coupeville	R13234-381-4590	Not Determined	1965
625991	573202		Coupeville	S8010-00-00005-0	Not Determined	1965
625992	573203		Coupeville	R23106-022-3980	Not Determined	1965
625993	573204		Coupeville	S6010-02-01004-0	Not Determined	1966
625999	573210		Coupeville	S8150-02-03013-0	Not Determined	1966
626001	573212		Coupeville	S8300-00-01003-0	Not Determined	1966
626003	573214		Coupeville	R13114-116-3680	Not Determined	1966
626004	573215		Coupeville	S8150-00-02007-0	Not Determined	1966
626005	573216		Coupeville	S6010-00-04017-0	Not Determined	1966
626008	573219		Coupeville	R13234-317-5000	Not Determined	1966
626009	573220		Coupeville	S8010-00-00069-0	Not Determined	1966
626010	573221		Coupeville	R13103-407-4060	Not Determined	1966
626011	573222		Coupeville	S7400-00-01007-0	Not Determined	1966
626012	573223		Coupeville	R13103-105-2830	Not Determined	1966
626013	573224		Coupeville	S8010-00-00068-0	Not Determined	1966
626014	573225		Coupeville	R23106-010-3450	Not Determined	1966
626016	573227		Coupeville	S6010-03-0000D-2	Not Determined	1967
626018	573229		Coupeville	S6010-06-00065-0	Not Determined	1967
627620	574831		Oak Harbor	R13327-497-1820	Not Determined	1908
627621	574832		Oak Harbor	S8420-00-00001-2	Not Determined	1909
627626	574837		Oak Harbor	R23331-420-4160	Not Determined	1910
627627	574838		Oak Harbor	R13312-099-3180	Not Determined	1910
627628	574839		Oak Harbor	R13435-083-4650	Not Determined	1910
627632	574843		Oak Harbor	R13327-521-3910	Not Determined	1912
627634	574845		Oak Harbor	R13312-168-1600	Not Determined	1912
627635	574846		Oak Harbor	R13303-121-4290	Not Determined	1912
627640	574851		Oak Harbor	S7740-00-00032-0	Not Determined	1913
627643	574854		Oak Harbor	R13436-463-0820	Not Determined	1913
627645	574856		Oak Harbor	R13336-443-1500	Not Determined	1913
627646	574857		Oak Harbor	R23320-295-0400	Not Determined	1913
627650	574861		Oak Harbor	R23330-049-5120	Not Determined	1914
627660	574871		Oak Harbor	S7295-00-00025-0	Not Determined	1915
627661	574872		Oak Harbor	R23319-445-5110	Not Determined	1915
627662	574873		Oak Harbor	R13311-034-5090	Not Determined	1915
627665	574876		Oak Harbor	R23330-239-4990	Not Determined	1917

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627670	574881		Oak Harbor	R13326-039-0630	Not Determined	1918
627674	574885		Oak Harbor	R23329-484-0390	Not Determined	1918
627675	574886		Oak Harbor	R23318-329-2390	Not Determined	1918
627682	574893		Oak Harbor	R13312-175-4400	Not Determined	1920
627689	574900		Oak Harbor	R13311-503-1120	Not Determined	1922
627691	574902		Oak Harbor	R13303-141-5200	Not Determined	1922
627698	574909		Oak Harbor	R13311-067-4290	Not Determined	1923
627699	574910		Oak Harbor	R23318-298-1470	Not Determined	1923
627701	574912		Oak Harbor	S6055-00-0000B-0	Not Determined	1923
627707	574918		Oak Harbor	R23317-431-3670	Not Determined	1923
627708	574919		Oak Harbor	R13436-480-1340	Not Determined	1923
627709	574920		Oak Harbor	R13435-150-3530	Not Determined	1924
627711	574922		Oak Harbor	R23306-462-0260	Not Determined	1924
627807	575018		Oak Harbor	R23330-314-4920	Not Determined	1937
627808	575019		Oak Harbor	R23320-469-3160	Not Determined	1937
627813	575024		Oak Harbor	R23330-350-4900	Not Determined	1938
627814	575025		Oak Harbor	S8420-00-00001-1	Not Determined	1938
627820	575031		Oak Harbor	R13312-064-0060	Not Determined	1939
627832	575043		Oak Harbor	S7575-00-03016-0	Not Determined	1940
627836	575047		Oak Harbor	R13302-429-4610	Not Determined	1940
627840	575051		Oak Harbor	R13313-190-2060	Not Determined	1940
627849	575060		Oak Harbor	R23317-450-2020	Not Determined	1941
627853	575064		Oak Harbor	R13301-033-1640	Not Determined	1941
627854	575065		Oak Harbor	R23306-182-0340	Not Determined	1942
627864	575075		Oak Harbor	R13303-331-4980	Not Determined	1942
627867	575078		Oak Harbor	R13326-371-0880	Not Determined	1942
627869	575080		Oak Harbor	R23318-304-2250	Not Determined	1943
627870	575081		Oak Harbor	R13302-282-1150	Not Determined	1943
627871	575082		Oak Harbor	S6525-00-0300B-0	Not Determined	1943
627872	575083		Oak Harbor	S7740-00-00033-0	Not Determined	1943
627874	575085		Oak Harbor	S6525-00-0300C-0	Not Determined	1943
627878	575089		Oak Harbor	R13326-086-0670	Not Determined	1943
627879	575090		Oak Harbor	S6525-00-02004-0	Not Determined	1943
627880	575091		Oak Harbor	R23318-304-2370	Not Determined	1943
627881	575092		Oak Harbor	R13326-120-0040	Not Determined	1943

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627882	575093		Oak Harbor	R23318-300-1820	Not Determined	1943
627883	575094		Oak Harbor	S6525-00-02002-0	Not Determined	1943
627885	575096		Oak Harbor	R23318-255-2570	Not Determined	1943
627886	575097		Oak Harbor	R13301-298-0460	Not Determined	1943
627887	575098		Oak Harbor	R13303-092-3820	Not Determined	1943
627888	575099		Oak Harbor	R13312-496-0340	Not Determined	1943
627889	575100		Oak Harbor	R23318-305-2500	Not Determined	1943
627890	575101		Oak Harbor	S6525-00-02003-0	Not Determined	1943
627892	575103		Oak Harbor	S6525-00-02001-0	Not Determined	1943
627893	575104		Oak Harbor	S7055-00-00009-0	Not Determined	1943
627899	575110		Oak Harbor	R23330-302-4720	Not Determined	1944
628002	575213		Oak Harbor	R13311-158-1590	Not Determined	1949
628009	575220		Oak Harbor	R23307-331-4800	Not Determined	1949
628031	575242		Oak Harbor	R13313-348-0320	Not Determined	1950
628033	575244		Oak Harbor	R23307-191-2840	Not Determined	1950
628039	575250		Oak Harbor	R13324-495-0500	Not Determined	1950
628043	575254		Oak Harbor	R13311-128-2550	Not Determined	1950
628049	575260		Oak Harbor	R23318-333-3000	Not Determined	1950
628055	575266		Oak Harbor	R13303-147-3780	Not Determined	1950
628056	575267		Oak Harbor	S7575-00-01027-0	Not Determined	1950
628058	575269	John & Connie Hudgins	Oak Harbor	R13303-165-3850	Determined Not Eligible, Not Determined	1950
628060	575271		Oak Harbor	R23330-202-5010	Not Determined	1950
628062	575273		Oak Harbor	R23307-103-1050	Not Determined	1950
628072	575283		Oak Harbor	R13312-280-0330	Not Determined	1950
628076	575287		Oak Harbor	S7575-00-01026-0	Not Determined	1950
628077	575288		Oak Harbor	R13312-084-1130	Not Determined	1950
628084	575295		Oak Harbor	R13301-456-0630	Not Determined	1950
628085	575296		Oak Harbor	R13303-158-3780	Not Determined	1950
628193	575404		Oak Harbor	S6335-00-00007-0	Not Determined	1952
628195	575406		Oak Harbor	R13335-394-3230	Not Determined	1952
628199	575410		Oak Harbor	S7740-00-00018-0	Not Determined	1952
628213	575424		Oak Harbor	R13436-407-1940	Not Determined	1952
628214	575425		Oak Harbor	S7740-00-00044-0	Not Determined	1952
628216	575427		Oak Harbor	R13302-110-1160	Not Determined	1952

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628218	575429		Oak Harbor	R23319-055-3650	Not Determined	1952
628222	575433		Oak Harbor	R13303-139-3950	Not Determined	1952
628225	575436		Oak Harbor	R13312-099-2070	Not Determined	1952
628231	575442		Oak Harbor	R13328-483-4730	Not Determined	1953
628247	575458		Oak Harbor	R23318-306-2630	Not Determined	1953
628255	575466		Oak Harbor	R13326-313-3310	Not Determined	1953
628263	575474		Oak Harbor	S7020-00-00002-0	Not Determined	1953
628373	575584		Oak Harbor	S6055-00-02006-0	Not Determined	1955
628374	575585		Oak Harbor	R23305-154-2920	Not Determined	1955
628377	575588		Oak Harbor	R13335-422-3530	Not Determined	1955
628382	575593		Oak Harbor	S7295-00-00015-0	Not Determined	1955
628388	575599		Oak Harbor	R13312-115-0720	Not Determined	1955
628397	575608		Oak Harbor	S7295-00-00013-0	Not Determined	1955
628401	575612		Oak Harbor	R13436-469-0930	Not Determined	1955
628402	575613		Oak Harbor	S6055-00-03007-0	Not Determined	1955
628404	575615		Oak Harbor	R13313-299-0480	Not Determined	1955
628405	575616		Oak Harbor	S7575-00-01019-0	Not Determined	1955
628407	575618		Oak Harbor	S6055-00-04008-0	Not Determined	1955
628408	575619		Oak Harbor	S6055-00-01003-0	Not Determined	1955
628409	575620		Oak Harbor	R13313-281-0170	Not Determined	1955
628413	575624		Oak Harbor	R23330-324-4920	Not Determined	1955
628416	575627		Oak Harbor	R13328-241-4830	Not Determined	1955
628418	575629		Oak Harbor	S6055-00-02011-0	Not Determined	1955
628420	575631		Oak Harbor	S7575-00-11015-0	Not Determined	1955
628421	575632		Oak Harbor	S7295-00-00002-0	Not Determined	1956
628424	575635		Oak Harbor	S7295-00-00022-0	Not Determined	1956
628425	575636		Oak Harbor	S7295-00-00014-0	Not Determined	1956
628428	575639		Oak Harbor	S7295-00-00003-0	Not Determined	1956
628430	575641	Barn, Maurer Barn	Oak Harbor	R13435-015-1720	Not Determined, Washington Heritage Barn Register	1956
628431	575642		Oak Harbor	R13335-221-4160	Not Determined	1956
628436	575647		Oak Harbor	S7295-00-00021-0	Not Determined	1956
628444	575655		Oak Harbor	S6600-00-05009-0	Not Determined	1956
628449	575660		Oak Harbor	R13312-146-2280	Not Determined	1956
628455	575666		Oak Harbor	R13325-122-1680	Not Determined	1956

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
628458	575669		Oak Harbor	S7295-00-00018-0	Not Determined	1956
628461	575672		Oak Harbor	S7295-00-00001-0	Not Determined	1956
628565	575776		Oak Harbor	R13335-390-0580	Not Determined	1957
628568	575779		Oak Harbor	R23331-427-1900	Not Determined	1957
628569	575780		Oak Harbor	R13436-442-1940	Not Determined	1957
628573	575784		Oak Harbor	S7285-21-00035-0	Not Determined	1957
628577	575788		Oak Harbor	R13311-455-1770	Not Determined	1957
628578	575789		Oak Harbor	R13436-478-1060	Not Determined	1957
628584	575795		Oak Harbor	S6055-00-01004-0	Not Determined	1957
628586	575797		Oak Harbor	R23308-345-0950	Not Determined	1957
628587	575798		Oak Harbor	S7520-00-01001-0	Not Determined	1957
628590	575801		Oak Harbor	S6055-00-02003-0	Not Determined	1957
628592	575803		Oak Harbor	S6055-00-03008-0	Not Determined	1957
628598	575809		Oak Harbor	R13301-319-0100	Not Determined	1957
628599	575810		Oak Harbor	R23331-415-2680	Not Determined	1957
628612	575823		Oak Harbor	S6600-00-01001-0	Not Determined	1957
628620	575831		Oak Harbor	S6600-00-02008-0	Not Determined	1957
628622	575833		Oak Harbor	R13301-303-0100	Not Determined	1957
628626	575837		Oak Harbor	S6055-00-03010-0	Not Determined	1957
628636	575847		Oak Harbor	R13326-185-0350	Not Determined	1957
628638	575849		Oak Harbor	R13324-091-2150	Not Determined	1957
628643	575854		Oak Harbor	R23318-379-4850	Not Determined	1957
628749	575960		Oak Harbor	S7285-30-03010-0	Not Determined	1958
628751	575962		Oak Harbor	S7285-30-11002-0	Not Determined	1958
628752	575963		Oak Harbor	R23307-140-2510	Not Determined	1958
628753	575964		Oak Harbor	S7285-30-04016-0	Not Determined	1958
628754	575965		Oak Harbor	S7285-30-09003-0	Not Determined	1958
628756	575967		Oak Harbor	S7520-00-02015-0	Not Determined	1958
628757	575968		Oak Harbor	S7285-30-09001-0	Not Determined	1958
628762	575973		Oak Harbor	S7520-00-02012-0	Not Determined	1958
628764	575975		Oak Harbor	S7285-30-09006-0	Not Determined	1958
628765	575976		Oak Harbor	S7285-30-04015-0	Not Determined	1958
628769	575980		Oak Harbor	S7285-30-04003-0	Not Determined	1958
628771	575982		Oak Harbor	S7285-40-00007-0	Not Determined	1958
628775	575986		Oak Harbor	S6600-00-05010-0	Not Determined	1958

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
628783	575994		Oak Harbor	S7520-00-03002-0	Not Determined	1958
628787	575998		Oak Harbor	S7285-30-10001-0	Not Determined	1958
628788	575999		Oak Harbor	S7285-30-11001-0	Not Determined	1958
628793	576004		Oak Harbor	S7520-00-02013-0	Not Determined	1958
628797	576008		Oak Harbor	S7285-30-08006-0	Not Determined	1958
628799	576010		Oak Harbor	S6515-00-01010-0	Not Determined	1958
628805	576016		Oak Harbor	S7285-30-04013-0	Not Determined	1958
628807	576018		Oak Harbor	S7285-30-05005-0	Not Determined	1958
628809	576020		Oak Harbor	R23329-502-1030	Not Determined	1958
628816	576027		Oak Harbor	S7285-30-04001-0	Not Determined	1958
628817	576028		Oak Harbor	R13335-433-3520	Not Determined	1958
628822	576033		Oak Harbor	R23317-425-0400	Not Determined	1958
628824	576035		Oak Harbor	S7285-30-04006-0	Not Determined	1958
628825	576036		Oak Harbor	S7285-30-04014-0	Not Determined	1958
628826	576037		Oak Harbor	S7065-00-00015-0	Not Determined	1958
628827	576038		Oak Harbor	S7520-00-02017-0	Not Determined	1958
628829	576040		Oak Harbor	R13328-206-4900	Not Determined	1958
628832	576043		Oak Harbor	S7065-00-00003-0	Not Determined	1958
628840	576051		Oak Harbor	S7285-30-05004-0	Not Determined	1958
628938	576149		Oak Harbor	S7285-30-03013-0	Not Determined	1959
628940	576151		Oak Harbor	S7285-30-09004-0	Not Determined	1959
628941	576152		Oak Harbor	S6535-00-00010-0	Not Determined	1959
628947	576158		Oak Harbor	S6600-00-05008-0	Not Determined	1959
628951	576162		Oak Harbor	R23331-419-2500	Not Determined	1959
628953	576164		Oak Harbor	S6600-00-01006-0	Not Determined	1959
628955	576166		Oak Harbor	S6600-00-02007-0	Not Determined	1959
628960	576171		Oak Harbor	S6600-00-02006-0	Not Determined	1959
628961	576172		Oak Harbor	S6600-00-01010-0	Not Determined	1959
628964	576175		Oak Harbor	S7285-30-07003-0	Not Determined	1959
628965	576176		Oak Harbor	S7285-30-02016-0	Not Determined	1959
628972	576183		Oak Harbor	S7285-30-03015-0	Not Determined	1959
628973	576184		Oak Harbor	R13335-221-4240	Not Determined	1959
628976	576187		Oak Harbor	S7520-00-03005-0	Not Determined	1959
628980	576191		Oak Harbor	S6600-00-01004-0	Not Determined	1959
628981	576192		Oak Harbor	S7655-00-01014-0	Not Determined	1959

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628987	576198		Oak Harbor	S7285-30-04007-0	Not Determined	1959
628991	576202		Oak Harbor	S6535-00-00011-0	Not Determined	1959
628993	576204		Oak Harbor	S7285-40-00009-0	Not Determined	1959
628994	576205		Oak Harbor	S6600-00-05007-0	Not Determined	1959
628996	576207		Oak Harbor	S7295-00-00010-0	Not Determined	1959
628999	576210		Oak Harbor	S6515-00-01008-0	Not Determined	1959
629001	576212		Oak Harbor	S6535-00-00014-0	Not Determined	1959
629005	576216		Oak Harbor	S7285-30-02015-0	Not Determined	1959
629008	576219		Oak Harbor	S6600-00-01012-0	Not Determined	1959
629009	576220		Oak Harbor	S7285-30-05007-0	Not Determined	1959
629010	576221		Oak Harbor	S6600-00-01007-0	Not Determined	1959
629013	576224		Oak Harbor	S7285-30-08001-0	Not Determined	1959
629014	576225		Oak Harbor	S7285-40-00001-0	Not Determined	1959
629015	576226		Oak Harbor	S7285-30-07002-0	Not Determined	1959
629016	576227		Oak Harbor	S7285-30-11004-0	Not Determined	1959
629019	576230		Oak Harbor	R23330-418-0700	Not Determined	1959
629020	576231		Oak Harbor	S6600-00-01003-0	Not Determined	1959
629024	576235		Oak Harbor	S7285-30-06003-0	Not Determined	1959
629025	576236		Oak Harbor	S6600-00-02004-0	Not Determined	1959
629026	576237		Oak Harbor	S7285-30-03001-0	Not Determined	1959
629124	576335		Oak Harbor	S6535-00-00004-0	Not Determined	1960
629125	576336		Oak Harbor	S7285-30-05015-0	Not Determined	1960
629130	576341		Oak Harbor	R23318-196-0140	Not Determined	1960
629136	576347		Oak Harbor	R13435-165-4310	Not Determined	1961
629138	576349		Oak Harbor	S7285-30-05016-0	Not Determined	1961
629145	576356		Oak Harbor	S7285-30-02006-0	Not Determined	1961
629147	576358		Oak Harbor	S7285-30-02005-0	Not Determined	1961
629150	576361		Oak Harbor	R13336-236-0710	Not Determined	1961
629151	576362		Oak Harbor	R13336-128-0340	Not Determined	1961
629153	576364		Oak Harbor	S7285-30-05009-0	Not Determined	1961
629156	576367		Oak Harbor	S6525-00-01008-0	Not Determined	1961
629159	576370		Oak Harbor	S7285-30-01003-0	Not Determined	1961
629163	576374		Oak Harbor	R13312-280-4040	Not Determined	1961
629164	576375		Oak Harbor	R23307-282-0080	Not Determined	1961
629166	576377		Oak Harbor	S7285-30-01006-0	Not Determined	1961



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629168	576379		Oak Harbor	S7285-30-01002-0	Not Determined	1961
629169	576380		Oak Harbor	S6515-00-04002-0	Not Determined	1961
629170	576381		Oak Harbor	S7285-30-02013-0	Not Determined	1961
629172	576383		Oak Harbor	S7655-02-03003-0	Not Determined	1961
629173	576384		Oak Harbor	R13303-141-4400	Not Determined	1961
629174	576385		Oak Harbor	S7655-02-04007-0	Not Determined	1961
629175	576386		Oak Harbor	S7285-30-05014-0	Not Determined	1961
629178	576389		Oak Harbor	S6515-00-01001-0	Not Determined	1961
629181	576392		Oak Harbor	S7520-00-03010-0	Not Determined	1962
629185	576396		Oak Harbor	S6515-02-10005-0	Not Determined	1962
629186	576397		Oak Harbor	S7520-00-03009-0	Not Determined	1962
629187	576398		Oak Harbor	S7285-30-02007-0	Not Determined	1962
629189	576400		Oak Harbor	S6535-00-00009-0	Not Determined	1962
629192	576403		Oak Harbor	S6055-00-01005-0	Not Determined	1962
629196	576407		Oak Harbor	S7740-00-00009-0	Not Determined	1962
629197	576408		Oak Harbor	R13324-495-1150	Not Determined	1962
629199	576410		Oak Harbor	S8468-00-00021-0	Not Determined	1962
629204	576415		Oak Harbor	S7285-30-01008-0	Not Determined	1962
629207	576418		Oak Harbor	R13324-247-4930	Not Determined	1962
629208	576419		Oak Harbor	S7655-02-04009-0	Not Determined	1962
629209	576420		Oak Harbor	R23318-208-1700	Not Determined	1962
629213	576424		Oak Harbor	S7285-30-01005-0	Not Determined	1962
629215	576426		Oak Harbor	R13326-071-0230	Not Determined	1962
629216	576427		Oak Harbor	S7285-30-01004-0	Not Determined	1962
629313	576524		Oak Harbor	S7655-02-03002-0	Not Determined	1964
629315	576526		Oak Harbor	S7285-30-02011-0	Not Determined	1964
629318	576529		Oak Harbor	S6515-02-08004-0	Not Determined	1964
629320	576531		Oak Harbor	S6515-00-05005-0	Not Determined	1964
629321	576532		Oak Harbor	S8415-00-00004-0	Not Determined	1964
629325	576536		Oak Harbor	R13327-147-1120	Not Determined	1964
629326	576537		Oak Harbor	S7415-00-00003-0	Not Determined	1964
629328	576539		Oak Harbor	S7285-30-08003-0	Not Determined	1964
629329	576540		Oak Harbor	S8415-00-00010-0	Not Determined	1964
629332	576543		Oak Harbor	S6055-00-01009-0	Not Determined	1964
629337	576548		Oak Harbor	S7655-02-04005-0	Not Determined	1964

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629338	576549		Oak Harbor	S7520-00-02002-0	Not Determined	1964
629341	576552		Oak Harbor	S7655-02-04002-0	Not Determined	1964
629342	576553		Oak Harbor	S7520-00-02009-0	Not Determined	1964
629344	576555		Oak Harbor	S7285-30-02008-0	Not Determined	1964
629345	576556		Oak Harbor	R13436-407-2330	Not Determined	1964
629346	576557		Oak Harbor	S7655-02-04006-0	Not Determined	1964
629347	576558		Oak Harbor	S7285-30-04009-0	Not Determined	1964
629350	576561		Oak Harbor	R13301-237-0140	Not Determined	1964
629351	576562		Oak Harbor	R23319-227-0300	Not Determined	1964
629355	576566		Oak Harbor	S7520-00-02010-0	Not Determined	1964
629357	576568		Oak Harbor	S7520-00-02004-0	Not Determined	1964
629358	576569		Oak Harbor	S6410-03-00039-0	Not Determined	1964
629359	576570		Oak Harbor	S7520-00-02008-0	Not Determined	1964
629361	576572		Oak Harbor	S8255-00-00016-0	Not Determined	1964
629363	576574		Oak Harbor	R13436-084-1780	Not Determined	1964
629368	576579		Oak Harbor	R13434-100-4030	Not Determined	1965
629370	576581		Oak Harbor	S8015-00-00001-0	Not Determined	1965
629371	576582		Oak Harbor	S6535-00-00020-0	Not Determined	1965
629372	576583		Oak Harbor	S7655-02-03010-0	Not Determined	1965
629374	576585		Oak Harbor	R13326-444-2810	Not Determined	1965
629379	576590		Oak Harbor	S6055-00-02012-0	Not Determined	1965
629380	576591		Oak Harbor	S7520-00-03006-0	Not Determined	1965
629389	576600		Oak Harbor	R23320-173-4980	Not Determined	1965
629391	576602		Oak Harbor	R13312-167-3620	Not Determined	1965
629394	576605		Oak Harbor	S6535-00-00003-0	Not Determined	1965
629398	576609		Oak Harbor	S7655-02-04008-0	Not Determined	1965
629500	576711		Oak Harbor	S6600-00-05004-0	Not Determined	1967
629505	576716		Oak Harbor	S7520-00-02007-0	Not Determined	1967
629506	576717		Oak Harbor	R23330-495-2340	Not Determined	1967
629507	576718		Oak Harbor	R13324-151-4860	Not Determined	1967
629508	576719		Oak Harbor	R13326-014-0230	Not Determined	1967
629510	576721		Oak Harbor	S7295-00-00028-0	Not Determined	1967
629516	576727		Oak Harbor	S7295-00-00026-0	Not Determined	1967
629517	576728		Oak Harbor	S6515-05-15003-0	Not Determined	1967
629520	576731		Oak Harbor	R13303-106-3830	Not Determined	1967

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629527	576738		Oak Harbor	R23319-178-0820	Not Determined	1967
629530	576741		Oak Harbor	S7285-30-03006-0	Not Determined	1967
629537	576748		Oak Harbor	S8015-02-00024-0	Not Determined	1967
629541	576752		Oak Harbor	S7415-00-00005-0	Not Determined	1967
629550	576761		Oak Harbor	R13326-288-3170	Not Determined	1967
629551	576762		Oak Harbor	R23330-133-1720	Not Determined	1967
629552	576763		Oak Harbor	S8015-00-00010-0	Not Determined	1967
629553	576764		Oak Harbor	R13325-513-3740	Not Determined	1967
629554	576765		Oak Harbor	S7285-30-03007-0	Not Determined	1967
629556	576767		Oak Harbor	R13313-231-1530	Not Determined	1967
629560	576771		Oak Harbor	S8015-00-00004-0	Not Determined	1967
629563	576774		Oak Harbor	S8265-00-01010-0	Not Determined	1967
629566	576777		Oak Harbor	S8140-00-02025-0	Not Determined	1968
629568	576779		Oak Harbor	S8140-00-05010-0	Not Determined	1968
629570	576781		Oak Harbor	S7575-00-11028-0	Not Determined	1968
629571	576782		Oak Harbor	R13325-249-3660	Not Determined	1968
629572	576783		Oak Harbor	S8140-00-05002-0	Not Determined	1968
629574	576785		Oak Harbor	S8140-00-05014-0	Not Determined	1968
629580	576791		Oak Harbor	S8140-00-05003-0	Not Determined	1968
629583	576794		Oak Harbor	S8140-00-02023-0	Not Determined	1968
629584	576795		Oak Harbor	S6515-03-12015-0	Not Determined	1968
629586	576797		Oak Harbor	S6515-07-00049-0	Not Determined	1968
629588	576799		Oak Harbor	S6455-00-00003-0	Not Determined	1968
629590	576801		Oak Harbor	S8055-00-00010-0	Not Determined	1968
629591	576802		Oak Harbor	S8140-00-05011-0	Not Determined	1968
629688	576899		Oak Harbor	R13327-369-1850	Not Determined	1968
629689	576900		Oak Harbor	S8140-00-05008-0	Not Determined	1968
629690	576901		Oak Harbor	R23330-493-3080	Not Determined	1968
629694	576905		Oak Harbor	S6515-00-02007-0	Not Determined	1968
629696	576907		Oak Harbor	S7655-00-01011-0	Not Determined	1968
629697	576908		Oak Harbor	S8140-00-05007-0	Not Determined	1968
629698	576909		Oak Harbor	S8265-00-01003-1	Not Determined	1968
629701	576912		Oak Harbor	S8140-00-05006-0	Not Determined	1968
629704	576915		Oak Harbor	S8015-02-00025-0	Not Determined	1968
629707	576918		Oak Harbor	S8140-00-01005-0	Not Determined	1969

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629715	576926		Oak Harbor	S6515-03-12009-0	Not Determined	1969
629717	576928		Oak Harbor	S8140-00-01014-0	Not Determined	1969
629718	576929		Oak Harbor	S8140-00-01009-0	Not Determined	1969
629719	576930		Oak Harbor	R13434-220-4010	Not Determined	1969
629720	576931		Oak Harbor	S8015-02-00021-0	Not Determined	1969
629721	576932		Oak Harbor	S8140-00-01017-0	Not Determined	1969
629723	576934		Oak Harbor	R13324-035-3100	Not Determined	1969
629725	576936		Oak Harbor	S8140-00-01019-0	Not Determined	1969
629726	576937		Oak Harbor	S6305-00-00021-0	Not Determined	1969
629727	576938		Oak Harbor	S8140-00-01007-0	Not Determined	1969
629729	576940		Oak Harbor	R13311-442-1520	Not Determined	1969
629731	576942		Oak Harbor	S8140-00-01012-0	Not Determined	1969
629732	576943		Oak Harbor	S7575-00-03051-0	Not Determined	1969
629741	576952		Oak Harbor	S6455-00-00057-0	Not Determined	1969
629742	576953		Oak Harbor	S8140-00-02011-0	Not Determined	1969
629743	576954		Oak Harbor	R23330-035-1770	Not Determined	1969
629745	576956		Oak Harbor	S8140-00-02012-0	Not Determined	1969
629746	576957		Oak Harbor	S6515-03-12002-0	Not Determined	1969
629748	576959		Oak Harbor	R13324-202-4130	Not Determined	1969
629753	576964		Oak Harbor	S8140-00-01013-0	Not Determined	1969
629754	576965		Oak Harbor	S8140-00-01010-0	Not Determined	1969
629756	576967		Oak Harbor	S8140-00-04003-0	Not Determined	1969
629760	576971		Oak Harbor	S7575-00-07001-0	Not Determined	1969
629762	576973		Oak Harbor	S8015-02-00014-0	Not Determined	1969
629764	576975		Oak Harbor	S8055-00-00002-0	Not Determined	1969
629766	576977		Oak Harbor	S8140-00-01015-0	Not Determined	1969
629768	576979		Oak Harbor	S8140-00-02003-0	Not Determined	1969
629776	576987		Oak Harbor	S8140-00-01011-0	Not Determined	1969
629777	576988		Oak Harbor	R13303-150-4990	Not Determined	1969
629778	576989		Oak Harbor	R13311-108-3050	Not Determined	1969
629780	576991		Oak Harbor	S8140-00-01018-0	Not Determined	1969
629889	577099		Oak Harbor	R23307-139-2170	Not Determined	1967
629893	577103		Oak Harbor	S7740-00-0000B-5	Not Determined	1968
629894	577104		Oak Harbor	S8265-02-04001-0	Not Determined	1968
629895	577105		Oak Harbor	S7285-21-00034-0	Not Determined	1968

HISTORIC I	ResourceID	SiteNameHi	Loc FullAd	TaxParcel	RegisterTy	BuiltYear
629904	577114		Oak Harbor	R13326-150-0350	Not Determined	1942
629906	577116		Oak Harbor	R13326-045-0230	Not Determined	1942
629907	577117		Oak Harbor	R13311-274-2180	Not Determined	1943
629908	577118		Oak Harbor	R13335-513-4360	Not Determined	1943
629909	577119		Oak Harbor	R23318-240-2180	Not Determined	1943
629910	577120		Oak Harbor	S7740-00-00001-0	Not Determined	1943
629912	577122		Oak Harbor	R13335-297-0280	Not Determined	1950
629913	577123		Oak Harbor	R13311-462-1390	Not Determined	1952
629925	577135		Coupeville	S7246-00-00012-0	Not Determined	1890
629928	577138		Oak Harbor	R13327-198-1980	Not Determined	1922
629929	577139		Oak Harbor	R13335-444-1230	Not Determined	1938
629930	577140		Oak Harbor	R23330-167-5220	Not Determined	1950
629931	577141		Oak Harbor	R13335-316-1140	Not Determined	1957
629933	577143		Oak Harbor	R13335-412-4330	Not Determined	1958
629934	577144		Oak Harbor	R13301-350-2950	Not Determined	1968
629936	577145		Coupeville	R13102-427-4250	Not Determined	1955
629938	577147		Oak Harbor	R13325-106-0190	Not Determined	1957
629940	577149		Oak Harbor	R13335-367-4010	Not Determined	1959
629942	577151		Coupeville	S8300-00-01002-0	Not Determined	1959
629946	577155		Oak Harbor	R13326-421-2780	Not Determined	1945
629947	577156		Oak Harbor	R13326-338-2970	Not Determined	1946
629957	577162		Coupeville	R13104-460-4100	Not Determined	1920
629960	577165		Coupeville	R13104-427-3800	Not Determined	1968
629969	577174		Coupeville	R13104-409-3940	Not Determined	1952
629970	577175		Oak Harbor	S7740-00-0000A-6	Not Determined	1954
629975	577180		Oak Harbor	R13335-275-3920	Not Determined	1956
629976	577181		Oak Harbor	R13335-517-4710	Not Determined	1963
629977	577182		Oak Harbor	R13327-502-2520	Not Determined	1963
630079	577282		Oak Harbor	S7285-00-0A001-1	Not Determined	1968
630081	577284	Chapman Rental House	Coupeville	R13104-436-3940	Not Determined	1918
630087	577290		Oak Harbor	R13335-261-3850	Not Determined	1959
630088	577291		Oak Harbor	S7285-01-00003-0	Not Determined	1960
630092	577295		Oak Harbor	R13335-386-3750	Not Determined	1967
630093	577296		Oak Harbor	R13335-275-2640	Not Determined	1968
463	455	Dixon House, Partridge House, Community Alcohol Center, Penn Cove Veterinary	Coupeville	R13104-428-3940	Not Determined	1918

HISTORIC I	ResourceID	SiteNameHi	Loc FullAd	TaxParcel	RegisterTy	BuiltYear
		Clinic				
630116	577316		Oak Harbor	S7285-01-00001-0	Not Determined	1959
630121	577321		Oak Harbor	R13326-341-0520	Not Determined	1968
630131	577330		Coupeville	R13122-410-0750	Not Determined	1940
630132	577331		Coupeville	R13116-271-4200	Not Determined	1940
630151	577350		Oak Harbor	R13335-414-3700	Not Determined	1950
630156	577355		Oak Harbor	R13326-012-3520	Not Determined	1964
630157	577356		Oak Harbor	R13335-320-2850	Not Determined	1964
630158	577357		Oak Harbor	R13326-365-0580	Not Determined	1965
630159	577358		Oak Harbor	R13326-484-2530	Not Determined	1967
630270	577465		Oak Harbor	R13324-462-1970	Not Determined	1948
630273	577468		Oak Harbor	R13435-084-0670	Not Determined	1910
630276	577471		Oak Harbor	S8475-00-00003-0	Not Determined	1967
676190	622616	Private	Oak Harbor		Determined Not Eligible	1950
675467	621933	R-45, Line Maintenance Shelter	NAS Whidbey Island		Determined Not Eligible	1976
675601	622058	Potable Water Tank, Building 197, Water Tank	Oak Harbor		Determined Not Eligible	1944
55501	44327	Mortar Battery Secondary Station, Fort Casey, None	Coupeville	Lot 1 of R13116-495-2950	Determined Eligible	1908
42	35	NAS Whidbey Island - Building 410, Hangar 6, Building 410, Hangar 6	NAS Whidbey Island		Determined Eligible	1942, 1955, 1957
676910	623297	FLEET & FAMILY INFO CENTER, BUILDING 2556	NAS Whidbey Island		Determined Not Eligible	1975
676911	623298	TEST CELL II, BUILDING 2765	NAS Whidbey Island		Determined Not Eligible	1994
676950	623337	Crew Shelter, R-75	NAS Whidbey Island		Determined Not Eligible	1970
678355	624678	Building 2614, Waste Water Treatment Plant	NAS Whidbey Island		Determined Not Eligible	1977
679036	625331	Building 2753, CNAF/FITT Team	NAS Whidbey Island		Determined Not Eligible	1973
88926	48429	Kineth, John Jr., Barn, Salmagundie Farms	Coupeville	R13101-287-1000	Not Determined, National Register, Not Determined, Washington Heritage Barn Register, Not Determined, Washington Heritage Register	1903
88927	48430	Crockett, Colonel Walter, Barn, Colonel Walter Crockett Farm	Coupeville	R13115-220-2200	Not Determined, National Register, Not Determined, Washington Heritage Barn Register, Not Determined, Washington Heritage Register	1895
88928	48431	Sherman Farm, Sherhill Vista Farms	Coupeville	R13109-086-1990	Not Determined	1942
102219	57701	Ault Field - Buildings 360-363, Fuel Storage	NAS Whidbey Island		Determined Not Eligible	1952
102220	57702	Ault Field - Fuel Tanks, Fuel Tanks Building 235-236	NAS Whidbey Island		Determined Not Eligible	1942
102222	57704	Building 368, Electrical Utility Vault, Building 368, Taxiway Lighting Vault	NAS Whidbey Island		Determined Not Eligible	1954, 1955
102223	57705	Ault Field - Building 369, Warehouse, Warehouse	NAS Whidbey Island		Determined Not Eligible	1954

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
102225	57707	Ault Field - Buildings 373, 374, 375, 376, 377, 378, 379, Barracks/Olympic Hall	NAS Whidbey Island		Determined Not Eligible	1954
102226	57708	Ault Field - Building 382, Admiral Nimitz Hall	NAS Whidbey Island		Determined Not Eligible	1954
102227	57709	Ault Field - Building 384, Central Heating Plant	NAS Whidbey Island		Determined Not Eligible	1954
102228	57710	Building 385 - Operations Building, Building 385 - Operations Building	NAS Whidbey Island		Determined Not Eligible	1954
102229	57711	Ault Field - Building 411, Contractor Storage	NAS Whidbey Island		Determined Not Eligible	1956
102230	57712	Ault Field - Building 414, Utility Vault	NAS Whidbey Island		Determined Not Eligible	1956
102231	57713	Ault Field - Building 415, Utility Vault, Storage	NAS Whidbey Island		Determined Not Eligible	1956
102232	57714	Ault Field - Building 420, Sewage Treatment, Classified Shredder Facility	NAS Whidbey Island		Determined Not Eligible	1958
102233	57715	Ault Field - Building 421, Sewage Pumping Station	NAS Whidbey Island		Determined Not Eligible	1958
102234	57716	Air to Ground Communication Building , Building 856 - Ault Field Air to Ground Communication Building	NAS Whidbey Island		Determined Not Eligible	1959
102235	57717	Ault Field - Building 860, Storage	NAS Whidbey Island		Determined Not Eligible	1959
102236	57718	Rocky Point Rec Area - Building 873 Can Do Inn	NAS Whidbey Island		Determined Not Eligible	1961
102237	57719	Radio Transmitter Building , Building 874 - Ault Field Radio Transmitter Building	NAS Whidbey Island		Determined Not Eligible	1961
102238	57720	Precision Approach Radar (PAR) Generator Building, Building 894 - Ault Field PAR Generator Building	NAS Whidbey Island		Determined Not Eligible	1963
102239	57721	Ault Field - Building 895, Smoking Shelter	NAS Whidbey Island		Determined Not Eligible	1948
102240	57722	Ault Field - Building 889, Vault	NAS Whidbey Island		Determined Not Eligible	1962
102241	57723	Ault Field - Building 962, Officer's Mess Hall, Ault Field - Building 962, Officer's Mess Hall, Officers' Mess Hall	NAS Whidbey Island		Determined Not Eligible	1963
102242	57724	Ault Field - Building 960, Chapel, Ault Field - Building 960, Chapel, Chapel, Ault Field - Building 960, Chapel, NAS Whidbey Island: Chapel (Building 960)	NAS Whidbey Island		Determined Eligible	1963
102243	57725	Ault Field - Building 2593, Electronic Attack Simulator	NAS Whidbey Island		Determined Not Eligible	1976
102245	57727	Building 994, Calibration Lab, Building 994, Security	NAS Whidbey Island		Determined Not Eligible	1966, 1969
102246	57728	Ault Field - Building 976, Aircraft Systems Training	NAS Whidbey Island		Determined Not Eligible	1966
102247	57729	Ault Field - Building 2643, Shop Building/Office	NAS Whidbey Island		Determined Not Eligible	1960
102248	57730	Ault Field - Building 2738, Wing Simulator Center	NAS Whidbey Island		Determined Not Eligible	1989
102249	57731	Building 2544, Hangar 7, Building 2544, Hangar 7	NAS Whidbey Island		Determined Not Eligible	1973
102250	57732	Building 2642, Hangar 8, Building 2642, Hangar 8	NAS Whidbey Island		Determined Not Eligible	1980
102251	57733	Ault Field - Building 2681, Hangar 9	NAS Whidbey Island		Determined Not Eligible	1984
102252	57734	Ault Field - Building 2699, Hangar 10	NAS Whidbey Island		Determined Not Eligible	1986
102253	57735	Ault Field - Building 2733, Hangar 11	NAS Whidbey Island		Determined Not Eligible	1988
102258	57740	Sea Plane Base - Building 201705, Seawall	NAS Whidbey Island		Determined Not Eligible	1942
102259	57741	Racon Hill - Building 858, Building 858 Medium Range Radar Building	NAS Whidbey Island		Determined Not Eligible	1959
102260	57742	Racon Hill - Building 390	NAS Whidbey Island		Determined Not Eligible	1954
102261	57743	Racon Hill - Building 853, Alarm Control Center	NAS Whidbey Island		Determined Not Eligible	1958
102262	57744	Building 423, Ordnance Operations Building, Building 423, Ordnance Operations Building	NAS Whidbey Island		Determined Not Eligible	1958



HISTORIC I	ResourceID	SiteNameHi	Loc FullAd	TaxParcel	RegisterTy	BuiltYear
102263	57745	Ault Field - Building 424 and 425, Magazines	NAS Whidbey Island		Determined Not Eligible	1958
102264	57746	Ault Field - Building 430, Generator Building	NAS Whidbey Island		Determined Not Eligible	1958
102265	57747	Ault Field - Building 487, Pressure Washing Facility	NAS Whidbey Island		Determined Not Eligible	1943
102268	57750	Ault Field - Building 340, Public Toilet/Shower, Rocky Point Recreation Area	NAS Whidbey Island		Determined Not Eligible	1949
102269	57751	Ault Field - Building 198, Water Treatment Plant	NAS Whidbey Island		Determined Not Eligible	1959
102270	57752	Ault Field - Building 855, Red Cross Storage	NAS Whidbey Island		Determined Not Eligible	1958
102271	57753	Ault Field - Building 946	NAS Whidbey Island		Determined Not Eligible	1952
102274	57756	Racon Hill - Building 388, Water Reservoir	NAS Whidbey Island		Determined Not Eligible	1954
102275	57757	Ault Field - Garage, Building R-38	NAS Whidbey Island		Determined Not Eligible	1945
102276	57758	Ault Field Airfield , Ault Field Airfield Facilities (Facilities 201247, 201715, 201436, 201935, 201685, 201703)	NAS Whidbey Island		Determined Not Eligible	1952, 1956, 1961, 1962, 1968
102277	57759	OLF Coupeville - Runway 13-31, Facility 201715, Runway 14-32	NAS Whidbey Island		Determined Not Eligible	1962
102278	57760	Building 2547 - Avionics Facility; Aircraft Intermediate Maintenance Dept., Building 2547, Building 2547 - Avionics Facility; Aircraft Intermediate Maintenance Dept., Building 2547 - Fleet Readiness Center Northwest	NAS Whidbey Island		Determined Not Eligible	1974
102279	57761	Ault Field - Storage Building, Building 285	NAS Whidbey Island		Determined Not Eligible	1948
102280	57762	Ault Field - Building 353, Ordnance Storage	NAS Whidbey Island		Determined Not Eligible	1949
102281	57763	Sea Plane Base - Inert Storehouse, Building 37	NAS Whidbey Island		Determined Not Eligible	1942
102282	57764	Ault Field - Ault Theater, Skywarrior Theater, Building 118	NAS Whidbey Island		Determined Eligible	1942
102296	57778	Sea Plane Base - Ready Lockers, Buildings 446, 447, 448, 449, 451, Storehouses	NAS Whidbey Island		Determined Eligible	1942
102298	57780	Building 100, Barracks #8, Building 100, Post Office/Training/Weapons	NAS Whidbey Island		Determined Not Eligible	1942
102299	57781	Ault Field - Barracks # 11, Building 103, Public Works/ROICC	NAS Whidbey Island		Determined Not Eligible	1942
102300	57782	Ault Field - Barracks #16, Building 108, Marine Aviation Training Support Group/Poa	NAS Whidbey Island		Determined Not Eligible	1942
102301	57783	Ault Field - Hangar 1, Ready Lockers, Building 112 and Support Buildings 457 and 458, Hangar 1 and Ready Lockers	NAS Whidbey Island		Determined Eligible	1942
102302	57784	Ault Field - Recreation Building, Building 117, Recreation Building	NAS Whidbey Island		Determined Not Eligible	1942
668319	615276	Island County Dike District # 3 Dike, Dugualla Bay Dike	Oak Harbor		Determined Not Eligible	1914
626088	573299		Coupeville	S6010-00-03019-0	Not Determined	1969
626090	573301		Coupeville	S6010-00-04004-0	Not Determined	1969
626091	573302		Coupeville	S6010-00-03015-0	Not Determined	1969
626092	573303		Coupeville	S6010-06-00087-0	Not Determined	1969
626093	573304		Coupeville	S6010-00-02031-0	Not Determined	1969
626095	573306		Coupeville	S6010-05-00016-0	Not Determined	1969
626097	573308		Coupeville	S6010-00-02041-0	Not Determined	1969
626098	573309		Coupeville	S7400-00-01024-0	Not Determined	1969
626101	573312		Coupeville	S8440-00-00004-0	Not Determined	1969

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
626103	573314		Coupeville	S7400-00-04005-0	Not Determined	1969
669208	616109	Private	Oak Harbor		Determined Not Eligible	1927
668248	615210	Private	Oak Harbor	R13323-0623-2810	Determined Not Eligible, Not Determined	1954
700759	663169	Crockett, Hugh, Barn, Boyer Farm	Coupeville		Determined Eligible, Washington Heritage Barn Register	1860
700454	662864	Barn, Summers Farm	Mount Vernon		Determined Eligible, Washington Heritage Barn Register	1895

Note: Properties with resource ID 0 removed. Duplicate inventory records (by ResourceID) removed. NAS Whidbey Island Register Type corrected and updated.

**Historic Properties on DAHP GIS Data Summary Table**

<b>Historic Properties</b>	<b>Count</b>
Determined Eligible for Local, State or National Register	32
Determined Not Eligible	256
Not Determined (Potentially Eligible)	1226
<b>Total</b>	<b>1514</b>

**Washington Heritage Barn Register on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>	<b>STREET_ADD</b>
IS00229	Kineth, John Jr., Barn	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville
IS00340	Gus Reuble Farm	Washington Heritage Barn Register	Coupeville
IS00343	James, William and Florence, Farm	Washington Heritage Barn Register	Oak Harbor
IS00295	Jenne, Edward and Agnes, Farm	Washington Heritage Barn Register	Coupeville
IS00347	Aloha Farms	Washington Heritage Barn Register	Coupeville
IS00348	Barn	Washington Heritage Barn Register	Oak Harbor
IS00302	Calhoun, Thomas and Mary, Farm	Washington Heritage Barn Register	Coupeville
IS00353	Case Farm	Washington Heritage Barn Register	Oak Harbor
IS00354	Gallagher/Schreck/Sherman Farm	Washington Heritage Barn Register	Coupeville
IS00355	Crockett, Hugh, Barn	Washington Heritage Barn Register	Coupeville
IS00313	Boyer, Freeman, Barn	Washington Heritage Barn Register	Coupeville
IS00356	Hookstra, Lambert, Farm	Washington Heritage Barn Register	Oak Harbor
IS00314	Keith, Sam, Farm	Washington Heritage Barn Register	Coupeville

**Washington Heritage Barn Register on DAHP GIS Data Summary Table**

<b>Washington Heritage Barn Register</b>	<b>Count</b>
Listed	13

**Historic Districts on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>	<b>STREET_ADD</b>
DT00006	Central Whidbey Island Historic District	National Register, Washington Heritage Register	South of Oak Harbor, Roughly Six Miles Either Side of Coupeville, Coupeville, WA
DT00011	Sqwikwikwab	Determination of Eligibility to NR, Washington Heritage Register	Address Restricted, La Conner, WA

**Historic Districts on DAHP GIS Data Summary Table**

<b>Historic Districts</b>	<b>Count</b>
Determined Eligible	2

**Cemetery Sites on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>
IS00271	CEMETERY	Inventory
IS00082	PRE CONTACT	Determined Eligible
IS00272	SNAKLIN MONUMENT	Inventory
SK00099	PRE CONTACT	Survey/Inventory
IS00013	PRE CONTACT	Survey/Inventory
IS00014	PRE CONTACT	Survey/Inventory
IS00032	PRE CONTACT	Survey/Inventory
IS00037	PRE CONTACT	Survey/Inventory
SK00033	PRE CONTACT	Survey/Inventory
IS00279	FIRCREST CEMETERY	Inventory
SK00035	PRE CONTACT	Survey/Inventory
IS00280	MAPLE LEAF CEMETERY	Inventory
IS00300	PRE CONTACT	Survey/Inventory
IS00077	PRE CONTACT	Survey/Inventory
IS00030	PRE CONTACT	Survey/Inventory

**Cemetery Sites on DAHP GIS Data Summary Table**

<b>Cemetery Sites</b>	<b>Count</b>
Determined Eligible	1
Inventory	4
Survey/Inventory	10
<b>Total</b>	<b>15</b>

**Washington Heritage Register Properties on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>	<b>STREET_ADD</b>	<b>Created_Da</b>
SK00337	Barn	Washington Heritage Barn Register	Mount Vernon	01/01/09
IS00226	Crockett, Colonel Walter, Barn	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville	01/01/09
IS00310	Deception Pass State Park	Washington Heritage Register	Oak Harbor	26/12/12

**Washington Heritage Register Properties on DAHP GIS Data Summary Table**

<b>Washington Heritage Register</b>	<b>Count</b>
Listed	3



**Archaeological Sites on DAHP GIS Data Summary Table**

<b>Archaeological Sites</b>	<b>Count</b>
Determined Eligible	2
Determined Not Eligible	2
Potentially Eligible	15
Unevaluated (Potentially Eligible)	79
<b>Total</b>	<b>98</b>

Archaeological Districts on DAHP GIS Data Summary Table

Historic Districts	Count
Determined Eligible	1

Enclosure (1)

## Ebey's Landing National Historical Reserve Historic Building Inventory (2016 Update)

Name	Status	Area
"Fairhaven"	Contributing	Coupeville
A. Kineth House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
A.B. Coates House	Contributing	Coupeville
A.S. Coates House	Not Contributing	Coupeville
A.W. Monroe House	Contributing	San De Fuca Uplands
A.W. Monroe/VandeWerfhorst Place	Contributing	San De Fuca Uplands
Abbott House	Not Contributing	Coupeville
Abbott/Knowles House	Contributing	Coupeville
Albert Kineth House	Contributing	Coupeville
Alexander Blockhouse	Contributing	Coupeville
Almberg House	Not Contributing	Coupeville
Alvah D. Blowers House	Contributing	Coupeville
Andherst Cottage	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Armstrong/Scoby House	Contributing	San De Fuca Uplands
Armstrong/Trumball House	Contributing	San De Fuca Uplands
Arnold Farm	Contributing	San De Fuca Uplands
Art Holmburg Place	Contributing	San De Fuca Uplands
Babcock Place	Not Contributing	Coupeville
Baher House/San de Fuca Cottage	Not Contributing	San De Fuca Uplands
Bearss/Barrett House	Contributing	Coupeville
Benson Confectionery	Contributing	Coupeville
Benson House	Contributing	Coupeville
Benson/Bunting House	Not Contributing	Coupeville
Benson/Robinett House	Not Contributing	San De Fuca Uplands
Bergman House	Contributing	Coupeville
Black/Lindsey House	Contributing	Coupeville
Bob Cushen House	Not Contributing	Coupeville
Boothe House	Contributing	Coupeville
Bradt House	Not Contributing	Coupeville
Brown Cottage/Shelton House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie

<b>Name</b>	<b>Status</b>	<b>Area</b>
Calhoun House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Capt. R.B. Holbrook House	Contributing	San De Fuca Uplands
Capt. Thomas Coupe House	Contributing	Coupeville
Capt. Thos. Kinney House	Contributing	Coupeville
Captain Barrington House	Not Contributing	San De Fuca Uplands
Captain Clapp House	Contributing	Coupeville
Captain Whidbey Inn	Contributing	San De Fuca Uplands
Carl Gillespie House	Contributing	Coupeville
Carl Marsh House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Case Cabin/Evans House	Not Contributing	San De Fuca Uplands
Cawsey House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Ceci House	Not Contributing	Coupeville
Chansey House	Contributing	Coupeville
Chapman House	Contributing	Coupeville
Charles Angel House	Contributing	Coupeville
Charles Grimes House	Not Contributing	San De Fuca Uplands
Charles T. Terry House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Charlie Mitchell Barn	Contributing	San De Fuca Uplands
Chris Solid House	Contributing	Coupeville
Chromy House	Contributing	Coupeville
Clapp/Ghormley House	Contributing	Coupeville
Clarence Wanamaker Farm	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Clark House	Contributing	Coupeville
Col. Granville Haller House	Contributing	Coupeville
Col. Walter Crockett Farmhouse & Blockhouse	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Comstock Barn	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Comstock/Sherman House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Congregational Church	Contributing	Coupeville
Conrad House	Contributing	Coupeville
Cook/Sherman House	Contributing	San De Fuca Uplands
County Jail/Boy Scout Building	Not Contributing	Coupeville

<b>Name</b>	<b>Status</b>	<b>Area</b>
Coupeville Cash Store	Contributing	Coupeville
Coupeville City Hall	Contributing	Coupeville
Coupeville Courier Printing Office	Contributing	Coupeville
Courthouse Vault	Contributing	Coupeville
Cove Cottage	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Crockett/Boyer Barn	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Cushen Ford Garage	Not Contributing	Coupeville
Cushen House	Contributing	Coupeville
Davis Blockhouse & Sunnyside Cemetery	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Dean House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Dean/Patmore/Zustiak House	Not Contributing	Coupeville
Dominick House	Not Contributing	Coupeville
Dr. White House	Contributing	Coupeville
Dr. White's Office	Contributing	Coupeville
Duvall House	Contributing	Coupeville
E.O. Lovejoy/Yorioka House	Contributing	Coupeville
Earlywine/Nienhuis Property	Contributing	San De Fuca Uplands
Ed Clark House	Contributing	Coupeville
Ed Jenne House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Edmonds House (Pinkston House)	Contributing	Coupeville
Edwards House	Not Contributing	Coupeville
Eerkes/Cleaver House	Not Contributing	San De Fuca Uplands
Eldred Van Dam House	Not Contributing	San De Fuca Uplands
Elisha Rockwell House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Elkhorn Saloon	Contributing	Coupeville
Ernest Watson House	Contributing	Coupeville
Farrell/Johnson House	Not Contributing	San De Fuca Uplands
Ferry House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fire Hall	Contributing	Coupeville
First Methodist Parsonage	Contributing	Coupeville
Fisher Place	Contributing	San De Fuca Uplands

<b>Name</b>	<b>Status</b>	<b>Area</b>
Fisher/Hingston/Trumball General Store	Contributing	San De Fuca Uplands
Flora A.P. Engle House	Contributing	Coupeville
Fort Casey Housing/Smith House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fort Casey Military Reservation/Camp Casey	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fort Casey Military Reservation/Fort Casey State Park	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fort Casey Officers' Quarters	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fort Casey Pump House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fort Casey Storage Buildings	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fort Ebey State Park	Contributing	San De Fuca Uplands
Frain/Burton Engle House	Contributing	Coupeville
Francis A. LeSourd House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Frank Newberry House	Contributing	Coupeville
Frank Pratt House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Fred Nuttall's House	Contributing	Coupeville
Frey/Stone House	Not Contributing	San De Fuca Uplands
Fullington House	Contributing	Coupeville
Gabriel/Reynolds House	Not Contributing	San De Fuca Uplands
Gallagher/Shreck/Sherman Place	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Garrison House	Not Contributing	San De Fuca Uplands
Gates House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Gelb/Alexander House	Not Contributing	San De Fuca Uplands
George Libbey House	Contributing	San De Fuca Uplands
Gilbert Place/Eggerman Farm	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Gillespie House/Reuble Farm	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Gillespie Meat Market	Contributing	Coupeville
Glazier/Herrett House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Glenwood Hotel	Contributing	Coupeville
Gouchin/Criswell House	Not Contributing	San De Fuca Uplands
Gould/Canty House	Contributing	Coupeville
H.H. Rhodes Place	Contributing	San De Fuca Uplands

<b>Name</b>	<b>Status</b>	<b>Area</b>
Hancock Granary	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Hancock/Partridge House	Contributing	Coupeville
Hanks House	Not Contributing	Coupeville
Hapton/Gould House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Harmon/Pearson/Engle House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Harp Place	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Hart House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Heckenbury House	Contributing	Coupeville
Henry Arnold/Grasser House	Contributing	San De Fuca Uplands
Hesselgrave House	Contributing	Coupeville
Hesselgrave/Folkart House	Not Contributing	Coupeville
Highwarden House	Contributing	Coupeville
Hingston House	Contributing	San De Fuca Uplands
Hingston/Trumball Store	Contributing	San De Fuca Uplands
Horace Holbrook House	Contributing	Coupeville
Hordyk Place/VanderVoet Farm	Contributing	San De Fuca Uplands
Howard House	Contributing	Coupeville
Howell/Harpole House	Contributing	Coupeville
Isaacson/Rector House	Not Contributing	San De Fuca Uplands
Island County Abstract Office	Contributing	Coupeville
Island County Bank	Contributing	Coupeville
Island County Times Building	Contributing	Coupeville
Ives House	Contributing	Coupeville
Jacob & Sarah Ebey House & Blockhouse	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Jacob Jenne House	Contributing	Coupeville
Jacob Straub House	Contributing	Coupeville
James Gillespie House	Contributing	Coupeville
James Place	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
James Wanamaker House	Contributing	Coupeville
James Zylstra House	Contributing	Coupeville
Jefferds House	Contributing	Coupeville



<b>Name</b>	<b>Status</b>	<b>Area</b>
John and Jane Kineth Sr. House	Contributing	Coupeville
John Gould House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
John LeSourd House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
John Robertson House	Contributing	Coupeville
John Robertson's Store	Contributing	Coupeville
Johnson House	Not Contributing	Coupeville
Joseph Libbey House	Contributing	Coupeville
Judge Still Law Office	Contributing	Coupeville
Keith House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Keystone Cottage	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Larios House	Not Contributing	Coupeville
Leach House	Contributing	Coupeville
Lee/Hall House	Not Contributing	San De Fuca Uplands
Lewis Shop	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Libbey House	Not Contributing	Coupeville
Liberal League Hall/	Contributing	San De Fuca Uplands
Lupien House	Not Contributing	San De Fuca Uplands
Maddex House	Not Contributing	San De Fuca Uplands
Masonic Lodge No. 15	Contributing	Coupeville
Maxwell Cottage	Not Contributing	San De Fuca Uplands
McCutcheon Honeymoon Cottage	Not Contributing	Coupeville
McWilliams Bungalow	Contributing	San De Fuca Uplands
Melvin Grasser House	Contributing	San De Fuca Uplands
Methodist Church	Contributing	Coupeville
Methodist Parsonage	Contributing	Coupeville
Meyer House	Not Contributing	Coupeville
Mock House	Contributing	Coupeville
Morris House	Contributing	Coupeville
Morris Place	Contributing	San De Fuca Uplands
Morrow/Franzen House	Not Contributing	Coupeville
Mulder House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie

<b>Name</b>	<b>Status</b>	<b>Area</b>
Munson House	Contributing	Coupeville
Muzzall Farm	Contributing	San De Fuca Uplands
Muzzall Rental House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Myers Property	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Newcomb House	Contributing	Coupeville
Newcomb Property	Contributing	Coupeville
Nienhuis/Leach Place	Contributing	San De Fuca Uplands
NPS Sheep Barn	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
O'Dell/F. Reuble House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old Anderson Place	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old Art Black Barn	Contributing	Coupeville
Old Boyer Place	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old County Courthouse/Grennan & Cranney Store	Contributing	San De Fuca Uplands
Old Fort Casey Wharf	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old Grade School/Priest Place	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old Hewitt Place	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old Hunting Lodge	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old Marvin Place	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Old Power Place	Contributing	San De Fuca Uplands
Oly Allison/Burke House	Not Contributing	San De Fuca Uplands
Partridge House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Pat's Place	Contributing	Coupeville
Pennington Farmhouse	Not Contributing	Coupeville
Peralta House	Not Contributing	Coupeville
Pickard House	Not Contributing	Coupeville
Polly Harpole's Maternity Home	Contributing	Coupeville
Pontiac Dealership/Auto Barn	Contributing	Coupeville
Post Office	Contributing	Coupeville
Powell House	Contributing	Coupeville
Prairie Center Mercantile	Not Contributing	Coupeville

<b>Name</b>	<b>Status</b>	<b>Area</b>
Preacher Lowdy Place	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Puget Race Drug Store	Contributing	Coupeville
Quonset House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
R.C. Hill Home/J.T. Fielding Place	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Ralph Engle Worker Housing	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Reuble Farm	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Reuble Squash Barn	Contributing	Coupeville
Reverend Lindsey House	Contributing	Coupeville
Robart Cottage	Contributing	San De Fuca Uplands
Sabin House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Sabin Shop	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Samsel/Zylstra Law Office	Contributing	Coupeville
Samuel E. Hancock House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Samuel Libbey Ranch	Contributing	San De Fuca Uplands
San de Fuca Community Chapel	Contributing	San De Fuca Uplands
San de Fuca Dock/Standard Oil Dock	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
San de Fuca School	Contributing	San De Fuca Uplands
Schroeder Rental House	Contributing	Coupeville
Schulke House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Sedge Building	Contributing	Coupeville
Sergeant Clark House	Contributing	Coupeville
Sherman Hog House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Sherman Squash Barn	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Sherman/Grasser House	Not Contributing	San De Fuca Uplands
Sherwood/Abbott/Franzen House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Sill/Alexander House	Not Contributing	Coupeville
Silvia House	Not Contributing	San De Fuca Uplands
Smith/Davison House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Solid Granary	Not Contributing	Coupeville
Stark House	Not Contributing	Coupeville
Still Log Cabin	Contributing	San De Fuca Uplands

<b>Name</b>	<b>Status</b>	<b>Area</b>
Stoddard/Engle House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Stone House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Strong Farm	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Strong Granary	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Susie & Aleck House	Not Contributing	Coupeville
Telephone Exchange Building	Contributing	Coupeville
Terry's Dryer/Gillespie Livery Building	Contributing	Coupeville
Thomas E. Clark House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Thomas Griffith House	Contributing	Coupeville
Thomas/Sullivan House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Thomas/Sullivan/Patmore House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
TNC Sheep Barn	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Todd/Lovejoy House	Contributing	Coupeville
Tom Briscoe House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Tom Howell's Barbershop	Contributing	Coupeville
Tuft Cottage/Mrs. J. Arnold House	Contributing	San De Fuca Uplands
Tuft House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Van Dam Place	Contributing	San De Fuca Uplands
VandeWerfhorst House	Not Contributing	San De Fuca Uplands
Walden House	Not Contributing	San De Fuca Uplands
Wanamaker/Youderian House	Not Contributing	Coupeville
Wangness/Ryan House	Not Contributing	Coupeville
Ward/Clark House	Not Contributing	Coupeville
Waterman Logging House	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Weidenbach House	Contributing	San De Fuca Uplands
Well's Duplex	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Wharf Warehouse and Dock	Contributing	Coupeville
Whidbey Mercantile Co./Toby's	Contributing	Coupeville
Wiley Barn	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Will Jenne House	Contributing	Coupeville
Willard/Argent Place	Not Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie

Name	Status	Area
William Engle House	Contributing	Ebey's Prairie, Fort Casey Uplands, Crockett Prairie
Williams House	Contributing	Coupeville
Williams/Higgins House	Contributing	Coupeville
Zylstra/Sherod House	Contributing	San De Fuca Uplands

Note: Table compiled from Ebey's Landing National Historic Reserve Historic Building Inventory 2016 Update provided by Ebey's Landing National Historic Reserve.

### **Contributing Views Listed on the 1998 Central Whidbey Island Historic District National Register form.**

Ebey's Prairie from the cemetery, and from Engle Road  
 Entry to Coupeville (from Ebey's Prairie into Prairie Center, and along Main Street) and Front Street in Coupeville  
 View from Front Street and the Wharf, across Penn Cove  
 View to Crockett Prairie and Camp Casey from Wanamaker Road  
 View to Crockett Prairie and uplands from the top of Patmore Road  
 View to Crockett Prairie and uplands from Keystone Spit  
 View to Grasser's Lagoon from Highway 20  
 Views to and across Penn Cove along Madrona Way  
 Views from the bluff trail to Ebey's Prairie and Coastal Strip  
 View of Smith Prairie from Highway 20, entering the Reserve  
 Views from Monroe's Landing across the cove to Coupeville  
 Views from fort Casey across Keystone Spit and Crockett Lake  
 View from Hwy 20 across Ebey's Prairie  
 Engle Road to Uplands and west coast  
 Views to Grasser's Hill from Madrona Way

### **Contributing Roads Listed on the 1998 Central Whidbey Island Historic District National Register form.**

Fort Casey Road  
 Engle Road  
 Wanamaker Road  
 Keystone Road  
 Patmore Road

Parker Road  
 Front Street  
 Main Street  
 Ebey Road  
 Terry Road (Includes Broadway north of Hwy. 20)  
 Sherman Road  
 Cemetery Road  
 Cook Road  
 Madrona Way  
 Libby Road  
 Zylstra Road  
 Pen Cove Road  
 Monroe's Landing Road  
 Scenic Heights Road  
 Van Dam Road  
 West Beach Road

**Central Whidbey Island Historic District/Ebey's Landing National Historical Reserve Building Inventory Summary Tables**

<b>Recorded Buildings</b>	<b>Count</b>
Contributing	193
Not Contributing	87
Total	280

<b>Contributing Buildings</b>	<b>Contributing Roads</b>	<b>Contributing Views</b>
193	15	21

Enclosure (2)





## Historic Properties on DAHP GIS Data

HISTORIC_I	ResourceID	SiteNameHi	Loc_FullAd	TaxParcel_	RegisterTy	BuiltYear
112737	65784	Private	Oak Harbor		Determined Not Eligible	1964
112741	65788	Private	Coupeville		Determined Not Eligible	1950
670504	617272	Coupeville Water Treatment Building	Coupeville	699453R13233-169-4320	Determined Not Eligible	1968
671319	618039	Private	Coupeville		Determined Not Eligible	1952
672688	619317	Private	Coupeville		Determined Eligible	1890
158782	106646				Not Determined	1941
158783	106647				Not Determined	1941
158784	106648				Not Determined	1941
158785	106649				Not Determined	1941
158787	106651				Not Determined	1941
158788	106652				Not Determined	1941
158789	106653				Not Determined	1941
158790	106654				Not Determined	1941
158791	106655				Not Determined	1941
158792	106656				Not Determined	1941
158793	106657				Not Determined	1921
158794	106658				Not Determined	1921
158795	106659				Not Determined	1921
158798	106662				Not Determined	1904
158802	106666				Not Determined	1941
158803	106667				Not Determined	1921
158804	106668				Not Determined	1904
158805	106669				Not Determined	1904
158806	106670				Not Determined	1904
158807	106671				Not Determined	1904
158808	106672				Not Determined	1904
158809	106673				Not Determined	1904
158810	106674				Not Determined	1904
158811	106675				Not Determined	1904
158812	106676				Not Determined	1900
158813	106677				Not Determined	1941
158814	106678				Not Determined	1880
158815	106679	San de Fuca School			Not Determined	1902

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
158835	106699	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
159241	107092	Fort Casey Barracks	Coupeville		Not Determined	1940, 1941
159242	107093	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159244	107095	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159245	107096		Coupeville		Not Determined	1941
159247	107098	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159248	107099	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159352	107196	Benson Confectionery	Coupeville		Not Determined	1916
391	383	Whidbey Mercantile Company, Toby's Tavern	Coupeville		Not Determined	1875, 1895
159365	107201	Tom Howell's Barbershop	Coupeville		Not Determined	1936
159368	107202	Admiralty Head Lighthouse	Coupeville		Not Determined	1861
159369	107203	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
404	396	Wharf Warehouse and Dock	Coupeville		Not Determined	1905
184801	132625				Not Determined	1941
184802	132626				Not Determined	1941
674221	620767	Fort Casey Building 2, Campground Comfort Station	Coupeville		Determined Not Eligible	1964
184864	132688	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
209249	157061				Not Determined	1941
209250	157062				Not Determined	1941
209252	157064				Not Determined	1941
209253	157065				Not Determined	1941
209255	157067				Not Determined	1941
209256	157068				Not Determined	1941
209257	157069				Not Determined	1941
209258	157070				Not Determined	1941
209259	157071				Not Determined	1941
209260	157072				Not Determined	1941
209261	157073				Not Determined	1941
209262	157074				Not Determined	1941
209264	157076				Not Determined	1941
209265	157077				Not Determined	1941
209266	157078				Not Determined	1941
209267	157079				Not Determined	1941
209268	157080				Not Determined	1941

<b>HISTORIC I</b>	<b>ResourceID</b>	<b>SiteNameHi</b>	<b>Loc FullAd</b>	<b>TaxParcel</b>	<b>RegisterTy</b>	<b>BuiltYear</b>
209269	157081				Not Determined	1941
209270	157082				Not Determined	1921
209271	157083				Not Determined	1921
209272	157084				Not Determined	1921
209275	157087				Not Determined	1904
209279	157091				Not Determined	1941
209280	157092				Not Determined	1921
209281	157093				Not Determined	1904
209282	157094				Not Determined	1904
209283	157095				Not Determined	1904
209284	157096				Not Determined	1904
209285	157097				Not Determined	1904
209286	157098				Not Determined	1904
209287	157099				Not Determined	1904
209288	157100				Not Determined	1904
209289	157101				Not Determined	1900
209290	157102				Not Determined	1941
209291	157103				Not Determined	1880
209292	157104	San de Fuca School			Not Determined	1902
209312	157124	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
159361	107197	Puget Race Drug Store	Coupeville		Not Determined	1890
672268	618927	Private	Coupeville		Determined Not Eligible	1960
126904	74818		WA		Not Determined	1941
126905	74819		WA		Not Determined	1941
126906	74820		WA		Not Determined	1941
126907	74821		WA		Not Determined	1941
126909	74823		WA		Not Determined	1941
126910	74824		WA		Not Determined	1941
126911	74825		WA		Not Determined	1941
126912	74826		WA		Not Determined	1941
126913	74827		WA		Not Determined	1941
126914	74828		WA		Not Determined	1941
126915	74829		WA		Not Determined	1921
126916	74830		WA		Not Determined	1921
126917	74831		WA		Not Determined	1921

HISTORIC I	ResourceID	SiteNameHi	Loc FullAd	TaxParcel	RegisterTy	BuiltYear
126920	74834		WA		Not Determined	1904
126924	74838		WA		Not Determined	1941
126925	74839		WA		Not Determined	1921
126926	74840		WA		Not Determined	1904
126927	74841		WA		Not Determined	1904
126928	74842		WA		Not Determined	1904
126929	74843		WA		Not Determined	1904
126930	74844		WA		Not Determined	1904
126931	74845		WA		Not Determined	1904
126932	74846		WA		Not Determined	1904
126933	74847		WA		Not Determined	1904
126934	74848		WA		Not Determined	1900
126935	74849		WA		Not Determined	1941
126936	74850		WA		Not Determined	1880
126937	74851	San de Fuca School	WA		Not Determined	1902
126957	74870	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
625481	572737	Grennan and Cranney's General Store, Island County Courthouse	Coupeville	R13230-167-2640	Not Determined	1851
625482	572738	Fairhaven	Coupeville	R13233-405-3070	Not Determined	1852
356	348	Coupe, Thomas, House	Coupeville	R13234-370-0150	Not Determined	1852
625486	572739	Duvall House	Coupeville	R13233-409-2860	Not Determined	1860
625487	572740		Coupeville	R13108-364-4680	Not Determined	1860
625488	572741		Coupeville	R13103-361-0370	Not Determined	1863
625490	572742		Coupeville	R13109-149-1990	Not Determined	1870
625492	572743		Coupeville	S8060-00-19004-1	Not Determined	1872
159363	107199	Haller, Colonel Granville House	Coupeville	R13233-379-4060	Not Determined	1866, 1875
625494	572744		Coupeville	S8060-00-09001-0	Not Determined	1880
625495	572745		Coupeville	R13233-330-3880	Not Determined	1885
625496	572746		Coupeville	S6415-00-19000-0	Not Determined	1886
625497	572747		Coupeville	R13104-267-2240	Not Determined	1888
625498	572748		Coupeville	R13233-054-1920	Not Determined	1888
625499	572749		Coupeville	S6005-00-06005-0	Not Determined	1888
343	335	Methodist Parsonage	Coupeville	S6415-00-11007-0	Not Determined	1889
335	327	Zylstra, James, House	Coupeville	S6415-00-22001-0	Not Determined	1890
625503	572750		Coupeville	R13233-008-3820	Not Determined	1890

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625504	572751		Coupeville	S8270-00-0E011-0	Not Determined	1890
354	346	Ervin Rental House	Coupeville	S6415-00-15001-0	Not Determined	1890
625506	572752		Coupeville	R13232-136-1940	Not Determined	1890
625507	572753		Coupeville	R13104-487-2140	Not Determined	1890
625508	572754		Coupeville	S6415-00-13004-0	Not Determined	1890
426	418	Lovejoy, E.O., House, Yorioka House	Coupeville	S6310-00-00011-0	Not Determined	1890
625514	572755		Coupeville	R13104-098-3880	Not Determined	1890
625517	572757		Coupeville	S6415-00-14001-0	Not Determined	1890
346	338	Straub, Jacob, House, Warder House	Coupeville	S6415-00-08008-0	Not Determined	1890
355	347	Gould, John, House, Canty House	Coupeville	S6425-00-02001-0	Not Determined	1890
348	340	Hesselgrave Rental House, Bagby Rental House	Coupeville	S6415-00-13003-0	Not Determined	1890
414	406	Stark House, Jefferds Rental House	Coupeville	S6415-00-13007-1	Not Determined	1890
352	344	Clapp House, Ghormley House	Coupeville	S6415-00-14002-0	Not Determined	1890
625525	572758		Coupeville	S8060-00-10010-0	Not Determined	1890
625526	572759		Coupeville	R13104-246-2030	Not Determined	1892
625527	572760	Frain House/Burton-Engle House	Coupeville	R13104-373-3330	Not Determined	1892
625529	572761		Coupeville	R13104-323-3820	Not Determined	1893
432	424	Black House, Lindsey House	Coupeville	R13233-323-1720	Not Determined	1894
625532	572762		Coupeville	S8060-00-17002-0	Not Determined	1895
625533	572763		Coupeville	S6415-00-24007-0	Not Determined	1895
625535	572764	Keith, Sam, Farm	Coupeville	R13103-078-2490	Not Determined, Washington Heritage Barn Register	1898
625536	572765		Coupeville	R13219-061-4150	Not Determined	1898
625537	572766		Coupeville	R13111-248-4630	Not Determined	1900
625540	572769		Coupeville	S8060-00-70002-0	Not Determined	1903
625541	572770		Coupeville	R13104-328-2240	Not Determined	1903
419	411	Mock House	Coupeville	S7215-00-01004-0	Not Determined	1904
625543	572771		Coupeville	S6415-00-18007-1	Not Determined	1904
360	352	Chromy House	Coupeville	S6005-00-04002-0	Not Determined	1904
625545	572772	Libbey, George and Annie House	Coupeville	R13230-154-2610	Not Determined	1904
625546	572773		Coupeville	R13232-004-4950	Not Determined	1905
625547	572774		Coupeville	S8060-00-10006-0	Not Determined	1905
625548	572775		Coupeville	S6420-00-00006-1	Not Determined	1905
359	351	Solid, Chris, House	Coupeville	R13234-334-0450	Not Determined	1906
625550	572776		Coupeville	R03225-234-4480	Not Determined	1906

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625645	572859		Coupeville	S8060-00-10013-0	Not Determined	1939
625647	572861		Coupeville	R13234-486-2900	Not Determined	1940
625648	572862		Coupeville	S6025-00-02003-0	Not Determined	1940
625649	572863		Coupeville	S8010-00-00070-0	Not Determined	1940
625650	572864		Coupeville	S8060-00-23010-0	Not Determined	1940
625651	572865		Coupeville	R13234-444-2960	Not Determined	1940
625652	572866		Coupeville	R13234-382-4130	Not Determined	1940
625653	572867	Private	Coupeville	S8010-00-00061-0	Determined Not Eligible, Not Determined	1941, 1953
625654	572868		Coupeville	R13232-118-0840	Not Determined	1941
625655	572869		Coupeville	R13103-485-4710	Not Determined	1941
625656	572870		Coupeville	R13234-390-2850	Not Determined	1941
625657	572871		Coupeville	R13115-333-2810	Not Determined	1942
625658	572872		Coupeville	S6005-00-13001-0	Not Determined	1942
625659	572873		Coupeville	S6005-00-13005-0	Not Determined	1942
625660	572874		Coupeville	S6415-00-36001-0	Not Determined	1942
625661	572875		Coupeville	S6415-00-23003-0	Not Determined	1942
625662	572876		Coupeville	R13230-060-2580	Not Determined	1942
625663	572877		Coupeville	R13230-280-0400	Not Determined	1942
625664	572878		Coupeville	S6415-00-24005-2	Not Determined	1942
625665	572879		Coupeville	S6005-00-13003-0	Not Determined	1942
625666	572880		Coupeville	S8010-00-00089-0	Not Determined	1943
625668	572882		Coupeville	S8010-00-00022-0	Not Determined	1943
625669	572883		Coupeville	R13105-282-4130	Not Determined	1943
625670	572884		Coupeville	S8010-00-00006-0	Not Determined	1943
625671	572885		Coupeville	S7530-01-0000B-0	Not Determined	1943
625672	572886		Coupeville	S6420-00-00004-2	Not Determined	1945
625673	572887		Coupeville	S6025-00-02001-0	Not Determined	1945
625674	572888		Coupeville	R13234-375-3030	Not Determined	1945
625675	572889		Coupeville	S7530-01-0000M-0	Not Determined	1945
625676	572890		Coupeville	S6415-00-16005-0	Not Determined	1945
625677	572891		Coupeville	S6415-00-07001-0	Not Determined	1945
625678	572892		Coupeville	S6415-00-38001-0	Not Determined	1945
625679	572893		Coupeville	S8010-00-00084-0	Not Determined	1945
625680	572894		Coupeville	S6415-00-07008-1	Not Determined	1945

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625681	572895		Coupeville	S7150-00-00011-0	Not Determined	1945
625682	572896		Coupeville	S6415-00-34005-2	Not Determined	1946
625683	572897		Coupeville	S6415-00-34003-0	Not Determined	1946
625684	572898		Coupeville	S8010-00-00064-0	Not Determined	1946
625686	572900		Coupeville	R13233-276-1160	Not Determined	1946
625687	572901		Coupeville	S6415-00-34005-1	Not Determined	1946
625690	572904		Coupeville	S8010-00-00018-0	Not Determined	1947
625691	572905		Coupeville	S6415-00-13001-0	Not Determined	1947
625692	572906		Coupeville	S6005-00-13004-0	Not Determined	1947
625693	572907		Coupeville	R13234-390-2760	Not Determined	1947
625694	572908		Coupeville	R13103-251-2330	Not Determined	1947
625695	572909		Coupeville	S6415-00-38004-0	Not Determined	1947
625696	572910		Coupeville	R13230-280-0050	Not Determined	1947
625697	572911		Coupeville	S6415-00-25002-0	Not Determined	1947
625698	572912		Coupeville	S8010-00-00039-0	Not Determined	1947
625699	572913		Coupeville	S6415-00-37001-0	Not Determined	1947
625702	572916		Coupeville	S7070-00-10004-0	Not Determined	1948
625703	572917		Coupeville	R13233-156-2300	Not Determined	1948
625704	572918		Coupeville	S8010-00-00085-0	Not Determined	1948
625705	572919		Coupeville	S8010-00-00001-2	Not Determined	1948
625706	572920		Coupeville	R13103-231-2300	Not Determined	1948
625707	572921		Coupeville	S6415-00-27003-0	Not Determined	1948
625708	572922		Coupeville	R13110-175-4500	Not Determined	1949
625710	572924		Coupeville	S8010-00-00015-2	Not Determined	1949
625711	572925		Coupeville	R13230-015-3660	Not Determined	1949
625712	572926		Coupeville	S8060-00-48002-0	Not Determined	1949
625713	572927		Coupeville	R13230-098-2310	Not Determined	1949
625714	572928		Coupeville	R13232-101-4900	Not Determined	1949
625717	572931		Coupeville	R13230-320-4740	Not Determined	1950
62+5718	572932	Private	Coupeville	S8010-00-00062-0	Determined Not Eligible, Not Determined	1941, 1950
625720	572934		Coupeville	S6005-00-13008-0	Not Determined	1950
625721	572935		Coupeville	R13232-091-1340	Not Determined	1950
625722	572936		Coupeville	S8010-00-00063-0	Not Determined	1950
625723	572937		Coupeville	R13103-200-2670	Not Determined	1950



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625724	572938		Coupeville	S8060-00-09032-0	Not Determined	1950
625726	572940		Coupeville	S6415-00-17001-0	Not Determined	1950
625728	572942		Coupeville	R13105-322-4370	Not Determined	1950
625729	572943		Coupeville	R13234-420-1300	Not Determined	1950
625730	572944	Private	Coupeville	R13103-270-2450	Determined Not Eligible, Not Determined	1950
625732	572946		Coupeville	R13231-459-3340	Not Determined	1950
625733	572947		Coupeville	R13103-245-1530	Not Determined	1950
625735	572949		Coupeville	R13114-204-3780	Not Determined	1951
625736	572950		Coupeville	S6415-00-18007-2	Not Determined	1951
625832	573044		Coupeville	R13103-120-2950	Not Determined	1958
625833	573045		Coupeville	S6415-00-33003-1	Not Determined	1958
625834	573046		Coupeville	S7400-00-03003-0	Not Determined	1958
625835	573047		Coupeville	S7400-00-02014-0	Not Determined	1958
625836	573048		Coupeville	S8060-00-0E016-0	Not Determined	1958
625837	573049		Coupeville	R13235-326-0200	Not Determined	1958
625839	573051		Coupeville	S7400-00-01005-0	Not Determined	1958
625840	573052		Coupeville	S8270-00-0F005-2	Not Determined	1958
625841	573053		Coupeville	S7400-00-01011-0	Not Determined	1958
625842	573054		Coupeville	R13233-182-4600	Not Determined	1958
625843	573055		Coupeville	R13230-345-0440	Not Determined	1958
625844	573056		Coupeville	S8270-00-0F004-1	Not Determined	1958
625845	573057		Coupeville	S7400-00-03002-0	Not Determined	1958
625846	573058		Coupeville	S8270-00-0F003-0	Not Determined	1958
625847	573059		Coupeville	S8270-00-0F005-1	Not Determined	1958
625848	573060		Coupeville	R13233-094-1050	Not Determined	1958
625849	573061		Coupeville	R13104-109-4100	Not Determined	1958
625850	573062		Coupeville	R13110-222-4560	Not Determined	1959
625854	573066		Coupeville	S8270-00-0E007-0	Not Determined	1959
625855	573067		Coupeville	S8270-00-0A010-0	Not Determined	1959
625856	573068		Coupeville	R13103-110-3240	Not Determined	1959
625857	573069		Coupeville	S8270-00-0G006-0	Not Determined	1959
625858	573070		Coupeville	S8270-00-0G007-0	Not Determined	1959
625859	573071	Coupeville Courier Printing Office	Coupeville	S6415-00-07006-0	Not Determined	1959
625860	573072		Coupeville	R03225-246-3560	Not Determined	1959

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625861	573073		Coupeville	S8270-00-0G005-0	Not Determined	1959
625862	573074		Coupeville	R13104-481-2280	Not Determined	1959
625863	573075		Coupeville	S8270-00-0A009-0	Not Determined	1959
625864	573076		Coupeville	S8270-00-0E006-0	Not Determined	1959
625865	573077	Private	Coupeville	R13103-150-3420	Determined Not Eligible, Not Determined	1959
625866	573078		Coupeville	S6415-00-07003-0	Not Determined	1959
625868	573080		Coupeville	S8270-00-0A008-2	Not Determined	1959
625869	573081		Coupeville	S7530-00-0B002-0	Not Determined	1959
625870	573082		Coupeville	S6415-00-06008-0	Not Determined	1959
625871	573083		Coupeville	S6415-00-06007-0	Not Determined	1959
625874	573086		Coupeville	R13109-005-3830	Not Determined	1960
625877	573089		Coupeville	R13116-507-3830	Not Determined	1960
625878	573090		Coupeville	S8010-00-00037-0	Not Determined	1960
625879	573091		Coupeville	R13105-454-5070	Not Determined	1960
625880	573092		Coupeville	S8270-00-0A013-1	Not Determined	1960
625881	573093		Coupeville	S8270-00-0A007-0	Not Determined	1960
625882	573094		Coupeville	S6415-00-16001-0	Not Determined	1960
625883	573095		Coupeville	R13105-493-4950	Not Determined	1960
625884	573096		Coupeville	S8270-00-0E009-1	Not Determined	1960
625885	573097		Coupeville	S8270-00-0A012-0	Not Determined	1960
625886	573098		Coupeville	R13234-442-4120	Not Determined	1960
625887	573099		Coupeville	S8270-00-0A011-0	Not Determined	1960
625888	573100		Coupeville	R13105-251-3790	Not Determined	1960
625889	573101		Coupeville	S8010-00-00066-0	Not Determined	1960
625890	573102		Coupeville	S8270-00-0A008-1	Not Determined	1960
625891	573103		Coupeville	S6415-00-39001-0	Not Determined	1960
625892	573104		Coupeville	S6415-00-33003-2	Not Determined	1960
625893	573105		Coupeville	S8010-00-00083-0	Not Determined	1960
625894	573106		Coupeville	S7400-00-01010-0	Not Determined	1960
625895	573107		Coupeville	S8270-00-0E008-0	Not Determined	1960
625896	573108		Coupeville	S7400-00-02008-0	Not Determined	1960
625897	573109	Private	Coupeville	R13103-183-3330	Determined Not Eligible, Not Determined	1960
625898	573110		Coupeville	R13232-126-2790	Not Determined	1960
625899	573111		Coupeville	R13232-191-5020	Not Determined	1960

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625911	573123		Coupeville	S7400-00-01043-0	Not Determined	1961
625912	573124		Coupeville	S7400-00-01045-0	Not Determined	1961
625913	573125		Coupeville	S8010-00-00001-1	Not Determined	1961
625917	573129		Coupeville	S6370-00-58010-0	Not Determined	1962
625920	573132		Coupeville	S7400-00-02002-0	Not Determined	1962
625921	573133		Coupeville	S7400-00-01016-0	Not Determined	1962
626026	573237		Coupeville	S7400-00-01006-0	Not Determined	1967
626027	573238		Coupeville	S7530-00-0B011-0	Not Determined	1967
626028	573239		Coupeville	R13234-333-4800	Not Determined	1967
626029	573240		Coupeville	R13219-237-3790	Not Determined	1967
626030	573241		Coupeville	R13234-460-2740	Not Determined	1967
626032	573243		Coupeville	R13233-354-1910	Not Determined	1967
626033	573244		Coupeville	S7400-00-01001-0	Not Determined	1967
626034	573245		Coupeville	S7070-00-08001-0	Not Determined	1967
626061	573272		Coupeville	R13109-162-0730	Not Determined	1968
626062	573273		Coupeville	S7450-00-00002-0	Not Determined	1968
626063	573274		Coupeville	S7760-00-01003-0	Not Determined	1968
626064	573275		Coupeville	R13101-315-0190	Not Determined	1968
626065	573276		Coupeville	S7150-00-00004-0	Not Determined	1968
626066	573277		Coupeville	S6310-00-00009-0	Not Determined	1968
626067	573278		Coupeville	R13103-457-1910	Not Determined	1968
626068	573279		Coupeville	S8010-00-00091-0	Not Determined	1968
626069	573280		Coupeville	S8160-00-19002-0	Not Determined	1968
626070	573281		Coupeville	S8010-00-00023-0	Not Determined	1968
626071	573282		Coupeville	R13235-440-0630	Not Determined	1968
626072	573283		Coupeville	R13219-363-3640	Not Determined	1968
626073	573284		Coupeville	R13233-320-1350	Not Determined	1968
626075	573286		Coupeville	R13110-403-2890	Not Determined	1968
626076	573287		Coupeville	S6415-00-33007-0	Not Determined	1968
626080	573291		Coupeville	R13109-141-0860	Not Determined	1969
627601	574812		Coupeville	R13221-061-3980	Not Determined	1899
627723	574934		Coupeville	R13221-015-2700	Not Determined	1925
627763	574974		Coupeville	R13221-471-5100	Not Determined	1930
627800	575011		Coupeville	R13222-490-4950	Not Determined	1936
627804	575015		Coupeville	S8050-00-02012-0	Not Determined	1937

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627805	575016		Coupeville	R13222-060-2620	Not Determined	1937
627806	575017		Coupeville	R13220-188-3000	Not Determined	1937
627902	575113		Coupeville	S8060-00-35002-0	Not Determined	1945
627961	575172		Coupeville	S7730-00-00003-4	Not Determined	1948
627964	575175		Coupeville	R13223-415-0580	Not Determined	1948
627965	575176		Coupeville	S7730-00-00014-3	Not Determined	1948
627981	575192		Coupeville	S7730-00-00016-1	Not Determined	1948
627986	575197		Coupeville	R13216-026-5110	Not Determined	1949
628108	575319		Coupeville	R13228-519-1480	Not Determined	1951
628130	575341		Coupeville	S7730-00-00004-2	Not Determined	1951
628147	575358		Coupeville	S7730-00-00005-2	Not Determined	1951
628148	575359		Coupeville	S7730-00-00006-1	Not Determined	1951
628154	575365		Coupeville	R13222-361-0130	Not Determined	1951
628159	575370		Coupeville	S7730-00-00022-1	Not Determined	1951
628161	575372		Coupeville	R13221-152-5230	Not Determined	1952
628163	575374		Coupeville	S7730-00-00008-4	Not Determined	1952
628166	575377		Coupeville	S7730-00-00008-2	Not Determined	1952
628167	575378		Coupeville	S7730-00-00003-3	Not Determined	1952
628168	575379		Coupeville	S7730-00-00008-1	Not Determined	1952
628172	575383		Coupeville	S7730-02-00006-0	Not Determined	1952
628176	575387		Coupeville	R13223-329-0620	Not Determined	1952
628178	575389		Coupeville	S7730-00-00006-2	Not Determined	1952
628179	575390		Coupeville	S7730-00-00007-1	Not Determined	1952
628278	575489		Coupeville	S7730-00-00009-3	Not Determined	1953
628288	575499		Coupeville	S7730-02-00007-0	Not Determined	1953
628291	575502		Coupeville	S7730-00-00016-2	Not Determined	1953
628296	575507		Coupeville	S7730-00-00021-0	Not Determined	1953
628297	575508		Coupeville	S7730-00-00017-1	Not Determined	1953
628302	575513		Coupeville	S7730-02-00060-0	Not Determined	1953
628305	575516		Coupeville	S7730-00-00012-1	Not Determined	1954
628307	575518		Coupeville	S7730-02-00031-0	Not Determined	1954
628310	575521		Coupeville	S7730-00-00022-2	Not Determined	1954
628320	575531		Coupeville	S7730-00-00009-2	Not Determined	1954
628337	575548		Coupeville	R13221-087-3580	Not Determined	1954
628341	575552		Coupeville	S7725-00-00005-0	Not Determined	1954

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628345	575556		Coupeville	S7730-00-00012-3	Not Determined	1954
628354	575565		Coupeville	S7730-02-00044-0	Not Determined	1954
628481	575692		Coupeville	S7730-02-00061-0	Not Determined	1956
628511	575722		Coupeville	S7730-02-00037-1	Not Determined	1957
628516	575727		Coupeville	S7730-02-00082-0	Not Determined	1957
628527	575738		Coupeville	S7730-02-00069-0	Not Determined	1957
628534	575745		Coupeville	S7730-02-00067-0	Not Determined	1957
628554	575765		Coupeville	S7730-00-00001-0	Not Determined	1957
628658	575869		Coupeville	S7730-02-00021-0	Not Determined	1957
628668	575879		Coupeville	S7730-02-00034-0	Not Determined	1957
628669	575880		Coupeville	S7730-02-00036-2	Determined Not Eligible	1957
628671	575882		Coupeville	S7730-02-00035-1	Not Determined	1957
628707	575918		Coupeville	S8050-02-19004-0	Not Determined	1958
628725	575936		Coupeville	R13221-187-5200	Not Determined	1958
628865	576076		Coupeville	R13221-050-1970	Not Determined	1958
629047	576258		Coupeville	S8050-00-04007-0	Not Determined	1960
629054	576265		Coupeville	S7730-02-00084-0	Not Determined	1960
629061	576272		Coupeville	S8050-00-08042-0	Not Determined	1960
629068	576279		Coupeville	S7730-02-00096-0	Not Determined	1960
629072	576283		Coupeville	S7005-00-02015-0	Not Determined	1960
629074	576285		Coupeville	S8050-00-09012-0	Not Determined	1960
629080	576291		Coupeville	S7730-02-00003-0	Not Determined	1960
629081	576292		Coupeville	S8050-00-13003-0	Not Determined	1960
629098	576309		Coupeville	S7730-02-00030-0	Not Determined	1960
629102	576313		Coupeville	R13223-445-0580	Not Determined	1960
629103	576314		Coupeville	S8050-00-09022-0	Not Determined	1960
629113	576324		Coupeville	S8050-00-07031-0	Not Determined	1960
629223	576434		Coupeville	R13221-025-3670	Not Determined	1962
629261	576472		Coupeville	S7730-02-00008-0	Not Determined	1963
629265	576476		Coupeville	S8050-00-07010-0	Not Determined	1963
629267	576478		Coupeville	S7730-02-00090-0	Not Determined	1963
629311	576522		Coupeville	R13221-044-4240	Not Determined	1963
629405	576616		Coupeville	S8050-00-04008-0	Not Determined	1965
629415	576626		Coupeville	S8050-00-10041-0	Not Determined	1965
629419	576630		Coupeville	S7005-00-01003-0	Not Determined	1965

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629420	576631		Coupeville	S7730-02-00092-0	Not Determined	1966
629445	576656		Coupeville	S8050-00-05007-0	Not Determined	1966
629448	576659		Coupeville	S7730-00-00018-1	Not Determined	1966
629454	576665		Coupeville	S8050-00-05018-0	Not Determined	1966
629471	576682		Coupeville	S7730-02-00052-0	Not Determined	1967
629472	576683		Coupeville	S7730-00-00013-4	Not Determined	1967
629476	576687		Coupeville	S7730-02-00038-1	Not Determined	1967
629478	576689		Coupeville	S7730-02-00045-0	Not Determined	1967
629486	576697		Coupeville	S7730-02-00039-0	Not Determined	1967
629487	576698		Coupeville	S7730-02-00022-0	Not Determined	1967
629488	576699		Coupeville	S7730-02-00064-1	Not Determined	1967
629600	576811		Coupeville	R13221-510-5130	Not Determined	1968
629615	576826		Coupeville	S8050-02-18005-0	Not Determined	1968
629627	576838		Coupeville	S7730-02-00017-1	Not Determined	1968
629643	576854		Coupeville	S7005-00-0000R-3	Not Determined	1968
629653	576864		Coupeville	S7730-02-00086-0	Not Determined	1968
629684	576895		Coupeville	S7730-02-00018-0	Not Determined	1968
629687	576898		Coupeville	S7730-02-00086-1	Not Determined	1968
629786	576997		Coupeville	S7730-02-00077-0	Not Determined	1969
629793	577004		Coupeville	S7730-02-00091-0	Not Determined	1969
629797	577008		Coupeville	S7730-02-00076-2	Not Determined	1969
629802	577013		Coupeville	S7730-02-00078-0	Not Determined	1969
450	442	The Bungalow, Engle, Flora A.P., House	Coupeville	R13233-358-3900	Not Determined	1914
629809	577019		Coupeville	R13233-310-1640	Not Determined	1935
629810	577020		Coupeville	S6415-00-27008-0	Not Determined	1941
629811	577021		Coupeville	S6415-00-23006-0	Not Determined	1941
629812	577022		Coupeville	S6005-00-13002-0	Not Determined	1942
629813	577023		Coupeville	S6415-00-27001-0	Not Determined	1942
629814	577024		Coupeville	R13233-260-3800	Not Determined	1969
629856	577066		Coupeville	S8370-00-00002-0	Not Determined	1952
444	436	Gillespie, Carl, House, Sampler Bookstore, Rosie's Garden Restaurant	Coupeville	R13233-286-3810	Not Determined	1884
629988	577192		Coupeville	R13233-211-3980	Not Determined	1965
630009	577213		Coupeville	S8060-00-10001-0	Not Determined	1880
630073	577276		Coupeville	R13233-040-4160	Not Determined	1956
630074	577277		Coupeville	S6415-00-31004-0	Not Determined	1961

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630189	577384		Coupeville	R13104-375-5250	Not Determined	1950
630192	577387		Coupeville	S8050-00-09001-0	Not Determined	1965
630232	577427		Coupeville	R13219-100-1950	Not Determined	1860
630233	577428		Coupeville	R13105-478-4660	Not Determined	1876
630234	577429		Coupeville	R13104-305-1970	Not Determined	1890
630235	577430		Coupeville	R13109-465-4760	Not Determined	1891
630236	577431		Coupeville	R13110-085-1980	Not Determined	1902
630237	577432		Coupeville	R13103-332-1790	Not Determined	1910
630238	577433		Coupeville	R13109-500-4220	Not Determined	1948
630240	577435		Coupeville	R13103-502-4800	Not Determined	1969
630252	577447		Coupeville	R13222-320-0550	Not Determined	1923
665755	612872	Reynolds House	Coupeville	231403	Determined Not Eligible	1928
666001	613111	Private	Coupeville		Determined Not Eligible	1951
165	157	Harmon - Pearson - Engle Farm	Coupeville		Not Determined, Washington Heritage Barn Register	1900
166	158	Cawsey House, Cawsey House, Perkins House	Coupeville		Not Determined	1890
168	160	Comstock, Al & Nellie, House, Sherman House	Coupeville		Not Determined	1890
174	166	Old Al Comstock Place	Coupeville		Determined Eligible	1935
176	168	Gallagher/Schreck/Sherman Farm, Sherman, A., House	Coupeville		Not Determined, Washington Heritage Barn Register	1917
177	169	Aloha Farms, Hancock, Samuel E., House	Coupeville		Not Determined, Washington Heritage Barn Register	1953
186	178	Gus Reuble Farm	Coupeville		Not Determined, Washington Heritage Barn Register	1930
380	372	Fullington, Maude, House, Fullington, Mary, House	Coupeville	S7070-00-11000-0	Not Determined	1859
382	374	Island County Bank, Vracin Office	Coupeville	R13233-375-4150	Not Determined	1890
384	376	Kinney, Captain Thomas, House, Davison House	Coupeville	S6415-00-08004-0	Not Determined	1871
385	377	Captain Clapp House, Vandyk House	Coupeville	S6415-00-07004-0	Not Determined	1890
388	380	Sedge Building, This 'n That Shop, Tartans and Tweeds	Coupeville		Not Determined	1871
389	381	Robertson, John, House, Tartans and Tweeds, Penn Cove Gallery, Ye Kitchen Shop	Coupeville		Not Determined	1864
392	384	John Robertson's Store, Seagull Restaurant, Captain's Galley	Coupeville		Not Determined	1886, 1912
393	385	Post Office, Laundromat, Fantasy Island	Coupeville		Not Determined	1938
394	386	Coupeville Cash Store, Butler Bell Antiques, Gift Gallery Antiques	Coupeville		Not Determined	1885, 1886
396	388	Elkhorn Saloon, Bishop Building, Coupeville Weaving Shop, Elkhorn Truck Antiques	Coupeville		Not Determined	1883
398	390	Judge Still Law Office, The Cove	Coupeville		Not Determined	1909
399	391	Island County Times Building, Lorna Doone's Attic, Jan McGregor Studio	Coupeville		Not Determined	1906, 1958



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400	392	Island County Abstract Office, Kristen's Ice Cream and More	Coupeville		Not Determined	1890, 1958
401	393	Terry's Dryer, Trader's Wharf	Coupeville		Not Determined	1855, 1897
403	395	Gillespie Meat Market, Korner Kranny, Keeping Room Antiques	Coupeville		Not Determined	1887, 1890
436	428	Congregational Church, St. Mary's Catholic Church	Coupeville	R13233-184-4240	Determined Eligible, Not Determined	1889
437	429	Reverend Lindsey House	Coupeville	624827	Determined Eligible, Not Determined	1898
443	435	Highwarden House, Young House, Datum Pacific Inc.	Coupeville	R13233-282-3880	Not Determined	1888
451	443	Telephone Exchange Building	Coupeville	S6025-00-18001-0	Not Determined	1958
457	449	Nichols House, Bennett House	Coupeville	R13104-490-3930	Not Determined	1893
458	450	Sergeant Clark House, Madsen House	Coupeville	R13104-493-4210	Not Determined	1895
467	459	Wanamaker, James, House, Martin House	Coupeville	R13104-331-4200	Not Determined	1890
470	462	Spangler House, Franzen Rental House	Coupeville	R13104-310-3980	Not Determined	1962
471	463	Bearss House, Barrett House	Coupeville	R13104-280-4190	Not Determined	1890
475	467	Bergman House	Coupeville	R13234-479-3170	Not Determined	1938
39779	30277	Rock Wall	Coupeville		Not Determined	1928
114746	67477	Darst, Earle	Coupeville		Determined Not Eligible	1950
115087	67802	Runway 13-31, Facility 201715, Runway 14-32	Coupeville		Not Determined	1962
158714	106579		Coupeville		Not Determined	1941
159314	107163	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159315	107164		Coupeville		Not Determined	1941
159316	107165		Coupeville		Not Determined	1941
159317	107166		Coupeville		Not Determined	1941
159318	107167		Coupeville		Not Determined	1941
159319	107168	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159320	107169	Fort Casey Company Quarters	Coupeville		Not Determined	1940
159321	107170		Coupeville		Not Determined	1941
159322	107171	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159323	107172	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159324	107173	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159327	107174		Coupeville		Not Determined	1921
159328	107175	Fort Casey Quartermaster Workshop: Building 22	Coupeville		Not Determined	1921
159329	107176	Fort Casey Guard House: Building 8	Coupeville		Not Determined	1921
159330	107177	Fort Casey Administration Building: Building 1	Coupeville		Not Determined	1940
159331	107178	Fort Casey Bachelor Officers Quarters	Coupeville		Not Determined	1940

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159332	107179		Coupeville		Not Determined	1904, 1906
159333	107180		Coupeville		Not Determined	1930
159334	107181		Coupeville		Not Determined	1900, 1962
159335	107182	Fort Casey Munitions Bunkers	Coupeville		Not Determined	1900
159336	107183	Fort Casey Chapel	Coupeville		Not Determined	1941
159337	107184	Fort Casey Quarter Master and Storehouse: Building 21	Coupeville		Not Determined	1921
159338	107185	Fort Casey Firehouse: Building 15	Coupeville		Not Determined	1904
159339	107186	Fort Casey Commanding Officer's Quarters	Coupeville		Not Determined	1904
159340	107187	Fort Casey Officer's Quarters	Coupeville		Not Determined	1904
159341	107188	Fort Casey Officer's Quarters: Building 3	Coupeville		Not Determined	1904
159342	107189		Coupeville		Not Determined	1904
159343	107190		Coupeville		Not Determined	1904
159344	107191		Coupeville		Not Determined	1904
159345	107192		Coupeville		Not Determined	1904
159346	107193	Fort Casey Batteries	Coupeville		Determined Eligible	1900
159347	107194		Coupeville		Not Determined	1941
159348	107195		Coupeville		Not Determined	1880
184804	132628				Not Determined	1941
184805	132629				Not Determined	1941
184807	132631				Not Determined	1941
184808	132632				Not Determined	1941
184809	132633				Not Determined	1941
184810	132634				Not Determined	1941
184811	132635				Not Determined	1941
184812	132636				Not Determined	1941
184813	132637				Not Determined	1941
184814	132638				Not Determined	1941
184816	132640				Not Determined	1941
184817	132641				Not Determined	1941
184818	132642				Not Determined	1941
184819	132643				Not Determined	1941
184820	132644				Not Determined	1941
184821	132645				Not Determined	1941
184822	132646				Not Determined	1921

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184823	132647				Not Determined	1921
184824	132648				Not Determined	1921
184827	132651				Not Determined	1904
184831	132655				Not Determined	1941
184832	132656				Not Determined	1921
184833	132657				Not Determined	1904
184834	132658				Not Determined	1904
184835	132659				Not Determined	1904
184836	132660				Not Determined	1904
184837	132661				Not Determined	1904
184838	132662				Not Determined	1904
184839	132663				Not Determined	1904
184840	132664				Not Determined	1904
184841	132665				Not Determined	1900
184842	132666				Not Determined	1941
184843	132667				Not Determined	1880
184844	132668	San de Fuca School			Not Determined	1902
672587	619227	Whidbey Island Game Farm, Pacific Rim Institute for Environmental Stewardship	Coupeville		Determined Eligible	1946
126836	74751		WA		Not Determined	1941
674330	620873	Dean House, Patmore House, Zustiak House	Coupeville	264840/ S7070-00-10007-0	Not Determined	1918
623311	570567		Coupeville	S8050-02-19008-0	Not Determined	1900
623339	570595		Coupeville	S8050-00-10022-0	Not Determined	1961
623345	570601		Coupeville	S8050-00-09017-0	Not Determined	1967
623349	570605		Coupeville	S8050-02-18016-0	Not Determined	1968
623352	570608		Coupeville	S8050-00-04013-1	Not Determined	1968
424	416	Newcomb House	Coupeville	R13234-434-1330	Not Determined	1908
178	170	Jenne, Edward and Agnes, Farm	Coupeville	R13109-330-4240	Not Determined, Washington Heritage Barn Register	1908
625553	572777		Coupeville	R13114-120-5030	Not Determined	1910
625554	572778		Coupeville	R13115-273-1780	Not Determined	1910
625555	572779	Schulke House/Steadman House, Valentine House	Coupeville	S6370-00-61005-0	Determined Eligible, Not Determined	1910
625556	572780		Coupeville	R13232-173-0200	Not Determined	1910
625557	572781		Coupeville	R13103-126-3340	Not Determined	1910
625559	572782		Coupeville	S7070-00-06002-0	Not Determined	1910
420	412	Benson House, Dole House	Coupeville	S7215-00-01001-0	Not Determined	1910

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625561	572783		Coupeville	R13219-034-3750	Not Determined	1910
625562	572784		Coupeville	S7070-00-07001-2	Not Determined	1910
625563	572785		Coupeville	R13103-266-1530	Not Determined	1910
625564	572786		Coupeville	S7070-00-03007-0	Not Determined	1911
625565	572787	Frank Newberry House	Coupeville	R13104-471-4210	Not Determined	1912
625566	572788		Coupeville	S6005-00-05002-0	Not Determined	1912
625567	572789		Coupeville	R13110-338-3570	Not Determined	1912
625568	572790		Coupeville	R03225-330-4800	Not Determined	1913
625569	572791		Coupeville	R03225-297-4170	Not Determined	1913
625570	572792		Coupeville	R13232-058-1270	Not Determined	1913
625572	572794		Coupeville	S6415-00-17003-0	Not Determined	1915
625574	572795		Coupeville	R13232-189-0120	Not Determined	1916
409	401	Angel, Charles, House, Rojas House	Coupeville	S6425-00-04001-0	Not Determined	1917
625576	572796		Coupeville	R13102-500-0500	Not Determined	1918
625577	572797		Coupeville	S7070-00-10007-0	Not Determined	1918
625578	572798		Coupeville	R13232-140-5020	Not Determined	1918
625579	572799		Coupeville	S6425-00-02003-0	Not Determined	1920
625580	572800		Coupeville	R13232-128-4970	Not Determined	1920
625582	572801		Coupeville	R13103-410-2190	Not Determined	1920
625583	572802		Coupeville	R13233-096-1940	Not Determined	1923
625584	572803		Coupeville	S6415-00-26001-0	Not Determined	1923
625586	572805		Coupeville	R13232-190-4830	Not Determined	1925
625587	572806		Coupeville	S7215-00-02001-0	Not Determined	1925
625588	572807	Zylstra/Sherod House	Coupeville	R13219-478-3400	Not Determined	1925
625589	572808	Nathan Howard	Coupeville	R13103-290-2150	Determined Not Eligible, Not Determined	1924, 1925
625590	572809		Coupeville	S6025-00-04001-0	Not Determined	1925
625594	572812	Oly Allison House	Coupeville	R13219-430-3490	Not Determined	1925
410	402	Polly Harpole's Maternity Home	Coupeville	S6415-00-32006-0	Not Determined	1927
625597	572814		Coupeville	R13103-378-2330	Not Determined	1927
625600	572816		Coupeville	R13114-333-2200	Not Determined	1928
625602	572818		Coupeville	S6370-00-61010-0	Not Determined	1928
625603	572819		Coupeville	R13230-099-2780	Not Determined	1929
625604	572820		Coupeville	R13232-153-0280	Not Determined	1929
625606	572822		Coupeville	R13104-419-2260	Not Determined	1930

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625607	572823		Coupeville	R13230-038-3450	Not Determined	1930
625611	572827		Coupeville	R13234-476-2500	Not Determined	1932
625612	572828		Coupeville	R13230-215-2340	Not Determined	1932
625613	572829		Coupeville	R03225-355-2100	Not Determined	1932
625614	572830		Coupeville	R13230-251-0570	Not Determined	1932
625615	572831		Coupeville	R13103-357-0630	Not Determined	1932
625616	572832		Coupeville	S8060-00-09042-0	Not Determined	1932
625617	572833		Coupeville	R13103-157-2690	Not Determined	1932
625621	572837		Coupeville	R13114-410-1250	Not Determined	1933
326	318	Clark House	Coupeville	R13233-184-4510	Not Determined	1933
625623	572838		Coupeville	R13232-197-0060	Not Determined	1933
625631	572846		Coupeville	S7530-00-00006-3	Not Determined	1935
625632	572847		Coupeville	R13233-305-1520	Not Determined	1935
625633	572848		Coupeville	S8060-00-06016-0	Not Determined	1935
625634	572849		Coupeville	S7530-00-00003-1	Not Determined	1935
625635	572850		Coupeville	S8060-00-47001-0	Not Determined	1935
625637	572852		Coupeville	R13234-310-1560	Not Determined	1936
625639	572854		Coupeville	R13230-249-0750	Not Determined	1937
625643	572857		Coupeville	S7070-00-02000-1	Not Determined	1938
625739	572953		Coupeville	S7530-00-00006-2	Not Determined	1951
625741	572955		Coupeville	S6415-00-33001-0	Not Determined	1952
625742	572956		Coupeville	R13233-319-3870	Not Determined	1952
428	420	Boothe House	Coupeville	S6420-00-00005-2	Not Determined	1952
625744	572957		Coupeville	R13103-128-2840	Not Determined	1952
625745	572958		Coupeville	S8010-00-00093-0	Not Determined	1952
625746	572959	Private	Coupeville	R13219-317-3400	Determined Not Eligible, Not Determined	1952
625747	572960		Coupeville	R13230-003-3500	Not Determined	1952
625748	572961		Coupeville	R13103-045-1700	Not Determined	1952
625749	572962		Coupeville	R13233-170-0300	Not Determined	1952
625751	572964		Coupeville	S8010-00-00096-0	Not Determined	1952
625752	572965		Coupeville	S8010-00-00065-0	Not Determined	1952
625753	572966		Coupeville	R13111-060-0100	Not Determined	1953
625754	572967	Private	Coupeville	S7400-00-01026-0	Determined Not Eligible, Not Determined	1953
625755	572968		Coupeville	S6415-00-23001-0	Not Determined	1953

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625756	572969		Coupeville	S8010-00-00004-0	Not Determined	1953
625757	572970		Coupeville	S7215-00-02002-1	Not Determined	1953
625758	572971		Coupeville	S8010-00-00015-1	Not Determined	1953
625759	572972		Coupeville	R13234-322-0400	Not Determined	1953
625760	572973		Coupeville	S8010-00-00016-1	Not Determined	1953
625761	572974		Coupeville	R13103-274-1870	Not Determined	1953
625763	572976		Coupeville	R13115-345-4930	Not Determined	1954
625764	572977		Coupeville	S7400-00-04002-0	Not Determined	1954
625765	572978		Coupeville	S7400-00-03001-0	Not Determined	1954
625766	572979		Coupeville	S7400-00-01019-0	Not Determined	1954
625767	572980		Coupeville	S7530-00-0B009-0	Not Determined	1954
625768	572981		Coupeville	S8010-00-00019-0	Not Determined	1954
625769	572982		Coupeville	R13232-181-0160	Not Determined	1954
625770	572983		Coupeville	S7400-00-01022-0	Not Determined	1954
625771	572984		Coupeville	S7530-01-0000I-0	Not Determined	1954
625772	572985		Coupeville	S7530-01-0000E-0	Not Determined	1954
625773	572986		Coupeville	S7205-00-00006-0	Not Determined	1954
625774	572987		Coupeville	S6415-00-18006-0	Not Determined	1954
625775	572988		Coupeville	S6415-00-38008-0	Not Determined	1954
625777	572990		Coupeville	R13115-269-1350	Not Determined	1955
625778	572991		Coupeville	R13103-375-1830	Not Determined	1955
625779	572992		Coupeville	R13230-198-2660	Not Determined	1955
625780	572993		Coupeville	S6415-00-33005-0	Not Determined	1955
625782	572995		Coupeville	S7530-00-00011-0	Not Determined	1955
625783	572996		Coupeville	S7400-00-01008-0	Not Determined	1955
408	400	Heckenbury House, Masonic Rental House	Coupeville	R13233-344-3760	Not Determined	1955
625788	573000		Coupeville	S7400-00-01015-0	Not Determined	1956
625789	573001		Coupeville	S7400-00-01012-0	Not Determined	1956
625790	573002		Coupeville	S6415-00-18005-0	Not Determined	1956
625791	573003		Coupeville	R13233-194-2500	Not Determined	1956
625792	573004		Coupeville	S6025-00-02004-0	Not Determined	1956
625793	573005		Coupeville	S7530-00-0B010-0	Not Determined	1956
625794	573006		Coupeville	S7400-00-03007-0	Not Determined	1956
625795	573007		Coupeville	S8270-00-0F001-0	Not Determined	1956
625796	573008		Coupeville	S7400-00-01037-0	Not Determined	1956

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625797	573009		Coupeville	S7530-00-00001-0	Not Determined	1956
625798	573010		Coupeville	S8270-00-0F002-2	Not Determined	1956
625799	573011		Coupeville	S7400-00-01027-0	Not Determined	1956
625800	573012		Coupeville	R13232-174-4330	Not Determined	1956
625805	573017		Coupeville	S8060-00-48001-0	Not Determined	1957
625806	573018		Coupeville	S8270-00-0E004-0	Not Determined	1957
625807	573019		Coupeville	S8270-00-0E002-0	Not Determined	1957
625808	573020		Coupeville	S7400-00-05004-0	Not Determined	1957
625809	573021		Coupeville	S8270-00-0E003-0	Not Determined	1957
625810	573022		Coupeville	S7400-00-03025-0	Not Determined	1957
625811	573023		Coupeville	S7400-00-01031-0	Not Determined	1957
625812	573024		Coupeville	S7400-00-02003-0	Not Determined	1957
625813	573025		Coupeville	S8270-00-0F007-2	Not Determined	1957
625814	573026		Coupeville	S8270-00-0F004-2	Not Determined	1957
625815	573027		Coupeville	S8270-00-0E001-0	Not Determined	1957
625816	573028		Coupeville	S7400-00-03006-0	Not Determined	1957
625817	573029		Coupeville	R03225-245-5130	Not Determined	1957
625823	573035		Coupeville	S7400-00-02015-0	Not Determined	1958
625824	573036		Coupeville	S6415-00-06001-0	Not Determined	1958
625825	573037	Residence	Coupeville	S8270-00-0F007-1	Not Determined	1958
625826	573038		Coupeville	S7400-00-02004-0	Not Determined	1958
625828	573040		Coupeville	S8270-00-0F002-1	Not Determined	1958
625829	573041		Coupeville	R13233-190-1000	Not Determined	1958
625830	573042		Coupeville	S8270-00-0E005-0	Not Determined	1958
625831	573043		Coupeville	S7400-00-03008-0	Not Determined	1958
625934	573145	Private	Coupeville	R13233-188-2280	Determined Not Eligible, Not Determined	1963
625935	573146		Coupeville	R13233-182-4680	Not Determined	1963
625936	573147		Coupeville	S7400-00-05012-0	Not Determined	1963
625937	573148		Coupeville	R13103-049-5150	Not Determined	1963
625938	573149		Coupeville	R03225-413-4300	Not Determined	1963
625939	573150		Coupeville	S7530-00-0000A-1	Not Determined	1963
625940	573151		Coupeville	R13232-162-0230	Not Determined	1963
625941	573152		Coupeville	R13232-133-2400	Not Determined	1963
625958	573169		Coupeville	S6370-00-61008-0	Not Determined	1964



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625964	573175		Coupeville	S8010-00-00082-0	Not Determined	1964
625965	573176		Coupeville	S6005-00-14001-2	Not Determined	1964
625967	573178		Coupeville	R13103-115-4620	Not Determined	1964
625968	573179		Coupeville	R13230-043-3150	Not Determined	1964
625970	573181		Coupeville	S7400-00-05001-1	Not Determined	1964
625981	573192		Coupeville	S7530-00-00009-0	Not Determined	1965
625982	573193		Coupeville	S7530-00-0000A-3	Not Determined	1965
625983	573194		Coupeville	S8010-00-00036-0	Not Determined	1965
625986	573197		Coupeville	R13104-496-3880	Not Determined	1965
625988	573199		Coupeville	R13103-270-2050	Not Determined	1965
625989	573200		Coupeville	S7450-00-00013-0	Not Determined	1965
625990	573201		Coupeville	R13234-381-4590	Not Determined	1965
625991	573202		Coupeville	S8010-00-00005-0	Not Determined	1965
626003	573214		Coupeville	R13114-116-3680	Not Determined	1966
626007	573218		Coupeville	S7450-00-00001-0	Not Determined	1966
626008	573219		Coupeville	R13234-317-5000	Not Determined	1966
626009	573220		Coupeville	S8010-00-00069-0	Not Determined	1966
626010	573221		Coupeville	R13103-407-4060	Not Determined	1966
626011	573222		Coupeville	S7400-00-01007-0	Not Determined	1966
626012	573223		Coupeville	R13103-105-2830	Not Determined	1966
626013	573224		Coupeville	S8010-00-00068-0	Not Determined	1966
626015	573226		Coupeville	S7530-00-00005-0	Not Determined	1966
627636	574847		Oak Harbor	R13221-046-1290	Not Determined	1912
627638	574849		Oak Harbor	R13222-114-3380	Not Determined	1912
627695	574906		Oak Harbor	R13222-114-3760	Not Determined	1922
627710	574921		Oak Harbor	R13223-378-0540	Not Determined	1924
627822	575033		Oak Harbor	S8060-00-73003-4	Not Determined	1939
627873	575084		Oak Harbor	S8050-00-12005-0	Not Determined	1943
628006	575217		Oak Harbor	S7730-00-00014-2	Not Determined	1949
628011	575222		Oak Harbor	S7730-00-00010-2	Not Determined	1949
628024	575235		Oak Harbor	S7730-00-00004-3	Not Determined	1949
628034	575245		Oak Harbor	S7730-00-00005-4	Not Determined	1950
628038	575249		Oak Harbor	S7730-00-00014-1	Not Determined	1950
628045	575256		Oak Harbor	S7730-00-00011-3	Not Determined	1950
628048	575259		Oak Harbor	S7730-00-00017-2	Not Determined	1950

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628053	575264		Oak Harbor	R13220-034-3440	Not Determined	1950
628059	575270		Oak Harbor	S7730-02-00059-0	Not Determined	1950
628061	575272		Oak Harbor	S7730-00-00010-1	Not Determined	1950
628063	575274		Oak Harbor	S7730-00-00013-5	Not Determined	1950
628075	575286		Oak Harbor	S7730-00-00020-3	Not Determined	1950
628080	575291		Oak Harbor	S8370-00-00001-0	Not Determined	1950
628184	575395		Oak Harbor	S7730-00-00019-1	Not Determined	1952
628187	575398		Oak Harbor	R13222-042-2320	Not Determined	1952
628188	575399		Oak Harbor	S7730-00-00015-1	Not Determined	1952
628200	575411		Oak Harbor	S7730-00-00005-1	Not Determined	1952
628210	575421		Oak Harbor	S7730-00-00009-1	Not Determined	1952
628211	575422		Oak Harbor	S8370-00-00004-0	Not Determined	1952
628229	575440		Oak Harbor	S8370-00-00005-0	Not Determined	1953
628237	575448		Oak Harbor	S7730-02-00025-0	Not Determined	1953
628250	575461		Oak Harbor	S7730-00-00008-3	Not Determined	1953
628252	575463		Oak Harbor	S7725-00-00001-0	Not Determined	1953
628257	575468		Oak Harbor	S7730-02-00063-0	Not Determined	1953
628275	575486		Oak Harbor	R13221-010-3550	Not Determined	1953
628372	575583		Oak Harbor	S7730-02-00048-0	Not Determined	1955
628375	575586		Oak Harbor	R13221-048-2090	Not Determined	1955
628381	575592		Oak Harbor	R13222-164-2540	Not Determined	1955
628385	575596		Oak Harbor	R13221-010-1970	Not Determined	1955
628387	575598		Oak Harbor	R13223-470-0630	Not Determined	1955
628389	575600		Oak Harbor	S7730-00-00012-2	Not Determined	1955
628399	575610		Oak Harbor	S7730-00-00003-1	Not Determined	1955
628411	575622		Oak Harbor	S7730-00-00003-2	Not Determined	1955
628439	575650		Oak Harbor	S7730-02-00029-0	Not Determined	1956
628445	575656		Oak Harbor	S7730-02-00051-0	Not Determined	1956
628450	575661		Oak Harbor	S7730-00-00006-3	Not Determined	1956
628451	575662		Oak Harbor	S7730-02-00053-0	Not Determined	1956
628463	575674		Oak Harbor	S7730-02-00057-0	Not Determined	1956
628608	575819		Oak Harbor	S7730-02-00035-2	Not Determined	1957
628616	575827		Oak Harbor	S7730-02-00075-0	Not Determined	1957
628624	575835		Oak Harbor	S7730-02-00023-0	Not Determined	1957
628630	575841		Oak Harbor	S7730-02-00070-2	Not Determined	1957

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628631	575842		Oak Harbor	S7730-02-00066-0	Not Determined	1957
628637	575848		Oak Harbor	S7730-02-00068-0	Not Determined	1957
628652	575863		Oak Harbor	S7730-02-00073-0	Not Determined	1957
628814	576025		Oak Harbor	S7730-02-00019-0	Not Determined	1958
628975	576186		Oak Harbor	R13223-340-0720	Not Determined	1959
628990	576201		Oak Harbor	R13228-511-1960	Not Determined	1959
629129	576340		Oak Harbor	R13221-062-5200	Not Determined	1960
629142	576353		Oak Harbor	S8050-00-07026-0	Not Determined	1961
629161	576372		Oak Harbor	S8050-00-13008-0	Not Determined	1961
629165	576376		Oak Harbor	S8050-00-04001-0	Not Determined	1961
629177	576388		Oak Harbor	S7730-02-00001-0	Not Determined	1961
629182	576393		Oak Harbor	R13221-032-2250	Not Determined	1962
629195	576406		Oak Harbor	S8050-00-07007-0	Not Determined	1962
629202	576413		Oak Harbor	S8050-00-01002-0	Not Determined	1962
629203	576414		Oak Harbor	R13223-511-1120	Not Determined	1962
629212	576423		Oak Harbor	R13223-307-0450	Not Determined	1962
629312	576523		Oak Harbor	S7730-02-00028-0	Not Determined	1964
629319	576530		Oak Harbor	S7005-00-01009-1	Not Determined	1964
629327	576538		Oak Harbor	R13221-016-1760	Not Determined	1964
629334	576545		Oak Harbor	S7005-02-03008-0	Not Determined	1964
629356	576567		Oak Harbor	S8050-00-04022-0	Not Determined	1964
629376	576587		Oak Harbor	S7730-02-00015-0	Not Determined	1965
629402	576613		Oak Harbor	R13221-051-1540	Not Determined	1965
629403	576614		Oak Harbor	S8050-00-08044-0	Not Determined	1965
629511	576722		Oak Harbor	S7730-02-00074-0	Not Determined	1967
629515	576726		Oak Harbor	S7730-02-00065-0	Not Determined	1967
629519	576730		Oak Harbor	S8050-00-09029-0	Not Determined	1967
629521	576732		Oak Harbor	S7730-02-00041-1	Not Determined	1967
629524	576735		Oak Harbor	S7730-02-00049-0	Not Determined	1967
629528	576739		Oak Harbor	S7730-02-00054-0	Not Determined	1967
629533	576744		Oak Harbor	S7730-00-00013-1	Not Determined	1967
629535	576746		Oak Harbor	S7730-02-00046-0	Not Determined	1967
629536	576747		Oak Harbor	S7730-02-00040-0	Not Determined	1967
629538	576749		Oak Harbor	S7730-02-00024-0	Not Determined	1967
629540	576751		Oak Harbor	S7730-02-00038-0	Not Determined	1967

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629543	576754		Oak Harbor	R13221-169-5200	Not Determined	1967
629544	576755		Oak Harbor	S7730-00-00013-3	Not Determined	1967
629555	576766		Oak Harbor	S7730-02-00041-0	Not Determined	1967
629557	576768		Oak Harbor	S7730-02-00020-0	Not Determined	1967
629561	576772		Oak Harbor	S7730-00-00013-2	Not Determined	1967
629573	576784		Oak Harbor	S7730-02-00064-2	Not Determined	1968
629576	576787		Oak Harbor	S7730-02-00088-2	Not Determined	1968
629578	576789		Oak Harbor	S7730-02-00087-0	Not Determined	1968
629582	576793		Oak Harbor	S7730-02-00088-1	Not Determined	1968
629585	576796		Oak Harbor	S7730-02-00085-0	Not Determined	1968
629592	576803		Oak Harbor	S8050-02-18009-2	Not Determined	1968
629699	576910		Oak Harbor	S8050-00-06011-0	Not Determined	1968
629708	576919		Oak Harbor	S8050-00-10021-0	Not Determined	1969
629712	576923		Oak Harbor	S7730-02-00083-0	Not Determined	1969
629716	576927		Oak Harbor	S7730-02-00079-0	Not Determined	1969
629734	576945		Oak Harbor	S7730-02-00081-0	Not Determined	1969
629737	576948		Oak Harbor	S7730-02-00080-0	Not Determined	1969
629740	576951		Oak Harbor	S7730-02-00076-1	Not Determined	1969
629747	576958		Oak Harbor	S8050-00-01001-2	Not Determined	1969
629749	576960		Oak Harbor	R13221-164-3400	Not Determined	1969
629752	576963		Oak Harbor	S7730-02-00080-1	Not Determined	1969
629758	576969		Oak Harbor	S7730-02-00078-1	Not Determined	1969
629771	576982		Oak Harbor	S7730-00-00012-4	Not Determined	1969
629772	576983		Oak Harbor	S7725-00-00008-0	Not Determined	1969
629900	577110		Coupeville	R13230-187-0370	Not Determined	1959
629901	577111		Coupeville	R13233-249-3680	Not Determined	1968
629925	577135		Coupeville	S7246-00-00012-0	Not Determined	1890
441	433	Jenne, Jacob, House, Victorian Bed and Breakfast	Coupeville	R13233-279-3910	Not Determined	1889
629936	577145		Coupeville	R13102-427-4250	Not Determined	1955
439	431	Libbey, Joseph B., House	Coupeville	R13233-214-3740	Determined Eligible, Not Determined	1870
448	440	Leach House	Coupeville	R13233-344-3870	Not Determined	1878, 1883
328	320	Williams House	Coupeville	S6415-00-40001-0	Not Determined	1896
629956	577161		Coupeville	S6415-00-09003-0	Not Determined	1910
629957	577162		Coupeville	R13104-460-4100	Not Determined	1920

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629958	577163		Coupeville	R13104-475-3900	Not Determined	1947
629960	577165		Coupeville	R13104-427-3800	Not Determined	1968
629969	577174		Coupeville	R13104-409-3940	Not Determined	1952
629979	577184		Coupeville	R13233-193-3970	Not Determined	1935
630081	577284	Chapman Rental House	Coupeville	R13104-436-3940	Not Determined	1918
159364	107200	Glenwood Hotel	Coupeville	R13233-380-3950	Not Determined	1890
440	432	Higgins House, Hecher and Donaldson Rental House, Dale Roundy Law Office	Coupeville	R13233-264-3900	Not Determined	1917
463	455	Dixon House, Partridge House, Community Alcohol Center, Penn Cove Veterinary Clinic	Coupeville	R13104-428-3940	Not Determined	1918
630099	577299		Coupeville	R13233-258-3970	Not Determined	1951
630100	577300		Coupeville	R13233-250-3850	Not Determined	1956
630101	577301		Coupeville	S6415-00-31007-0	Not Determined	1958
630102	577302		Coupeville	R13233-363-4140	Determined Not Eligible	1960
630103	577303		Coupeville	R13233-133-4550	Determined Not Eligible	1969
334	326	Coupeville City Hall	Coupeville	S6415-00-20005-0	Not Determined	1928
630124	577323	Island County Courthouse	Coupeville	S6415-00-21000-0	Not Determined	1948
630125	577324		Coupeville	R13233-240-3830	Not Determined	1968
630131	577330		Coupeville	R13122-410-0750	Not Determined	1940
630132	577331		Coupeville	R13116-271-4200	Not Determined	1940
630141	577340		Coupeville	R13233-380-3350	Not Determined	1874
630142	577341		Coupeville	R13233-230-3860	Not Determined	1959
445	437	Methodist Church, United Methodist Church	Coupeville	R13233-291-3850	Not Determined	1894
666911	613948	Kathleen Ryan	Coupeville		Determined Not Eligible	1960
278	270	Grennan and Cranney Store, Grennan and Cranney Store	Coupeville		Not Determined, Washington Heritage Register	1855
344	336	Griffith, Thomas, House, Brooks House	Coupeville	S6415-00-12001-0	Not Determined	1869
345	337	First Methodist Parsonage, Jefferds Rental House	Coupeville	S6415-00-09005-1	Not Determined	1890
347	339	Jefferds Rental House	Coupeville	S6415-00-13002-0	Not Determined	1920
363	355	Holbrook, Horace, House, Forrester, Alice, House	Coupeville	R13233-352-3600	Not Determined	1890
368	360	Howell House, Wright House	Coupeville	S6415-00-32004-0	Not Determined	1927
369	361	Clark, Ed, House, Bishop House	Coupeville	S6415-00-32003-0	Not Determined	1915
370	362	Morris House, Reynolds Rental House	Coupeville	S6415-00-32002-0	Not Determined	1910
374	366	Cushen House, Penn Cove Bed and Breakfast	Coupeville	R13233-363-3550	Not Determined	1925
376	368	Pontiac Dealership, Auto Barn	Coupeville	S6025-00-06001-3	Not Determined	1963
676408	622820	House	Coupeville	R13233-310-1640	Not Determined	1935
676414	622826	House	Coupeville	R13233-276-1160	Not Determined	1946

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55501	44327	Mortar Battery Secondary Station, Fort Casey, None	Coupeville	Lot 1 of R13116-495-2950	Determined Eligible	1908
431	423	White, Dr., House	Coupeville	R13233-322-1850	Not Determined	1894
49281	39384	Rock Wall	Coupeville		Not Determined	1928
49283	39386	Fifth Street, Arnold Road	Coupeville	na	Not Determined	1890
49284	39387	Forest Street, Power Road	Coupeville	na	Not Determined	1890
49285	39388	Main Street, Holbrook Road	Coupeville	na	Not Determined	1890
49287	39390	Standard Oil Dock, Penn Cove Mussels, Inc. Dock	Coupeville		Not Determined	1915
88926	48429	Kineth, John Jr., Barn, Salmagundie Farms	Coupeville	R13101-287-1000	Not Determined, National Register, Not Determined, Washington Heritage Barn Register, Not Determined, Washington Heritage Register	1903
88927	48430	Crockett, Colonel Walter, Barn, Colonel Walter Crockett Farm	Coupeville	R13115-220-2200	Not Determined, National Register, Not Determined, Washington Heritage Barn Register, Not Determined, Washington Heritage Register	1895
88928	48431	Sherman Farm, Sherhill Vista Farms	Coupeville	R13109-086-1990	Not Determined	1942
88929	48432	Willow Wood Farm, Smith Farm	Coupeville	R13104-145-0170	Not Determined	1900
88930	48433	LeSourd Barn and Granary, Ebey Road Farm, Inc.	Coupeville	R13104-118-2490	Not Determined, National Register, Not Determined, Washington Heritage Barn Register, Not Determined, Washington Heritage Register	1923
626098	573309		Coupeville	S7400-00-01024-0	Not Determined	1969
626099	573310		Coupeville	S8160-00-03006-0	Not Determined	1969
626100	573311		Coupeville	S8160-00-13009-0	Not Determined	1969
626102	573313		Coupeville	S7760-00-03004-0	Not Determined	1969
626103	573314		Coupeville	S7400-00-04005-0	Not Determined	1969
201	193	Sherman Hog House	Coupeville		Not Determined, National Register, Not Determined, Washington Heritage Barn Register, Not Determined, Washington Heritage Register	1942
700399	662809	Willowood Barn, Willowood Farm; Smith Ranch	Coupeville		Determined Eligible, National Register, Determined Eligible, Washington Heritage Barn Register, Determined Eligible, Washington Heritage Register	1880
700400	662810	Barn, Tessaro Barn	Coupeville		Determined Eligible, National Register, Determined Eligible, Washington Heritage Barn Register, Determined Eligible, Washington Heritage Register	1905
700711	663121	Pratt Sheep Barn I, Pratt Farm	Coupeville		Determined Eligible, Washington Heritage Barn Register	1935

HISTORIC I	ResourceID	SiteNameHi	Loc FullAd	TaxParcel	RegisterTy	BuiltYear
700757	663167	Pratt Sheep Barn, Pratt Sheep Barn II	Coupeville		Determined Eligible, Washington Heritage Barn Register	1935
700759	663169	Crockett, Hugh, Barn, Boyer Farm	Coupeville		Determined Eligible, Washington Heritage Barn Register	1860

Note: Properties with resource ID 0 removed. Duplicate inventory records (by ResourceID) removed. Raw Data from DAHP GIS.

**Historic Properties on DAHP GIS Data Summary Table**

Historic Properties	Count
Determined Eligible for Local, State or National Register	14
Determined Not Eligible	22
Not Determined (Potentially Eligible)	876
<b>Total</b>	<b>912</b>

**Washington Heritage Barn Register on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>	<b>STREET_ADD</b>
IS00295	Jenne, Edward and Agnes, Farm	Washington Heritage Barn Register	Coupeville
IS00302	Calhoun, Thomas and Mary, Farm	Washington Heritage Barn Register	Coupeville
IS00313	Boyer, Freeman, Barn	Washington Heritage Barn Register	Coupeville
IS00314	Keith, Sam, Farm	Washington Heritage Barn Register	Coupeville
IS00338	Clark Sherman Farm	Washington Heritage Barn Register	Coupeville
IS00339	Rip, Lawrence and Joyce, Farm	Washington Heritage Barn Register	Coupeville
IS00340	Gus Reuble Farm	Washington Heritage Barn Register	Coupeville
IS00344	Pratt Sheep Barn I	Washington Heritage Barn Register	Coupeville
IS00345	Ernest Watson House	Washington Heritage Barn Register	Coupeville
IS00346	Harmon/Pearson/Engle Farm	Washington Heritage Barn Register	Coupeville
IS00347	Aloha Farms	Washington Heritage Barn Register	Coupeville
IS00352	Pratt Sheep Barn	Washington Heritage Barn Register	Coupeville
IS00354	Gallagher/Schreck/Sherman Farm	Washington Heritage Barn Register	Coupeville
IS00355	Crockett, Hugh, Barn	Washington Heritage Barn Register	Coupeville
IS00227	LeSourd Barn and Granary	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville
IS00229	Kineth, John Jr., Barn	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville
IS00231	Sherman Hog House	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville
IS00232	Willowood Barn	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville
IS00234	Barn	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville

**Washington Heritage Barn Register on DAHP GIS Data Summary Table**

<b>Washington Heritage Barn Register</b>	<b>Count</b>
Listed	19



**Historic Districts on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>	<b>STREET_ADD</b>
DT00006	Central Whidbey Island Historic District	National Register, Washington Heritage Register	South of Oak Harbor, Roughly Six Miles Either Side of Coupeville, Coupeville, WA

**Historic Districts on DAHP GIS Data Summary Table**

<b>Historic Districts</b>	<b>Count</b>
Determined Eligible	1

**Cemetery Sites on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>
IS00049	PRE-CONTACT	Survey/Inventory
IS00050	PRE-CONTACT	Survey/Inventory
IS00300	PRE-CONTACT	Survey/Inventory
IS00052	PRE-CONTACT	Survey/Inventory
IS00054	PRE-CONTACT	Survey/Inventory
IS00061	PRE-CONTACT	Survey/Inventory
IS00331	PRE-CONTACT	Inventory
IS00075	PRE-CONTACT	Survey/Inventory
IS00077	PRE-CONTACT	Survey/Inventory
IS00088	PRE-CONTACT	Survey/Inventory
IS00217	PRE-CONTACT	Survey/Inventory
IS00218	PRE-CONTACT	Survey/Inventory
IS00235	PRE-CONTACT	Survey/Inventory
IS00263	PRE-CONTACT	Survey/Inventory
IS00271	CEMETERY	Inventory
IS00272	SNAKLIN MONUMENT	Inventory
IS00273	SUNNYSIDE CEMETERY	Inventory
IS00013	PRE-CONTACT	Survey/Inventory

**Cemetery Sites on DAHP GIS Data Summary Table**

<b>Cemetery Sites</b>	<b>Count</b>
Inventory	4
Survey/Inventory	14
<b>Total</b>	<b>18</b>

**Washington Heritage Register Properties on DAHP GIS Data**

<b>SITE_ID</b>	<b>Comments</b>	<b>Elig_Name</b>	<b>STREET_ADD</b>	<b>Created_Da</b>
IS00226	Crockett, Colonel Walter, Barn	National Register, Washington Heritage Barn Register, Washington Heritage Register	Coupeville	01/01/09
IS00098	Grennan and Cranney Store	Washington Heritage Register	Coupeville	01/01/09

**Washington Heritage Register Properties on DAHP GIS Data Summary Table**

<b>Washington Heritage Register</b>	<b>Count</b>
Listed	2

**Archaeological Sites on DAHP GIS Data Summary Table**

<b>Archaeological Sites</b>	<b>Count</b>
Determined Eligible	6
Potentially Eligible	5
Unevaluated (Potentially Eligible)	84
<b>Total</b>	<b>95</b>

Enclosure (3)



**Properties Listed for the National Register of Historic Places in Ebey's Landing National Historic Reserve and the Aggregate 65dB DNL**

<b>Reference Number</b>	<b>Name</b>	<b>Type</b>	<b>Location</b>
73001869	Central Whidbey Island Historic District	District	Central Whidbey Island - Coupeville
77001334	Loers, Benjamin, House	Building	2046 Swantown Road - Oak Harbor
82004285	Deception Pass	Structure	Highway 20 - Anacortes

**Properties Listed for the National Register of Historic Places in Ebey's Landing National Historic Reserve and the Aggregate 65dB DNL Summary Table**

<b>NRHP Listed Properties</b>	<b>Count</b>
District	1
Building	1
Structure	1
<b>Total</b>	<b>3</b>

Enclosure (4)

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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 N44/2800  
July, 19 2017

Dr. Allyson Brooks  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
1110 South Capital Way, Suite 30  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

SUBJECT: LOG NO. 102214-23-USN: CONTINUING SECTION 106 CONSULTATION ON  
THE IDENTIFICATION EFFORT FOR THE PROPOSED INCREASE IN EA-  
18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY  
ISLAND, ISLAND COUNTY, WASHINGTON

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. The Navy thanks you for your comments on our identification methodology and appreciates your continued participation in the Section 106 consultation. The Navy will carefully take your comments and recommendations into consideration. This letter is to provide you an update on our identification effort.

We are currently in the process of gathering information on historic properties in the APE. The Navy is working with your staff to schedule a meeting to discuss this effort in greater detail. To date, we have compiled data from the Washington State Department of Archaeology and Historic Preservation (DAHP) Geographic Information System (GIS) data, the National Register of Historic Places (NRHP), NAS Whidbey Island records, and the 2016 Ebey's Landing National Historical Reserve (ELNHR) Historic Building Inventory Update (Enclosures 1-4). The summary tables comprise data gathered from existing information and provided by consulting parties. The summary tables include:

Enclosure 1. Historic properties identified in the 65 dB DNL contour line.

Enclosure 2. Historic buildings identified in the ELNHR derived from the ELNHR's 2016 Inventory Update.

Enclosure 3. Historic properties identified in the ELNHR.

Enclosure 4. All listed historic properties in the NRHP.

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Ser N44/2800  
July 19, 2017

Data provided in enclosures (2) and (3) may be duplicate in some instances for buildings and structures.

In addition, the Navy invites you to comment on our preliminary context bibliography (Enclosure 5). The unique juxtaposition of federal properties and the ELNHR, with a community that celebrates the local and national historic setting provides a wealth of contextual information to expand upon. The enclosed bibliography draws upon existing information and provides a foundation to elaborate upon the broad description and patterns of historical development within the APE. Please note that the bibliography includes the Cold War Historic Context Study for NAS Whidbey Island and a number of guidance documents on identifying and evaluating Post World War II historic properties.

Finally, per 36 CFR 800.4(a)(4) the Navy is consulting with Indian Tribes to identify properties of religious and cultural significance within the area of potential effect.

The Navy looks forward to continued consultations with you. If during the identification and evaluation of historic properties the Navy determines it necessary to expand the APE or revise our inventory plan, we will consult with SHPO and our other consulting parties. If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,



KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer

- Enclosures:
1. Historic properties in the 65 dB DNL contour line
  2. Historic buildings in the ELNHR derived from the ELNHR's 2016 Inventory
  3. Historic properties identified in the ELHNR
  4. All listed historic properties in the NRHP
  5. Historic Context Bibliography





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

5090  
Ser N44/2791  
July 19, 2017

Mr. David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Mr. Brownell:

SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE IDENTIFICATION EFFORT FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. This letter is to provide you an update on our effort to identify historic properties within the area of potential effect (APE). The Navy welcomes your comments or any further information about historic properties in the area.

We are currently in the process of gathering information on historic properties in the APE. To date, we have compiled data from the Washington State Department of Archaeology and Historic Preservation (DAHP) Geographic Information System (GIS) data, the National Register of Historic Places (NRHP), NAS Whidbey Island records, and the 2016 Ebey's Landing National Historical Reserve (ELNHR) Historic Building Inventory Update (Enclosures 1-4). The summary tables comprise data gathered from existing information and provided by consulting parties. The summary tables include:

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5090  
Ser N44/2791  
July 19, 2017

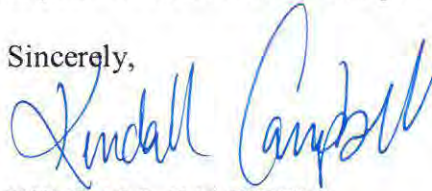
In addition, the Navy invites you to comment on our preliminary context bibliography (Enclosure 5). The unique juxtaposition of federal properties and the ELNHR, with a community that celebrates the local and national historic setting provides a wealth of contextual information to expand upon. The enclosed bibliography draws upon existing information and provides a foundation to elaborate upon the broad description and patterns of historical development within the APE.

The Navy understands that the project area and its surrounding location may have cultural importance and significance to your tribe. Section 106 of the NHPA requires federal agencies to seek information from tribes likely to have knowledge of, or concerns with, historic resources within the project's APE. We are specifically seeking your comments on our proposed APE and any knowledge or concerns about properties that may have religious or cultural significance and may be eligible for listing in the National Register of Historic Places, including Traditional Cultural Properties.

We appreciate any assistance you could provide us in our efforts to comply with Section 106 of the NHPA. Please be assured that the Navy will treat any information you share with us with the degree of confidentiality that is required in Section 800.11(c) of the NHPA, or with any other special restrictions you may require.

The Navy looks forward to continued consultations with you. If during the identification and evaluation of historic properties the Navy determines it necessary to expand the APE or revise our inventory plan, we will consult with SHPO and our other consulting parties. If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,



KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer

- Enclosures:
1. Historic properties in the 65 dB DNL contour line
  2. Historic buildings in the ELNHR derived from the ELNHR's 2016 Inventory
  3. Historic properties identified in the ELHNR
  4. All listed historic properties in the NRHP
  5. Historic Context Bibliography



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

5090  
Ser N44/2787  
July 19, 2017

Mr. Ken Pickard  
President  
Citizens of Ebey's Reserve  
P.O. Box 202  
Coupeville, WA 98239-0202

Dear Mr. Pickard:

SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE IDENTIFICATION EFFORT FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. This letter is to provide you an update on our effort to identify historic properties within the area of potential effect (APE). The Navy welcomes your comments or any further information about historic properties in the area.

We are currently in the process of gathering information on historic properties in the APE. To date, we have compiled data from the Washington State Department of Archaeology and Historic Preservation (DAHP) Geographic Information System (GIS) data, the National Register of Historic Places (NRHP), NAS Whidbey Island records, and the 2016 Ebey's Landing National Historical Reserve (ELNHR) Historic Building Inventory Update (Enclosures 1-4). The summary tables comprise data gathered from existing information and provided by consulting parties. The summary tables include:

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Enclosure 3. Historic properties identified in the ELNHR.

Enclosure 4. All listed historic properties in the NRHP.

Data provided in enclosures (2) and (3) may be duplicate in some instances for buildings and structures.



5090  
Ser N44/2787  
July 19, 2017

In addition, the Navy invites you to comment on our preliminary context bibliography (Enclosure 5). The unique juxtaposition of federal properties and the ELNHR, with a community that celebrates the local and national historic setting provides a wealth of contextual information to expand upon. The enclosed bibliography draws upon existing information and provides a foundation to elaborate upon the broad description and patterns of historical development within the APE.

The Navy looks forward to continued consultations with you. If during the identification and evaluation of historic properties the Navy determines it necessary to expand the APE or revise our inventory plan, we will consult with SHPO and our other consulting parties. If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,



KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer

- Enclosures:
1. Historic properties in the 65 dB DNL contour line
  2. Historic buildings in the ELNHR derived from the ELNHR's 2016 Inventory
  3. Historic properties identified in the ELHNR
  4. All listed historic properties in the NRHP
  5. Historic Context Bibliography



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

5090  
Ser N44/3313  
October 2, 2017

Mr. John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

Dear Mr. Fowler:

**SUBJECT: CONTINUING SECTION 106 CONSULTATION FOR THE PROPOSED  
INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION  
WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. The Navy appreciates your continued participation in the Section 106 consultation.

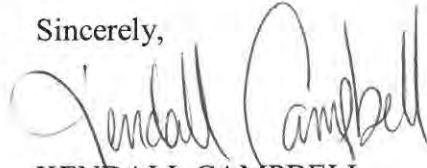
This letter is to inform you that completion of the section 106 analysis for the EA-18G Growler Operations EIS will be extended, as the Navy has decided to extend the timeline for completion of the Final EIS. During this additional time, the Navy will conduct additional analysis to incorporate changes to Navy training requirements that may reduce impacts to local communities. These changes are based on the introduction of new landing technologies that would reduce the Navy's requirement for Field Carrier Landing Practice (FCLP) and result in fewer operations and personnel than previously projected. The Navy will also consider additional FCLP distribution options between Ault Field and OLF Coupeville that may further mitigate noise impacts.

The Navy recognizes that aircraft noise can adversely affect the setting of certain noise-sensitive historic properties and cannot complete the section 106 process until the noise models are revised to incorporate changes to the Navy's training requirements. Should the additional noise modeling result in a change to the proposed 65 dB DNL noise contour line, the Navy will adjust the Area of Potential Effects (APE) accordingly. While the new noise analysis is being performed, the Navy will continue to work on the section 106 identification effort. Specifically, we will continue to compile information about historic properties within the APE. However, we will wait for the new noise analysis to conduct a determination of effects analysis.

5090  
Ser N44/3313  
October 2, 2017

The Navy welcomes your comments and will continue to take any comments received into consideration as we continue our identification efforts. If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,

A handwritten signature in black ink that reads "Kendall Campbell". The signature is written in a cursive style with a large, looping initial "K".

KENDALL CAMPBELL

NASWI Cultural Resources Program Manager and  
Archaeologist

By Direction of the Commanding Officer





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

5090  
Ser N44/3312  
October 2, 2017

Dr. Allyson Brooks  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: LOG NO. 102214-23-USN: CONTINUING SECTION 106 CONSULTATION FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON**

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. The Navy appreciates your continued participation in the Section 106 consultation.

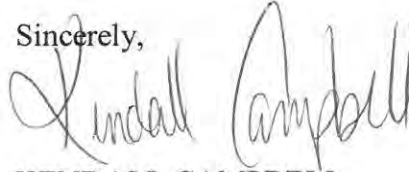
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KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer





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

5090  
Ser N44/3318  
October 2, 2017

Mr. David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Mr. Brownell:

SUBJECT: CONTINUING SECTION 106 CONSULTATION FOR THE PROPOSED  
INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION  
WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. The Navy appreciates your continued participation in the Section 106 consultation.

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The Navy understands that the project area and its surrounding location may have cultural importance and significance to your tribe. Section 106 of the NHPA requires federal agencies to seek information from tribes likely to have knowledge of, or concerns with, historic resources within the project's APE. We are specifically seeking your comments on our proposed APE and



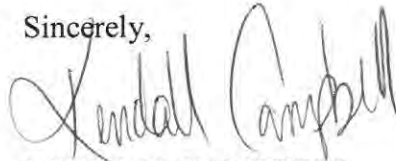
5090  
Ser N44/3318  
October 2, 2017

any knowledge or concerns about properties that may have religious or cultural significance and may be eligible for listing in the National Register of Historic Places, including Traditional Cultural Properties.

We appreciate any assistance you could provide us in our efforts to comply with section 106 of the NHPA. Please be assured that the Navy will treat any information you share with us with the degree of confidentiality that is required in Section 800.11(c) of the NHPA, or with any other special restrictions you may require.

The Navy welcomes your comments and will continue to take any comments received into consideration as we continue our identification efforts. If you require additional information, I can be reached at (360) 257-6780 or [kendall.campbell1@navy.mil](mailto:kendall.campbell1@navy.mil).

Sincerely,



KENDALL CAMPBELL

NASWI Cultural Resources Program Manager and  
Archaeologist

By Direction of the Commanding Officer



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

5090  
Ser N44/3314  
October 2, 2017

Mr. Ken Pickard  
President  
Citizens of Ebey's Reserve  
P.O. Box 202  
Coupeville, WA 98239-0202

Dear Mr. Pickard:

SUBJECT: CONTINUING SECTION 106 CONSULTATION FOR THE PROPOSED  
INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION  
WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and its implementing regulations in 36 CFR section 800, Naval Air Station (NAS) Whidbey Island is continuing consultation for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington. The Navy appreciates your continued participation in the Section 106 consultation.

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Sincerely,

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KENDALL CAMPBELL  
NASWI Cultural Resources Program Manager and  
Archaeologist  
By Direction of the Commanding Officer





DEPARTMENT OF THE NAVY

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

5090  
Ser N44/2077  
June 25, 2018

Allyson Brooks, PhD  
State Historic Preservation Officer  
Washington Department of Archaeology and Historic Preservation  
1063 South Capital Way, Suite 106  
P.O. Box 48343  
Olympia, WA 98504-8343

Dear Dr. Brooks:

**SUBJECT: LOG NO. 102214-23-USN: REQUEST FOR SECTION 106 CONSULTATION ON THE FINDING OF ADVERSE EFFECT TO HISTORIC PROPERTIES FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON.**

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations 36 CFR 800, Naval Air Station (NAS) Whidbey Island is continuing consultation, and asks for your concurrence on our finding of Historic Properties Adversely Effected for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington.

The Navy has determined that the proposed undertaking is a Historic Properties Adversely Affected for indirect adverse effects to the Central Whidbey Island Historic District as a result of more frequent aircraft operations affecting certain landscape components of the district, specifically the perceptual qualities on our finding of Historic Properties Adversely Effected for the proposed increase of EA-18G Growler operations at NAS Whidbey Island, Island County, Washington in five locations (Enclosure 1).

The Navy understands that the Area of Potential Effect and its surrounding location may have cultural importance and significance to members of the traditional cultural groups of Whidbey Island. In order to identify possible religious or cultural significance to affected tribes, the Navy is continuing consultation with the Swinomish Indian Tribal Community, the Samish Indian Nation, the Upper Skagit Indian Tribe, the Stillaguamish Tribe of Indians, Lummi Nation, Tulalip Tribe, Suquamish Tribe, and Jamestown S'Klallam Indian Tribe. Results of tribal consultation may be provided to your office.

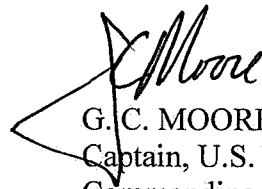
The Navy is also continuing consultation with the Advisory Council on Historic Preservation (ACHP), National Park Service, Trust Board of Ebey's Landing National Historical Reserve, Island County Commissioners, Washington State Parks, Seattle Pacific University, Citizens of Ebey's Reserve, David, Day, Port Townsend Historical Society, City of Port

5090  
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June 25, 2018

Townsend, and Town of Coupeville. Results of this consultation may also be provided to your office.

The Navy requests your concurrence with the finding of Adverse Effects to Historic Properties for the proposed undertaking. If you require additional information, please contact Ms. Kendall Campbell, the NAS Whidbey Island Cultural Resources Program Manager and Archaeologist, at (360) 257-6780 or email at [Kendall.Campbell1@navy.mil](mailto:Kendall.Campbell1@navy.mil).

Sincerely,



G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Finding of Effects Determination



Allyson Brooks Ph.D., Director  
State Historic Preservation Officer

June 27, 2018

Ms. Kendall Campbell  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98278-5000

Re: Increase in EA-18G Growler Operations  
Log No.: 102214-23-USN

Dear Ms. Campbell:

Thank you for contacting our department. We have reviewed the materials you provided for the proposed Increase in EA-18G Growler Operations at Naval Air Station Whidbey Island, Whidbey Island, Island County, Washington.

We concur with your Determination of Adverse Effect. We look forward to further consultations and the development of a Memorandum of Agreement (MOA) to address the identified Adverse Effect.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

We look forward to further substantive consultations.

Sincerely,

A handwritten signature in blue ink, appearing to read 'R. Whitlam', with a long horizontal line extending to the right.

Robert G. Whitlam, Ph.D.  
State Archaeologist  
(360) 890-2615  
email: [rob.whitlam@dahp.wa.gov](mailto:rob.whitlam@dahp.wa.gov)









DEPARTMENT OF THE NAVY

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

5090  
Ser N44/2078  
June 25, 2018

Mr. John M. Fowler  
Executive Director  
Advisory Council on Historic Preservation  
401 F Street NW, Suite 308  
Washington, DC 20001-2637

Dear Mr. Fowler:

**SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE FINDING OF ADVERSE EFFECT TO HISTORIC PROPERTIES FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON.**

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The Navy is also continuing consultation with the Washington State Historic Preservation Officer (SHPO), National Park Service, Trust Board of Ebey's Landing National Historical Reserve, Island County Commissioners, Washington State Parks, Seattle Pacific University, Citizens of Ebey's Reserve, David, Day, Port Townsend Historical Society, City of Port

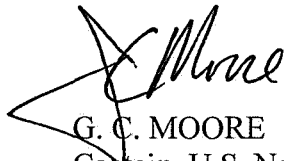


5090  
Ser N44/2078  
June 25, 2018

Townsend, and Town of Coupeville. Results of this consultation may also be provided to your office.

The Navy requests your concurrence with the finding of Adverse Effects to Historic Properties for the proposed undertaking. If you require additional information, please contact Ms. Kendall Campbell, the NAS Whidbey Island Cultural Resources Program Manager and Archaeologist, at (360) 257-6780 or email at Kendall.Campbell1@navy.mil.

Sincerely,

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G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Finding of Effects Determination



DEPARTMENT OF THE NAVY

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

5090  
Ser N44/2079  
June 25, 2018

Mr. David Brownell  
Cultural Resources Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Mr. Brownell:

**SUBJECT: CONTINUING SECTION 106 CONSULTATION ON THE FINDING OF ADVERSE EFFECT TO HISTORIC PROPERTIES FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON.**

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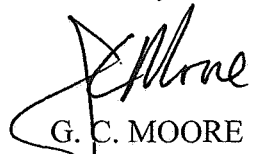
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5090  
Ser N44/2079  
June 25, 2018

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The Navy requests your comments with the finding of Adverse Effects to Historic Properties for the proposed undertaking. If you require additional information, please contact Ms. Kendall Campbell, the NAS Whidbey Island Cultural Resources Program Manager and Archaeologist, at (360) 257-6780 or email at Kendall.Campbell1@navy.mil.

Sincerely,

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G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Finding of Effects Determination



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

5090  
Ser N44/2087  
June 25, 2018

Ms. Maryon Attwood  
President  
Citizens of Ebey's Reserve  
P.O. Box 202  
Coupeville, WA 98239-0202

Dear Ms. Attwood:

**SUBJECT: CONTINUING SECTION 106 CONSULTATION THE FINDING OF ADVERSE EFFECT TO HISTORIC PROPERTIES FOR THE PROPOSED INCREASE IN EA-18G GROWLER OPERATIONS AT NAVAL AIR STATION WHIDBEY ISLAND, ISLAND COUNTY, WASHINGTON.**

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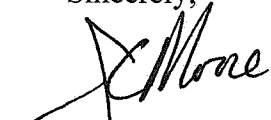
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The Navy is also continuing consultation with the Advisory Council on Historic Preservation (ACHP), Washington State Historic Preservation Officer (SHPO), National Park Service, Trust Board of Ebey's Landing National Historical Reserve, Island County Commissioners, Washington State Parks, Seattle Pacific University, Citizens of Ebey's Reserve, David, Day, Port Townsend Historical Society, City of Port Townsend, and Town of Coupeville. Results of this consultation may also be provided to your office.

5090  
Ser N44/2087  
June 25, 2018

The Navy requests your comments on the finding of Adverse Effects to Historic Properties for the proposed undertaking. If you require additional information, please contact Ms. Kendall Campbell, the NAS Whidbey Island Cultural Resources Program Manager and Archaeologist, at (360) 257-6780 or email at Kendall.Campbell1@navy.mil.

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G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Finding of Effects Determination

# Section 106 Determination of Effect for the EA-18G “Growler” Airfield Operations at the Naval Air Station Whidbey Island Complex

## Executive Summary

The United States (U.S.) Department of the Navy (Navy) is continuing consultation and conducting an identification effort and determination of effect under Section 106 of the National Historic Preservation Act of 1966 (NHPA) for the increase in EA-18G “Growler” aircraft and airfield operations at Naval Air Station (NAS) Whidbey Island. The results of the Navy’s identification effort and determination of effects are reflected in the following document. In addition, this document summarizes consultation efforts for this undertaking under NHPA per 36 CFR 800 and presents information requested during previous consultations through correspondence and meetings conducted between October 2014 and October 2017.

The Navy has determined that the proposed undertaking is a “Historic Properties Adversely Affected”. The increased frequentness of noise exposure results in adverse indirect effects to characteristics of the Central Whidbey Island Historic District that currently make it eligible for the National Register of Historic Places (NRHP). Although the effects are intermittent, the proposed undertaking would result in an increased occurrence of noise exposure affecting certain cultural landscape components in the historic district—specifically, the perceptual qualities of five locations that contribute to the significance of the landscapes. The Navy finds no other adverse effects to historic properties from the proposed undertaking.

This documents describes how the Navy applied the criteria of adverse effect to historic properties within the area of potential effects (APE) and assessed whether the proposed undertaking may directly or indirectly alter the characteristics that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property. As defined in consultation, the APE comprises four components:

- On-installation Direct Effect Areas: Areas on the installation where historic properties could be directly affected (i.e., by ground disturbance, demolition, or alteration).
  - On-installation Indirect Effect Areas: Areas within the installation bounded by the 65 decibel (dB) day-night average sound level (DNL) noise contours where historic properties could remain physically undisturbed but potentially subject to effects from the introduction of visual, atmospheric, or audible elements that occur when aircraft are seen or heard flying in the vicinity.
- Off-installation Indirect Effect Areas: Areas off installation within operational areas bounded by the 65 dB DNL noise contours and potentially subject to effects from the introduction of visual, atmospheric, or audible elements to the setting that occur when aircraft are seen or heard flying in the vicinity.
- Ebey’s Landing National Historical Reserve (ELNHR)

To minimize the adverse indirect effects of the proposed undertaking, the Navy would continue to implement current policies that are in place to minimize auditory, visual, and atmospheric effects of flight operation on the surrounding community, including the following:

- Implementing flight path noise abatement patterns that direct inter-facility flights away from land and directing pilots to keep aircraft above minimum flight altitude standards set by the Federal Aviation Administration (FAA).
- Publishing flight operations on a weekly basis to assist the public in making informed decisions about their activities.
- Utilizing Landing Signal Officers (LSOs) during Field Carrier Landing Practice (FCLP) training to ensure flight pattern integrity and proper sequencing of aircraft is maintained.
- Restricting ground operations and aircraft maintenance.
- Restricting high-power jet aircraft turns prior to noon on Sundays and daily between the hours of 10:00 p.m. and 7:30 a.m.
- Working with local municipalities to adopt appropriate land use zoning through the Navy's Air Installations Compatible Use Zones (AICUZ) and Readiness and Environmental Protection Initiative (REPI) programs.
- Training pilots to familiarize them with rules and noise abatement procedures, and instill attitudes that support positive community relations.
- Continually reviewing operational procedures to identify potential operational changes that reduce noise while supporting safe, effective, and economical mission execution.
- Participating in bi-annual community leadership forums to discuss issues between the installation and the local community.
- Monitoring airfield operations and striving to mitigate potential operational impacts during academic testing periods and important community events such as the Penn Cover Mussel Fest.
- Continuing to work with the Whidbey Camano Land Trust to collaborate on the purchase of conservation easements that serve to preserve the historic and scenic integrity of the cultural landscapes by lessening changes that affect the integrity of the Central Whidbey Island Historic District.

In addition to the above-mentioned measures to avoid and minimize adverse effects on historic properties in the Central Whidbey Island Historic District, the Navy offers the following mitigation measures as a starting point to consultation on resolution of adverse effects on historic properties under 36 Code of Federal Regulations (CFR) 800.6:

- Installation of informational kiosks and/or panels at entry points to the ELNHR at locations where the undertaking has adverse indirect effects to perceptual qualities that contribute to the significance of the ELNHR's contributing landscapes.
- Increased support to the REPI and encroachment management programs at NAS Whidbey Island for continued partnership with the Whidbey Camano Land Trust in acquiring conservation easements.
- The Navy proposes to enter into a cooperative agreement with the ELNHR to collaborate on a project to improve the efficacy and efficiency of online ELNHR historic property inventories. This

agreement will ameliorate inconsistencies and update the ELNHR and Washington State historic property inventories and GIS databases for properties located within the ELNHR.





# 1 Introduction

The Navy proposes to continue and expand its existing Electronic Attack community at NAS Whidbey Island by operating additional Growler aircraft as appropriated by Congress. The Navy needs to effectively and efficiently increase electronic attack capabilities in order to counter increasingly sophisticated threats and provide more aircraft per squadron to give operational commanders more flexibility in addressing future threats and missions. The need for the proposed undertaking is to maintain and expand Growler operational readiness to support national defense requirements under Title 10, United States Code (U.S.C.) Section 5062.

Due to the complexity of the proposed undertaking, the Navy has conducted robust consultations with the Washington (WA) State Historic Preservation Officer (SHPO), the Advisory Council of Historic Preservation (ACHP), American Indian Tribes, representatives of local governments, and other interested parties. The Navy initiated consultation on October 14, 2014, and has continued consultation through correspondence and in-person meetings from June 2016 through October 2017. Key consultation steps have included correspondence and meetings to establish the proposed undertaking, to define the APE, to discuss the identification effort and methods, and to present an inventory of historic properties within the APE. In the fall of 2017, the Navy paused the identification and consultation effort in anticipation of changes to the scale and scope of the proposed undertaking that would potentially alter the APE and require revisions to the inventory.

Since the October 2017 consultation, the Navy has modified the proposed undertaking to account for changes to projected operational needs including a decrease in the projected number of pilots required in each squadron, a reduction in the total number of operations proposed, and the inclusion of additional operational scenarios under each alternative. These changes have resulted in revisions to the APE and revisions to the inventory.



## 2 Proposed Undertaking

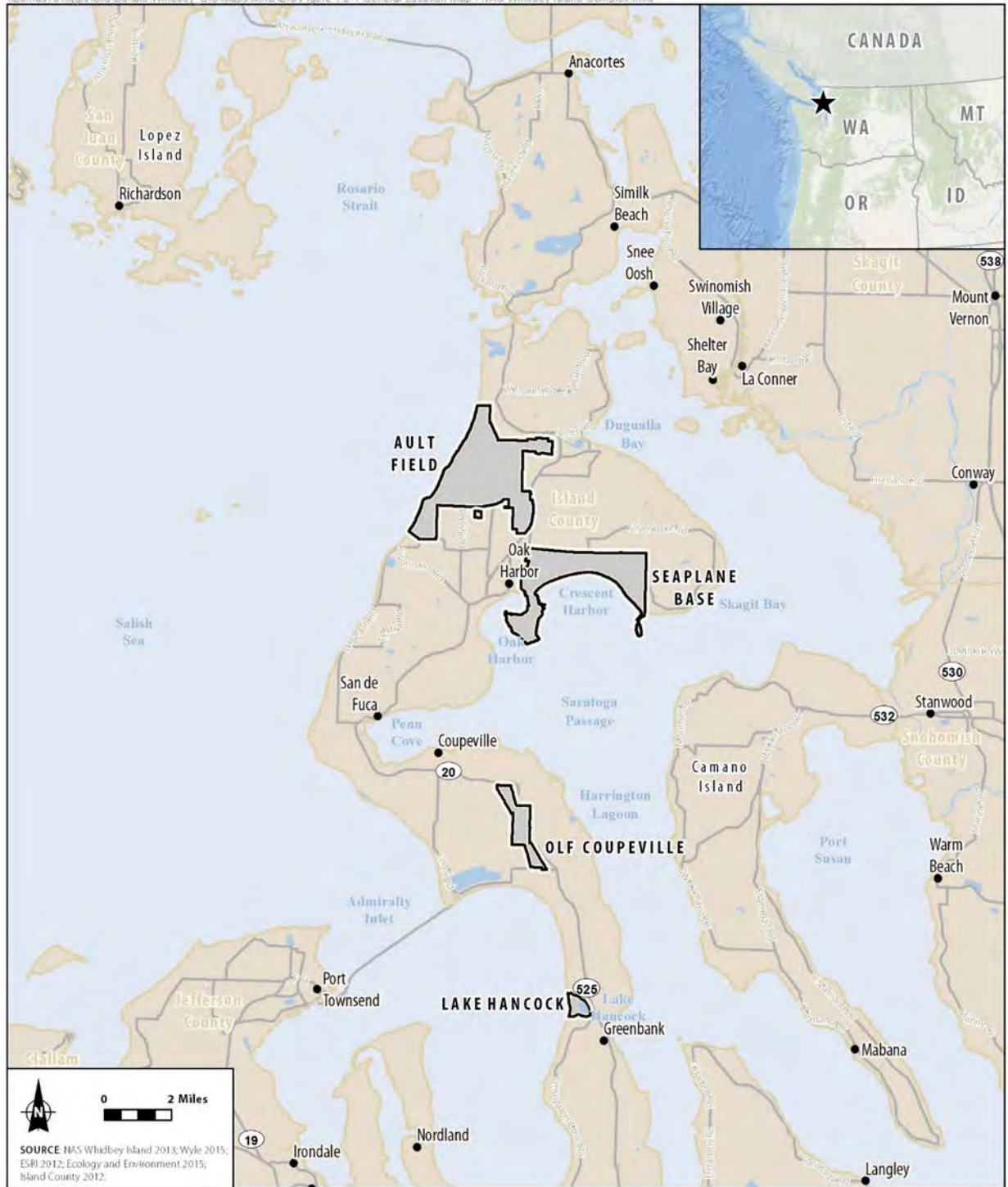
The U.S. Navy proposes to expand existing EA-18G “Growler” (Growler) operations at NAS Whidbey Island’s Ault Field and Outlying Landing Field (OLF) Coupeville (Figure 1). The purpose of the proposed undertaking is to continue and expand the Navy’s existing Electronic Attack community at NAS Whidbey Island by operating additional Growler aircraft as appropriated by Congress. The Navy needs to effectively and efficiently increase electronic attack capabilities in order to counter increasingly sophisticated threats and provide more aircraft per squadron to give operational commanders more flexibility in addressing future threats and missions. The need for the proposed undertaking is to maintain and expand Growler operational readiness to support national defense requirements under Title 10, U.S.C. Section 5062.

The mission of the Navy’s Growler aircraft is to suppress enemy air defenses and communications systems. Additionally, Navy Growlers disrupt land-based threats in order to protect the lives of U.S. ground forces. The Secretary of Defense directed that the tactical Airborne Electronic Attack (AEA) mission is the exclusive responsibility of the Navy. As a result, the Navy is the only U.S. military service to maintain a tactical AEA capability and is required to preserve and cultivate the expertise and knowledge of the Growler community. NAS Whidbey Island has served as the home base location for the Navy’s tactical Electronic Warfare community for more than 45 years and is currently the sole home base for the Navy’s entire tactical AES community in the U.S.

The November 2016 Draft Environmental Impact Statement (DEIS) for EA-18G “Growler” Airfield Operations at Naval Air Station Whidbey Island Complex evaluates the potential impacts of alternatives and operational scenarios based on the allocation of additional Growler aircraft between carrier and expeditionary squadrons and potential distribution of annual Growler FCLPs between Ault Field and OLF Coupeville. Since the Draft EIS was published, the Navy has modified the proposed undertaking to incorporate the following:

1. A reduced number of pilots to be assigned to Fleet Squadrons at NAS Whidbey Island (two fewer pilots per carrier squadron), which results in a decrease in overall projected flight operations.
2. The accelerated Fleet-wide introduction of new technology (e.g., Precision Landing Mode [PLM]) that will reduce the overall requirement for FCLP training at NAS Whidbey Island, and
3. Two additional FCLP distribution scenarios that may further mitigate noise impacts at Ault Field and OLF Coupeville.

The Navy announced these changes in a press release dated September 22, 2017. The information presented herein accounts for these changes. The changes are represented in the tables at the end of this section comparing the No Action Alternative to the three proposed alternatives and the various scenarios of flight operation including distribution of FCLPs between Ault Field and OLF Coupeville.



**Figure 1 NAS Whidbey Island**

The proposed undertaking continues to include an increase in the number of EA-18G aircraft operating at NAS Whidbey Island as well as expand the number of total annual airfield operations at NAS Whidbey Island's primary airport, Ault Field, and FCLP operations at OLF Coupeville. Airfield operations specific to this undertaking include Growler takeoffs and landings, inter-facility transit, and FCLP training at Ault Field and OLF Coupeville. Annual airfield operations at NAS Whidbey Island would increase by approximately 29 to 33 percent (depending on alternative and scenario selected) over the No Action Alternative to support the addition of 35 or 36 new aircraft assigned to Ault Field (Tables 1-3). See Sections 2.2 and 2.3 for more information on the proposed alternatives and scenarios.

The proposed increase in aircraft and personnel requires renovation and construction of facilities at Ault Field. No construction would be required at OLF Coupeville because it is capable of supporting increased operational requirements in its current state. Construction at Ault Field would take place in future years, and personnel and aircraft would arrive incrementally as aircraft are delivered by the manufacturer, personnel are trained, and families relocate.

Under any of the action alternatives, planned land disturbance for construction activities would be 10.1 acres. Once constructed, facilities and parking would add up to 2.3 acres of new impervious surface at the installation. Throughout construction, these alternatives would require temporary hangar facilities to support squadron functions until permanent facilities are completed. Once construction is complete, all temporary facilities would be removed. All three alternatives would require repairs to an inactive taxiway for aircraft parking in addition to expanded hangar space. All planned construction activities would occur on the north end of the flight line at Ault Field. New parking areas, maintenance facilities, and aircraft armament storage would be constructed along Enterprise Road at the north end of Charles Porter Road. Appendix A shows the locations of required facilities under each alternative, including:

- Temporary hangar facilities, which would be placed over existing impervious surface, that would be utilized throughout construction to support squadron functions until permanent facilities are completed. Upon completion of construction, all temporary facilities would be removed.
- Repairs would be made to an inactive taxiway for aircraft parking in addition to expanded hangar space.
- A two-squadron hangar would be constructed on the flight line adjacent to Hangar 5.
- Hangar 12 would be expanded to accommodate additional training squadron aircraft.
- Demolition of Building 115.

**Table 1. Comparison of Modeled No Action Alternative and Alternative 1, under All Scenarios (Average Year), Aircraft Operations at the NAS Whidbey Island Complex<sup>1, 5, 7, 8, 9</sup>**

<i>Aircraft Type</i>	<i>FCLP<sup>2</sup></i>	<i>Other Operations<sup>3</sup></i>	<i>Total</i>	<i>Total Change from No Action<sup>6</sup></i>
<b><i>Average Year Scenarios for Ault Field</i></b>				
No Action	11,300	66,900	78,200	
<b><i>Alternative 1, Scenario A (20% of FCLPs at Ault Field)</i></b>				
Growler	6,100	67,000	73,100	
All Other Aircraft <sup>4, 6</sup>	0	14,200	14,200	
Total Airfield Operations	6,100	81,200	87,300	+9,100
<b><i>Alternative 1, Scenario B (50% of FCLPs at Ault Field)</i></b>				
Growler	15,500	65,600	81,100	
All Other Aircraft <sup>4, 6</sup>	0	14,200	14,200	
Total Airfield Operations	15,500	79,800	95,300	+17,100
<b><i>Alternative 1, Scenario C (80% of FCLPs at Ault Field)</i></b>				
Growler	24,900	64,400	89,300	
All Other Aircraft <sup>4, 6</sup>	0	13,900	13,900	
Total Airfield Operations	24,900	78,300	103,200	+25,000
<b><i>Alternative 1, Scenario D (30% of FCLPs at Ault Field)</i></b>				
Growler	9,200	66,600	75,800	
All Other Aircraft <sup>4, 6</sup>	0	14,200	14,200	
Total Airfield Operations	9,200	80,800	90,000	+11,800
<b><i>Alternative 1, Scenario E (70% of FCLPs at Ault Field)</i></b>				
Growler	21,700	64,800	86,500	
All Other Aircraft <sup>4, 6</sup>	0	13,900	13,900	
Total Airfield Operations	21,700	78,700	100,400	+22,200
<b><i>Average Year Scenarios for OLF Coupeville</i></b>				
No Action	6,100	400	6,500	
<b><i>Alternative 1, Scenario A (80% of FCLPs at OLF Coupeville)</i></b>				
Growler	24,900	0	24,900	
All Other Aircraft <sup>4, 6</sup>	0	400	400	
Total Airfield Operations	24,900	400	25,300	+18,800
<b><i>Alternative 1, Scenario B (50% of FCLPs at OLF Coupeville)</i></b>				
Growler	15,500	0	15,500	
All Other Aircraft <sup>4, 6</sup>	0	400	400	
Total Airfield Operations	15,500	400	15,900	+9,400
<b><i>Alternative 1, Scenario C (20% of FCLPs at OLF Coupeville)</i></b>				
Growler	6,200	0	6,200	
All Other Aircraft <sup>4, 6</sup>	0	400	400	
Total Airfield Operations	6,200	400	6,600	+100
<b><i>Alternative 1, Scenario D (70% of FCLPs at OLF Coupeville)</i></b>				
Growler	21,800	0	21,800	
All Other Aircraft <sup>4, 6</sup>	0	400	400	
Total Airfield Operations	21,800	400	22,200	+15,700
<b><i>Alternative 1, Scenario E (30% of FCLPs at OLF Coupeville)</i></b>				
Growler	9,300	0	9,300	
All Other Aircraft <sup>4, 6</sup>	0	400	400	
Total Airfield Operations	9,300	400	9,700	+3,200



**Table 1. Comparison of Modeled No Action Alternative and Alternative 1, under All Scenarios (Average Year), Aircraft Operations at the NAS Whidbey Island Complex<sup>1, 5, 7, 8, 9</sup>**

<i>Aircraft Type</i>	<i>FCLP<sup>2</sup></i>	<i>Other Operations<sup>3</sup></i>	<i>Total</i>	<i>Total Change from No Action<sup>6</sup></i>
<b><i>Average Year Scenarios for the NAS Whidbey Island Complex</i></b>				
No Action Total	17,400	67,300	84,700	
<b><i>Alternative 1, Scenario A</i></b>				
Total Airfield Operations	31,000	81,600	112,600	+27,900
<b><i>Alternative 1, Scenario B</i></b>				
Total Airfield Operations	31,000	80,200	111,200	+26,500
<b><i>Alternative 1, Scenario C</i></b>				
Total Airfield Operations	31,100	78,700	109,800	+25,100
<b><i>Alternative 1, Scenario D</i></b>				
Total Airfield Operations	31,000	81,200	112,200	+27,500
<b><i>Alternative 1, Scenario E</i></b>				
Total Airfield Operations	31,000	79,100	110,100	+25,400

Source: Wyle, 2017

Notes:

- <sup>1</sup> Three-digit numbers are rounded to nearest 100 if  $\geq$  to 100; two-digit numbers are rounded to the nearest 10 if  $\geq$  10 or if between 1 and 9.
- <sup>2</sup> Each FCLP pass = 2 operations (one arrival and one departure).
- <sup>3</sup> Other operations include Touch-and-Goes, Depart and Re-enter, and Ground Controlled Approaches.
- <sup>4</sup> All other aircraft include P-8A, H-60, C-40, and transient aircraft. The 400 other operations at OLF Coupeville are H-60 search and rescue helicopter operations.
- <sup>5</sup> An operation is defined as one arrival or one departure.
- <sup>6</sup> The number of operations fluctuates slightly between alternative and scenario due to randomness inherent in modeling.
- <sup>7</sup> The NAS Whidbey Island complex includes Ault Field and OLF Coupeville.
- <sup>8</sup> Scenario A: 20 percent of FCLPs conducted at Ault Field, and 80 percent conducted at OLF Coupeville; Scenario B: 50 percent of FCLPs conducted at Ault Field, and 50 percent conducted at OLF Coupeville; Scenario C: 80 percent of FCLPs conducted at Ault Field, and 20 percent conducted at OLF Coupeville; Scenario D: 30 percent of FCLPs conducted at Ault Field, and 70 percent conducted at OLF Coupeville; Scenario E: 70 percent of FCLPs conducted at Ault Field, and 30 percent conducted at OLF Coupeville.
- <sup>9</sup> Since the publication of the Draft EIS, two new operational scenarios for each action alternative have been added to the analysis. In addition, several updates were applied to the noise analysis, which included incorporation of Precision Landing Mode reducing overall airfield operations by approximately 20 percent across all scenarios and updating the number of pilots per squadron (reduction); see Section 1.13.

Key:

- FCLP = field carrier landing practice
- OLF = outlying landing field

**Table 2. Comparison of Modeled No Action Alternative and Alternative 2, under All Scenarios (Average Year), Aircraft Operations at the NAS Whidbey Island Complex<sup>1, 5, 7, 8, 9</sup>**

<i>Aircraft Type</i>	<i>FCLP<sup>2</sup></i>	<i>Other Operations<sup>3</sup></i>	<i>Total</i>	<i>Total Change from No Action<sup>6</sup></i>
<b><i>Average Year Scenarios for Ault Field</i></b>				
No Action	11,300	66,900	78,200	
<b><i>Alternative 2, Scenario A (20% of FCLPs at Ault Field)</i></b>				
Growler	5,900	67,900	73,800	
All Other Aircraft <sup>3, 5</sup>	0	14,200	14,200	
Total Airfield Operations	5,900	82,100	88,000	+9,800
<b><i>Alternative 2, Scenario B (50% of FCLPs at Ault Field)</i></b>				
Growler	14,800	66,500	81,300	
All Other Aircraft <sup>3, 5</sup>	0	14,200	14,200	
Total Airfield Operations	14,800	80,700	95,500	+17,300
<b><i>Alternative 2, Scenario C (80% of FCLPs at Ault Field)</i></b>				
Growler	23,700	65,400	89,100	
All Other Aircraft <sup>3, 5</sup>	0	14,100	14,100	
Total Airfield Operations	23,700	79,500	103,200	+25,000
<b><i>Alternative 2, Scenario D (30% of FCLPs at Ault Field)</i></b>				
Growler	8,900	67,500	76,400	
All Other Aircraft <sup>3, 5</sup>	0	14,200	14,200	
Total Airfield Operations	8,900	81,700	90,600	+12,400
<b><i>Alternative 2, Scenario E (70% of FCLPs at Ault Field)</i></b>				
Growler	20,800	65,800	86,600	
All Other Aircraft <sup>3, 5</sup>	0	14,100	14,100	
Total Airfield Operations	20,800	79,900	100,700	+22,500
<b><i>Average Year Scenarios for OLF Coupeville</i></b>				
No Action	6,100	400	6,500	
<b><i>Alternative 2, Scenario A (80% of FCLPs at OLF Coupeville)</i></b>				
Growler	23,700	0	23,700	
All Other Aircraft <sup>3</sup>	0	400	400	
Total Airfield Operations	23,700	400	24,100	+17,600
<b><i>Alternative 2, Scenario B (50% of FCLPs at OLF Coupeville)</i></b>				
Growler	14,800	0	14,800	
All Other Aircraft <sup>3</sup>	0	400	400	
Total Airfield Operations	14,800	400	15,200	+8,700
<b><i>Alternative 2, Scenario C (20% of FCLPs at OLF Coupeville)</i></b>				
Growler	5,900	0	5,900	
All Other Aircraft <sup>3</sup>	0	400	400	
Total Airfield Operations	5,900	400	6,300	-200
<b><i>Alternative 2, Scenario D (70% of FCLPs at OLF Coupeville)</i></b>				
Growler	20,800	0	20,800	
All Other Aircraft <sup>3, 5</sup>	0	400	400	
Total Airfield Operations	20,800	400	21,200	+14,700
<b><i>Alternative 2, Scenario E (30% of FCLPs at OLF Coupeville)</i></b>				
Growler	8,900	0	8,900	
All Other Aircraft <sup>3, 5</sup>	0	400	400	
Total Airfield Operations	8,900	400	9,300	+2,800

**Table 2. Comparison of Modeled No Action Alternative and Alternative 2, under All Scenarios (Average Year), Aircraft Operations at the NAS Whidbey Island Complex<sup>1, 5, 7, 8, 9</sup>**

<i>Aircraft Type</i>	<i>FCLP<sup>2</sup></i>	<i>Other Operations<sup>3</sup></i>	<i>Total</i>	<i>Total Change from No Action<sup>6</sup></i>
<b>Average Year Scenarios for the NAS Whidbey Island Complex</b>				
No Action Total	17,400	67,300	84,700	
<b>Alternative 2, Scenario A</b>				
Total Airfield Operations	29,600	82,500	112,100	+27,400
<b>Alternative 2, Scenario B</b>				
Total Airfield Operations	29,600	81,100	110,700	+26,000
<b>Alternative 2, Scenario C</b>				
Total Airfield Operations	29,600	79,900	109,500	+24,800
<b>Alternative 2, Scenario D</b>				
Total Airfield Operations	29,700	82,100	111,800	+27,100
<b>Alternative 2, Scenario E</b>				
Total Airfield Operations	29,700	80,300	110,000	+25,300

Source: Wyle, 2017

Notes:

- <sup>1</sup> Three-digit numbers are rounded to nearest 100 if  $\geq$  to 100; two-digit numbers are rounded to the nearest 10 if  $\geq$  10 or if between 1 and 9.
- <sup>2</sup> Each FCLP pass = 2 operations (one arrival and one departure).
- <sup>3</sup> Other operations include Touch-and-Goes, Depart and Re-enter, and Ground Controlled Approaches.
- <sup>4</sup> All other aircraft include P-8A, H-60, C-40, and transient aircraft. The 400 other operations at OLF Coupeville are H-60 search and rescue helicopter operations.
- <sup>5</sup> An operation is defined as one arrival or one departure.
- <sup>6</sup> The number of operations fluctuates slightly between alternative and scenario due to randomness inherent in modeling.
- <sup>7</sup> The NAS Whidbey Island complex includes Ault Field and OLF Coupeville.
- <sup>8</sup> Scenario A: 20 percent of FCLPs conducted at Ault Field, and 80 percent conducted at OLF Coupeville; Scenario B: 50 percent of FCLPs conducted at Ault Field, and 50 percent conducted at OLF Coupeville; Scenario C: 80 percent of FCLPs conducted at Ault Field, and 20 percent conducted at OLF Coupeville; Scenario D: 30 percent of FCLPs conducted at Ault Field, and 70 percent conducted at OLF Coupeville; Scenario E: 70 percent of FCLPs conducted at Ault Field, and 30 percent conducted at OLF Coupeville.
- <sup>9</sup> Since the publication of the Draft EIS, two new operational scenarios for each action alternative have been added to the analysis. In addition, several updates were applied to the noise analysis, which included incorporation of Precision Landing Mode reducing overall airfield operations by approximately 20 percent across all scenarios and updating the number of pilots per squadron (reduction); see Section 1.13.

Key:

FCLP = field carrier landing practice  
 OLF = outlying landing field

**Table 3. Comparison of Modeled No Action Alternative and Alternative 3, under All Scenarios (Average Year), Aircraft Operations at the NAS Whidbey Island Complex<sup>1, 5, 7, 8, 9</sup>**

<i>Aircraft Type</i>	<i>FCLP<sup>2</sup></i>	<i>Other Operations<sup>3</sup></i>	<i>Total</i>	<i>Total Change from No Action<sup>6</sup></i>
<b><i>Average Year Scenarios for Ault Field</i></b>				
No Action	11,300	66,900	78,200	
<b><i>Alternative 3, Scenario A (20% of FCLPs at Ault Field)</i></b>				
Growler	5,900	67,700	73,600	
All Other Aircraft <sup>3, 5</sup>	0	14,100	14,100	
Total Airfield Operations	5,900	81,800	87,700	+9,500
<b><i>Alternative 3, Scenario B (50% of FCLPs at Ault Field)</i></b>				
Growler	14,800	66,600	81,400	
All Other Aircraft <sup>3, 5</sup>	0	13,900	13,900	
Total Airfield Operations	14,800	80,500	95,300	+17,100
<b><i>Alternative 3, Scenario C (80% of FCLPs at Ault Field)</i></b>				
Growler	23,700	65,200	88,900	
All Other Aircraft <sup>3, 5</sup>	0	14,000	14,000	
Total Airfield Operations	23,700	79,200	102,900	+24,700
<b><i>Alternative 3, Scenario D (30% of FCLPs at Ault Field)</i></b>				
Growler	8,900	67,300	76,200	
All Other Aircraft <sup>3, 5</sup>	0	14,100	14,100	
Total Airfield Operations	8,900	81,400	90,300	+12,100
<b><i>Alternative 3, Scenario E (70% of FCLPs at Ault Field)</i></b>				
Growler	20,700	65,600	86,300	
All Other Aircraft <sup>3, 5</sup>	0	14,000	14,000	
Total Airfield Operations	20,700	79,600	100,300	+22,100
<b><i>Average Year Scenarios for OLF Coupeville</i></b>				
No Action	6,100	400	6,500	
<b><i>Alternative 3, Scenario A (80% of FCLPs at OLF Coupeville)</i></b>				
Growler	23,700	0	23,700	
All Other Aircraft <sup>3</sup>	0	400	400	
Total Airfield Operations	23,700	400	24,100	+17,600
<b><i>Alternative 3, Scenario B (50% of FCLPs at OLF Coupeville)</i></b>				
Growler	14,800	0	14,800	
All Other Aircraft <sup>3</sup>	0	400	400	
Total Airfield Operations	14,800	400	15,200	+8,700
<b><i>Alternative 3, Scenario C (20% of FCLPs at OLF Coupeville)</i></b>				
Growler	5,900	0	5,900	
All Other Aircraft <sup>3</sup>	0	400	400	
Total Airfield Operations	5,900	400	6,300	-200
<b><i>Alternative 3, Scenario D (70% of FCLPs at OLF Coupeville)</i></b>				
Growler	20,700	0	20,700	
All Other Aircraft <sup>3, 5</sup>	0	400	400	
Total Airfield Operations	20,700	400	21,100	+14,600
<b><i>Alternative 3, Scenario E (30% of FCLPs at OLF Coupeville)</i></b>				
Growler	8,900	0	8,900	
All Other Aircraft <sup>3, 5</sup>	0	400	400	
Total Airfield Operations	8,900	400	9,300	+2,800

**Table 3. Comparison of Modeled No Action Alternative and Alternative 3, under All Scenarios (Average Year), Aircraft Operations at the NAS Whidbey Island Complex<sup>1, 5, 7, 8, 9</sup>**

<i>Aircraft Type</i>	<i>FCLP<sup>2</sup></i>	<i>Other Operations<sup>3</sup></i>	<i>Total</i>	<i>Total Change from No Action<sup>6</sup></i>
<b><i>Average Year Scenarios for the NAS Whidbey Island Complex</i></b>				
No Action Total	17,400	67,300	84,700	
<b><i>Alternative 3, Scenario A</i></b>				
Total Airfield Operations	29,600	82,200	111,800	+27,100
<b><i>Alternative 3, Scenario B</i></b>				
Total Airfield Operations	29,600	80,900	110,500	+25,800
<b><i>Alternative 3, Scenario C</i></b>				
Total Airfield Operations	29,600	79,600	109,200	+24,500
<b><i>Alternative 3, Scenario D</i></b>				
Total Airfield Operations	29,600	81,800	111,400	+26,700
<b><i>Alternative 3, Scenario E</i></b>				
Total Airfield Operations	29,600	80,000	109,600	+24,900

Source: Wyle, 2017

Notes:

- <sup>1</sup> Three-digit numbers are rounded to nearest 100 if  $\geq$  to 100; two-digit numbers are rounded to the nearest 10 if  $\geq$  10 or if between 1 and 9.
- <sup>2</sup> Each FCLP pass = two operations (one arrival and one departure).
- <sup>3</sup> Other operations include Touch-and-Goes, Depart and Re-enter, and Ground Controlled Approaches.
- <sup>4</sup> All other aircraft include P-8A, H-60, C-40, and transient aircraft. The 400 other operations at OLF Coupeville are H-60 search and rescue helicopter operations.
- <sup>5</sup> An operation is defined as one arrival or one departure.
- <sup>6</sup> The number of operations fluctuates slightly between alternative and scenario due to randomness inherent in modeling.
- <sup>7</sup> The NAS Whidbey Island complex includes Ault Field and OLF Coupeville.
- <sup>8</sup> Scenario A: 20 percent of FCLPs conducted at Ault Field, and 80 percent conducted at OLF Coupeville; Scenario B: 50 percent of FCLPs conducted at Ault Field, and 50 percent conducted at OLF Coupeville; Scenario C: 80 percent of FCLPs conducted at Ault Field, and 20 percent conducted at OLF Coupeville; Scenario D: 30 percent of FCLPs conducted at Ault Field, and 70 percent conducted at OLF Coupeville; Scenario E: 70 percent of FCLPs conducted at Ault Field, and 30 percent conducted at OLF Coupeville.
- <sup>9</sup> Since the publication of the Draft EIS, two new operational scenarios for each action alternative have been added to the analysis. In addition, several updates were applied to the noise analysis, which included incorporation of Precision Landing Mode reducing overall airfield operations by approximately 20 percent across all scenarios and updating the number of pilots per squadron (reduction); see Section 1.13.

Key:

- FCLP = field carrier landing practice
- OLF = outlying landing field

## 2.1 Proposed Alternatives

The Navy is evaluating potential effects to historic properties from continuing and increasing airfield operations, establishing facilities and functions at Ault Field to support an expanded Growler mission, and associated personnel changes. Three alternatives are being considered for implementation of the undertaking, as well as the No Action Alternative (Table 4). The alternatives include:

**Table 4. Aircraft, Personnel, and Dependents by Alternative for the Environmental Impact Statement for EA-18G Growler Airfield Operations at the Naval Air Station Whidbey Island Complex**

<i>Alternative</i>	<i>Growler Aircraft Loading</i>	<i>Total Growler Aircraft</i>	<i>Growler Personnel Loading</i>	<i>Total Growler Personnel</i>	<i>Dependents</i>
No Action Alternative	9 carrier squadrons (45 aircraft) 3 expeditionary squadrons (15 aircraft) 1 Reserve Squadron (5 aircraft) 1 training squadron (17 aircraft)	82	517 Officer 3,587 Enlisted	4,104	5,627
Alternative 1	9 carrier squadrons (72 aircraft) 3 expeditionary squadrons (15 aircraft) 1 Reserve Squadron (5 aircraft) 1 training squadron (25 aircraft)	117 (+35)	597 Officer 3,842 Enlisted	4,439 (+335)	6,086 (+459)
Alternative 2	9 carrier squadrons (63 aircraft) 5 expeditionary squadrons (25 aircraft) 1 Reserve Squadron (5 aircraft) 1 training squadron (25 aircraft)	118 (+36)	619 Officer 4,113 Enlisted	4,732 (+628)	6,487 (+860)
Alternative 3	9 carrier squadrons (63 aircraft) 3 expeditionary squadrons (24 aircraft) 1 Reserve Squadron (5 aircraft) 1 training squadron (26 aircraft)	118 (+36)	597 Officer 3,848 Enlisted	4,445 (+341)	6,094 (+467)

### No Action Alternative (Baseline for Comparison of the Action Alternatives)

The No Action Alternative represents the current existing and authorized conditions for Ault Field and OLF Coupeville. The No Action Alternative comprises factors such as aircraft loading, facility and infrastructure changes, changes in personnel levels, and the changes to the number of aircraft unrelated to the proposed undertaking that are expected to be fully implemented by 2021. The No Action Alternative takes into account platform changes and actions already consulted and currently being

implemented. The No Action Alternative does not meet the purpose and need of the Navy's Proposed Action (the proposed undertaking), but it does provide a benchmark of the existing and planned conditions against which to compare the potential effects to historic properties of the three action alternatives.

### **Alternative 1**

Alternative 1 would expand carrier capabilities by adding three additional aircraft to each of the existing nine carrier squadrons and augmenting the Fleet Replacement Squadrons (FRS) with eight additional aircraft (a net increase of 35 aircraft). Alternative 1 would add an estimated 335 Navy personnel and 459 dependents to the region.

### **Alternative 2**

Alternative 2 would expand expeditionary and carrier capabilities by establishing two new expeditionary squadrons, adding two additional aircraft to each of the nine existing carrier squadrons, and augmenting the FRS with eight additional aircraft (a net increase of 36 aircraft). Alternative 2 would add an estimated 628 Navy personnel and 860 dependents to the region.

### **Alternative 3**

Alternative 3 would expand expeditionary and carrier capabilities by adding three additional aircraft to each of the three existing expeditionary squadrons, adding two additional aircraft to each of the nine existing carrier squadrons, and augmenting the FRS with nine additional aircraft (a net increase of 36 aircraft). Alternative 3 would add an estimated 341 Navy personnel and 467 dependents to the region.

## **2.2 Operational Scenarios and Field Carrier Landing Practice**

The Navy introduced five sub-alternatives (referred to as "scenarios" A through E) in the Final EIS to analyze the potential effects from increased operations and the distribution of FCLP operations between Ault Field and OLF Coupeville. Each of the scenarios represents a varying distribution of Growler FCLP operations between Ault Field and OLF Coupeville, expressed as a percentage at each location. The percentages depicted are used for general description of the scenarios. See Table 5 for a summary of EA-18G Growler aircraft FCLP changes by alternative and scenario.

- **Scenario A** – Twenty percent of all FCLPs conducted at Ault Field and 80 percent of all FCLPs conducted at OLF Coupeville
- **Scenario B** – Fifty percent of all FCLPs conducted at Ault Field and 50 percent of all FCLPs conducted at OLF Coupeville
- **Scenario C** – Eighty percent of all FCLPs conducted at Ault Field and 20 percent of all FCLPs conducted at OLF Coupeville
- **Scenario D** – Thirty percent of all FCLPs conducted at Ault Field and 70 percent of all FCLPs conducted at OLF Coupeville
- **Scenario E** – Seventy percent of all FCLPs conducted at Ault Field and 30 percent of all FCLPs conducted at OLF Coupeville

**Table 5. Comparison of FCLPs by Alternative at the NAS Whidbey Island Complex<sup>1</sup>**

<i>Alternative<sup>2</sup></i>	<i>Ault Field</i>	<i>OLF Coupeville</i>	<i>Total FCLPs</i>
<b>Alternative 1</b>			
Scenario A (20/80 FCLP Split)	6,100	24,900	31,000
Scenario B (50/50 FCLP Split)	15,500	15,500	31,000
Scenario C (80/20 FCLP Split)	24,900	6,200	31,100
Scenario D (30/70 FCLP Split)	9,200	21,800	31,000
Scenario E (70/30 FCLP Split)	21,700	9,300	31,000
<b>Alternative 2</b>			
Scenario A (20/80 FCLP Split)	5,900	23,700	29,600
Scenario B (50/50 FCLP Split)	14,800	14,800	29,600
Scenario C (80/20 FCLP Split)	23,700	5,900	29,600
Scenario D (30/70 FCLP Split)	8,900	20,800	29,700
Scenario E (70/30 FCLP Split)	20,800	8,900	29,700
<b>Alternative 3</b>			
Scenario A (20/80 FCLP Split)	5,900	23,700	29,600
Scenario B (50/50 FCLP Split)	14,800	14,800	29,600
Scenario C (80/20 FCLP Split)	23,700	5,900	29,600
Scenario D (30/70 FCLP Split)	8,900	20,700	29,600
Scenario E (70/30 FCLP Split)	20,700	8,900	29,600
<b>No Action Alternative</b>	<b>11,300</b>	<b>6,100</b>	<b>17,400</b>

Notes:

- <sup>1</sup> This table includes FCLP operations only. Total airfield operations include FCLPs as well as all other operations. Detailed airfield operations tabulated by airfield and alternative/scenario are provided in Sections 3.1 and 4.1.
- <sup>2</sup> The FCLP percentages for each scenario that are expressed in this analysis are intended to analyze levels of operations at Ault Field and OLF Coupeville. The percentages are not intended to provide a firm division of FCLPs between airfields. Training requirements may require FCLPs that fall within a range of these operations.
- <sup>3</sup> FCLP operations may differ between alternative and scenario due to randomness inherent in modeling.

The FCLP percentages for each scenario that are expressed in this analysis are intended to analyze levels of total aircraft operations. The percentages are not intended to provide a firm division of FCLPs between airfields. From a purely operational perspective, the Navy would prefer to use OLF Coupeville for all FCLPs because it more closely replicates the carrier flight pattern and landing conditions at sea, and therefore provides superior training. However, because the Navy recognizes that noise impacts to the community are unavoidable, the Navy analyzed five operational scenarios at the expense of ideal training. For more information about the proposed alternatives and scenarios, see Section 2 of the EIS.

Currently, NAS Whidbey Island is home to nine carrier squadrons (45 aircraft), three expeditionary squadrons (15 aircraft), one expeditionary reserve squadron (five aircraft), one training squadron (17 aircraft), and an Electronic Attack Weapons School. The squadrons are defined as follows:

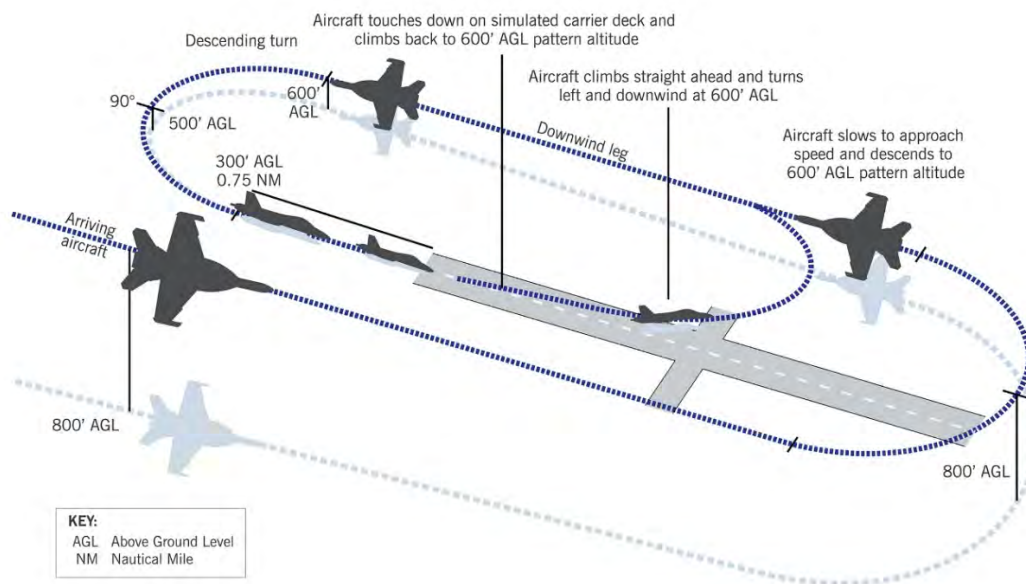
- **Carrier squadrons** deploy on aircraft carriers and conduct periodic FCLP to requalify pilots to land on aircraft carriers
- **Expeditionary squadrons** include the reserve squadron; because they deploy to overseas land-based locations, they do not normally require periodic FCLP prior to deployment
- **The training squadron**, also known as the Fleet Replacement Squadron, or FRS, is the training squadron responsible for “post-graduate” training of newly designated Navy pilots and Naval



Flight Officers, those returning to flight status after non-flying assignments, or those transitioning to a new aircraft for duty in the Fleet. The training squadron is the “schoolhouse” where pilots receive their initial FCLP, and it fosters professional standardization and a sense of community.

Although the proposed number of aircraft in each alternative is similar, the personnel required and the manner in which the aircrews would train using the additional aircraft differ, which in turn, changes operational requirements. For example, the squadron type determines the FCLP requirements and number of personnel stationed in the local area. An alternative that has an increased number of carrier squadrons would result in increased FCLP requirements, while an alternative that increases expeditionary squadrons would not result in increased FCLP requirements.

FCLP is a graded flight exercise that prepares pilots for landing on aircraft carriers. FCLP is generally flown in a left-hand, closed-loop, racetrack-shaped pattern, ending with a touch-and-go landing or a low approach with the LSO present and grading the proficiency of the pilot. The pattern simulates, as closely as practicable, the conditions aircrews would encounter during actual carrier landing operations at sea (see Figure 2). FCLPs are conducted on shore facilities to provide pilots the opportunity to simulate carrier landing operations in an environment where the risks associated with at-sea carrier operations can be safely managed. Landing on an aircraft carrier is one of the most dangerous tasks a pilot can perform and is a perishable skill that must be regularly reinforced.



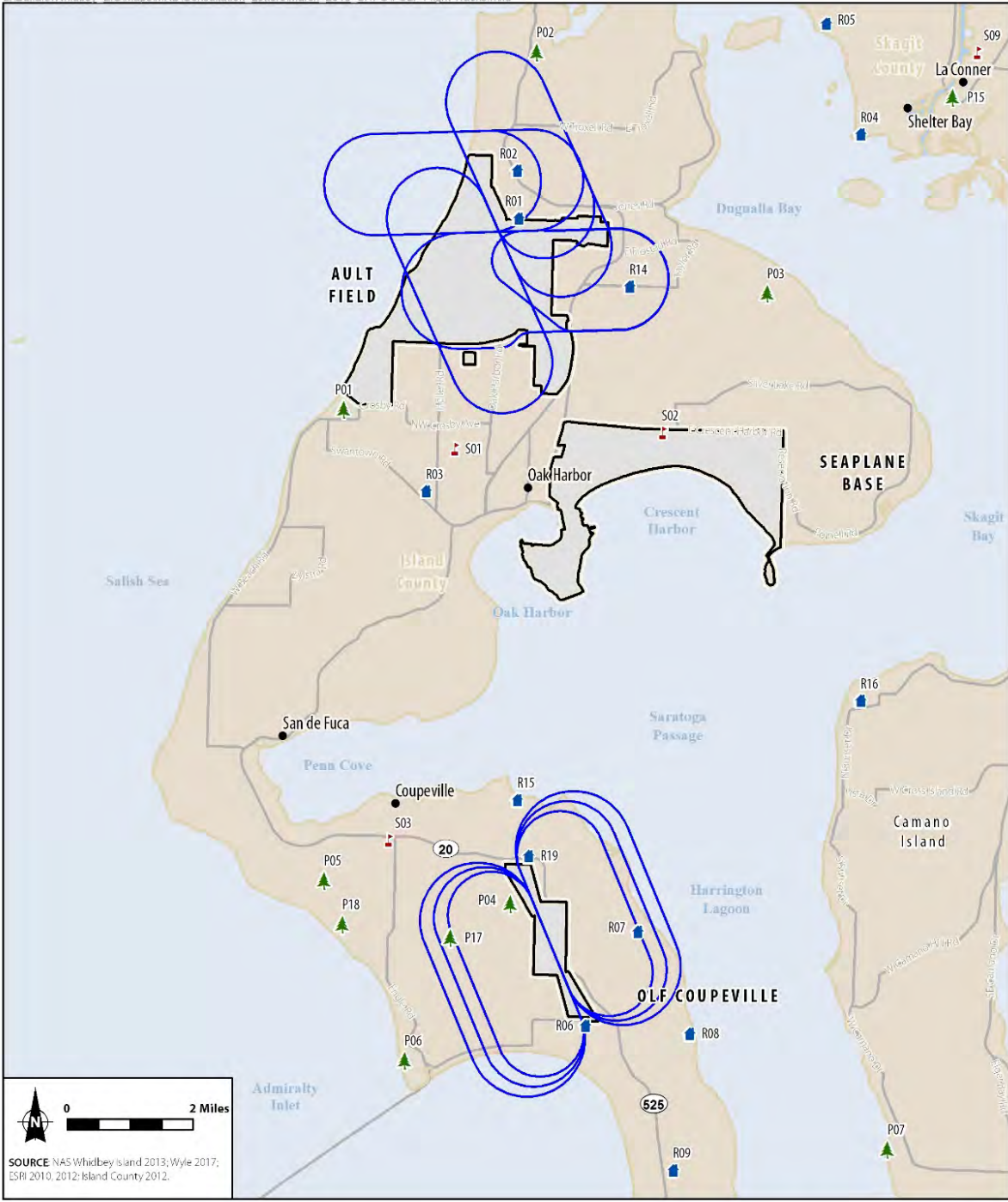
**Figure 2 FCLP Pattern**

A typical FCLP evolution lasts approximately 45 minutes, usually with three to five aircraft participating in the training. Each FCLP flight pattern is considered two operations: the landing or approach is counted as one operation, and the takeoff is counted as another. So, a single plane flying one FCLP loop is counted as two operations. FCLP schedules are dictated by training and deployment schedules, occur with concentrated periods of high-tempo operations, and are followed by periods of little to no activity. Per Navy guidelines, pilots must perform FCLP before initial carrier qualification (ship) landings or re-

qualification landings. The carrier qualification landings for each pilot need to occur within 10 days of operating from an aircraft carrier.

For several years, the Navy has been developing technology to make landing on a carrier easier and safer. This effort has resulted in the Navy's projected Fleet-wide implementation of PLM technology (also known as MAGIC CARPET, an acronym for Maritime Augmented Guidance with Integrated Controls for Carrier Approach and Recovery Precision Enabling Technologies). PLM is a flight control system that automates some controls to assist pilots with landing on aircraft carriers, resulting in a safer environment for Navy pilots. This technology will reduce the workload and training requirements for pilots to develop and maintain proficiency at shipboard landings. PLM holds great promise for making carrier landing safer through automation, which would reduce the amount of FCLP required. The potential training reduction for required FCLPs with the inclusion of PLM is estimated at 20 percent. This 20-percent reduction is reflected in the results of the updated noise analysis and incorporated into the current analysis of effects. The Navy is moving forward with an aggressive schedule to incorporate this technology into the Fleet, and the Navy expects that this will reduce FCLP training requirements in the next several years.

Finally, the FCLP pattern analyzed includes a change from a historical non-standard pattern to a standardized flight pattern. Runway utilization for FCLPs at Ault Field and OLF Coupeville depends primarily on prevailing winds and the performance characteristics of the Growler. In recent years, due to a non-standard flight pattern on OLF Coupeville Runway 14, the utilization of that runway has been significantly lower than Runway 32. The narrower non-standard flight pattern requires an unacceptably steep angle of bank for the Growler due to performance differences from the former Prowler flying the pattern. Consequently, the proposed undertaking includes the standardization of the training pattern at OLF Coupeville to allow the Growler to utilize both Runway 14 and Runway 32, depending on weather conditions (see Figure 3). For more information about runway utilization, see Section 3 of the EIS.



- City
- County Boundary
- Major Road
- Installation Area
- FCLP
- Points of Interest (POI)
- 🌲 Park
- 🏠 Residential
- 🎓 School

**FCLP Flight Tracks at  
NAS Whidbey Island Complex**  
Whidbey Island, Island County, WA

**Figure 3 Proposed FCLP Flight Tracks at Ault Field and OLF Coupeville**

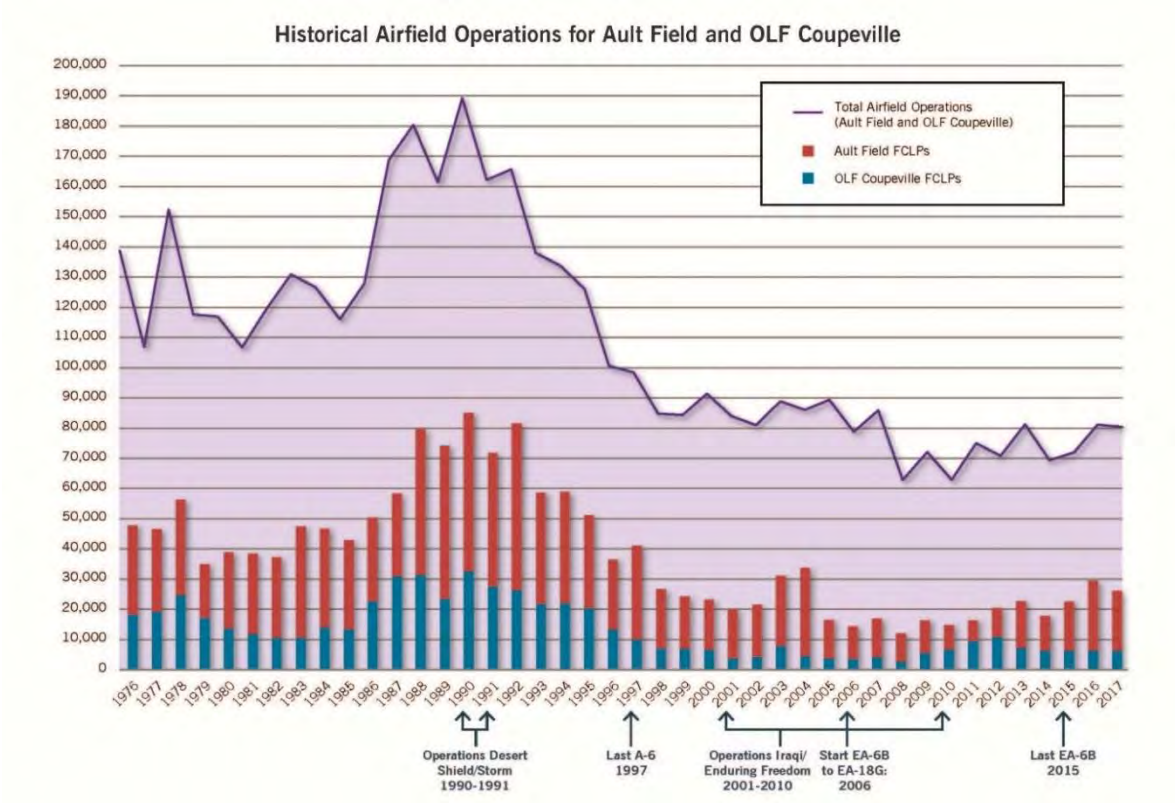
### **2.3 Historical FCLP Operations at Ault Field and OLF Coupeville**

The level of operations proposed under each alternative and scenario combination for this undertaking represents a return to past levels of operations occurring in the 1970s, 1980s, and 1990s at the NAS Whidbey Island complex, which ranged between 98,259 (in 2002) and 188,420 (in 1990) (Appendix B).

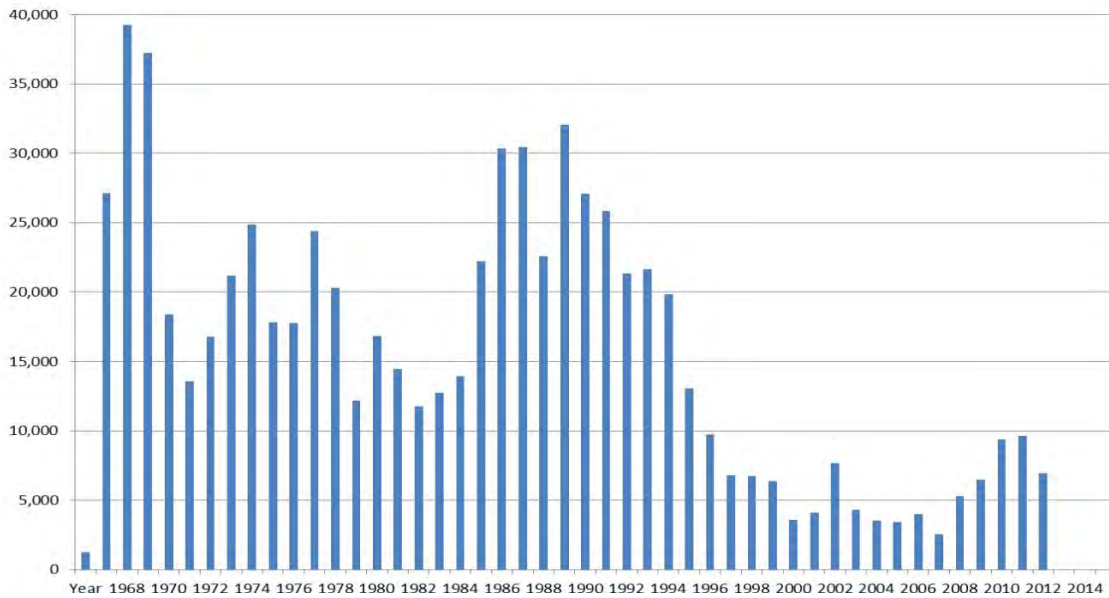
Electronic warfare has played a key role in combat operations since its introduction during World War II, and its importance continues to grow as potential adversaries invest in modern threat systems. From early in the installation's history, Ault Field and the Seaplane Base were identified as ideal locations for the rearming and refueling of Navy patrol planes and other tactical aircraft operating in defense of Puget Sound. On September 21, 1942, NAS Whidbey Island was formally commissioned. In support of the new naval air operations on Whidbey Island, OLF Coupeville became operational in 1943 to support practice approach/landings and emergency landings.

At the end of World War II, NAS Whidbey Island was chosen as the main, multi-type aircraft, all-weather naval support station in the Pacific Northwest and in 1951 was designated a Master Jet Station, which expanded its mission to include jet aircraft training and operations of carrier-based squadrons. The U.S. involvement in Vietnam saw NAS Whidbey Island's evolution into the Navy's home for its electronic attack aircraft. This period also saw the end of the seaplane era, with the last of the seaplane squadrons transferred to NAS Moffett Field, California in 1965. At the same time, NAS Whidbey Island announced it would receive the new A-6A Intruder platform, the first all-weather attack bomber. Effects of the arrival of the A-6A to NAS Whidbey Island were almost immediate, as these squadrons trained for deployments in Southeast Asia. Air operations at Ault Field increased 31 percent from 1966 to 1967. In 1967, OLF Coupeville became critical in assisting to mission success, and by 1969 nearly 40,000 FCLP operations were being conducted at OLF Coupeville. As a Master Jet Station, in 1971, NAS Whidbey Island received a new high-performance aircraft, the EA-6B Prowler, and became the home base of the AEA mission for the Navy. With the introduction of the Prowler, the Navy consistently averaged over 20,000 FCLP operations annually at OLF Coupeville through the remainder of the Cold War. OLF Coupeville continues to be critical to the AEA mission and provides the most realistic training for FLCP.

Since the arrival of the Intruder aircraft in 1966, the Navy has continuously used OLF Coupeville for FCLP training (Figure 4). Like all NAS Whidbey Island operations, previous FCLP operations at OLF Coupeville indicate periods of higher and lower activity, depending on Navy mission requirements. Prior to 1996, FCLP operations at OLF Coupeville ranged between approximately 11,782 and 39,246, with more than 20,000 FCLP operations per year in the late 1960s and in the late 1980s to early 1990s. Since 1996 and the sunset of the Intruder aircraft, FCLP operations at OLF Coupeville have ranged between 2,548 and 9,736 per year. In that time, NAS Whidbey Island has also seen the transition of the AEA aircraft from the Prowler to the Growler. The Growler began operations at NAS Whidbey Island in 2007, and the full transition from the Prowler to the Growler aircraft was completed on June 27, 2015. See Figure 5 and Appendix C for previous FCLP operations data between 1967 and 2016.



**Figure 4 Previous Airfield Operations for Ault Field and OLF Coupeville**



**Figure 5 Previous FCLP Operations for OLF Coupeville**



### 3 Definition of the Area of Potential Effects

The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist (36 CFR 800.16[d]). It includes effects that will occur immediately as well as those effects that are reasonably foreseeable. The APE was defined in consultation with the ACHP, SHPO, consulting parties, and American Indian tribes. Due to the complexity of the project and the wealth of comments from consulting parties, APE consultations spanned a year beginning in June 2016 and concluding in July 2017. See Appendix D for a summary of Navy consultation efforts from October 2014 through October 2017. The following is a short synopsis of the APE consultation.

The Navy provided a proposed definition of the APE to the ACHP, SHPO, consulting parties, and American Indian tribes and nations (tribes) on June 30, 2016. The Navy proposed to define the direct effect components of the APE as those areas where construction would occur on the installation. The Navy further proposed to define the indirect effect components of the APE as those areas on and off the installation within the 65 dB DNL noise contours from air operations at NAS Whidbey Island. The Navy noted at the time that a noise modeling study was in process for this undertaking. Upon completion of the noise modeling study, the Navy would utilize the resulting modeled noise contours for the APE and continue consultation. The results of the noise study were released in November 2016, and, in cooperation with the Draft EIS public meetings, the Navy invited the public to provide input on the proposed undertaking's potential effects to historic properties and the APE. The most conspicuous concern of the undertaking expressed in the public meetings was the potential for adverse indirect effects to historic properties from noise.

In correspondence dated May 1, 2017, the Navy conducted additional consultation concerning the definition of the APE; the results of the noise contours from the noise modeling study, which utilized NOISEMAP Version 7.2, were provided to all consulting parties. To fully evaluate the potential direct and indirect effects of the undertaking on historic properties, the APE was proposed to include the following three components:

- **On-installation Direct Effect Areas:** Areas on the installation where historic properties could be directly affected (e.g., by ground disturbance, demolition, or alteration) (Figure 6).
- **On-installation Indirect Effect Area:** Areas within the installation bounded by the 65 dB DNL noise contours where historic properties could remain physically undisturbed but potentially subject to effects from the introduction of visual, atmospheric, or audible elements.
- **Off-installation Indirect Effect Area:** Areas off installation, within operational areas potentially bounded by the 65 dB DNL noise contours and potentially subject to effects from the introduction of visual, atmospheric, or audible elements to the setting.





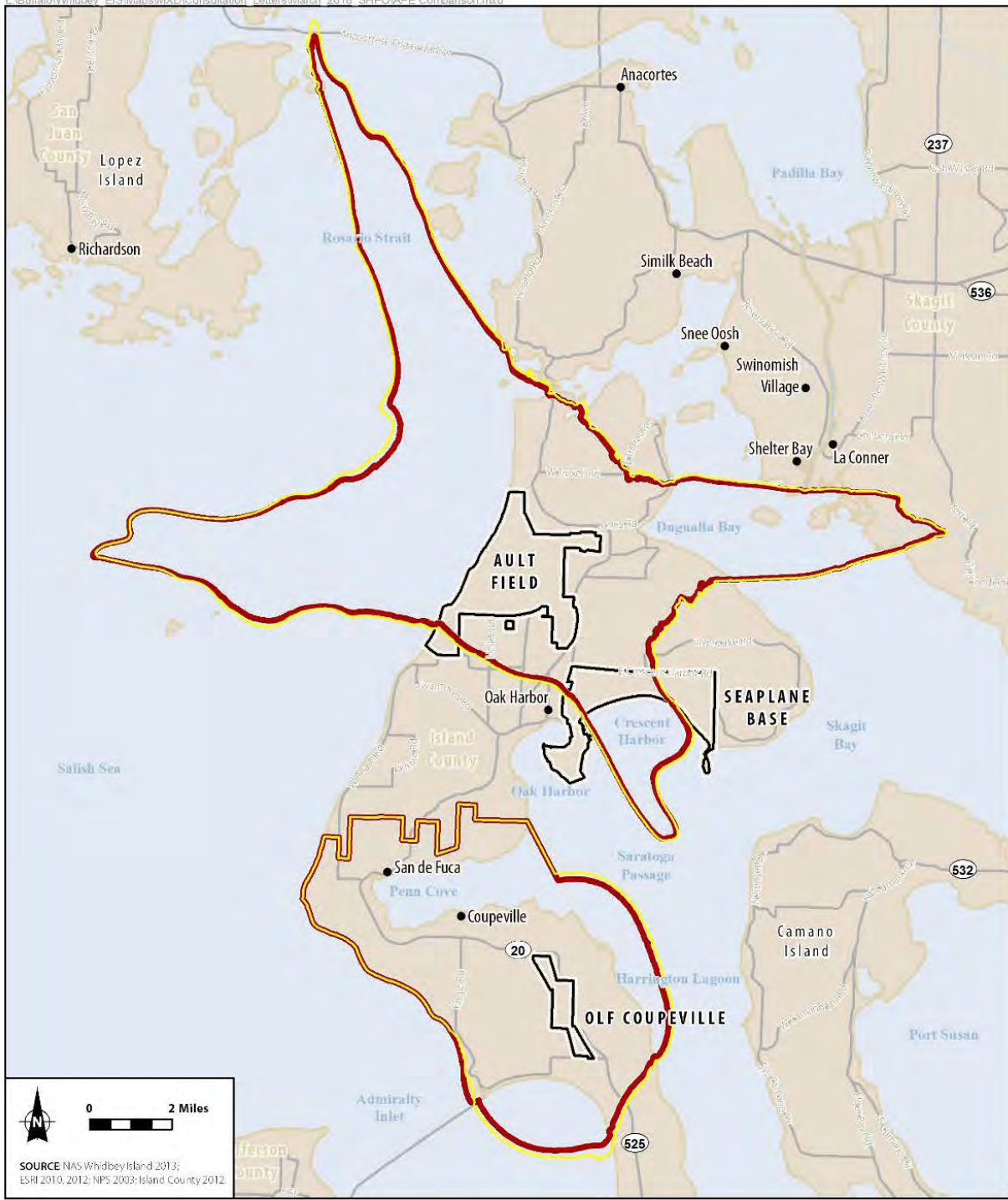
Figure 6 Direct Area of Potential Effects



Additional information was provided in July 2017 to address concerns that the APE fully encompasses any historic properties with a potential to be affected by the undertaking, specifically from indirect effects of airfield operational noise. The Navy recognized that aircraft noise may adversely affect the setting of certain noise-sensitive historic properties for short periods of time when the aircraft are operating in the vicinity and noted that the 65 dB DNL noise contour selected for the APE included the most expansive aggregate noise contour. The aggregate noise contour combined the land encompassed by the 65 dB DNL contour extending the largest distance from Ault Field and OLF Coupeville for each alternative. This thereby incorporated the largest overall area within the 65 dB DNL noise contours around Ault Field and OLF Coupeville. The May 1, 2017, letter also noted that the 65 dB DNL contour is generally accepted for the evaluation of potential effects to historic properties near airports, and its use to define the APE in Section 106 consultations is consistent with use by other federal agencies to evaluate potential impacts from change in noise, including the U.S. Environmental Protection Agency (USEPA), U.S. Department of Housing and Urban Development (HUD), the FAA, and the Department of Defense (DoD). Finally, the Navy also indicated its intention to include the whole of the ELNHR within the APE analysis.

The DNL metric is the current standard for assessing potential effects to historic properties because it factors the number, frequency, and energy (loudness) of noise events. The DNL metric is a cumulative measure and represents long-term noise exposure rather than a sound level heard at any given time, which makes it appropriate for assessing long-term direct and indirect auditory, visual, and atmospheric effects to historic properties. The DNL values are average quantities, mathematically representing the continuous sound level that would be present from all of the variations in sound level that occur over a 24-hour period. For more information about noise metrics and modeling, see Section 3.2.2 and Appendix A of the EIS.

On October 2, 2017, the Navy notified the ACHP, SHPO, consulting parties, and tribes that the Navy was revising the noise analysis and would consult on changes to the APE and inventory once the revision was complete. There were changes in the scale and scope of the undertaking due to a decrease in the number of pilots required in each squadron and squadron composition, the inclusion of two new scenarios (Scenarios D and E), and the new noise analysis. The inclusion of this information resulted in a change in the airfield DNL noise contours. Since the defined APE is based on the 65 dB DNL contour line (with inclusion of the ELNHR boundary), the Navy has revised the APE to reflect the new aggregate 65 dB DNL contour line consistent with the methodology used in prior consultations. This resulted in a concurrent change in the inventory. The APE change as a result of the new noise analysis is illustrated in Figure 7, and the change in inventory is discussed in Section 5.



- City
- ▭ Installation Area
- County Boundary
- Major Road
- ▭ June 2017 APE
- ▭ February 2018 APE

**APE Comparison**  
Whidbey Island, Island County, WA

**Figure 7 Amended Indirect Area of the APE**

## 4 Cultural Context

Whidbey Island is located within the ethnographic territory of the Southern Coast Salish, a large native group consisting of speakers of two distinct Coast Salish languages: *Twana* or *Lushootseed*. Twana was spoken by the people of Hood Canal and its drainage. Lushootseed territory extended from Samish Bay in the north, south to the head of Puget Sound, and it was further divided into the Northern Lushootseed and Southern Lushootseed by differences in dialect. Before the treaties of 1854-1855, as many as 50 named groups were known to have lived in the Southern Coast Salish traditional cultural area (Suttles and Lane, 1990). Whidbey Island is located in the southwestern part of Northern Lushootseed territory and was home to several Southern Coast Salish tribes for numerous generations (Navy, 2016c).

The northern portion of the island is within the ethnographic territory of the Lower Skagit, speakers of a northern Lushootseed dialect. The Kikiallus and Squiamish, divisions of the Swinomish, also occupied the northern portion of Whidbey Island, including the area of Deception Pass (Snyder, 1974). Additionally, the K'lallam reportedly exploited resources along the west coast of Whidbey Island in the early historic period (Gibbs, 1855).

The waters of northern Puget Sound were used by the Coastal Salish people, and their subsistence practices centered on the exploitation of marine resources, although terrestrial resources were also heavily used. The most important food of the Southern Coast Salish was salmon; however, a number of shellfish species, including clams, cockles, oysters, saltwater snails, barnacles, crab, chitons, and mussels, also were gathered and eaten. Important terrestrial resources included blacktail deer and elk. Important plant resources collected during ethnographic times included camas, bracken, wapato, salmonberry, thimbleberry, trailing blackberry, blackcap, serviceberry, salal berry, red huckleberry, blueberry, and red and blue elderberry (Navy, 2016c; Suttles and Lane, 1990).

Forest resources also were used for wooden canoes, boxes, bowls, and spoons. Wood fibers were used to make basketry, cordage, mats, nets, blankets, and garments. Cattail and tule mats were made, along with robes of a variety of materials including woven mountain goat wool, deer hides, bear skins, and duck skins (Navy, 2016c). In the vicinity of Crescent Harbor and Oak Harbor, the Lower Skagit primarily fished for flounder and salmon, and harvested a variety of shellfish (Snyder, 1974). In general, resources on the island were exploited in the spring, summer, and fall, when groups would travel to various sites on the island where resources could be easily obtained as they became seasonally available.

By the 1790s, the first non-native groups entered Puget Sound. George Vancouver was one of the first to arrive, in 1792 (Suttles and Lane, 1990). At first, the settlers made little contact with the Southern Coast Salish due to the needs of the fur trade, which was their initial interest. However, by 1818, the U.S. and Great Britain opened up the territory, including lands within Puget Sound. Thirty years later, a treaty was signed between the U.S. and Great Britain to divide the territory, with the lands south of the boundary at the Strait of Juan de Fuca going to the U.S. (Navy, 2016c).

During the mid-1800s, the number of Euro-American settlements increased in the Washington Territory, which caused some conflict with the local tribes. As a result, Isaac Stevens, the first governor and superintendent of Indian Affairs of the Washington Territory, was authorized by the U.S. to negotiate with Washington tribes for the settlement of their traditional lands. Stevens negotiated eight treaties. As part of these treaties, the tribes reserved their rights to continue traditional activities on these lands.

Reservations also were established from the lands retained, after tribal lands were ceded to the U.S. Treaty rights, however, were reserved on lands beyond the reservations.

Industries such as timber and commercial fishing developed during the second half of the nineteenth century, as tribal members slowly moved onto reservations and white settlement grew. In 1850, the Donation Land Law was passed to give legal status to claims already made to promote settlement. Isaac N. Ebey was the first permanent white settler to file a claim as a result of this act. Settlement in the areas of Oak Harbor and Crescent Harbor also occurred at this time, with brothers Samuel and Thomas Maylor arriving in 1852, followed soon after by Edward Barrington (although none filed claims until the 1860s) (NPS, 1980). In addition, the military began acquiring land for defense as early as 1850. This land, with an additional 150 acres on and around Admiralty Head, became the construction site of Fort Casey beginning in 1897 (Gilbert and Luxenberg, 1997).

In 1883, the Town of Coupeville was platted on Captain Thomas Coupe's 320-acre claim. One year later, the town had stores, hotels, a school, a church, and numerous dwellings. Today's Front Street is representative of this late nineteenth century development. Coupeville is the second oldest city founded in the State of Washington (NPS, 2006a).

In addition to the Town of Coupeville, continued growth allowed for the construction of Fort Casey in the late 1890s; it served as part of a defense system to guard Puget Sound (NPS, 1980). Much of the infrastructure associated with Fort Casey has been in place since 1906 (NPS, 2006a). Fort Casey Military Reservation, along with Fort Flagler and Fort Worden, was part of a three-fort defense system designed to protect the entrance to Puget Sound (Gilbert and Luxenberg, 1997). Starting in 1895, Dutch homesteaders began to arrive and settle in the Oak Harbor area. By 1897, more than 200 Dutch had settled in north Whidbey, particularly in the area of Clover Valley, which is today Ault Field (Neil, 1989). This community of Dutch settlers began potato and dairy farms on Whidbey Island (Navy, 2016c). By the turn of the century, the Puget Sound basin was established as the urban center of the northwest, and Whidbey Island became a vacation spot for the mainlanders (Navy, 2016c).

During this time, Island County's population doubled between 1900 and 1910, and continued to increase during the 1920s; the number of farms in the county also tripled between 1900 and 1920. In addition, military activity increased at Fort Casey with the construction of map rooms and gun escarpments during World War I (Gilbert and Luxenberg, 1997).

Naval buildup in the U.S. during the late 1930s required expansion of existing facilities and construction of new facilities on the West Coast. Beginning in 1939, Fort Casey also became active as the U.S. began to increase its military strength in reaction to events occurring in Europe (Gilbert and Luxenberg, 1997).

After the enactment of the Two-Ocean Navy Act, of 1940, the Chief of Naval Operations requested a list of potential locations for a new Pacific Coast base that could accommodate seaplanes, allow for expansion into land-based planes, and provide the necessary support services for ammunition, fuel, and personnel. Clover Valley and Crescent Harbor were selected, due in large part to their weather, described as a "sunshine oasis in the fog belt of Puget Sound" (Command History, 1945). An appropriation of \$3.79 million was made for the construction of NAS Whidbey Island in August of 1941, and construction began following the attack on Pearl Harbor. The mission of the two new bases on Whidbey Island was to provide facilities to operate and maintain two off-shore patrol squadrons, one inshore patrol squadron, and facilities for operating four additional squadrons. NAS Whidbey Island was formally commissioned on September 21, 1942 (Navy, 2016c).

Prior to the Navy's acquisition of land for the Seaplane Base and Ault Field (originally Clover Valley Field) in 1941, and for OLF Coupeville in 1943, the lands on Whidbey Island were rural, with open pasture land, dirt roads, and second-growth forested areas. Farms and their accompanying structures dominated the landscape, as the community of Oak Harbor had a population of fewer than 400 people. Before the early 1940s, these rural areas were subdivided into numerous lots ranging in size from 10 to nearly 180 acres. Ault Field contained approximately 120 such lots as of 1941, and roughly 85 rural or farm lots were located at the Seaplane Base (Hampton and Burkett, 2010; Navy, 2016).

OLF Coupeville, located on the south side of Penn Cove, was split between 16 landowners in 1937, before its acquisition by the Navy in 1943; construction was completed in 1944 (Navy, 2016c). For instance, the Kineth and Smith families had obtained large homestead tracts through the Homestead Act in the 1850s. The homesteads around OLF Coupeville contained fertile prairie lands, and farmers like the Kineth and Smith families prospered growing some of the best wheat crops on the island (Navy, 2017a). In fact, the northern portions of OLF Coupeville are located within the ELNHR because of the properties' overlap with some of the original land claims on Whidbey Island.

The outbreak of World War II brought more activity to Whidbey Island. Patrol planes based at NAS Whidbey Island flew long-range navigation training missions over the north Pacific. Buildings continued to be added to the original complement throughout World War II (Hampton and Burkett, 2010). In 1949, NAS Whidbey Island became a major Fleet support station and the only major station north of San Francisco and west of Chicago. This decision to make it a major Fleet support station, and the rising tensions of the Cold War in connection with the outbreak of the Korean War, resulted in the development of additional facilities and rehabilitation of existing structures in the early 1950s (Dames and Moore, 1994). This development centered on Ault Field, with the Seaplane Base taking a supporting role.

The 1950s also were characterized by the first operations of modern jet aircraft. In 1951, NAS Whidbey Island was designated a Master Jet Station. In order to provide long-range, nuclear-capable, strategic bombers from forward-based Pacific Fleet aircraft carriers, the Navy assigned heavy attack squadrons to NAS Whidbey Island beginning in 1956. In the latter half of the 1950s, NAS Whidbey Island also became the center of anti-submarine warfare in the Pacific Northwest (Navy, 2016c).

During the same time, the Fort Casey military reservation fluctuated between being an active training post and being on caretaker status. The property was put up for sale in 1954; Washington State Parks and Recreation Commission took over ownership of Admiralty Head at this time (Gilbert and Luxenberg, 1997).

During the early 1960s, the Seaplane Base continued as an active facility, but it was placed on standby status by 1966. Between 1965 and 1969, NAS Whidbey Island received the A6 Intruder squadrons, which transformed it into the sole training and operation center for these squadrons for use in the Pacific. The A6A Intruder training program included celestial and other navigational training, radar navigation, special weapons employment, bombing, and day/night carrier qualifications. This action increased air operations at Ault Field. In 1967, OLF Coupeville was reactivated for FCLPs (Navy, 2016c). Since that year, the Navy has continuously used OLF Coupeville for FCLP, with a peak of use between 1967 and 1971 and another peak in the late 1980s and early 1990s (*Argent v. United States*, 124 F.3d 1277).

In 1970, the Seaplane Base patrol operations were ended. By 1971, NAS Whidbey Island became the home base of tactical electronic warfare squadrons for naval aviation forces, a role that continues today

(Navy, 2016c). Two years later, in 1973, NAS Whidbey Island was formally established as a Functional Specialty Center, responsible for the training and operations of all medium attack squadrons of the Pacific Fleet and all of the Navy's tactical electronic warfare squadrons.

The Central Whidbey Island Historic District was listed on the NRHP on December 12, 1973. The original nomination form noted its state significance, a period of significance for the nineteenth century, and areas of significance including aboriginal (historic), agriculture, architecture, commerce, and military. The ELNHR (Ebey's Reserve) boundaries are the same as the Central Whidbey Island Historic District. Established under Section 508 of the Parks and Recreation Act of 1978, the Ebey's Reserve was created "to preserve and protect a rural community which provides an unbroken historic record from...19<sup>th</sup> century exploration and settlement in Puget Sound to the present time." The reserve is the only "historical reserve" in the National Park System. The lands included in the historic district today include approximately 17,400 acres, including Penn Cove. The district consisted of original donation land claims, locations listed in a Historic American Building Survey (HABS), Fort Casey, and structures displaying a cross-section of early domestic architecture (Cook, 1972).

By 1980, aviation units based at NAS Whidbey Island included six medium attack squadrons, nine tactical electronic warfare squadrons, and three Naval Air Reserve squadrons (Navy, 2016c). In 1980, an addendum to the NRHP nomination form for the Central Whidbey Island Historic District was developed to include the Clark House in a new location (Vandermeer, 1980). During the 1980s, NAS Whidbey Island squadrons provided electronic warfare support to U.S. naval forces operating around the world. NAS Whidbey Island then functioned as the main homeport for the Pacific Fleet of Prowler squadrons, which began the transition to Growler aircraft in 2008. The Seaplane Base has continued as a support facility to Ault Field (Navy, 2016c).

In 1998, an amendment to the Central Whidbey Island Historic District was completed. This amendment notes the property as a district, with private and public ownership, containing 103 contributing buildings, six sites, 286 structures, and one object. It identifies 79 contributing resources previously listed in the NRHP. The NRHP form notes significance under criteria A, B, and C, a period of significance from 1300 to 1945, and areas of significance in agriculture, architecture, commerce, recreation/tourism, ethnic heritage, exploration/settlement, education, religion, military, and politics and government. The amendment also identifies key cultural landscape components and characteristics, such as land use patterns, circulation systems, landscape organization, vegetation, and farm complexes (Gilbert and Luxenberg, 1997).

Ten contributing landscape areas were included as part of the 1998 amendment in order to represent four primary landforms and the Town of Coupeville. The ten contributing landscape areas are defined in the amendment as Ebey's Prairie, Crockett Prairie, Smith Prairie, San de Fuca Uplands, Fort Casey Uplands, East Woodlands, West Woodlands, Penn Cove, Coastal Strip, and Coupeville. The contributing landscapes possess character-defining qualities including:

- Patterns of Spatial Organization
- Natural Vegetation
- Land Use Categories and Activities
- Vegetation Related to Land Use
- Circulation

- Structures
- Cluster Arrangement
- Views and Other Perceptual Qualities

Historic land use patterns are shown to retain a high degree of integrity and represent the dominant values of agricultural lands, recreation and natural resource values of the shorelines, and community stability for the Town of Coupeville. Fifteen character views are noted within the nomination form, including views to or within Crockett's Prairie, Ebey's Prairie, Coupeville, Grasser's Lagoon, Penn Cove, Smith Prairie, Monroe's Landing, Fort Casey, and the Uplands (Gilbert and Luxenberg, 1997). These resources are eligible under NRHP criterion A for their association with agriculture, architecture, commerce, recreation/tourism, ethnic heritage (native people), exploration and settlement, education, religion, military, and politics and government; under NRHP criterion B for their association with Captain George Vancouver and Master Joseph Whidbey, the Ebey family, Captain Thomas Coupe, Judge Lester Still, and other individuals who contributed to the settlement and development of central Whidbey Island; and under NRHP criterion C because they comprise a cohesive cultural landscape that embodies the distinctive characteristics of types, styles, and periods of construction dating from the mid-nineteenth century to the present, reflecting associations with agricultural, military, commercial, residential, governmental, and recreational types of land use. (Gilbert and Luxenberg, 1997).





## **5 Inventory of Properties listed on or eligible to be Listed in the NRHP within the APE**

There is a wealth of information about historic and pre-contact cultural resources on Whidbey Island. The Navy compiled a historic context bibliography of pertinent studies and literature, presented in Appendix E, for consultation in its July 19, 2017, letter updating its efforts to identify historic properties in the APE. The Whidbey Island community celebrates its local and national historic setting and is home to many federal, state, and local resource managers, including the National Park Service, the Navy, the ELNHR, and Washington State Parks and Recreation. Consequently, numerous archeological and architectural studies have been performed that provide a robust foundation for understanding the prehistoric and historic-era development in the APE.

Due to the nature of the direct and indirect potential effects from the proposed activities in the undertaking, along with the large number of cultural resource surveys available, the Navy did not conduct a full survey of historic properties in the APE; instead, it incorporates the existing substantial data, obtained from background research as presented in the historic context bibliography, consultation, and previous field investigations. In addition, since the majority of the area of the APE surrounding OLF Coupeville is incorporated into the boundary for the ELNHR, the Navy elected to utilize the most recent historic building inventory update of 2016 in its assessment along with the 2003 analysis of land use change and cultural landscape integrity. See Appendix E for a bibliography of pertinent source material.

In most cases, the results of architectural, historical, and archaeological studies have been included in the Washington State Department of Archaeology and Historic Preservation (WA DAHP) Geographic Information System (GIS) data. This inventory presents information gathered primarily from the WA DAHP GIS data set, the NRHP, NAS Whidbey Island records, and the 2016 ELNHR Historic Building Inventory Update. See Appendix F for a complete list of cultural resources within the APE, including those listed in the NRHP, the Washington Heritage Register, and the Washington State Historic Barn Register.

This inventory includes all historic properties within the APE regardless of property type or eligibility status. The Navy's identification effort has taken into consideration comments made to the Draft EIS and in Section 106 consultations. In addition, the inventory has been changed since the July 19, 2017, identification effort update as a result of the outcome of the new noise modeling and amended APE. Specifically, some properties at the boundary of the 65 dB DNL no longer fall within it, so they were removed from the inventory. See Appendix G for a list of properties that are no longer within the APE.

A large number of properties were also added to the inventory to ensure all properties on file at WA DAHP and on file with the ELNHR are considered. While both data sets overlap, the 2016 ELNHR Historic Building Update includes only those properties that are within the boundary of the reserve and that have been formally evaluated to determine whether they contribute to the historic significance of the reserve. Those evaluated properties are a small subset of historic structures within the ELNHR boundary that have been recorded by other entities and are on file at WA DAHP. The ELNHR 2016 inventory has not been updated in the WA DAHP database. To ensure all potentially indirectly affected properties are considered in this analysis, the inventory has been revised to include all properties recorded in the WA DAHP GIS data within the boundaries of the ELNHR in addition to those listed in the 2016 ELNHR Historic Building Update. Consequently, the inventory is smaller than that reported on July 19, 2017, which

presented the WA DAHP GIS data separately from the ELNHR inventory. See Appendix F for a full inventory of the APE.

While the WA DAHP GIS data are the most comprehensive available for the APE, some inconsistencies were noted where the DAHP GIS data overlap with NAS Whidbey Island and ELNHR data. This inventory has been corrected to reconcile differences between the WA DAHP GIS data and NAS Whidbey records. However, it has not been corrected to reconcile differences between the WA DAHP GIS data and 2016 ELNHR inventory. Consequently, duplicate listings for NAS Whidbey Island properties have been removed from this inventory, and determinations of eligibility have been updated while inconsistencies between the ELNHR 2016 inventory and the WA DAHP GIS data have not been updated. To ensure all ELNHR properties are accurately considered, the ELNHR properties were analyzed separately.

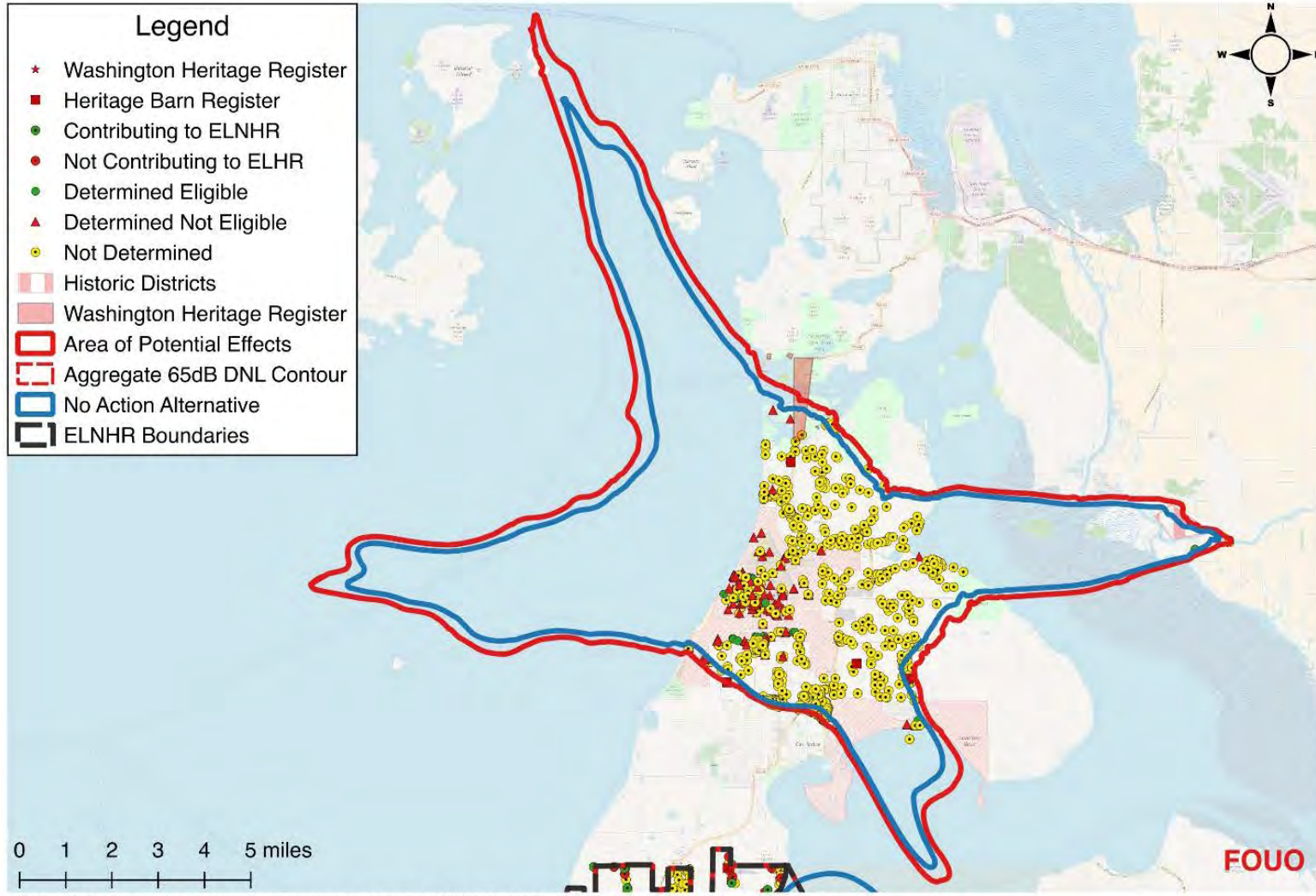
The rich history of Whidbey Island is reflected in the large number of recorded archaeological sites, cemetery sites, historic buildings and structures, and historic and archaeological districts within the APE (Table 6). See Figures 8 and 9 for locations of historic buildings, structures, and districts, and Appendix H for locations of archaeological districts and cemetery sites. There are a total of 2,487 inventoried historic properties within the APE. The majority of inventoried properties are historic structures and buildings, which include a total 1,989 buildings and structures on file at the WA DAHP, 288 listed in the ELNHR inventory, and 29 listed on the NRHP, WA Heritage Barn Register, or the Washington Heritage Register. There are also 151 recorded archaeological sites, which reflect Whidbey Island’s extensive indigenous history, and 27 historic era and pre-contact cemetery sites. Additionally, two historic and archaeological districts are within the APE: the ELNHR and Sqwikwikwab (Fish Town).

**Table 6 Revised APE Inventory Overview**

<i>Property Type</i>	<i>Eligible/ Listed</i>	<i>Not Eligible</i>	<i>Not Determined</i>	<i>Total Inventoried</i>
Buildings and Structures (50 Years and Older)	28	182	1,779	1,989
Washington Heritage Barn Register Listed	23	NA	NA	23
Historic Districts	2	0	0	2
Washington Heritage Register Listed	4	NA	NA	4
National Register of Historic Places	2	NA	NA	2
Cemetery Sites	1	0	26	27
Archaeological Sites	7	2	142	151
Archaeological Districts	1	0	0	1
ELNHR 2016 Inventory	203	85	NA	288
<b>Total</b>	<b>271</b>	<b>269</b>	<b>1,947</b>	<b>2,487</b>

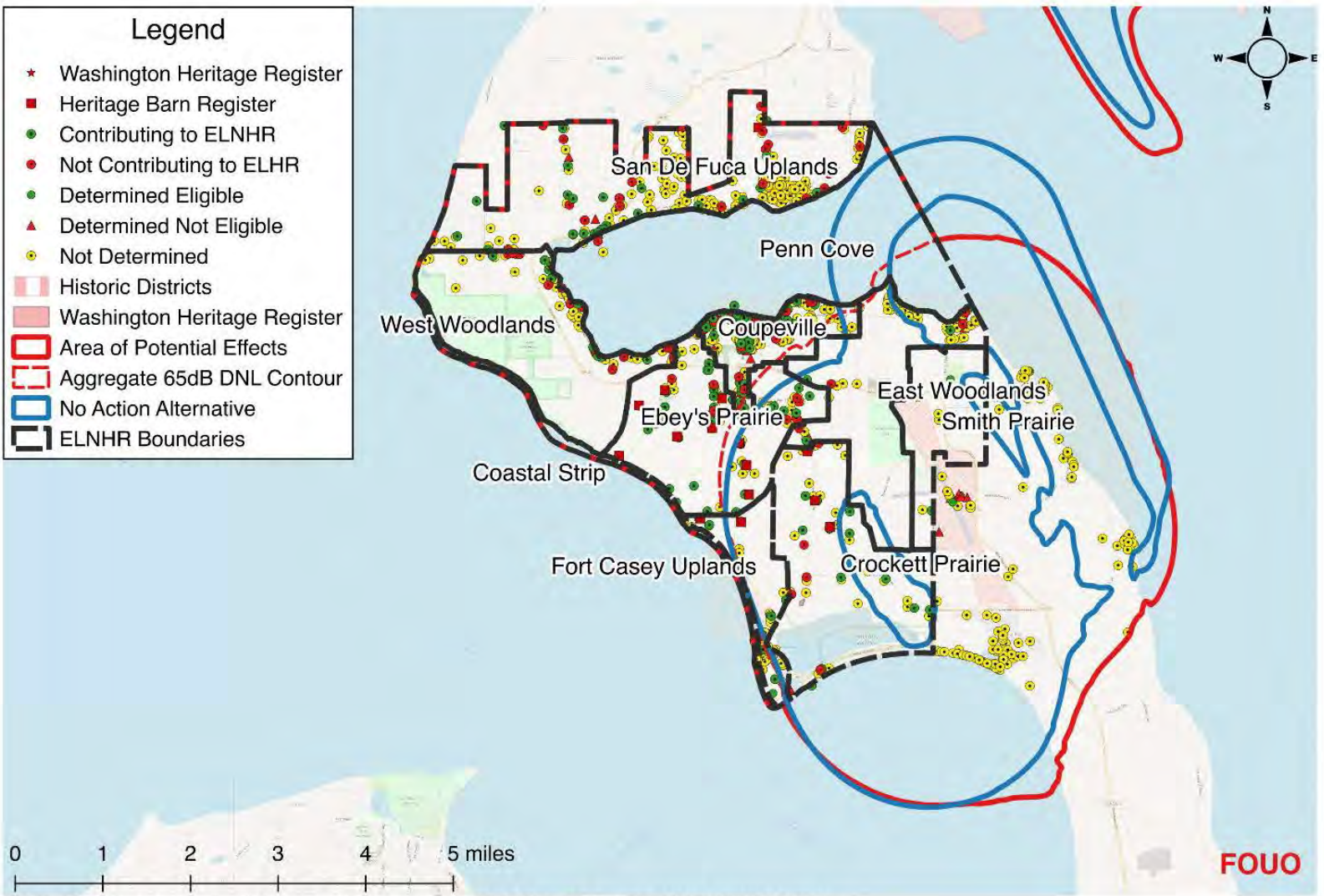
Note: Many of the ELNHR buildings and structures (where the 65 dB DNL overlaps with the ELNHR) are also included in the ELNHR 2016 Inventory.

Note: Properties listed on the Washington Heritage Register or Washington Heritage Barn Register are considered potentially eligible for listing in the NRHP.



Note: Displays property status as recorded in DAHP GIS data and ELNHR 2016 Update.

**Figure 8** Map of Recorded Historic Buildings and Structures within the Ault Field Portion of the APE



Note: Displays property status as recorded in DAHP GIS data and ELNHR 2016 Update.

**Figure 9 Map of Recorded Historic Buildings and Structures within the OLF Coupeville Portion of the APE**



## 5.1 Buildings and Structures (50 Years and Older)

Like many developed areas, there are a large number of recorded historic structures and buildings within the APE. However, the majority of recorded buildings have either been determined not eligible for listing in the NRHP or have yet to be evaluated (see Table 7). Approximately one percent of recorded properties within the APE have been determined eligible for listing but are not listed in local, state, or national historic registers. Nine percent have been determined not eligible for listing, and 89 percent are properties greater than 50 years of age that have yet to be formally evaluated for eligibility for listing in the NRHP. These unevaluated properties primarily consist of records imported into the WA DAHP GIS database from the real estate tax assessor's records to help historic researchers identify areas where properties of historic importance may be present. For purposes of this study, all Washington State Heritage Register and non-determined properties are considered potentially eligible for listing in the NRHP.

**Table 7 Buildings and Structures (50 Years and Older) within the APE**

<i>Buildings and Structures (50 Years and Older)</i>	<i>Count</i>
Determined Eligible for Local, State, or National Register	28
Determined Not Eligible	182
Not Determined (Potentially Eligible)	1,779
<b>Total</b>	<b>1,989</b>

## 5.2 Washington Heritage Barn Register, NRHP, and Washington Heritage Register Listed Properties

There are 29 properties within the APE that are listed on the NRHP, Washington Heritage Barn Register, or Washington Heritage Register (Table 8). Twenty-three properties are listed in the Washington Heritage Barn Register, four are listed in the Washington Heritage Register, and two are listed in the NRHP. Properties listed on the Washington Heritage Register or Washington Heritage Barn Register have not necessarily been evaluated for listing in the NRHP but are considered potentially eligible for listing in the NRHP.

**Table 8 Washington Heritage Barn Register, NRHP, and Washington Heritage Register Listed Properties within the APE**

<i>Listed Properties</i>	<i>Count</i>
Washington Heritage Barn Register	23
Washington Heritage Register	4
NRHP Listed	2
<b>Total</b>	<b>29</b>

Note: Properties listed on the Washington Heritage Register or Washington Heritage Barn Register are considered potentially eligible for listing in the NRHP.

### 5.3 Historic Districts

There are two historic districts within the APE: Central Whidbey Island Historic District, which was originally recorded as part of the Central Whidbey Island Historic District, and Sqwikwikwab (also known as Fish Town) Historic/Archaeological District. Both districts have been determined eligible for listing in the NRHP.

#### 5.3.1 Central Whidbey Island Historic District

The Central Whidbey Island Historic District’s inventory has evolved significantly since its inception in 1973. The original 1973 Central Whidbey Island Historic District NRHP form listed 78 nineteenth century historic structures; this number was amended to 79 in 1980. In 1998, the NRHP form was amended again to include a total of 396 historic properties spanning the time period between 1300 and 1945. Approximately 92 structures were determined to be contributing to the eligibility of the district, along with a collection of contributing features including 21 roads, 15 views, and a variety of small-scale features (e.g. old lamp posts, historic gates and fences, and remnant orchards). In 2010, the NRHP form was amended again to include an additional structure. Today, the inventory includes 203 eligible or contributing buildings and a collection of other contributing features that span the time period from 1300 to 1945 (Table 9), See Appendix I for a complete list of contributing structures, roads, and views.

**Table 9 ELNHR Inventory**

<i>Recorded Buildings and Structures</i>	<i>Non-Contributing Structures</i>	<i>Contributing Buildings and Structures</i>	<i>Contributing Roads</i>	<i>Contributing Views</i>	<i>Contributing Landscapes</i>
288	85	203	21	15	10

The ELNHR was established by Congress in 1978 to “preserve and protect a rural community which provides an unbroken historic record from Nineteenth Century exploration and settlement of Puget Sound up to the present time....” (Public Law 95-625). The reserve comprises 17,400 acres of private, state, and federally owned land in central Whidbey Island and incorporates the Central Whidbey Island Historic District. The district and ELNHR have evolved substantially over the past 45 years.

The district possesses both historic and architectural significance and is significant for its retention of a number of important historic events, including early settlement, rural community development tied to farmland, a strong tie with wartime activities, and architectural styles representative of much of the Puget Sound region in the late 1800s.

The 1998 NRHP amendment to the historic district added 217 buildings, sites, and structures to the district, as well as 10 contributing landscapes. The intent of the amendment was to supplement the original nomination to “fully reflect the range of landscape and architectural features that contribute to the special character of the Reserve which Congress has sought to preserve.” The amendment identified eight defining landscape characteristics: Patterns of Spatial Organization, Response to the Natural Environment, Land Use Categories and Activities, Vegetation, Circulation, Buildings and Structures, Cluster Arrangements, and Views and Other Perceptual Qualities.

In addition, the 1998 NRHP amendment notes:

“...changes are evident within the historic district. Some properties deemed eligible for the National Register lack individual distinction but are eligible as components of a district. The



grouping of buildings, structures and sites within the Reserve identified for listing in conjunction with the district's cultural landscape features and components, represent the various historic periods and areas of significance identified in this amended nomination form in an exemplary way. The district, comprised of various and diverse pieces, as a whole possesses great significance and integrity. The non-contributing buildings and structures do not detract from the sense of time and place that the historic features provide this area. The unity that this historic district/national historical reserve exhibits and its rich and assorted natural and cultural resources provide a laboratory for learning about Pacific Northwest history and how this history fits into our nation's history.”

The nomination package considers that the district represents pieces of history from different historic periods and that non-contributing elements do not detract from the integrity of the district but instead offer an understanding of how history within the district is ever changing and that this district is continuing to evolve to its present time and place.

In 2003, the ELNHR prepared an analysis of land use change and cultural landscape integrity. The eight established landscape characteristics were evaluated for integrity since their listing in the NRHP. The study found that all 10 of the Central Whidbey Island Historic District’s contributing landscapes retained integrity but were at risk from incremental residential growth. The study recommended that for the agricultural tradition to persist, a combination of controls such as zoning, designation of agricultural protection, and purchase of conservation easements should be implemented.

In 2016, the ELNHR inventory was updated. The update included reevaluation of contributing structures. The updated inventory is on file with the ELNHR; however, it has yet to be included into the WA DAHP Washington Information System for Architectural and Archaeological Records Data (WISAARD) database or incorporated into the NRHP listing. Associated contributing landscape and elements were not included in the update.

### **5.3.2 Sqwikwikwab (Fish Town)**

Sqwikwikwab, also known as Fish Town, is an eligible historic and archaeological district in the vicinity of La Connor, near the mouth of the north fork of the Skagit River. It is within an area known ethnographically to have been occupied by the Lower Skagit Indians. Today, the Lower Skagit Indians (sometimes called Whidbey Island Skagits) are enrolled in the Swinomish Indian Tribal Community. The name Sqwikwikwab was derived historically from a series of fishing cabins that were erected in the early twentieth century, when gill-netting of salmon in the river became illegal. In the middle 1960s, many of the cabins were restored and occupied by an artist colony.

## **5.4 Cemeteries**

Twenty-seven cemeteries are within the APE (Table 10). Five are historic-era cemeteries or monuments, and 22 are prehistoric archaeological sites that contained multiple burials. Individual and collective burial places can reflect and represent in important ways the cultural values and practices of the past that help instruct us about who we are as a people. Yet for profoundly personal reasons, familial and cultural descendants of the interred often view graves and cemeteries with a sense of reverence and devout sentiment that can overshadow objective evaluation. Therefore, cemeteries and graves are among those properties that ordinarily are not considered eligible for inclusion in the NRHP unless they meet special requirements. One prehistoric cemetery site in the APE, 45IS00082, is also an

archaeological site that is eligible for listing in the NRHP and subject to protection under the Native American Graves Protection and Repatriation Act (NAGPRA).

**Table 10 Cemeteries within the APE**

<i>Cemeteries</i>	<i>Count</i>
Historic-era Cemetery	4
Historic-era Monument	1
Prehistoric Burial Places	22
<b>Total</b>	<b>27</b>

## 5.5 Archaeological Sites

There are a total of 151 archaeological sites within the APE (Table 11). Seven have been determined eligible for listing in the NRHP, and two have been determined ineligible for listing in the NRHP. Fifteen are considered potentially eligible for listing, and 127 have not been evaluated for eligibility for listing in the NRHP. Unevaluated sites are considered potentially eligible.

**Table 11 Archaeological Sites within the APE**

<i>Archaeological Sites</i>	<i>Count</i>
Determined Eligible	7
Determined Not Eligible	2
Potentially Eligible	15
Unevaluated (Potentially Eligible)	127
<b>Total</b>	<b>151</b>

## 5.6 Archaeological Districts

There is one archaeological district, Sqwikwikwab, within the APE. It is also listed in the WA DAHP data as a historic district.

### 5.6.1 Sqwikwikwab (Fish Town)

Sqwikwikwab, also known as Fish Town, is an eligible historic and archaeological district in the vicinity of La Connor, near the mouth of the north fork of the Skagit River. The district consists of four prehistoric archaeological sites: 45SK33A, 45SK33B, 45SK99, and a nearby burial site. The archaeological sites have been excavated by the Washington Archaeological Society, the Seattle Central Community College, and Washington State University. The burials were removed by the local American Indian tribes for reburial around 1900. Radiocarbon dating places occupation of 45SK99 to 1220 ± 70.

## 6 Methodology for Determination of Adverse Effects

The NHPA Section 106 directs federal agencies to make a reasonable and good faith effort to identify historic properties, taking into account the magnitude and nature of the proposed undertaking, the nature and extent of the potential effects on historic properties, and the likely nature and location of the historic properties within the APE (36 CFR 800.4(b)(1)). If historic properties are present and the federal agency determines those properties may be affected by the proposed undertaking, federal agencies take into account the nature and extent of the potential effects on those historic properties by applying the criteria of adverse effects. Per Section 106 regulations, an adverse effect is found when an undertaking may alter, directly or indirectly, any of the “characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association” (36 CFR 800.5[a][1]).

To determine the potential adverse effects of the undertaking, this analysis applies an appropriate methodology to identify direct and indirect effects to historic properties. Direct effects are primarily the result of construction and demolition activities that may cause direct physical damage to significant features of a historic property. Indirect effects are primarily the result of change to “visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features” (36 CFR 800.5[a][1]).

To identify historic properties potentially subject to direct and indirect adverse effects in the APE, the Navy analyzed a variety of data, including:

1. Results of an environmental and cultural literature review,
2. Cultural resource survey and reports of properties within 100 meters of the area of indirect effects,
3. Review of historic property inventories including those conducted by NAS Whidbey Island, WA DAHP, Washington Heritage Barn Register, Washington Heritage Register, and the ELNHR 2016 Inventory,
4. Noise studies related to effects on structures and historic properties
5. Noise studies performed on Whidbey Island
6. Geological formation information,
7. Soils classification,
8. Historic land use and land ownership information, and
9. History of Navy activity in area.

### 6.1 Direct Effects

For this analysis, consideration of potential direct adverse effects includes whether the proposed undertaking involves direct physical damage to a historic property, including historic buildings, structures, districts, or archaeological sites. In addition, the analysis considered whether the undertaking proposed any construction, renovation, or demolition activities that would alter the use or setting of existing historic properties. Since additional facilities or renovation to existing facilities would not be required at OLF Coupeville, the proposed undertaking includes construction and demolition

activities only at Ault Field. Accordingly, the Navy analyzes potential direct adverse effects to historic properties from physical destruction, damage, alteration, or change in the character of a property's use that could arise from proposed construction, renovation, and demolition of buildings and structures at Ault Field.

Proposed ground-disturbing, construction, demolition, and renovation activities are limited to Ault Field. No ground disturbance is anticipated to occur in other locations of the APE during construction (i.e., off station); no direct effects would be anticipated to occur to archaeological resources outside the direct effects area of the APE.

The proposed undertaking includes ground disturbance primarily in the north end of the flight line at Ault Field, within the APE for the area of potential direct effects as identified on July 14, 2017. Construction of a new armament storage facility would occur west of Building 386 (Hangar 5), and the current armament storage building (Building 115) would be demolished. New hangar facilities include expansion of Building 2737 (Hangar 12) and construction of a two-squadron hangar just north of Hangar 5.

All ground-disturbing activities for construction and demolition will occur in areas where sediments have been extensively disturbed by past construction of Ault Field facilities and utilities. During building and runway construction, excavation is not planned to exceed a depth of 10 feet below the ground surface, which is the current maximum depth expected for construction of foundation footings. Utilities are expected to be installed to a depth of 24 to 36 inches below the ground surface and then connected into existing utility lines where feasible. Landscaping and parking construction will disturb the upper 8 to 12 inches of topsoil. Airfield repairs are proposed for Taxiway Juliet, requiring excavation of existing fill estimated at no greater than 21 inches below the ground surface.

## **6.2 Indirect Effects**

Analysis of potential indirect effects includes consideration of whether the undertaking would introduce or change "visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features," consistent with 36 CFR 800.5(a)(1). The proposed changes in airfield operations at Ault Field and OLF Coupeville have the potential to introduce auditory, visual, and atmospheric characteristics that could cause indirect effects to historic properties. Specifically, although the Navy would not be introducing a new noise level through the proposed undertaking, the proposed changes in aircraft operations and flight patterns have the potential to change the frequentness of noise exposure in the community. Based on comments received during consultation on the APE and the proposed undertaking's potential to alter noise exposure due to increased operations and flight pattern changes, the Navy focused its analysis of potential indirect effects upon whether the undertaking results in a substantive change in noise exposure measured in dB DNL. As discussed in Section 3, DNL illustrates where high levels of noise exposure are being experienced. Application of an average sound level, such as the DNL metric, to analyze substantive change in noise exposure when comparing existing conditions and proposed changes is consistent with analysis conducted by other federal and state agencies, including the FAA (FAA Order 1050.1F) and the Department of Transportation (DOT) (WA State Department of Transportation Traffic Noise Policy and Procedures, 2012).

The Navy analyzed substantive change in noise exposure in two ways:

1. Analyzing the change in exposure to the 65 dB DNL contour, and

2. Analyzing the degree of change in dB DNL, also called delta DNL, in the APE.

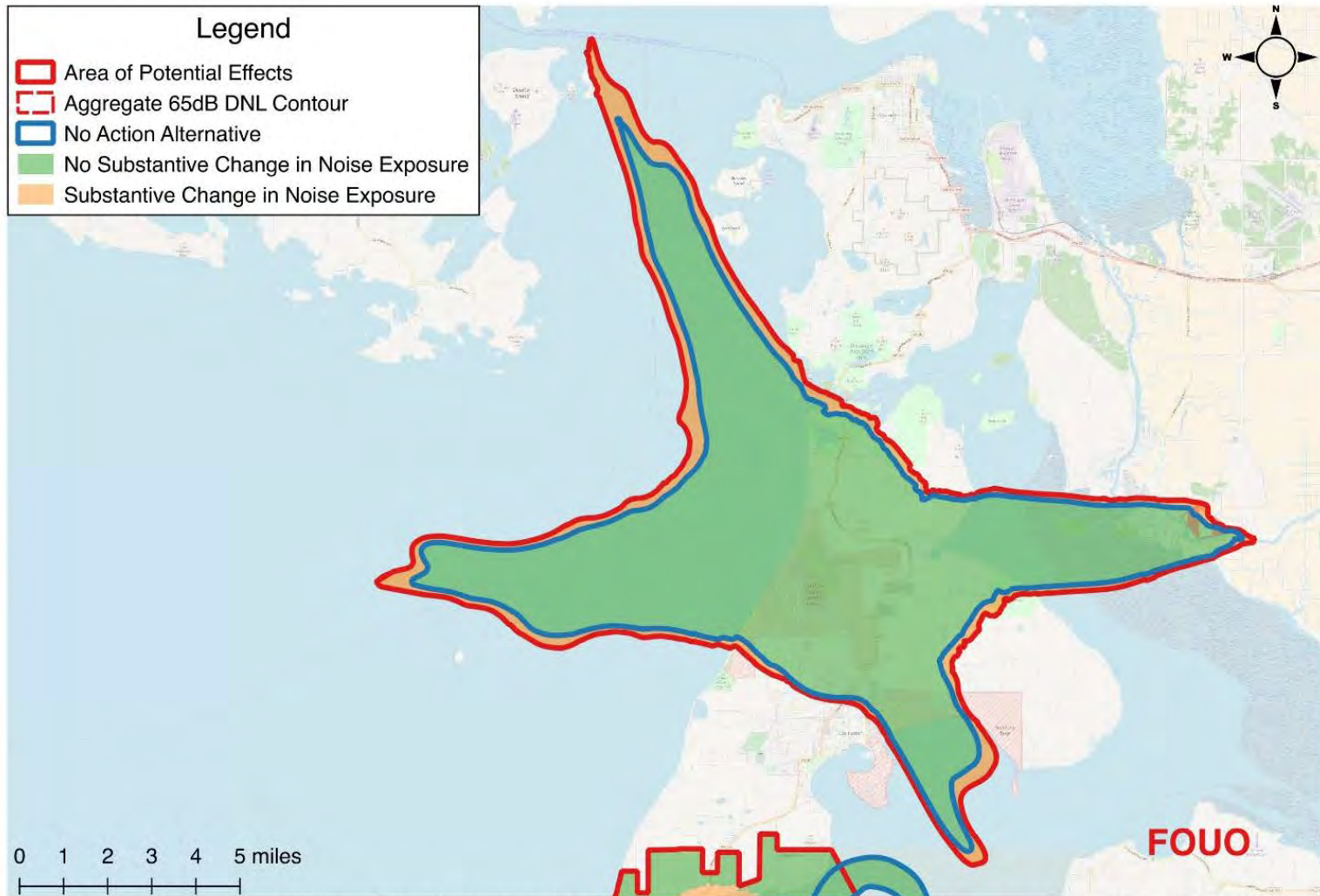
Change in exposure to the area within the 65 dB DNL contour is represented as change in the 65 dB DBL contour between the No Action Alternative and the proposed aggregate 65 dB DNL contour. For this undertaking, the area within the proposed aggregate 65 dB DNL contour is larger in most instances than that of the 65 dB DNL contour of the No Action Alternative. Thus, the analysis focuses on those historic properties located within the proposed aggregate 65 dB DNL that are not located within the No Action Alternative's 65 dB DNL contour. Primarily, these historic properties are located at the edge of the APE, where the proposed aggregate 65 dB DNL expands beyond the No Action Alternative 65 dB DNL contour. This area is represented as orange in Figures 10 and 11.

The degree of change in dB DNL is measured by the difference between the dB DNL for the proposed action, represented as an aggregate of all proposed alternatives, and the dB DNL modeled under the No Action Alternative. This difference, also called delta DNL, was calculated across the entire APE in 1 dB increments. The highest degree of change in delta DNL occurs primarily near OLF Coupeville, where the Growler would fly a standardized training pattern that utilizes both Runway 14 and Runway 32.

To determine the degree of change in delta DNL that could result in a potential for indirect adverse effects on historic properties, the Navy looked to other federal agencies' standards. Consistently, other federal agencies applied a methodology for addressing potential adverse effects to historic properties from an increase in noise exposure through reference to land use compatibility standards within a 65 dB DNL contour as a proxy.

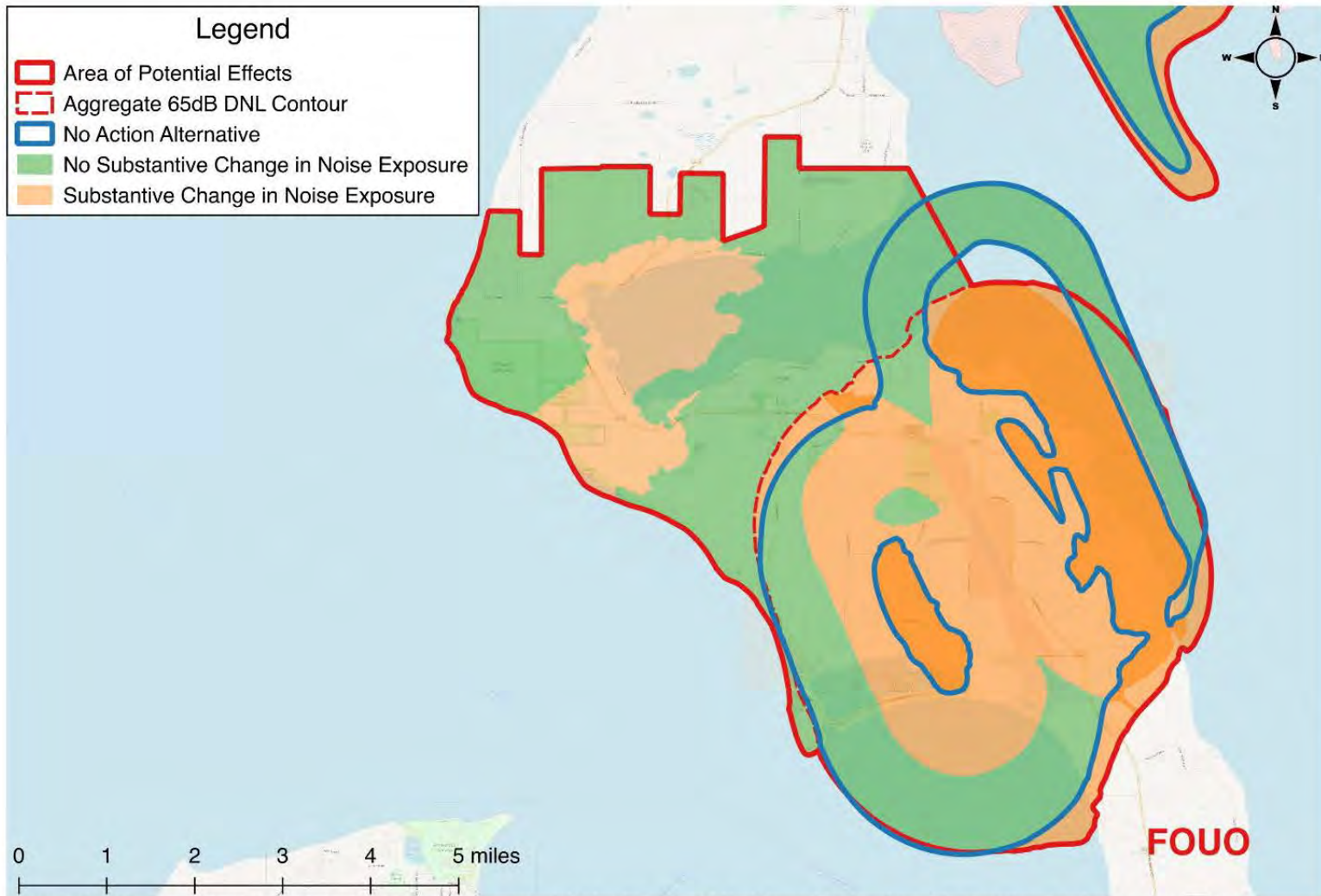
The Navy conducts Air Installations Compatible Use Zones (AICUZ) studies and provides recommendations to local governing bodies promoting compatible land use surrounding Navy airfields based, in part, on noise exposure depicted as a DNL contour. An AICUZ study recommends compatible land use based on noise exposure levels in increments of 5 dB DNL. The foundation of the 5 dB DNL standard is based on federal policy and the characteristics of sound.

Use of the 5 dB DNL increment is in keeping with the 1977 Standard Land Use Coding Manual (SLUCM) from the U.S. DOT, Federal Highway Administration, as well as the findings of two other Federal Interagency Committees on noise, one published in 1980 and another in 1992. In alignment with the SLUCM, practices by other federal agencies, and Navy policy, the Navy identifies noise zones in 5 dB bands within the 65 dB DNL contour and AICUZ noise zones. Accordingly, the Navy assesses change in delta DNL based on changes in noise exposure of 5 dB DNL or greater to identify a substantive change in noise exposure that could have potential adverse indirect effects to historic properties.



Note: Darker orange indicates overlap between shift in 65 dB DNL (from No Action Alternative to Aggregate 65 dB DNL) and area where increase in dB DNL is substantive.

**Figure 10 Ault Field Areas of Substantive Change in Noise Exposure**



Note: Darker orange indicates overlap between shift in 65 dB DNL (from No Action Alternative to Aggregate 65 dB DNL) and area where increase in dB DNL is substantive.

**Figure 11 OLF Coupeville Areas of Substantive Change in Noise Exposure**



Historic properties are currently not considered by federal agencies for land use compatibility recommendations. Since historic properties are not currently included in the SLUCM, the Navy is following the recommendations in the *Aircraft Noise Study for Naval Air Station Whidbey Island and Outlying Landing Field Coupeville, Washington* (2005), and uses “conventional structures” as the standard to assess noise exposure levels for normally compatible land uses. For conventional structures, land use compatibility recommendations begin at Noise Zone 2, which begins at 65 dB DNL. As such, the Navy applies the methodology for assessing potential indirect adverse effects to historic properties within the 65 dB DNL contour that result in substantive change in noise exposure using a change in 5 dB DNL. However, due to the unique historic characteristics of the ELNHR, the Navy agreed to include the entirety of the ELNHR in its APE, and it will analyze all historic properties included in the ELNHR inventory that experience a change of 5 dB DNL or greater regardless of what noise contour the historic property falls within.

While change in DNL is commonly applied to analyze potential adverse effects to historic properties, there is no established standard threshold. Thresholds lower than 5 DNL have been used by other agencies at commercial airports where the noise events are relatively steady from day to day. However, Navy airfield operations are more episodic and depend on operational and training needs driven by deployment schedules. Even with a substantial increase in activity at OLF Coupeville, noise would still be more sporadic, temporary sound exposure in comparison to the sound resulting from an active commercial airport. For all these reasons, the Navy has chosen to use 5dB as the increment for this analysis.

In summary, this analysis assesses a substantive change in noise exposure using delta DNL in comparison to the existing, or No Action Alternative, noise levels of:

- +5 dB DNL or more in areas with an existing DNL of greater than or equal to 65 dB, and
- +5 dB DNL or more in areas within the ELNHR, regardless of existing noise contour range.

In Figures 10 and 11, the areas depicted in orange within the APE are those where the model shows substantive changes to noise exposure that could cause indirect adverse effects to historic properties. The dark orange area depicts areas where there is an overlap in the change in exposure to the 65 dB contour line and a change in 5 dB or more in delta DNL. The analysis finds that 31 historic properties listed as eligible or contributing to the ELNHR would experience a change in 5 dB DNL or more under the proposed undertaking in areas within the ELNHR that are located outside the aggregate 65 dB DNL contour. Within the aggregate 65 dB DNL contour, the only area that experiences a substantive change in noise exposure occurs at OLF Coupeville. No areas surrounding Ault Field experience a change of 5 dB DNL or greater within the 65 dB DNL contour.

### **6.3 Additional Considerations for Determining Effects**

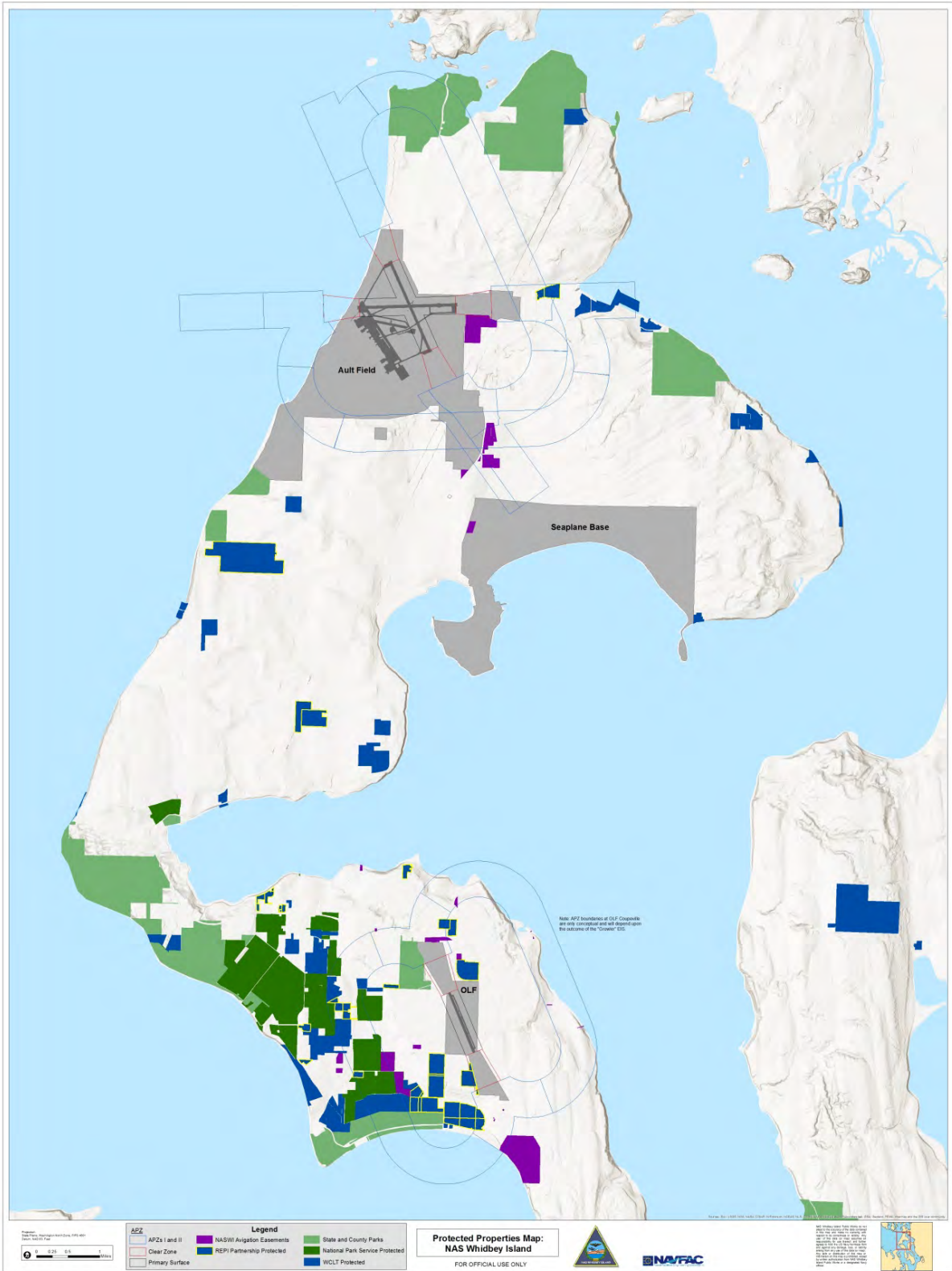
In addition to changes in noise exposure and noise experience, the Navy also took into consideration the following factors to assess indirect adverse effects to historic properties:

1. **The maximum potential level of usage proposed at both airfields.** None of the action alternatives proposes using both airfields to the maximum level.
2. **Intermittent airfield use.** Unlike commercial airfields, operations at military airfields are intermittent, with long periods of time between airfield operations when there is no use or no noise occurring.

3. **History of use at Ault Field and OLF Coupeville.** Ault Field is the primary airfield for NAS Whidbey Island and has historically higher numbers of operations than OLF Coupeville. The aggregate 65 dB DNL contour line represents the noise environment predicted with the maximum possible number of operations at OLF Coupeville. The alternative with the greatest proposed number of operations would generate noise levels similar to the historical levels generated by the average number of operations conducted between 1968 and 1989.
  - a. The Navy follows governing FAA rules and regulations when establishing procedures for flying arrivals and departures. Procedures for arrival and departure into and out of Ault Field and OLF Coupeville have been developed in conjunction with the FAA over decades, with an emphasis on de-conflicting military, commercial, and general aircraft while avoiding more densely populated areas where feasible.
  - b. Seasonal changes, such as wind direction and hours of darkness, will influence noise-abatement protocols used throughout the year. For example, wind direction will determine which runway is used at the airfield. Nighttime training is accomplished earlier in the winter, when it gets dark around 5:00 p.m., then during the summer, when it gets dark around 10:00 p.m.
4. **The Navy strives to be a good steward of the environment as well as a good neighbor.** NAS Whidbey Island is implementing measures to minimize impacts from aircraft operations or training noise impacts on its surrounding communities. Policies currently implemented to minimize noise impacts at Ault Field and OLF Coupeville include the following:
  - a. Flight paths are designed to mitigate the effects of aircraft noise on the communities surrounding the NAS Whidbey Island airfields. In addition to adopting local flight noise abatement patterns that direct interfacility flights away from land as much as possible, the NAS Whidbey Island Operations Manual standards for interfacility transit are above minimum flight altitude standards set by the FAA.
  - b. The Navy publishes a schedule of FCLP flight operations weekly for both Ault Field and OLF Coupeville to assist the public in making informed decisions about their activities.
  - c. During FCLPs, a LSO is present to monitor approaches to the airfield, maintain two-way communication with air traffic control and all participating pilots, and ensure pattern integrity and proper sequencing of aircraft in order to efficiently accomplish FCLP training.
  - d. Airfield ground operations and aircraft maintenance are restricted to reduce noise disturbance. High-power turns should not be conducted prior to 12:00 noon on Sundays or between the hours of 10:00 p.m. and 7:30 a.m. for jet aircraft.
  - e. The Navy has been actively working to minimize effects of noise on the community through its AICUZ and REPI programs. Specifically, the Navy works with local municipalities to adopt appropriate land use zoning to curb high-density development around the airfields and partners with the Whidbey Camano Land Trust and Island County to establish numerous conservation easements in order to preserve the historic and scenic integrity of the cultural landscapes. This initiative of establishing conservation easements is designed to reduce the number of changes that threaten the integrity of the Central Whidbey Island Historic District, specifically

at Smith Prairie and Crockett Prairie landscapes (two landscape areas with the highest proportion of effect). To date, NAS Whidbey Island has partnered with the Whidbey Camano Land Trust to secure conservation easements on 961 acres of land in the Central Whidbey Island Historic District at a cost of \$7.8 million. See Figure 12 for the encroachment protection map that depicts current conservation units.

- f. The NAS Whidbey Island Air Operations Department is responsible for conducting periodic pilot training to provide familiarization with course rules, appropriate noise abatement procedures, and the importance of good community relations.
- g. The NAS Whidbey Island Air Operations Officer continually reviews operational procedures to identify operational changes intended to reduce noise within the constraints of safety, mission effectiveness, and cost savings.
- h. The NAS Whidbey Island Commanding Officer and Air Operations Officer participate in bi-annual community leadership forums to discuss issues of mutual importance between the installation and the local community.
- i. The NAS Whidbey Island Air Operations Officer monitors airfield operational schedules and attempts to mitigate potential operational impacts during key academic testing periods in schools and during large-scale community events such as the Penn Cove Mussel Fest.



**Figure 12 NAS Whidbey Island Encroachment Protection Map**



## 7 Determination of Adverse Effects to Historical, Archaeological and Cultural Resources

In this section, the Navy applies the methodology for assessing effects described in Section 6. For the direct effects analysis, the Navy focuses only on those areas where ground-disturbing activities, construction, and demolition are proposed. For the indirect effects analysis, the Navy applies the methodology to the entirety of the APE. See Section 6 for more information about methods.

### 7.1 Analysis of Potential Direct Effects

To support additional Growler aircraft and personnel, new construction would occur at Ault Field, including expansion and construction of hangar space, construction of new armament storage, demolition of the old armament storage facility, construction of a separate mobile maintenance storage facility, and expansion of parking areas.

To identify historic properties within the APE, the Navy has reviewed available environmental and cultural resource literature addressing properties within 100 meters of the project area. The review determined one archaeological survey, four architectural surveys, and one context report have been conducted within the search area (Table 13).

**Table 13 Environmental and Cultural Resources Studies Conducted in the Area of the Proposed Undertaking**

<i>Author</i>	<i>Report Title</i>	<i>Comments</i>
EDAW, Inc. 1997	<i>Historic Resources Survey Naval Air Station Whidbey Island, U.S. Department of the Navy, Island County, WA</i>	A survey of NAS Whidbey Island historic buildings; Ault Field Buildings 112, 118, and 180/220 dating to the 1940s identified as eligible
Rudolph et al. 2009	<i>Historic Properties Assessment and National Register Eligibility Recommendations for P-236 ARRA Waterline Replacement NAVFAC Northwest AOR: NAS Whidbey Island.</i>	Archaeological pedestrian survey with 18 shovel tests; 1 historic site recorded beyond the APE; 3 previously recorded sites were evaluated.
Hampton and Burkette 2010	<i>Phase I Architecture Survey of Naval Air Station Whidbey Island</i>	NAS Whidbey Island building overview and evaluation including Ault Field.
Thursby et al. 2013	<i>Final Naval Air Station Whidbey Island Cold War Historic Context</i>	A literature overview to establish Cold War historic context of NAS Whidbey Island, including Ault Field
Chidley et al. 2013	<i>Naval Air Station Whidbey Island Cold War Study Phase 2: Inventory and Evaluation</i>	Inventory and evaluation of Cold War era resources at NAS Whidbey Island including Ault Field
Chidley et al. 2017	<i>Early Euro-American Settlement Study and Context Report: Naval Air Station Whidbey Island</i>	Report addressing the pre-Navy history of all Navy property on Whidbey Island
Stevenson et al. 2018	<i>Archaeological Inventory for the Naval Health Clinic, Oak Harbor Naval Air Station Whidbey Island, Island County, Washington</i>	Archaeological pedestrian survey with 84 shovel tests; no historic properties recorded

Two archaeological surveys have occurred of areas of the APE and within 100 meters of the APE. The 2009 archaeological survey examined the linear alignment of a large water pipeline project. Several sections of the water pipeline intersect or run near the APE. The pipeline survey included a pedestrian

survey of the entire route, with limited shovel testing where the alignment deviated from existing roadways and where there appeared to be little previous disturbance. The study also included delineation and evaluation of previously recorded archaeological sites at Ault Field. Because the portion of the surveyed alignment that runs near the APE was extensively disturbed, no shovel testing was required.

The 2018 archaeological survey examined areas southwest of Ault Field and conducted 84 shovel tests up to 1 meter in depth. This subsurface survey was limited to some degree by some combination of modern paved streets, paved parking lots, buried marked and unmarked utilities, fencing with locked gates, buildings, and recently demolished buildings impeding shovel testing. No archaeological resources were observed during the pedestrian or subsurface survey.

The architectural surveys focused on NAS Whidbey Island buildings that were built before 1964 and during the Cold War Era (1947–1989) at Ault Field and other NAS Whidbey Island properties. Two historic structures have been recorded within the APE, but neither will be adversely affected by the work. The context report focused on early Euro-American settlement at NAS Whidbey Island to provide information on settlement, ownership, and use of Clover Valley and other NAS Whidbey Island properties.

Two buildings associated with the activities defined in the direct effects analysis have been determined eligible for listing in the NRHP, with SHPO concurrence. Building 386 (Hangar 5) was determined eligible as a historic structure and an example of the Miramar-type hangar on January 26, 2010 (SHPO Log: 012610-05-USN), and under the Cold War era context on April 4, 2014 (SHPO Log:020714-01-USN). Building 112 (Hangar 1) was determined eligible for its architectural merit as a Birchwood-type hangar in 2010 (SHPO Log:012610-05-USN). Three buildings and structures associated with the proposed undertaking have been determined not eligible for listing in the NRHP, and the SHPO concurred. Building 115 was determined not eligible on January 26, 2010 (SHPO Log: 012610-05-USN). Building 2737 (Hangar 12) and Taxiway Juliet were determined not eligible on April 4, 2014 (SHPO Log: 020714-01-USN).

The Navy's literature review also revealed the following regarding the APE:

- The underlying geology of the APE consists primarily of artificial fill, modified land, and Pleistocene glacial deposits including Everson Interstade Glaciomarine Drift and Vashon Stade Till. The privately owned parking expansion footprint is depicted within or very near Holocene nearshore deposits on the geologic map of the Oak Harbor, Crescent Harbor, and Part of the Smith Island 7.5-minute Quadrangles, Island County, Washington (Dragovich et al, 2005) however archaeological shovel testing performed along Charles Porter Boulevard for a waterline replacement project in 2008 did not encounter any intact soils (Rudolph et al, 2009).
- The soils are classified as Urban Land-Coupeville-Coveland Complex, Coveland Loam, and Everett-Alderwood Complex. Urban Land is land that is mostly covered by streets, parking lots, buildings, and other structures of urban areas. Coupeville-Coveland Complex, Coveland Loam, and Everett-Alderwood Complex soils are formed in glacial drift and outwash overlying dense glaciomarine deposits. These soils are used for forage crop production, livestock grazing, timber production, wildlife habitat, hay and pasture, urban development, a source of sand and gravel, woodland, field crops, orchards, vineyards, and watersheds. Potential natural vegetation includes Sitka spruce, red alder, western red cedar, Douglas fir, grand fir, lodgepole pine, bigleaf



maple, clustered rose, salmonberry, blackberry, red elderberry, common snowberry, stinging nettle, swordfern, slough sedge, field horsetail, scouring-rush horsetail, stinging nettle, salal, bracken fern, Pacific rhododendron, western hemlock, red huckleberry, Nootka rose, ocean-spray, and Cascade Oregon grape, orange honeysuckle, and evergreen huckleberry.

- No prehistoric or historic archaeological sites have been recorded within the APE or within 200 meters of it. Two historic archaeological sites are located within 1 kilometer of the APE. Site 45IS243 is located about 800 kilometers east of the APE. The site consists of historic logging materials, cut tree stumps, and a dugout area of 39 by 30 meters. Site 45IS283 is located about 900 kilometers southwest of the APE. The site includes a historic period concrete foundation and debris. Both historic archaeological sites are recommended ineligible for listing in the NRHP, but the Navy has yet to formally evaluate them.
- Building 386 (Hangar 5), which is eligible for the NRHP, is proximate to the planned location of the construction activities and would be adjacent to the two-squadron hangar. This building is eligible for the NRHP due to its unique architectural qualities as an example of a Miramar-type hangar (i.e., Criterion C). The physical structure of the building would not be altered during the proposed construction; however, increased dust, personnel, and machinery may temporarily impact the setting. The new hangar facility design would be required to comply with the NAS Whidbey Island Installation Appearance Plan (IAP). The IAP was developed to maintain consistency of appearance of all structural design throughout the installation. The Navy has determined that no adverse effect to Hangar 5's viewshed would be anticipated.
- Building 112 (Hangar 1), which is eligible for the NRHP, is also proximate to the planned location of expansion and construction of hangars. Hangar 1 was determined eligible during the cultural resources review for the Environmental Assessment (EA) for the Demolition of Underutilized, Excess, and Obsolete Buildings at NAS Whidbey Island (Demo EA) in 2010. The Demo EA proposed demolition of up to 80 structures at NAS Whidbey Island, including Hangar 1. A Memorandum of Agreement (MOA) to mitigate the adverse effects of demolition on Hangar 1 and several other eligible buildings was signed with the SHPO in May 2010. The Navy has met the mitigation measures stipulated in the MOA, and Hangar 1 is scheduled for demolition in the fall of 2018.
- Building 115 was built in 1942 and was determined ineligible for listing in the NRHP (SHPO Log: 012610-05-USN). Building 115 is located on Midway Street, just west of Langley Boulevard. The building was originally built as an ordnance shop and continues its function as an aviation armament shop today. A new ordnance shop is required in closer proximity to the flight line and will replace Building 115. Geotechnical borings within one-eighth mile of Building 115 encountered five soil types: fill, glacial marine drift, glacial till, glacial outwash, and undifferentiated glacially consolidated soils. The fill varied from 2.5 to 6 feet deep, and no Holocene deposits were encountered between it and the Pleistocene sediments. It is unlikely that any intact Holocene sediments exist beneath the building. Therefore, the Navy has determined that archaeological monitoring of the building's demolition is not warranted.
- Taxiway Juliet was constructed in the early 1950s. While the taxiways (in conjunction with the runway) represent the post-World War II conversion of Ault Field to a Master Jet Station, they were determined not eligible for inclusion in the NRHP (DAHP Log: 041814-01-USN). Therefore, the Navy has determined no historic properties would be affected during taxiway repairs.

- In case of an inadvertent discovery of Native American human remains and/or archaeological resources during construction, the Navy would follow the current inadvertent discovery plan by notifying the appropriate tribal governments and the state Department of Archaeology and Historic Preservation regarding the treatment of the remains and/or archaeological resources per applicable laws.

The Navy has determined that the proposed undertaking in the area of direct effects in the APE will result in no adverse effects to historic properties because no archaeological sites are known to exist in the APE, no NRHP-eligible buildings will be adversely affected by the proposed undertaking, and little likelihood exists for intact archaeological deposits to be present in the APE. Given the results of geotechnical borings and documented disturbance from airfield and flight line construction and maintenance since 1942, the Navy does not find archaeological monitoring of construction or demolition necessary. Although it is unlikely that intact archaeological resources will be found, the Navy recognizes the potential for post-review discoveries of archaeological resources. Therefore, a copy of the inadvertent discovery plan will be provided to the contractor, alerting them to cease work and notify the NAS Whidbey Island Cultural Resource Program Manager if a discovery is made.

## **7.2 Analysis of Indirect Effects**

Indirect effects resulting from change to visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features include change in visual elements or alteration to views and vistas, modification of atmospheric elements from aircraft operations, or change in noise exposure.

For this undertaking, the proposed activities would not introduce new visual, atmospheric, or audible elements. Rather, the existing elements would be increased.

The increase in operations relative to the No Action Alternative does not alter the visual experience, atmospheric elements, or setting in ways that diminish the district's ability to convey its historic significance. The character-defining features of the historic district and its contributing properties are not predicated on a setting that is absent of modern technology or non-contributing elements, particularly those that enter the visual setting temporarily, such as modern ships, vehicles, trucks, and aircraft. The 1998 amendment to the Central Whidbey Island Historic District NRHP nomination makes clear that the diversity of buildings, structures, and sites, along with the contributing landscape features, represent a variety of historic periods. In addition, non-contributing buildings and structure do not substantially detract from the sense of time and place that the historic features, when experienced as a whole, provide the area. As such, temporary introduction of a visual and atmospheric elements in the sky does not indirectly alter the characteristics of the district that make it eligible for listing in the NRHP.

To reiterate from Section 6, potential adverse indirect effects from change in noise exposure on historic properties were measured in two ways: 1, a change in exposure to the 65 dB DNL contour and 2, a substantive change in dB DNL.

Change in exposure to the 65 dB DNL contour is represented as change in the area of the 65 dB DNL contour between the No Action Alternative and the proposed aggregate 65 dB DNL contour. This includes any historic properties that are located within the proposed aggregate 65 dB DNL contour but are not located within the No Action Alternative's 65 dB DNL contour. Primarily, these properties are

located at the edge of the APE, where the proposed 65 dB DNL contour expands beyond the No Action Alternative 65 dB DNL contour.

Substantive change in dB DNL is measured as the difference between the dB DNL for the proposed action, represented as an aggregate of all proposed alternatives, and the dB DNL modeled under the No Action Alternative. This difference, also called delta DNL, was modeled across the entire APE, and areas where there is a substantive increase in dB DNL were outlined. See Section 6 for more information on substantive increases in dB DNL. These areas are primarily near OLF Coupeville, where the Growler would fly a standardized training pattern that utilizes both Runway 14 and Runway 32.

The noise modeling indicates that changes to noise exposure are minimal within the majority of the APE. However, areas at the boundary between the proposed aggregate 65 dB DNL contour and the No Action Alternative 65 dB DNL contour at OLF Coupeville and Ault Field would fall within the 65 dB DNL contour, and there would be a substantive change in delta DNL near OLF Coupeville and in the northern portion of the Central Whidbey Island Historic District (Figures 10 and 11).

To analyze potential adverse indirect effects of modeled noise changes, the property type and eligibility status for all identified historic properties listed in the NRHP were compiled, as well as those listed in the Washington Heritage Barn Register and the Washington Heritage Register, recorded as eligible on the WA DAHP GIS data, and recognized as contributing to ELNHR in the ELNHR 2016 Inventory (Appendix J) within the substantive change in dB DNL area and within the area between the proposed aggregate 65 dB DNL contour and No Action Alternative 65 dB DNL contour. In addition, because of the unique and important historic characteristics of the Central Whidbey Island Historic District, the Navy has also included all eligible and contributing historic properties listed in the ELNHR Inventory that experience a delta DNL change of 5 dB or more. Table 14 presents a summary of all determined-eligible properties listed in the Washington DAHP WISAARD database, the 2016 update to the ELNHR, and properties listed in the NRHP, the Washington Heritage Barn Register, or the Washington Heritage Register. See Figures 13 and 14 for locations of historic buildings, structures, and districts, and see Appendix K for locations of archaeological districts and cemetery sites. Sections 7.2.1 – 7.2.6 assess effects to determined eligible or listed properties that are within the potential adverse effects area.

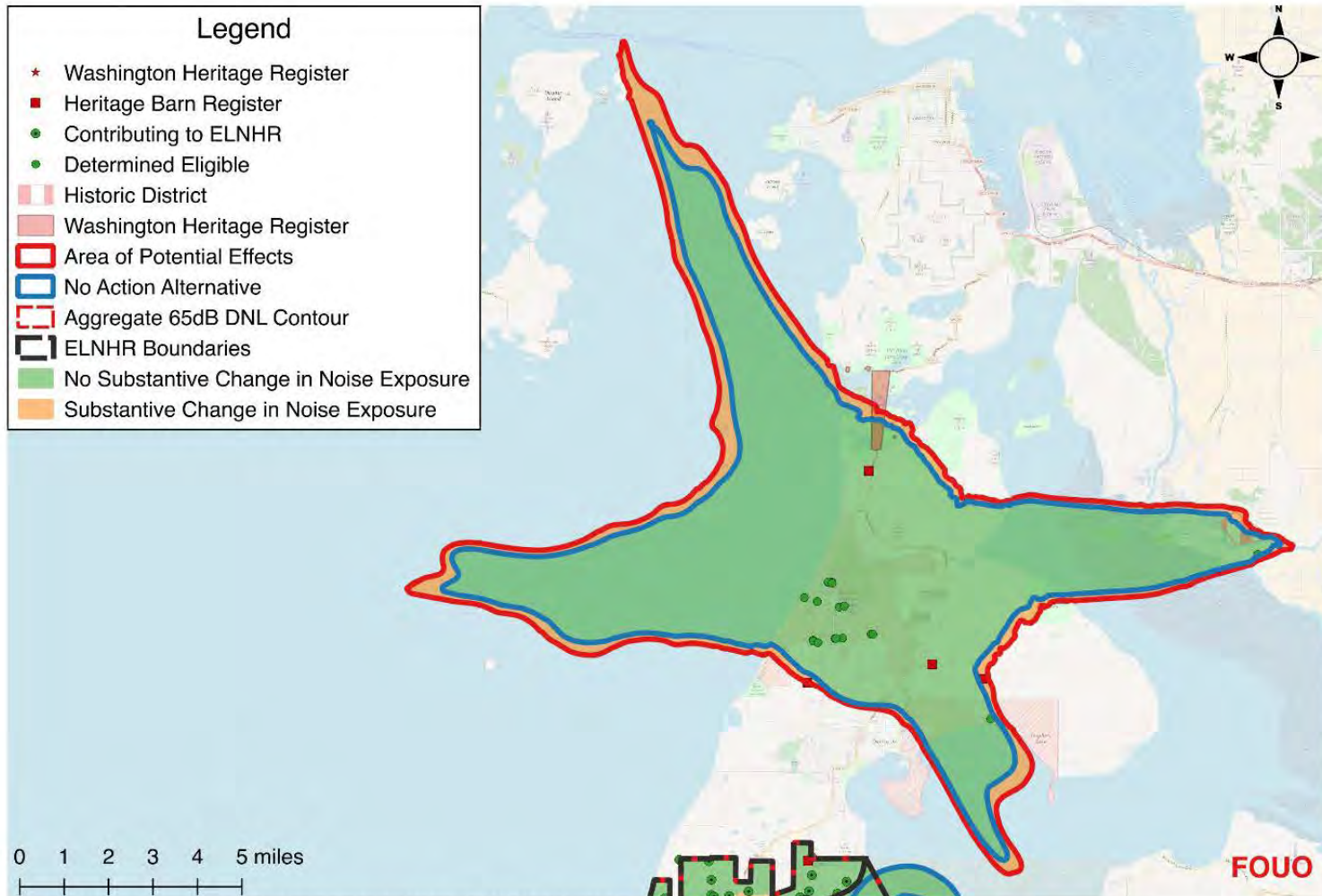
The proposed undertaking would result in no substantive change in noise exposure to a majority of the eligible and listed properties. Of the 67 eligible or listed historic properties within the APE, approximately 87 percent (58 properties) would not experience any substantive change in noise exposure, and 13 percent (nine properties) are located in the area of the APE where substantive changes in noise exposure have been identified.

**Table 14 Summary of Potential Indirect Effects to all Eligible and Listed Properties**

<i>Property Type</i>	<i>Potential Indirect Effects</i>		
	<i>No Substantive Change in Noise Exposure</i>	<i>Substantive Change in Noise Exposure</i>	<i>Total</i>
Buildings and Structures (50 years and older)	26	2	28
Listed in Washington Heritage Barn Register	17	6	23
Listed in Washington Heritage Register	4	0	4
Listed in NRHP	2	0	2
Historic Districts*	1	1	2
Archaeological Sites	7	0	7
Cemetery Sites	1	0	1
Traditional Cultural Places	0	0	0
Archaeological Districts	1	0	1
<b>Total</b>	<b>58</b>	<b>9</b>	<b>67</b>

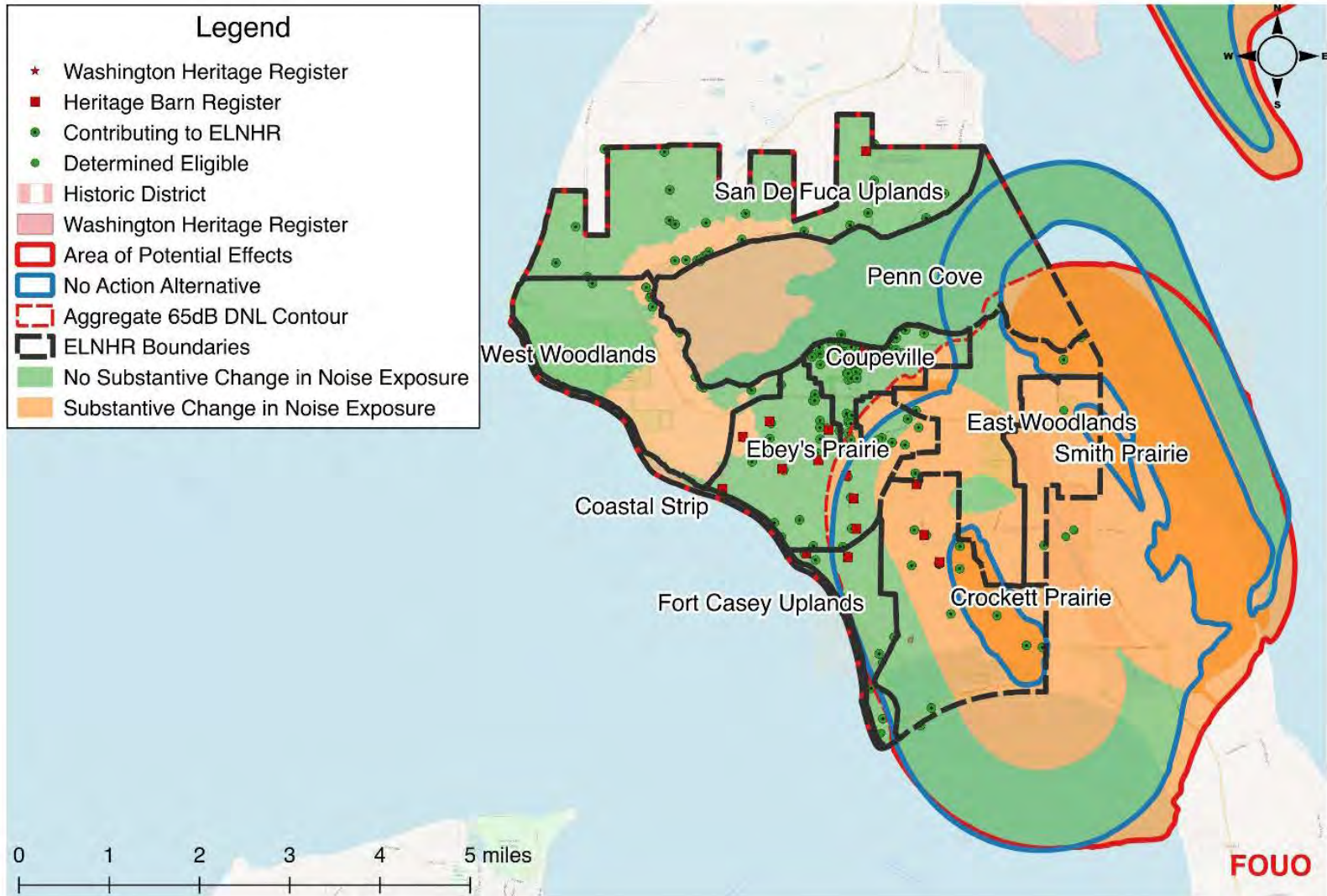
Note: Many of the ELNHR buildings and structures (where the 65 dB DNL overlaps with ELNHR) are also included in the ELNHR 2016 Inventory).

\* For the purposes of this study, ELNHR is analyzed as an NRHP-listed historic district.



Note 1: Displays property status as recorded in ELNHR 2016 Update and DAHP GIS data.  
 Note 2: Darker orange indicates overlap between shift in 65 dB DNL (from No Action Alternative to Aggregate 65 dB DNL) and area where increase in dB DNL is substantive,

**Figure 13 Map of all Eligible and Listed Historic Buildings and Structures within the Ault Field portion of the APE**



**Figure 14 Map of all Eligible and Listed Historic Buildings and Structures within the OLF Coupeville portion of the APE**



### 7.2.1 Historic Buildings and Structures

Two eligible buildings and structures would experience substantive change in noise exposure (Table 15). However, the proposed undertaking will have no adverse effect to the structural integrity of the historic structures in the indirect effects area of the APE or diminish the integrity of their design or workmanship.

**Table 15 Eligibility Criteria of Historic Buildings and Structures in the Potential Adverse Effects Area**

<i>Historic ID</i>	<i>Name</i>	<i>Year Built</i>	<i>Eligibility Criteria</i>
672587	Whidbey Island Game Farm, Pacific Rim Institute for Environmental Stewardship	1946	Criterion A
700759	Crockett, Hugh, Barn, Boyer Farm	1860	Criterion A

To analyze potential adverse effects to structures and buildings, the Navy looked to previous studies within the APE, as well as to outside research on the effects of noise on historic properties. Specifically, the Navy looked at the original criteria and amendments to the NRHP nomination form for the Central Whidbey Island Historic District. In addition, the Navy looked to the ELNHR's management documents, studies, and inventories. Finally, the Navy sought out available research and studies on the effects of aircraft noise on historic properties.

There is limited research available that documents studies on the effects of aircraft noise on historic properties. This analysis focuses on noise effects on structures in general (Guidelines for preparing Environmental Impact Statements on Noise, 1977) and on noise effects on historic structures. Pertinent studies include an analysis of proposed Concorde flight operations on historic structures at several East Coast airports, including Dulles and Kennedy Airports (Hershey, Kevala, and Burns 1975, and Wessler 1977) and portions of the 2012 noise study prepared in support of the 2012 EA for the proposed transition of expeditionary EA-6B Prowler squadrons to EA-18G Growler aircraft. To date, no study supports a finding that aircraft operations at Ault Field or OLF Coupeville have or will cause diminished integrity of location, setting, materials, design, workmanship, feeling, or association to historic buildings and structures.

The Navy reviewed the original nomination package of the Central Whidbey Island Historic District and subsequent amendments made in 1983, 1998, and 2010, as well as ELNHR's management plans and inventory updates of 1980, 2003, 2005, and 2016. The inventories and evaluations studied various property types and character-defining features of the district and the ELNHR. Although the ELNHR inventories have added and subtracted properties from contributing status, no properties have been determined to no longer retain the characteristics that qualify them for inclusion in the NRHP because of adverse effects from Navy actions, specifically aircraft operations or aircraft noise effects on buildings and structures.

In 1977, the National Research Council developed guidelines for evaluating potential impacts of noise for EIS studies on noise. These guidelines are consistently cited in subsequent studies as the basis for evaluating Section 106 impacts to historic properties. Per the guidelines, sounds lasting more than 1 second and with a peak unweighted sound level greater than or equal to 130 dB (in the 1 hertz (Hz) to 1,000 Hz frequency range) are considered potentially damaging to structural components (NRC and NAS, 1977). This is a conservative standard for assessing all sound (NRC and NAS, 1977).



With respect to the potential for aircraft noise and vibration effects on the structural components of historic structures, only a few studies have been published. Two studies were conducted in the 1970s in connection with the EIS on proposed Concorde operations in the U.S. In 1975, Hershey, Kevala, and Burns (1975) examined the potential for structural feature breakage at five historic sites within the Concorde flightpath, including the St. George's Church near Kennedy Airport, and four historic sites near Dulles Airport (Sully Plantation, Dranesville Tavern, Broad Run Bridge and Tollhouse, and Manassas Battlefield Park). The historic sites chosen for study were all located within a few miles of the proposed Concorde flight paths. The authors evaluated the impact on structural features, including windows, brick chimneys, a stone bridge, and plaster ceilings. They determined that the potential for breakage was generally less than 0.001 percent for a year of overflights at all five historic sites.

In 1977, Wesler reevaluated the noise analysis at the Sully Plantation and concluded that no damage was found to the 1795 plantation house from routine departures of the Concorde aircraft 1,500 feet from the runway centerline of Dulles Airport (Wesler, 1977). Wesler found that the structural vibration levels from the Concorde takeoff and landings were actually less than those caused by touring groups and vacuum cleaning. Of note, both Concorde studies also concluded that "noise exposure levels for compatible land use also were protective of conventional historic and archaeological sites."

The Navy's 2012 noise study included an assessment of noise and vibration impacts from Navy airfield operations to historic buildings and structures. Because of a wide range of variations in building code and aircraft types, the U.S. has yet to develop a precise threshold for adverse effects to the integrity of buildings and structures. Therefore, this study applies the same standards used in the 2012 noise study for the assessment of noise and vibration from Navy airfield operations to historic properties within the APE.

The 2012 study at NAS Whidbey Island suggested that sounds lasting more than 1 second above a sound level of 130 C-weighted decibels (dBC) are potentially damaging to structural components (Kester and Czech, 2012). The study evaluated Prowlers and Growlers at NAS Whidbey Island and noted that none of the conditions evaluated for the study caused C-weighted sound levels to exceed 130 dBC (i.e., the stated threshold) and that structural damage would not be expected. The authors, however, did note that takeoff conditions had C-weighted sound levels greater than 110 dBC for both types of aircraft, creating an environment conducive to noise-induced vibration (Kester and Czech, 2012).

In order to reach these conclusions, the authors of the 2012 study included a brief examination of low-frequency noise associated with Growler overflights at 1,000 feet AGL in takeoff, cruise, and approach configuration/power conditions (Kester and Czech, 2012). The study found that the takeoff condition has the highest potential for damage, with unweighted sound levels of approximately 105 dB and an overall C-weighted sound level of 115 dBC. The Growler would exhibit C-weighted sound levels up to 101 dBC when cruising and 109 dBC (gear down) at approach. As these levels are much less than the 130 dB criterion, damage would not be expected for structures in the vicinity of the NAS Whidbey Island airfields.

In 2016, the National Park Service (NPS) conducted an acoustical study utilizing two acoustic monitoring systems for 31 days on NPS property in the ELNHR. The locations consisted of the Reuble Farmstead and

the Ferry House. At the Reuble Farmstead (located approximately 0.5 mile from Crockett Barn), the highest recorded sound pressure level was 113 dBA during FCLP by Growlers. At the Ferry House, 85 dBA was the loudest recorded military aircraft sound level (NPS, 2016). While these studies concerned two locations known for their historic qualities, the study did not evaluate the potential damage that could be caused to these structures by noise or vibration. However, when comparing the highest recorded sound pressures of 113 dBA and 85 dBA at the two points of interest (POIs), it is unlikely that sound pressures would approach a peak unweighted sound level greater than or equal to 130 dBC, which is the level that would be considered potentially damaging to structures at those locations.

Although studies are limited, the available data indicate that noise within the APE is unlikely to alter the characteristics that qualify historic buildings and structures for inclusion in the NRHP.

### 7.2.2 Heritage-Listed Historic Properties

Six buildings listed in the Washington Heritage Barn Register would experience substantial changes in noise exposure (Table 16). The same analysis described in Section 7.2.1 applies to heritage-listed historic properties. Accordingly, the undertaking will have no adverse effect to the structural integrity of the listed buildings and structures and does not alter the qualities of significance that make these historic properties eligible. The proposed undertaking does not alter characteristics of architectural expression, method of construction, or physical features of the property’s setting.

**Table 16 Eligibility Criteria of Buildings Listed in the Washington Heritage Barn Register in the Potential Adverse Effects Area**

<i>ID</i>	<i>Name</i>	<i>Register</i>	<i>Built Year</i>	<i>Eligibility Criteria</i>
IS00343	James, William and Florence, Farm	Heritage Barn	c. 1914	None Listed
IS00314	Keith, Sam, Farm	Heritage Barn	1895	Criterion A
IS00340	Gus Reuble Farm	Heritage Barn	1912	Criterion A
IS00355	Crockett, Hugh, Barn	Heritage Barn	c. 1860	Criterion A
IS00356	Hookstra, Lambert, Farm	Heritage Barn	c. 1910	None Listed
IS00229	Kineth, John, Barn	Heritage Barn		

### 7.2.3 Archaeological Sites

No determined-eligible archaeological sites would experience a substantive change in noise exposure.

### 7.2.4 Cemeteries

No determined-eligible area cemeteries would experience a substantive change in noise exposure.

### 7.2.5 Traditional Cultural Places

There are no known traditional cultural places or properties of traditional religious importance recorded in the APE. Consultations with Tribes and the SHPO have resulted in no new traditional cultural places or properties of traditional religious importance identified within the APE. See Appendix D for a summary of Navy consultations.

### 7.2.6 Historic and Archaeological Districts

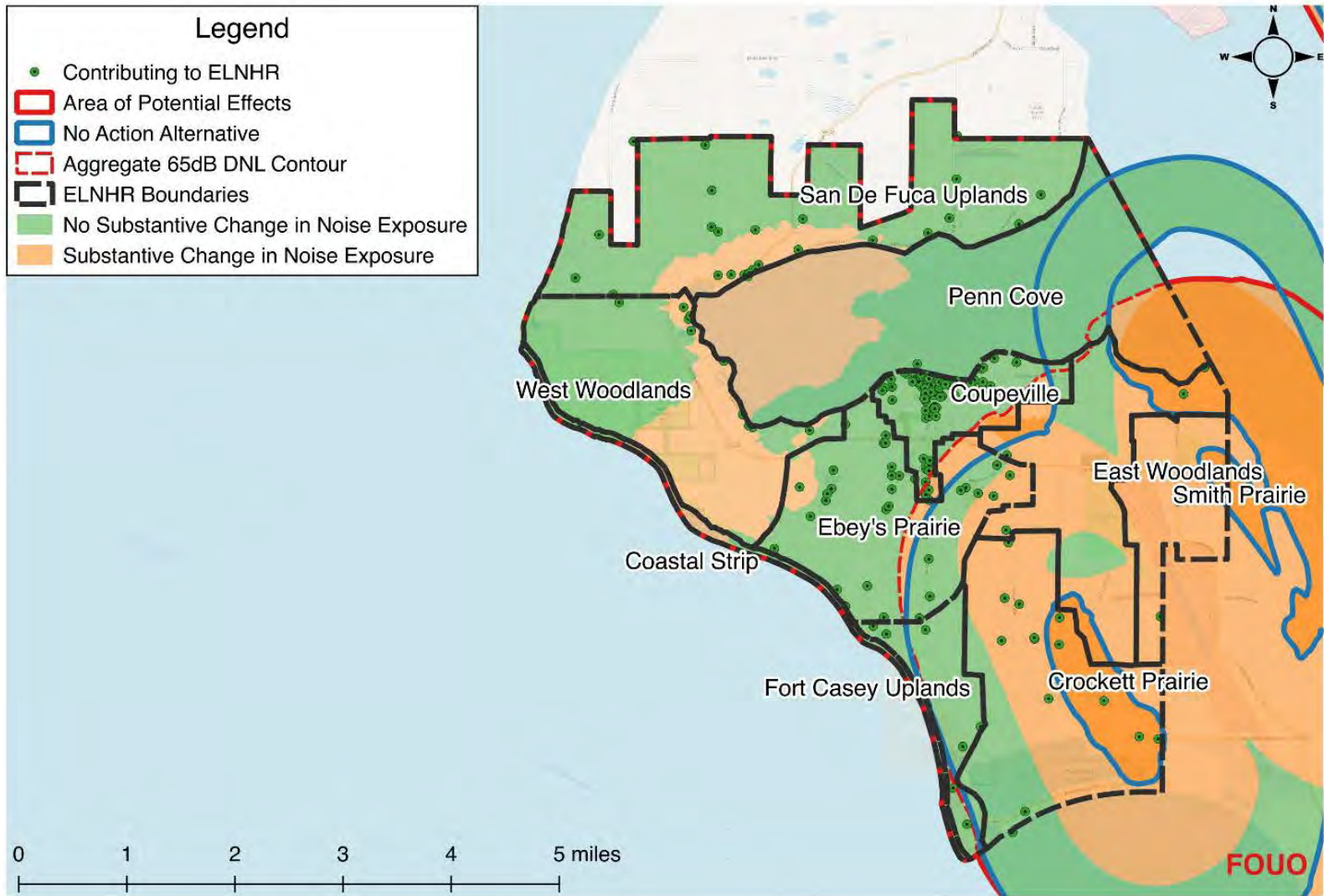
One historic district, the Central Whidbey Island Historic District, would experience substantive changes to noise exposure that would cause adverse effects to the perceptual quality of views that contribute to its significance.

### **Central Whidbey Island Historic District Buildings and Structures**

Of the 288 individually eligible or contributing buildings and structures in the Central Whidbey Island Historic District (the district), 44 would experience substantive changes in noise exposure (Table 17 and Figure 15). However, the undertaking will have no adverse effect on the structural integrity of the listed buildings and structures and does not alter the qualities of significance that make these historic properties eligible per the analysis in Section 7.2.1. The proposed undertaking does not alter characteristics of architectural expression or method of construction, and it does not introduce alterations in land use patterns inconsistent with the agricultural land use patterns first established during the period of significance of early settlement in the 1850s within the boundary of the district.

**Table 17 Contributing Buildings to the ELNHR within the Potential Adverse Effects Area**

<i>Name</i>	<i>Landscape Area</i>	<i>Built Year</i>	<i>Significance</i>
Bearss/Barrett House	Coupeville	1893	Criterion C
James Wanamaker House	Coupeville	1892	Criterion C
A.B. Coates House	Coupeville	1892	Criterion C
Morrow/Franzen House (Spangler/Franzen Rental House)	Coupeville	c. 1900	Criterion C
Reuble Squash Barn	Coupeville	c. 1940	Criterion C
Mulder House	East Woodlands	c. 1900	Criterion C
Thomas/Sullivan House	East Woodlands	1910	Criterion C
Harp Place	Smith Prairie	c. 1900	Criterion C
Wiley Barn	Fort Casey Uplands	c. 1930s	Criterion A
John Kineth, Jr. Farmhouse	Smith Prairie	c. 1910	Criteria A and C
Keith House	Fort Casey Uplands	1895	Criterion A
Old Anderson Place	Fort Casey Uplands	1902	Criterion A
Hapton/Gould House (John Gould/Miller House)	Crockett Prairie	1910	Criterion C
Reuble Farm	Fort Casey Uplands	1895	Criterion A
Fort Casey Pump House	Crockett Prairie	1906	Criterion A
Gillespie House/Reuble Farm	Fort Casey Uplands	1912	Criterion A
Myers Property	East Woodlands	c. 1928	Criterion A
Clarence Wanamaker Farm	Crockett Prairie	1928	Criteria A and C
Crockett/Boyer Barn (Hugh Crockett House)	Crockett Prairie	c. 1860	Criterion A
Col. Walter Crockett Farmhouse and Blockhouse	Crockett Prairie	c. 1860	Criterion A
Calhoun House (Sam Crockett House)	Crockett Prairie	1890	Criterion C
Gilbert Place/Eggerman Farm	Crockett Prairie	Unknown	Criterion A
Walton Aubert House – Fiddler’s Green	Penn Cove	1907	Criteria A and C
O’Leary Cottage/Snakelum House	Penn Cove	1940	Criteria A and C
Melvin Grasser House	Penn Cove	1932	Criterion C
Old County Courthouse/Grennan & Cranney Store	Penn Cove	1855	Criteria A and C
George Libbey House	Penn Cove	1904	Criterion C
Fisher Place	Penn Cove	1928	Criteria A and C
Whid-Isle Inn/Captain Whidbey Inn	Penn Cove	c. 1905	Criteria A and C
Smith Cottage	Penn Cove	1933	Criteria A and C
A. Kineth House	Penn Cove	1916	Criteria A and C
Still Log Cabin	Penn Cove	c. 1938	Criteria A and C
San de Fuca School	San de Fuca Uplands	1903	Criterion C
Capt. R.B. Holbrook House	San de Fuca Uplands	1874	Criterion C
Liberal League Hall/San de Fuca Community Chapel	San de Fuca Uplands	1906	Criterion C
Hingston House	San de Fuca Uplands	1880	Criterion C
Tuft Cottage/Mrs. J. Arnold House	San de Fuca Uplands	Pre-1935	Criterion C
Armstrong/Trumball House	San de Fuca Uplands	c. 1905	Criterion C
Fisher/Hingston/Trumball General StoreL	San de Fuca Uplands	c. 1903	Criterion A
Hingston/Trumball Store	San de Fuca Uplands	1880	Criterion C
Armstrong/Scoby House	San de Fuca Uplands	1895	Criterion C
Henry Arnold/Grasser House	San de Fuca Uplands	1923	Criteria A and C
Robart Cottage	San de Fuca Uplands	1912	Criterion C
NPS Sheep Barn	Ebey’s Prairie	1930	Criterion C



**Figure 15** Map of Potential Adverse Effects to Contributing Properties and Landscapes in ELNHR

## **Central Whidbey Island Historic District Contributing Features and Elements**

A number of landscape and architectural features contribute to the special character of the Central Whidbey Island Historic District and were identified in the 1983 building and landscape inventory conducted by the NPS. The district's inventory was expanded, and a number of landscapes were introduced into its NRHP nomination form in the 1998 amendment. This amendment and its inclusion of contributing landscape features to the historic character of the district sought to reflect and formalize those special historic qualities of Central Whidbey Island that Congress sought to preserve in the creation of the ELNHR in 1978. The 1998 amendment documents the landscape component of the inventory into both natural and cultural elements of ELNHR and identifies 10 distinct landscape areas, including Ebey's Prairie, Crockett Prairie, Smith Prairie, San de Fuca Uplands, Fort Casey Uplands, East Woodlands, West Woodlands, Penn Cove, Coastal Strip, and Coupeville. The landscape areas were identified as character-defining features representing the continuum of early patterns of settlement, agriculture, and commercial uses in the district as evidenced by historic land use patterns, circulation systems, spatial organization as a response to the natural environment, vegetation, structures, farm cluster, and views and other perceptual qualities.

In 2003, the NPS performed an analysis of land use change and cultural landscape integrity to assess tangible loss of the character-defining qualities of landscape. The NPS did not identify Navy aircraft operations at OLF Coupeville as a threat to change the overall character of the district from the period of 1983 to 2000.

The proposed undertaking will not affect the character-defining qualities related to land use patterns, circulation systems, spatial organization as a response to the natural environment, vegetation, structures, or farm clusters. The 2003 NPS analysis covered a time period when Navy aircraft operations at OLF Coupeville exceeded the proposed increase in, and overall numbers of, operations contained in the current Proposed Action. The 2003 study primarily focused on patterns of land use change, circulation patterns, vegetation, boundaries, and cluster arrangements. The study concluded that the greatest risk to integrity of landscape features in the district was the "relentless pressures of residential growth" and recommended land use control strategies such as zoning and conservation easements. The current proposed undertaking does not change circulation, patterns of land use, vegetation, structures, or cluster arrangements and will have no adverse effect to these landscape characteristics.

The proposed undertaking has the potential for indirect adverse effects to the perceptual qualities that contribute to cultural landscapes of the Central Whidbey Island Historic District, specifically the significant perceptual qualities of landscapes from nine distinct points in the district. The Navy identified a substantive change in noise exposure in nine areas where perceptual qualities contribute to the significance of the landscape. Potentially affected landscapes include all of the identified contributing landscapes except for the Fort Casey Uplands. The substantive change in noise exposure has the potential to indirectly alter the perceptual experience of the contributing cultural landscapes because these nine areas are identified as tangible resources and character-defining features of the cultural landscapes. The 1998 amendment defines these areas as contributing views following the NPS's published guidance for nominating rural historic districts in 1984. Guidance for analysis and evaluation of views and vistas includes analysis of significant perceptual qualities, such as smells and sounds, from the viewpoint (NPS Cultural Landscapes Inventory Professional Procedures Guide, 2001). The Central Whidbey Island Historic District NRHP nomination describes the contributing landscape views and the perceptual qualities as tangible resources that were identified using the historic record and are based on

character-defining features of the cultural landscape. The nine landscape areas located within the defined area of substantive change in noise exposure include:

1. Entry to Coupeville from Ebey’s Prairie into the prairie and along Main Street
2. View to Crockett Prairie and Camp Casey from Wanamaker Road
3. View to Crockett Prairie and uplands from the top of Patmore Road
4. View to Crockett Prairie and uplands from Keystone Spit
5. View to Grasser’s Lagoon from Highway 20
6. Views to and across Penn Cove along Madrona Way
7. Views from the bluff trail to Ebey’s Prairie and Coastal Strip
8. View from Smith Prairie from Highway 20, entering the ELNHR
9. Views to Grasser’s Hill from Madrona Way

Of these nine landscape areas, one is located within the area newly exposed to the aggregate 65 dB DNL contour, four are located within the aggregate 65 dB DNL contour and are exposed to a change of 5 dB or greater delta DNL, and four are located outside the aggregate 65 dB DNL contour but within the boundary of the ELNHR and experience a change in 5 dB or greater delta DNL (see Table 18).

**Table 18 Change in Noise Exposure within Aggregate 65 dB DNL Noise Contour**

<i>Change in Exposure to Aggregate 65 dB DNL Contour</i>	<i>Change in delta DNL of 5 dB or Greater within the Aggregate 65 dB DNL Contour</i>	<i>Change in delta DNL of 5 dB or Greater Outside the Aggregate 65 dB DNL Contour within ELNHR</i>
Entry to Coupeville (from Ebey’s Prairie into prairie center and along Main Street) and Front Street in Coupeville	View to Crockett Prairie and Camp Casey from Wanamaker Road	View to Grasser’s Lagoon from Highway 20
	View to Crockett Prairie and uplands from the top of Patmore Road	Views to and across Penn Cove along Madrona Way
	Views to Crockett Prairie and uplands from Keystone Spit	Views from the bluff trail to Ebey’s Prairie and Coastal Strip
	View of Smith Prairie from Highway 20, entering the ELNHR	Views to Grasser’s hill from Madrona Way

Of the nine landscape areas, the Navy has determined that five are adversely affected as a result of a substantive change in noise exposure. Although all of these landscape points either experience a change in exposure to the 65 dB DNL contour or a change of delta DNL of 5 dB or more, only five experience a change that has the potential to result in a change in recommended land use. Of the four landscape points outside the aggregate 65 dB DNL contour within the ELNHR that experience a change in 5 dB or greater delta DNL, the level of change in noise exposure, although quite noticeable, does not result in an adverse effect. The landscapes are located well outside the 65 dB DNL contour and a quiet soundscape is not a defining characteristic of the landscapes. In addition, no land use restrictions are recommended per SLUCM standards as a result of the change in noise exposure, and the area is considered compatible with all land uses.



The remaining five landscape points are located within areas where change in noise exposure would result in potential changes in land use recommendations and/or land use restrictions. In addition, the five landscape points are located at gateway points into the ELNHR where the rural character of the landscape contributes not only to the scenic quality of ELNHR but also to those characteristics of the landscape that have shaped human settlement and use of the landscape that make the landscapes character defining elements of the historic district. All of these entrance points are within three landscape areas: Crockett Prairie, Smith Prairie, and Ebey's Prairie. These three prairies make up approximately 42 percent of the ELNHR and are key landscape characteristics to many of the historic themes, events, people, and activities important in the ELNHR's history, including the Salish occupation and use, early Euro-American settlement, and agricultural land use patterns established during early settlement in the 1850s. The change in noise exposure indirectly alters the perceptual qualities of the five contributing views identified and the character-defining features of these key cultural landscape components.



## 8 Finding of Effect

The Navy has determined that the proposed undertaking is a Historic Properties Adversely Affected for adverse indirect effects to cultural landscapes in the Central Whidbey Island Historic District—specifically, the perceptual qualities of the following five locations that contribute to the significance of the landscape:

1. Entry to Coupeville from Ebey's Prairie into prairie and along Main Street
2. View to Crockett Prairie and Camp Casey from Wanamaker Road
3. View to Crockett Prairie and uplands from the top of Patmore Road
4. View to Crockett Prairie and uplands from Keystone Spit
5. View from Smith Prairie from Highway 20, entering the ELNHR

In order to minimize the adverse effect to the perceptual experience of these cultural landscapes, the Navy proposes to continue to support policies in place to minimize noise effects of flight operation in the community (see Section 6). In addition, the Navy will continue to work with the Whidbey Camano Land Trust to collaborate on the purchase of conservation easements, which, per the recommendations of the 2003 landscape study, serves to preserve the historic and scenic integrity of the cultural landscape and to diminish landscape change that threatens the integrity of the landscape features on the ELNHR.

In addition to continuing existing policies that minimize adverse effects to historic properties, the Navy offers the following as a starting point for consultation on resolution of the adverse effect to perceptual experience of these cultural landscapes:

- Informational kiosks at locations where the undertaking has adverse indirect effects to perceptual qualities that contribute to the significance of ELNHR contributing landscapes, which coincide with entry points to the ELNHR.
  - Although the Navy determined that the four landscapes points within the ELNHR that experience a delta DNL change of 5 dB or more but are located outside the 65 dB DNL contour are not adversely effected by the change in noise exposure, these areas are also located at or near entrance points to the reserve. The Navy is willing to consider locating information kiosks in these location as well.
- Increase support to the REPI and encroachment management programs at NAS Whidbey Island for continued partnership with the Whidbey Camano Land Trust in acquiring conservation easements.
- Support of a project to improve efficacy and efficiency of online ELNHR historic property inventories to ameliorate inconsistencies and update the ELNHR and Washington State historic properties inventories and GIS databases for properties located within the ELNHR. The Navy proposes to enter into a cooperative agreement with the ELNHR to provide support equivalent to one year of labor at pay grade GS 9.



# Appendix A

## Location of Required Facilities





## Appendix B

### Previous Operations for Ault Field and the Seaplane Base from 1976 to 2013

Year	Ault Field			OLF Coupeville	Total	
	FCLP (a)	Other (b)	Total (a+b)	FCLP (d)	FCLP (a+d)	Operations (a+b+d)
1976	29,245	90,948	120,193	17,810	47,055	138,003
1977	27,064	61,449	88,513	17,748	44,812	106,261
1978	31,308	95,896	127,204	24,378	55,686	151,582
1979	17,720	78,963	96,683	20,282	38,002	116,965
1980	25,102	79,000	104,102	12,190	27,292	116,292
1981	26,443	62,805	89,248	16,848	43,291	160,096
1982	26,696	77,639	104,335	14,472	41,168	118,807
1983	36,418	82,019	118,437	11,782	48,200	130,219
1984	32,400	80,842	113,242	12,726	45,126	125,968
1985	29,185	72,267	101,452	13,934	43,119	115,386
1986	27,475	77,529	105,004	22,232	49,707	127,236
1987	27,202	110,480	137,682	30,350	57,552	168,032
1988	47,734	101,396	149,130	30,442	78,176	179,527
1989	50,186	87,850	138,036	22,596	72,782	160,632
1990	51,758	104,582	156,340	32,080	83,838	188,420
1991	43,662	90,632	134,294	27,088	70,750	161,382
1992	54,516	84,515	139,031	25,844	80,360	164,875
1993	36,422	79,551	115,973	21,324	57,746	137,297
1994	36,472	74,990	111,462	21,628	58,100	133,090
1995	30,494	74,936	105,430	19,854	50,348	125,284
1996	22,832	86,895	109,727	13,066	35,898	122,793
1997	30,740	88,093	118,833	9,736	40,476	128,569
1998	19,516	77,433	96,949	6,808	26,324	103,757
1999	17,194	77,014	94,208	6,752	23,946	100,960
2000	16,536	84,424	100,960	6,378	22,914	107,338
2001	16,132	79,857	95,989	3,568	19,700	99,557
2002	17,090	77,069	94,159	4,100	21,190	98,259

Source: Wyle Laboratories, Inc. 2004





**Appendix C**  
**Previous FCLP Operations Data for OLF Coupeville from 1967 to 2013**

<i>Year</i>	<i>Operations</i>
1967	1,236
1968	27,130
1969	39,246
1970	37,218
1971	18,392
1972	13,572
1973	16,764
1974	21,180
1975	24,844
1976	17,810
1977	17,748
1978	24,378
1979	20,282
1980	12,190
1981	16,848
1982	14,472
1983	11,782
1984	12,726
1985	13,934
1986	22,232
1987	30,350
1988	30,442
1989	22,596
1990	32,080
1991	27,088
1992	25,844
1993	21,324
1994	21,628
1995	19,854
1996	13,066
1997	9,736
1998	6,808
1999	6,752
2000	6,378
2001	3,568
2002	4,100
2003	7,684
2004	4,314
2005	3,529
2006	3,413
2007	3,976
2008	2,548
2009	5,292

<i>Year</i>	<i>Operations</i>
2010	6,476
2011	9,378
2012	9,668
2013	6,972
2014	6,120
2015	6,120
2016	6,120
2017	5,804



## Appendix D

### Summary of Section 106 Consultation from October 2014 to November 2017

<i>NHPA Section 106 Process for Growler Increase at NAS Whidbey Island</i>	<i>Consultation Effort to date</i>
Navy Established Undertaking	October 2014
Identification of Historic Properties Defining the Area of Potential Effects (APE)	June 2016 - Letter proposing APE methodology Aug 2016 - Letter clarifying Section 106 process Nov 2016 - Release of DEIS and contour lines Dec 2016 - Public meetings presenting proposed APE April 2017 - Letter defining APE May 2017 - Meeting to discuss APE rationale July 2017 - Letter defining final APE
Identification of Historic Properties Inventory and Eligibility	June 2017 – Letter proposing inventory methodology July 2017 – Letter with final inventory Aug 2017 – Meeting providing rationale for using existing inventories and eligibility status w/o additional survey Oct 2017- Notification of delay in consultation to incorporate changes in scale and scope of undertaking



## Appendix E

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## Appendix F

### Inventory of Cultural Resources within the Area of Potential Effects

WA DAHP GIS Data

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
26	Naval Air Station Whidbey Island - Outlying Field, Coupeville, NAS Building 1 & 2	NAS Whidbey Island		Determined Not Eligible	1944
42	NAS Whidbey Island - Building 410, Hangar 6, Building 410, Hangar 6	NAS Whidbey Island		Determined Eligible	1942, 1955, 1957
165	Harmon - Pearson - Engle Farm	Coupeville		Not Determined	1900
166	Cawsey House, Cawsey House, Perkins House	Coupeville		Not Determined	1890
168	Comstock, Al & Nellie, House, Sherman House	Coupeville		Not Determined	1890
174	Old Al Comstock Place	Coupeville		Determined Eligible	1935
176	Gallagher/Schreck/Sherman Farm, Sherman, A., House	Coupeville		Not Determined	1917
177	Aloha Farms, Hancock, Samuel E., House	Coupeville		Not Determined	1953
178	Jenne, Edward and Agnes, Farm	Coupeville	R13109-330-4240	Not Determined	1908
186	Gus Reuble Farm	Coupeville		Not Determined	1930
201	Sherman Hog House	Coupeville		Not Determined	1942
278	Grennan and Cranney Store, Grennan and Cranney Store	Coupeville		Not Determined	1855
326	Clark House	Coupeville	R13233-184-4510	Not Determined	1933
328	Williams House	Coupeville	S6415-00-40001-0	Not Determined	1896
334	Coupeville City Hall	Coupeville	S6415-00-20005-0	Not Determined	1928

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
335	Zylstra, James, House	Coupeville	S6415-00-22001-0	Not Determined	1890
343	Methodist Parsonage	Coupeville	S6415-00-11007-0	Not Determined	1889
344	Griffith, Thomas, House, Brooks House	Coupeville	S6415-00-12001-0	Not Determined	1869
345	First Methodist Parsonage, Jefferds Rental House	Coupeville	S6415-00-09005-1	Not Determined	1890
346	Straub, Jacob, House, Warder House	Coupeville	S6415-00-08008-0	Not Determined	1890
347	Jefferds Rental House	Coupeville	S6415-00-13002-0	Not Determined	1920
348	Hesselgrave Rental House, Bagby Rental House	Coupeville	S6415-00-13003-0	Not Determined	1890
352	Clapp House, Ghormley House	Coupeville	S6415-00-14002-0	Not Determined	1890
354	Ervin Rental House	Coupeville	S6415-00-15001-0	Not Determined	1890
355	Gould, John, House, Cauty House	Coupeville	S6425-00-02001-0	Not Determined	1890
356	Coupe, Thomas, House	Coupeville	R13234-370-0150	Not Determined	1852
359	Solid, Chris, House	Coupeville	R13234-334-0450	Not Determined	1906
360	Chromy House	Coupeville	S6005-00-04002-0	Not Determined	1904
363	Holbrook, Horace, House, Forrester, Alice, House	Coupeville	R13233-352-3600	Not Determined	1890
368	Howell House, Wright House	Coupeville	S6415-00-32004-0	Not Determined	1927
369	Clark, Ed, House, Bishop House	Coupeville	S6415-00-32003-0	Not Determined	1915
370	Morris House, Reynolds Rental House	Coupeville	S6415-00-32002-0	Not Determined	1910
374	Cushen House, Penn Cove Bed and Breakfast	Coupeville	R13233-363-3550	Not Determined	1925
376	Pontiac Dealership, Auto Barn	Coupeville	S6025-00-06001-3	Not Determined	1963
380	Fullington, Maude, House, Fullington, Mary, House	Coupeville	S7070-00-11000-0	Not Determined	1859
382	Island County Bank, Vracin Office	Coupeville	R13233-375-4150	Not Determined	1890

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
384	Kinney, Captain Thomas, House, Davison House	Coupeville	S6415-00-08004-0	Not Determined	1871
385	Captain Clapp House, Vandyk House	Coupeville	S6415-00-07004-0	Not Determined	1890
388	Sedge Building, This 'n That Shop, Tartans and Tweeds	Coupeville		Not Determined	1871
389	Robertson, John, House, Tartans and Tweeds, Penn Cove Gallery, Ye Kitchen Shop	Coupeville		Not Determined	1864
391	Whidbey Mercantile Company, Toby's Tavern	Coupeville		Not Determined	1875, 1895
392	John Robertson's Store, Seagull Restaurant, Captain's Galley	Coupeville		Not Determined	1886, 1912
393	Post Office, Laundromat, Fantasy Island	Coupeville		Not Determined	1938
394	Coupeville Cash Store, Butler Bell Antiques, Gift Gallery Antiques	Coupeville		Not Determined	1885, 1886
396	Elkhorn Saloon, Bishop Building, Coupeville Weaving Shop, Elkhorn Truck Antiques	Coupeville		Not Determined	1883
398	Judge Still Law Office, The Cove	Coupeville		Not Determined	1909
399	Island County Times Building, Lorna Doone's Attic, Jan McGregor Studio	Coupeville		Not Determined	1906, 1958
400	Island County Abstract Office, Kristen's Ice Cream and More	Coupeville		Not Determined	1890, 1958
401	Terry's Dryer, Trader's Wharf	Coupeville		Not Determined	1855, 1897
403	Gillespie Meat Market, Korner Kranny, Keeping Room Antiques	Coupeville		Not Determined	1887, 1890
404	Wharf Warehouse and Dock	Coupeville		Not Determined	1905

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
408	Heckenbury House, Masonic Rental House	Coupeville	R13233-344-3760	Not Determined	1955
409	Angel, Charles, House, Rojas House	Coupeville	S6425-00-04001-0	Not Determined	1917
410	Polly Harpole's Maternity Home	Coupeville	S6415-00-32006-0	Not Determined	1927
414	Stark House, Jefferds Rental House	Coupeville	S6415-00-13007-1	Not Determined	1890
419	Mock House	Coupeville	S7215-00-01004-0	Not Determined	1904
420	Benson House, Dole House	Coupeville	S7215-00-01001-0	Not Determined	1910
424	Newcomb House	Coupeville	R13234-434-1330	Not Determined	1908
426	Lovejoy, E.O., House, Yorioka House	Coupeville	S6310-00-00011-0	Not Determined	1890
428	Boothe House	Coupeville	S6420-00-00005-2	Not Determined	1952
431	White, Dr., House	Coupeville	R13233-322-1850	Not Determined	1894
432	Black House, Lindsey House	Coupeville	R13233-323-1720	Not Determined	1894
436	Congregational Church, St. Mary's Catholic Church	Coupeville	R13233-184-4240	Determined Eligible	1889
437	Reverend Lindsey House	Coupeville	624827	Determined Eligible	1898
439	Libbey, Joseph B., House	Coupeville	R13233-214-3740	Determined Eligible	1870
440	Higgins House, Hecher and Donaldson Rental House, Dale Roundy Law Office	Coupeville	R13233-264-3900	Not Determined	1917
441	Jenne, Jacob, House, Victorian Bed and Breakfast	Coupeville	R13233-279-3910	Not Determined	1889
443	Highwarden House, Young House, Datum Pacific Inc.	Coupeville	R13233-282-3880	Not Determined	1888
444	Gillespie, Carl, House, Sampler Bookstore, Rosie's Garden Restaurant	Coupeville	R13233-286-3810	Not Determined	1884

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
445	Methodist Church, United Methodist Church	Coupeville	R13233-291-3850	Not Determined	1894
448	Leach House	Coupeville	R13233-344-3870	Not Determined	1878, 1883
450	The Bungalow, Engle, Flora A.P., House	Coupeville	R13233-358-3900	Not Determined	1914
451	Telephone Exchange Building	Coupeville	S6025-00-18001-0	Not Determined	1958
457	Nichols House, Bennett House	Coupeville	R13104-490-3930	Not Determined	1893
458	Sergeant Clark House, Madsen House	Coupeville	R13104-493-4210	Not Determined	1895
463	Dixon House, Partridge House, Community Alcohol Center, Penn Cove Veterinary Clinic	Coupeville	R13104-428-3940	Not Determined	1918
467	Wanamaker, James, House, Martin House	Coupeville	R13104-331-4200	Not Determined	1890
470	Private	Coupeville	R13104-310-3980	Not Determined	1962
471	Bearss House, Barrett House	Coupeville	R13104-280-4190	Not Determined	1890
475	Bergman House	Coupeville	R13234-479-3170	Not Determined	1938
39779	Rock Wall		27188 SR 20, Oak Harbor, WA 98277	Not Determined	1928
49281	Rock Wall		27188 SR 20, Coupeville, WA 98277	Not Determined	1928
49283	Fifth Street, Arnold Road	Coupeville	na	Not Determined	1890
49284	Forest Street, Power Road	Coupeville	na	Not Determined	1890
49285	Main Street, Holbrook Road	Coupeville	na	Not Determined	1890
49287	Standard Oil Dock, Penn Cove Mussels, Inc. Dock		State Route (SR) 20, vicinity of Coupeville, WA 98239	Not Determined	1915
51578	Naval Air Station Whidbey Island - Building 386, Hangar 5	NAS Whidbey Island	Federal - NA	Determined Eligible	1953, 1955

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
55501	Mortar Battery Secondary Station, Fort Casey, None	Coupeville	Lot 1 of R13116-495-2950	Determined Eligible	1908
88926	Kineth, John Jr., Barn, Salmagundie Farms	Coupeville	R13101-287-1000	Not Determined	1903
88927	Crockett, Colonel Walter, Barn, Colonel Walter Crockett Farm	Coupeville	R13115-220-2200	Not Determined	1895
88928	Sherman Farm, Sherhill Vista Farms	Coupeville	R13109-086-1990	Not Determined	1942
88929	Willow Wood Farm, Smith Farm	Coupeville	R13104-145-0170	Not Determined	1900
88930	LeSourd Barn and Granary, Ebey Road Farm, Inc.	Coupeville	R13104-118-2490	Not Determined	1923
102219	Ault Field - Buildings 360-363, Fuel Storage	NAS Whidbey Island		Determined Not Eligible	1952
102220	Ault Field - Fuel Tanks, Fuel Tanks Building 235-236	NAS Whidbey Island		Determined Not Eligible	1942
102222	Building 368, Electrical Utility Vault, Building 368, Taxiway Lighting Vault	NAS Whidbey Island		Determined Not Eligible	1954, 1955
102223	Ault Field - Building 369, Warehouse, Warehouse	NAS Whidbey Island		Determined Not Eligible	1954
102224	Ault Field - Building 371, BOSC Maintenance Shops	NAS Whidbey Island		Determined Not Eligible	1954
102225	Ault Field - Buildings 373, 374, 375, 376, 377, 378, 379, Barracks/Olympic Hall	NAS Whidbey Island		Determined Not Eligible	1954
102226	Ault Field - Building 382, Admiral Nimitz Hall	NAS Whidbey Island		Determined Not Eligible	1954
102227	Ault Field - Building 384, Central Heating Plant	NAS Whidbey Island		Determined Not Eligible	1954
102228	Building 385 - Operations Building, Building 385 - Operations Building	NAS Whidbey Island		Determined Not Eligible	1954



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
102229	Ault Field - Building 411, Contractor Storage	NAS Whidbey Island		Determined Not Eligible	1956
102230	Ault Field - Building 414, Utility Vault	NAS Whidbey Island		Determined Not Eligible	1956
102231	Ault Field - Building 415, Utility Vault, Storage	NAS Whidbey Island		Determined Not Eligible	1956
102232	Ault Field - Building 420, Sewage Treatment, Classified Shredder Facility	NAS Whidbey Island		Determined Not Eligible	1958
102233	Ault Field - Building 421, Sewage Pumping Station	NAS Whidbey Island		Determined Not Eligible	1958
102234	Air to Ground Communication Building , Building 856 - Ault Field Air to Ground Communication Building	NAS Whidbey Island		Determined Not Eligible	1959
102235	Ault Field - Building 860, Storage	NAS Whidbey Island		Determined Not Eligible	1959
102236	Rocky Point Rec Area - Building 873 Can Do Inn	NAS Whidbey Island		Determined Not Eligible	1961
102237	Radio Transmitter Building , Building 874 - Ault Field Radio Transmitter Building	NAS Whidbey Island		Determined Not Eligible	1961
102238	Precision Approach Radar (PAR) Generator Building, Building 894 - Ault Field PAR Generator Building	NAS Whidbey Island		Determined Not Eligible	1963
102239	Ault Field - Building 895, Smoking Shelter	NAS Whidbey Island		Determined Not Eligible	1948
102240	Ault Field - Building 889, Vault	NAS Whidbey Island		Determined Not Eligible	1962

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
102241	Ault Field - Building 962, Officer's Mess Hall, Ault Field - Building 962, Officer's Mess Hall, Officers' Mess Hall	NAS Whidbey Island		Determined Not Eligible	1963
102242	Ault Field - Building 960, Chapel, Ault Field - Building 960, Chapel, Chapel, Ault Field - Building 960, Chapel, NAS Whidbey Island: Chapel (Building 960)	NAS Whidbey Island		Determined Eligible	1963
102243	Ault Field - Building 2593, Electronic Attack Simulator	NAS Whidbey Island		Determined Not Eligible	1976
102245	Building 994, Calibration Lab, Building 994, Security	NAS Whidbey Island		Determined Not Eligible	1966, 1969
102247	Ault Field - Building 2643, Shop Building/Office	NAS Whidbey Island		Determined Not Eligible	1960
102248	Ault Field - Building 2738, Wing Simulator Center	NAS Whidbey Island		Determined Not Eligible	1989
102249	Building 2544, Hangar 7, Building 2544, Hangar 7	NAS Whidbey Island		Determined Not Eligible	1973
102250	Building 2642, Hangar 8, Building 2642, Hangar 8	NAS Whidbey Island		Determined Not Eligible	1980
102252	Ault Field - Building 2699, Hangar 10	NAS Whidbey Island		Determined Not Eligible	1986
102253	Ault Field - Building 2733, Hangar 11	NAS Whidbey Island		Determined Not Eligible	1988
102258	Sea Plane Base - Building 201705, Seawall	NAS Whidbey Island		Determined Not Eligible	1942
102259	Racon Hill - Building 858, Building 858 Medium Range Radar Building	NAS Whidbey Island		Determined Not Eligible	1959

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
102260	Racon Hill - Building 390	NAS Whidbey Island		Determined Not Eligible	1954
102261	Racon Hill - Building 853, Alarm Control Center	NAS Whidbey Island		Determined Not Eligible	1958
102262	Building 423, Ordnance Operations Building, Building 423, Ordnance Operations Building	NAS Whidbey Island		Determined Not Eligible	1958
102263	Ault Field - Building 424 and 425, Magazines	NAS Whidbey Island		Determined Not Eligible	1958
102264	Ault Field - Building 430, Generator Building	NAS Whidbey Island		Determined Not Eligible	1958
102265	Ault Field - Building 487, Pressure Washing Facility	NAS Whidbey Island		Determined Not Eligible	1943
102268	Ault Field - Building 340, Public Toilet/Shower, Rocky Point Recreation Area	NAS Whidbey Island		Determined Not Eligible	1949
102269	Ault Field - Building 198, Water Treatment Plant	NAS Whidbey Island		Determined Not Eligible	1959
102271	Ault Field - Building 946	NAS Whidbey Island		Determined Not Eligible	1952
102274	Racon Hill - Building 388, Water Reservoir	NAS Whidbey Island		Determined Not Eligible	1954
102275	Ault Field - Garage, Building R-38	NAS Whidbey Island		Determined Not Eligible	1945
102276	Ault Field Airfield , Ault Field Airfield Facilities (Facilities 201247, 201715, 201436, 201935, 201685, 201703)	NAS Whidbey Island		Determined Not Eligible	1952, 1956, 1961, 1962, 1968
102277	OLF Coupeville - Runway 13-31, Facility 201715, Runway 14-32	NAS Whidbey Island		Determined Not Eligible	1962

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
102278	Building 2547 - Avionics Facility; Aircraft Intermediate Maintenance Dept., Building 2547, Building 2547 - Avionics Facility; Aircraft Intermediate Maintenance Dept., Building 2547 - Fleet Readiness Center Northwest	NAS Whidbey Island		Determined Not Eligible	1974
102279	Ault Field - Storage Building, Building 285	NAS Whidbey Island		Determined Not Eligible	1948
102280	Ault Field - Building 353, Ordnance Storage	NAS Whidbey Island		Determined Not Eligible	1949
102282	Ault Field - Ault Theater, Skywarrior Theater, Building 118	NAS Whidbey Island		Determined Eligible	1942
102296	Sea Plane Base - Ready Lockers, Buildings 446, 447, 448, 449, 451, Storehouses	NAS Whidbey Island		Determined Eligible	1942
102298	Building 100, Barracks #8, Building 100, Post Office/Training/Weapons	NAS Whidbey Island		Determined Not Eligible	1942
102299	Ault Field - Barracks # 11, Building 103, Public Works/ROICC	NAS Whidbey Island		Determined Not Eligible	1942
102300	Ault Field - Barracks #16, Building 108, Marine Aviation Training Support Group/Poa	NAS Whidbey Island		Determined Not Eligible	1942
102301	Ault Field - Hangar 1, Ready Lockers, Building 112 and Support Buildings 457 and 458, Hangar 1 and Ready Lockers	NAS Whidbey Island		Determined Eligible	1942
102302	Ault Field - Recreation Building, Building 117, Recreation Building	NAS Whidbey Island		Determined Not Eligible	1942
102307	Ault Field - Boiler House, Building 209, Boiler House	NAS Whidbey Island		Determined Not Eligible	1944

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
102309	Ault Field - Dispensary and Dental Clinic, Building 243, Legal	NAS Whidbey Island		Determined Not Eligible	1945
102310	OLF Coupeville - Aircraft Control Tower, Building 1, Aircraft Operations Control Tower	NAS Whidbey Island		Determined Not Eligible	1944
102321	Sea Plane Base - Igloo Magazines, Buildings 35, 432-445, Inert Storehouses	NAS Whidbey Island		Determined Not Eligible	1942
102342	Ault Field - Maintenance Shop, Building 115, Weapons/AIMD/Supply	NAS Whidbey Island		Determined Not Eligible	1942
102343	Ault Field - Garage, Building 124, CDC Vehicle Maintenance HW Storage	NAS Whidbey Island		Determined Not Eligible	1942
102344	Ault Field - Free Gunnery Range Gate House, Building 128, Ladies Golf Clubhouse	NAS Whidbey Island		Determined Not Eligible	1942
102345	Ault Field - Ordnance Building, Building 130, Duffer's Cove / Golf Clubhouse	NAS Whidbey Island		Determined Not Eligible	1942
102347	Ault Field - High Explosive Magazine, Building 137, High Explosive Magazine	NAS Whidbey Island		Determined Not Eligible	1943
102348	Ault Field - Chief Petty Officer's Club (CPO), Building 138, Chief Petty Officer's Club (CPO)	NAS Whidbey Island		Determined Not Eligible	1943
102349	Ault Field - Skeet and Trap Shooting Office, Building 170, Rod and Gun Club Office, Bowman's Club	NAS Whidbey Island		Determined Not Eligible	1943

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
102350	Ault Field - Skeet and Trap Range, Facility 171, Vacant/Not in Use	NAS Whidbey Island		Determined Not Eligible	1943
102352	Ault Field - Agricultural Barn, Building 189, MVR Warehouse	NAS Whidbey Island		Determined Not Eligible	1920
102353	Ault Field - Granary, Building 206, Skookum Storage/ Maintenance Building	NAS Whidbey Island		Determined Not Eligible	1930
102354	Ault Field - VAQ Storage, Building 219, VAQ Storage/NADEP ISR Depot RPR	NAS Whidbey Island		Determined Not Eligible	1944
102355	Ault Field - Agricultural Barn, Building 262, NMCI Computer Warehouse	NAS Whidbey Island		Determined Not Eligible	1935
102356	Ault Field - Building 278,, A/C Refueler Contract Building	NAS Whidbey Island		Determined Not Eligible	1945
102357	Ault Field - Electrical Utility Building, Building 281, Electric Support at FF3	NAS Whidbey Island		Determined Not Eligible	1942
102358	Ault Field - Water Pump House, Building 284, Water Pump House	NAS Whidbey Island		Determined Not Eligible	1942
102360	Ault Field - Ready Locker Magazines, Building 353, 462-466, 469-471 Ready Locker Magazines	NAS Whidbey Island		Determined Not Eligible	1949
102364	Ault Field - CPO Club Utility Building, Building 492, CPO Club Storage	NAS Whidbey Island		Determined Not Eligible	1943
112737	Jay Palmer	Oak Harbor		Determined Not Eligible	1964
112741	Donna Ransdell	Coupeville		Determined Not Eligible	1950

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
112742	Private	Oak Harbor		Determined Not Eligible	1954
114746	Darst, Earle	Oak Harbor		Determined Not Eligible	1950
115064	Building 2737, Hangar 12, Building 2737, Hangar 12	NAS Whidbey Island		Determined Not Eligible	1989
115082	Building 2700 - Naval Facility Whidbey Island, Building 2700, Building 2700 - Naval Facility Whidbey Island, Building 2700 - Naval Ocean Processing Facility	NAS Whidbey Island		Determined Eligible	1986
115130	Magazines, Buildings 35, 432-445, Inert Storehouses	NAS Whidbey Island		Determined Not Eligible	1942
115167	Ready Locker Magazines, Building 353, 462-466, 469-471 Ready Locker Magazines	NAS Whidbey Island		Determined Not Eligible	1949
126836		WA		Not Determined	1941
126904		WA		Not Determined	1941
126905		WA		Not Determined	1941
126906		WA		Not Determined	1941
126907		WA		Not Determined	1941
126909		WA		Not Determined	1941
126910		WA		Not Determined	1941
126911		WA		Not Determined	1941
126912		WA		Not Determined	1941
126913		WA		Not Determined	1941
126914		WA		Not Determined	1941
126915		WA		Not Determined	1921
126916		WA		Not Determined	1921
126917		WA		Not Determined	1921

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
126920		WA		Not Determined	1904
126924		WA		Not Determined	1941
126925		WA		Not Determined	1921
126926		WA		Not Determined	1904
126927		WA		Not Determined	1904
126928		WA		Not Determined	1904
126929		WA		Not Determined	1904
126930		WA		Not Determined	1904
126931		WA		Not Determined	1904
126932		WA		Not Determined	1904
126933		WA		Not Determined	1904
126934		WA		Not Determined	1900
126935		WA		Not Determined	1941
126936		WA		Not Determined	1880
126937	San de Fuca School	WA		Not Determined	1902
126957	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
158714				Not Determined	1941
158782				Not Determined	1941
158783				Not Determined	1941
158784				Not Determined	1941
158785				Not Determined	1941
158787				Not Determined	1941
158788				Not Determined	1941
158789				Not Determined	1941
158790				Not Determined	1941
158791				Not Determined	1941
158792				Not Determined	1941
158793				Not Determined	1921
158794				Not Determined	1921



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
158795				Not Determined	1921
158798				Not Determined	1904
158802				Not Determined	1941
158803				Not Determined	1921
158804				Not Determined	1904
158805				Not Determined	1904
158806				Not Determined	1904
158807				Not Determined	1904
158808				Not Determined	1904
158809				Not Determined	1904
158810				Not Determined	1904
158811				Not Determined	1904
158812				Not Determined	1900
158813				Not Determined	1941
158814				Not Determined	1880
158815	San de Fuca School			Not Determined	1902
158835	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
159241	Fort Casey Barracks	Coupeville		Not Determined	1940, 1941
159242	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159244	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159245		Coupeville		Not Determined	1941
159247	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159248	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159314	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159315		Coupeville		Not Determined	1941
159316		Coupeville		Not Determined	1941
159317		Coupeville		Not Determined	1941
159318		Coupeville		Not Determined	1941
159319	Fort Casey Company Quarters	Coupeville		Not Determined	1941

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
159320	Fort Casey Company Quarters	Coupeville		Not Determined	1940
159321		Coupeville		Not Determined	1941
159322	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159323	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159324	Fort Casey Company Quarters	Coupeville		Not Determined	1941
159327		Coupeville		Not Determined	1921
159328	Fort Casey Quartermaster Workshop: Building 22	Coupeville		Not Determined	1921
159329	Fort Casey Guard House: Building 8	Coupeville		Not Determined	1921
159330	Fort Casey Administration Building: Building 1	Coupeville		Not Determined	1940
159331	Fort Casey Bachelor Officers Quarters	Coupeville		Not Determined	1940
159332		Coupeville		Not Determined	1904, 1906
159333		Coupeville		Not Determined	1930
159334		Coupeville		Not Determined	1900, 1962
159335	Fort Casey Munitions Bunkers	Coupeville		Not Determined	1900
159336	Fort Casey Chapel	Coupeville		Not Determined	1941
159337	Fort Casey Quarter Master and Storehouse: Building 21	Coupeville		Not Determined	1921
159338	Fort Casey Firehouse: Building 15	Coupeville		Not Determined	1904
159339	Fort Casey Commanding Officer's Quarters	Coupeville		Not Determined	1904
159340	Fort Casey Officer's Quarters	Coupeville		Not Determined	1904
159341	Fort Casey Officer's Quarters: Building 3	Coupeville		Not Determined	1904
159342		Coupeville		Not Determined	1904
159343		Coupeville		Not Determined	1904
159344		Coupeville		Not Determined	1904
159345		Coupeville		Not Determined	1904

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
159346	Fort Casey Batteries	Coupeville		Determined Eligible	1900
159347		Coupeville		Not Determined	1941
159348		Coupeville		Not Determined	1880
159352	Benson Confectionery	Coupeville		Not Determined	1916
159361	Puget Race Drug Store	Coupeville		Not Determined	1890
159363	Haller, Colonel Granville House	Coupeville	R13233-379-4060	Not Determined	1866, 1875
159364	Glenwood Hotel	Coupeville	R13233-380-3950	Not Determined	1890
159365	Tom Howell's Barbershop	Coupeville		Not Determined	1936
159368	Admiralty Head Lighthouse	Coupeville		Not Determined	1861
159369	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
184801				Not Determined	1941
184802				Not Determined	1941
184804				Not Determined	1941
184805				Not Determined	1941
184807				Not Determined	1941
184808				Not Determined	1941
184809				Not Determined	1941
184810				Not Determined	1941
184811				Not Determined	1941
184812				Not Determined	1941
184813				Not Determined	1941
184814				Not Determined	1941
184816				Not Determined	1941
184817				Not Determined	1941
184818				Not Determined	1941
184819				Not Determined	1941
184820				Not Determined	1941

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
184821				Not Determined	1941
184822				Not Determined	1921
184823				Not Determined	1921
184824				Not Determined	1921
184827				Not Determined	1904
184831				Not Determined	1941
184832				Not Determined	1921
184833				Not Determined	1904
184834				Not Determined	1904
184835				Not Determined	1904
184836				Not Determined	1904
184837				Not Determined	1904
184838				Not Determined	1904
184839				Not Determined	1904
184840				Not Determined	1904
184841				Not Determined	1900
184842				Not Determined	1941
184843				Not Determined	1880
184844	San de Fuca School			Not Determined	1902
184864	Wid-Isle Inn, Captain Whidbey Inn	Coupeville		Not Determined	1901
209249				Not Determined	1941
209250				Not Determined	1941
209252				Not Determined	1941
209253				Not Determined	1941
209255				Not Determined	1941
209256				Not Determined	1941
209257				Not Determined	1941
209258				Not Determined	1941
209259				Not Determined	1941

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
209260				Not Determined	1941
209261				Not Determined	1941
209262				Not Determined	1941
209264				Not Determined	1941
209265				Not Determined	1941
209266				Not Determined	1941
209267				Not Determined	1941
209268				Not Determined	1941
209269				Not Determined	1941
209270				Not Determined	1921
209271				Not Determined	1921
209272				Not Determined	1921
209275				Not Determined	1904
209279				Not Determined	1941
209280				Not Determined	1921
209281				Not Determined	1904
209282				Not Determined	1904
209283				Not Determined	1904
209284				Not Determined	1904
209285				Not Determined	1904
209286				Not Determined	1904
209287				Not Determined	1904
209288				Not Determined	1904
209289				Not Determined	1900
209290				Not Determined	1941
209291				Not Determined	1880
209292	San de Fuca School			Not Determined	1902
209312	Wid-Isle Inn, Captain Whidbey Inn			Not Determined	1901
623311		Oak Harbor	S8050-02-19008-0	Not Determined	1900

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
623312		Oak Harbor	R23330-102-1130	Not Determined	1900
623319		Oak Harbor	S6430-00-00013-0	Not Determined	1900
623330		Oak Harbor	R23330-037-1130	Not Determined	1900
623332		Oak Harbor	R13326-092-0250	Not Determined	1912
623333		Oak Harbor	R23330-095-2210	Not Determined	1920
623336		Oak Harbor	R13326-272-3510	Not Determined	1943
623337		Oak Harbor	R13312-167-2960	Not Determined	1952
623338		Oak Harbor	R13312-146-2130	Not Determined	1959
623339		Oak Harbor	S8050-00-10022-0	Not Determined	1961
623340		Oak Harbor	R13312-235-4300	Not Determined	1962
623342		Oak Harbor	R23320-096-0500	Not Determined	1963
623343		Oak Harbor	R13312-450-0650	Not Determined	1966
623344		Oak Harbor	R13323-074-2810	Not Determined	1966
623345		Oak Harbor	S8050-00-09017-0	Not Determined	1967
623346		Oak Harbor	R23330-484-0180	Not Determined	1967
623347		Oak Harbor	R23308-369-1170	Not Determined	1967
623349		Oak Harbor	S8050-02-18016-0	Not Determined	1968
623350		Oak Harbor	S8265-00-01001-2	Not Determined	1968
623351		Oak Harbor	R23319-386-2750	Not Determined	1968
623352		Oak Harbor	S8050-00-04013-1	Not Determined	1968
623353		Oak Harbor	S8265-02-03003-1	Not Determined	1969
623354		Oak Harbor	R23307-419-0980	Not Determined	1969
623355		Oak Harbor	R13328-363-4120	Not Determined	1969
623356		Oak Harbor	R23319-302-3820	Not Determined	1969
625481	Grennan and Cranney's General Store, Island County Courthouse	Coupeville	R13230-167-2640	Not Determined	1851
625482	Fairhaven	Coupeville	R13233-405-3070	Not Determined	1852
625486	Duvall House	Coupeville	R13233-409-2860	Not Determined	1860

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625487		Coupeville	R13108-364-4680	Not Determined	1860
625488		Coupeville	R13103-361-0370	Not Determined	1863
625490		Coupeville	R13109-149-1990	Not Determined	1870
625492		Coupeville	S8060-00-19004-1	Not Determined	1872
625494		Coupeville	S8060-00-09001-0	Not Determined	1880
625495		Coupeville	R13233-330-3880	Not Determined	1885
625496		Coupeville	S6415-00-19000-0	Not Determined	1886
625497		Coupeville	R13104-267-2240	Not Determined	1888
625498		Coupeville	R13233-054-1920	Not Determined	1888
625499		Coupeville	S6005-00-06005-0	Not Determined	1888
625503		Coupeville	R13233-008-3820	Not Determined	1890
625504		Coupeville	S8270-00-0E011-0	Not Determined	1890
625506		Coupeville	R13232-136-1940	Not Determined	1890
625507		Coupeville	R13104-487-2140	Not Determined	1890
625508		Coupeville	S6415-00-13004-0	Not Determined	1890
625514		Coupeville	R13104-098-3880	Not Determined	1890
625517		Coupeville	S6415-00-14001-0	Not Determined	1890
625525		Coupeville	S8060-00-10010-0	Not Determined	1890
625526		Coupeville	R13104-246-2030	Not Determined	1892
625527	Frain House/Burton-Engle House	Coupeville	R13104-373-3330	Not Determined	1892
625529		Coupeville	R13104-323-3820	Not Determined	1893
625532		Coupeville	S8060-00-17002-0	Not Determined	1895
625533		Coupeville	S6415-00-24007-0	Not Determined	1895
625535	Keith, Sam, Farm	Coupeville	R13103-078-2490	Not Determined	1898
625536		Coupeville	R13219-061-4150	Not Determined	1898
625537		Coupeville	R13111-248-4630	Not Determined	1900

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625538		Coupeville	S8150-00-01008-0	Not Determined	1900
625540		Coupeville	S8060-00-70002-0	Not Determined	1903
625541		Coupeville	R13104-328-2240	Not Determined	1903
625543		Coupeville	S6415-00-18007-1	Not Determined	1904
625545	Libbey, George and Annie House	Coupeville	R13230-154-2610	Not Determined	1904
625546		Coupeville	R13232-004-4950	Not Determined	1905
625547		Coupeville	S8060-00-10006-0	Not Determined	1905
625548		Coupeville	S6420-00-00006-1	Not Determined	1905
625550		Coupeville	R03225-234-4480	Not Determined	1906
625553		Coupeville	R13114-120-5030	Not Determined	1910
625554		Coupeville	R13115-273-1780	Not Determined	1910
625555	Schulke House/Steadman House, Valentine House	Coupeville	S6370-00-61005-0	Determined Eligible	1910
625556		Coupeville	R13232-173-0200	Not Determined	1910
625557		Coupeville	R13103-126-3340	Not Determined	1910
625559		Coupeville	S7070-00-06002-0	Not Determined	1910
625561		Coupeville	R13219-034-3750	Not Determined	1910
625562		Coupeville	S7070-00-07001-2	Not Determined	1910
625563		Coupeville	R13103-266-1530	Not Determined	1910
625564		Coupeville	S7070-00-03007-0	Not Determined	1911
625565	Frank Newberry House	Coupeville	R13104-471-4210	Not Determined	1912
625566		804 NE 9TH ST, COUPEVILLE, WA 98239	S6005-00-05002-0	Not Determined	1912
625567		Coupeville	R13110-338-3570	Not Determined	1912



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625568		2440 LIBBEY RD, COUPEVILLE, WA 98239	R03225-330-4800	Not Determined	1913
625569		2494 LIBBEY RD, COUPEVILLE, WA 98239	R03225-297-4170	Not Determined	1913
625570		50 SEA HOLLY LN, COUPEVILLE, WA 98239	R13232-058-1270	Not Determined	1913
625571		Coupeville	R13101-343-4020	Not Determined	1915
625572		307 NE 8TH ST, COUPEVILLE, WA 98239	S6415-00-17003-0	Not Determined	1915
625574		1996 MADRONA WAY, COUPEVILLE, WA 98239	R13232-189-0120	Not Determined	1916
625576		Coupeville	R13102-500-0500	Not Determined	1918
625577		502 NW MADRONA WAY, COUPEVILLE, WA 98239	S7070-00-10007-0	Not Determined	1918
625578		109 N SHERMAN RD, COUPEVILLE, WA 98239	R13232-140-5020	Not Determined	1918
625579		505 NE 9TH ST, COUPEVILLE, WA 98239	S6425-00-02003-0	Not Determined	1920
625580		97 N SHERMAN RD, COUPEVILLE, WA 98239	R13232-128-4970	Not Determined	1920
625582		Coupeville	R13103-410-2190	Not Determined	1920
625583		1456 BLACK RD, COUPEVILLE, WA 98239	R13233-096-1940	Not Determined	1923
625584		401 NE 6TH ST, COUPEVILLE, WA 98239	S6415-00-26001-0	Not Determined	1923
625585		Coupeville	R23107-391-0270	Not Determined	1925
625586		1637 MADRONA WAY, COUPEVILLE, WA 98239	R13232-190-4830	Not Determined	1925

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625587		901 NE 8TH ST, COUPEVILLE, WA 98239	S7215-00-02001-0	Not Determined	1925
625588	Zylstra/Sherod House	1173 ZYLSTRA RD, COUPEVILLE, WA 98239	R13219-478-3400	Not Determined	1925
625589	Private	Coupeville	R13103-290-2150	Determined Not Eligible	1924, 1925
625590		305 NW COVELAND ST, COUPEVILLE, WA 98239	S6025-00-04001-0	Not Determined	1925
625591		Coupeville	S8440-00-00025-0	Not Determined	1925
625594	Oly Allison House	1129 ZYLSTRA Rd, COUPEVILLE, WA 98239	R13219-430-3490	Not Determined	1925
625597		Coupeville	R13103-378-2330	Not Determined	1927
625600		Coupeville	R13114-333-2200	Not Determined	1928
625602		Coupeville	S6370-00-61010-0	Not Determined	1928
625603		2185 MADRONA WAY, COUPEVILLE, WA 98239	R13230-099-2780	Not Determined	1929
625604		1986 MADRONA WAY, COUPEVILLE, WA 98239	R13232-153-0280	Not Determined	1929
625606		82 S EBAY RD, COUPEVILLE, WA 98239	R13104-419-2260	Not Determined	1930
625607		2136 MADRONA WAY, COUPEVILLE, WA 98239	R13230-038-3450	Not Determined	1930
625608		Coupeville	R13113-363-4620	Not Determined	1932
625611		1108 NE LOVEJOY ST, COUPEVILLE, WA 98239	R13234-476-2500	Not Determined	1932
625612		25428 SR 20, COUPEVILLE, WA 98239	R13230-215-2340	Not Determined	1932
625613		2648 EL SOL PL, COUPEVILLE, WA 98239	R03225-355-2100	Not Determined	1932

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625614		2357 LIBBEY RD, COUPEVILLE, WA 98239	R13230-251-0570	Not Determined	1932
625615		Coupeville	R13103-357-0630	Not Determined	1932
625616		735 HOLBROOK RD, COUPEVILLE, WA 98239	S8060-00-09042-0	Not Determined	1932
625617		Coupeville	R13103-157-2690	Not Determined	1932
625620		Coupeville	S8150-00-01006-0	Not Determined	1933
625621		Coupeville	R13114-410-1250	Not Determined	1933
625623		1998 MADRONA WAY, COUPEVILLE, WA 98239	R13232-197-0060	Not Determined	1933
625624		Coupeville	R23106-508-1720	Not Determined	1933
625625		Coupeville	R23106-501-1840	Not Determined	1934
625626		Coupeville	S8150-00-01015-0	Not Determined	1935
625629		Coupeville	S8150-02-03001-2	Not Determined	1935
625631		2040 CAPTAIN WHIDBEY INN RD, COUPEVILLE, WA 98239	S7530-00-00006-3	Not Determined	1935
625632		709 NW MADRONA WAY, COUPEVILLE, WA 98239	R13233-305-1520	Not Determined	1935
625633		783 HOLBROOK RD, COUPEVILLE, WA 98239	S8060-00-06016-0	Not Determined	1935
625634		2100 MADRONA WAY, COUPEVILLE, WA 98239	S7530-00-00003-1	Not Determined	1935
625635		26611 SR 20, COUPEVILLE, WA 98239	S8060-00-47001-0	Not Determined	1935
625636		Coupeville	R23106-076-3100	Not Determined	1936
625637		903 NE 7TH ST, COUPEVILLE, WA 98239	R13234-310-1560	Not Determined	1936

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625639		2341 LIBBEY RD, COUPEVILLE, WA 98239	R13230-249-0750	Not Determined	1937
625643		507 NW SNOMONT ST, COUPEVILLE, WA 98239	S7070-00-02000-1	Not Determined	1938
625644		Coupeville	R23106-082-3080	Not Determined	1938
625645		1956 PENN COVE RD, COUPEVILLE, WA 98239	S8060-00-10013-0	Not Determined	1939
625647		1302 NE PARKER RD, COUPEVILLE, WA 98239	R13234-486-2900	Not Determined	1940
625648		403 NW COVELAND ST, COUPEVILLE, WA 98239	S6025-00-02003-0	Not Determined	1940
625649		Coupeville	S8010-00-00070-0	Not Determined	1940
625650		767 DUNBAR ST, COUPEVILLE, WA 98239	S8060-00-23010-0	Not Determined	1940
625651		1304 NE PARKER RD, COUPEVILLE, WA 98239	R13234-444-2960	Not Determined	1940
625652		Coupeville	R13234-382-4130	Not Determined	1940
625653	Private	Coupeville	S8010-00-00061-0	Determined Not Eligible	1941, 1953
625654		1940 GOOD BEACH LN, COUPEVILLE, WA 98239	R13232-118-0840	Not Determined	1941
625655		Coupeville	R13103-485-4710	Not Determined	1941
625656		1305 NE PARKER RD, COUPEVILLE, WA 98239	R13234-390-2850	Not Determined	1941
625657		Coupeville	R13115-333-2810	Not Determined	1942
625658		806 NE 8TH ST, COUPEVILLE, WA 98239	S6005-00-13001-0	Not Determined	1942
625659		807 NE LASALLE ST, COUPEVILLE, WA 98239	S6005-00-13005-0	Not Determined	1942

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625660		401 NE 4TH ST, COUPEVILLE, WA 98239	S6415-00-36001-0	Not Determined	1942
625661		205 NE 7TH ST, COUPEVILLE, WA 98239	S6415-00-23003-0	Not Determined	1942
625662		2210 KENNEDY LAGOON CT, COUPEVILLE, WA 98239	R13230-060-2580	Not Determined	1942
625663		2370 LIBBEY RD, COUPEVILLE, WA 98239	R13230-280-0400	Not Determined	1942
625664		306 NE 6TH ST, COUPEVILLE, WA 98239	S6415-00-24005-2	Not Determined	1942
625665		805 NE LASALLE ST, COUPEVILLE, WA 98239	S6005-00-13003-0	Not Determined	1942
625666		Coupeville	S8010-00-00089-0	Not Determined	1943
625667		Coupeville	S7095-01-00009-0	Not Determined	1943
625668		Coupeville	S8010-00-00022-0	Not Determined	1943
625669		164 CEMETERY RD, COUPEVILLE, WA 98239	R13105-282-4130	Not Determined	1943
625670		Coupeville	S8010-00-00006-0	Not Determined	1943
625671		2097 TWIN LAGOON LN, COUPEVILLE, WA 98239	S7530-01-0000B-0	Not Determined	1943
625672		1101 NE PARKER RD, COUPEVILLE, WA 98239	S6420-00-00004-2	Not Determined	1945
625673		407 NW COVELAND ST, COUPEVILLE, WA 98239	S6025-00-02001-0	Not Determined	1945
625674		1307 NE PARKER RD, COUPEVILLE, WA 98239	R13234-375-3030	Not Determined	1945
625675		2066 MADRONA WAY, COUPEVILLE, WA 98239	S7530-01-0000M-0	Not Determined	1945

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625676		702 NE GOULD ST, COUPEVILLE, WA 98239	S6415-00-16005-0	Not Determined	1945
625677		301 NE FRONT ST, COUPEVILLE, WA 98239	S6415-00-07001-0	Not Determined	1945
625678		201 NE 4TH ST, COUPEVILLE, WA 98239	S6415-00-38001-0	Not Determined	1945
625679		Coupeville	S8010-00-00084-0	Not Determined	1945
625680		905 NE KINNEY ST, COUPEVILLE, WA 98239	S6415-00-07008-1	Not Determined	1945
625681		437 HILL VALLEY DR, COUPEVILLE, WA 98239	S7150-00-00011-0	Not Determined	1945
625682		302 NE 4TH ST, COUPEVILLE, WA 98239	S6415-00-34005-2	Not Determined	1946
625683		404 NE CLAPP ST, COUPEVILLE, WA 98239	S6415-00-34003-0	Not Determined	1946
625684		Coupeville	S8010-00-00064-0	Not Determined	1946
625685		Coupeville	S7365-00-00004-0	Not Determined	1946
625686		508 VINE ST, COUPEVILLE, WA 98239	R13233-276-1160	Not Determined	1946
625687		402 NE CLAPP ST, COUPEVILLE, WA 98239	S6415-00-34005-1	Not Determined	1946
625688		Coupeville	S8150-00-01009-0	Not Determined	1947
625689		Coupeville	S8150-00-01010-0	Not Determined	1947
625690		Coupeville	S8010-00-00018-0	Not Determined	1947
625691		201 NE 9TH ST, COUPEVILLE, WA 98239	S6415-00-13001-0	Not Determined	1947
625692		802 NE LEACH ST, COUPEVILLE, WA 98239	S6005-00-13004-0	Not Determined	1947
625693		1207 NE PARKER RD, COUPEVILLE, WA 98239	R13234-390-2760	Not Determined	1947

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625694		Coupeville	R13103-251-2330	Not Determined	1947
625695		205 NE 4TH ST, COUPEVILLE, WA 98239	S6415-00-38004-0	Not Determined	1947
625696		2396 LIBBEY RD, COUPEVILLE, WA 98239	R13230-280-0050	Not Determined	1947
625697		606 NE GOULD ST, COUPEVILLE, WA 98239	S6415-00-25002-0	Not Determined	1947
625698		Coupeville	S8010-00-00039-0	Not Determined	1947
625699		301 NE 4TH ST, COUPEVILLE, WA 98239	S6415-00-37001-0	Not Determined	1947
625702		804 NW BROADWAY ST, COUPEVILLE, WA 98239	S7070-00-10004-0	Not Determined	1948
625703		108 NW BROADWAY ST, COUPEVILLE, WA 98239	R13233-156-2300	Not Determined	1948
625704		Coupeville	S8010-00-00085-0	Not Determined	1948
625705		Coupeville	S8010-00-00001-2	Not Determined	1948
625706		Coupeville	R13103-231-2300	Not Determined	1948
625707		305 NE 6TH ST, COUPEVILLE, WA 98239	S6415-00-27003-0	Not Determined	1948
625708		Coupeville	R13110-175-4500	Not Determined	1949
625709		Coupeville	R23117-442-0700	Not Determined	1949
625710		Coupeville	S8010-00-00015-2	Not Determined	1949
625711		2126 MADRONA WAY, COUPEVILLE, WA 98239	R13230-015-3660	Not Determined	1949
625712		26581 SR 20, COUPEVILLE, WA 98239	S8060-00-48002-0	Not Determined	1949
625713		2229 MADRONA WAY, COUPEVILLE, WA 98239	R13230-098-2310	Not Determined	1949
625714		1630 WIND DANCER PL, COUPEVILLE, WA 98239	R13232-101-4900	Not Determined	1949

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625715		Coupeville	S8150-00-01014-0	Not Determined	1950
625716		Coupeville	S7095-01-00015-0	Not Determined	1950
625717		25990 SR 20, COUPEVILLE, WA 98277	R13230-320-4740	Not Determined	1950
625718	Private	Coupeville	S8010-00-00062-0	Determined Not Eligible	1941, 1950
625719		Coupeville	R23106-090-3040	Not Determined	1950
625720		811 NE 9TH ST, COUPEVILLE, WA 98239	S6005-00-13008-0	Not Determined	1950
625721		66 SEA HOLLY LN, COUPEVILLE, WA 98239	R13232-091-1340	Not Determined	1950
625722		Coupeville	S8010-00-00063-0	Not Determined	1950
625723		Coupeville	R13103-200-2670	Not Determined	1950
625724		724 WALL ST, COUPEVILLE, WA 98239	S8060-00-09032-0	Not Determined	1950
625725		Coupeville	S7490-00-00003-0	Not Determined	1950
625726		301 NE 8TH ST, COUPEVILLE, WA 98239	S6415-00-17001-0	Not Determined	1950
625727		Coupeville	S8440-00-00014-0	Not Determined	1950
625728		162 CEMETERY RD, COUPEVILLE, WA 98239	R13105-322-4370	Not Determined	1950
625729		1008 NE LEACH ST, COUPEVILLE, WA 98239	R13234-420-1300	Not Determined	1950
625730	Private	Coupeville	R13103-270-2450	Determined Not Eligible	1950
625731		Coupeville	R23107-459-3200	Not Determined	1950
625732		2107 MADRONA WAY, COUPEVILLE, WA 98239	R13231-459-3340	Not Determined	1950
625733		Coupeville	R13103-245-1530	Not Determined	1950
625734		Coupeville	R13113-212-0210	Not Determined	1951



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625735		Coupeville	R13114-204-3780	Not Determined	1951
625736		701 NE HALLER ST, COUPEVILLE, WA 98239	S6415-00-18007-2	Not Determined	1951
625737		Coupeville	S7365-00-00006-0	Not Determined	1951
625738		Coupeville	S7365-00-00005-0	Not Determined	1951
625739		2046 CAPTAIN WHIDBEY INN RD, COUPEVILLE, WA 98239	S7530-00-00006-2	Not Determined	1951
625740		Coupeville	S8150-02-03001-1	Not Determined	1952
625741		407 NE HALLER ST, COUPEVILLE, WA 98239	S6415-00-33001-0	Not Determined	1952
625742		708 N MAIN ST, COUPEVILLE, WA 98239	R13233-319-3870	Not Determined	1952
625744		Coupeville	R13103-128-2840	Not Determined	1952
625745		Coupeville	S8010-00-00093-0	Not Determined	1952
625746	Terry Menges	1041 ZYLSTRA, COUPEVILLE, WA 98239	R13219-317-3400	Determined Not Eligible	1952
625747		2123 MADRONA WAY, COUPEVILLE, WA 98239	R13230-003-3500	Not Determined	1952
625748		Coupeville	R13103-045-1700	Not Determined	1952
625749		106 N SHERMAN RD, COUPEVILLE, WA 98239	R13233-170-0300	Not Determined	1952
625750		Coupeville	S7095-01-00010-0	Not Determined	1952
625751		Coupeville	S8010-00-00096-0	Not Determined	1952
625752		Coupeville	S8010-00-00065-0	Not Determined	1952
625753		Coupeville	R13111-060-0100	Not Determined	1953
625754	Private	Coupeville	S7400-00-01026-0	Determined Not Eligible	1953
625755		201 NE 7TH ST, COUPEVILLE, WA 98239	S6415-00-23001-0	Not Determined	1953

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625756		Coupeville	S8010-00-00004-0	Not Determined	1953
625757		705 NE LEACH ST, COUPEVILLE, WA 98239	S7215-00-02002-1	Not Determined	1953
625758		Coupeville	S8010-00-00015-1	Not Determined	1953
625759		704 NE OTIS ST, COUPEVILLE, WA 98239	R13234-322-0400	Not Determined	1953
625760		Coupeville	S8010-00-00016-1	Not Determined	1953
625761		Coupeville	R13103-274-1870	Not Determined	1953
625763		Coupeville	R13115-345-4930	Not Determined	1954
625764		Coupeville	S7400-00-04002-0	Not Determined	1954
625765		Coupeville	S7400-00-03001-0	Not Determined	1954
625766		Coupeville	S7400-00-01019-0	Not Determined	1954
625767		2076 TWIN LAGOON LN, COUPEVILLE, WA 98239	S7530-00-0B009-0	Not Determined	1954
625768		Coupeville	S8010-00-00019-0	Not Determined	1954
625769		1994 MADRONA WAY, COUPEVILLE, WA 98239	R13232-181-0160	Not Determined	1954
625770		Coupeville	S7400-00-01022-0	Not Determined	1954
625771		2065 TWIN LAGOON LN, COUPEVILLE, WA 98239	S7530-01-0000I-0	Not Determined	1954
625772		2079 TWIN LAGOON LN, COUPEVILLE, WA 98239	S7530-01-0000E-0	Not Determined	1954
625773		1105 NE MOORE PL, COUPEVILLE, WA 98239	S7205-00-00006-0	Not Determined	1954
625774		206 NE 7TH ST, COUPEVILLE, WA 98239	S6415-00-18006-0	Not Determined	1954
625775		301 NE HALLER ST, COUPEVILLE, WA 98239	S6415-00-38008-0	Not Determined	1954
625777		Coupeville	R13115-269-1350	Not Determined	1955
625778		Coupeville	R13103-375-1830	Not Determined	1955

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625779		2273 MADRONA WAY, COUPEVILLE, WA 98239	R13230-198-2660	Not Determined	1955
625780		206 NE 4TH ST, COUPEVILLE, WA 98239	S6415-00-33005-0	Not Determined	1955
625781		Coupeville	S7490-00-00025-0	Not Determined	1955
625782		2050 MADRONA WAY, COUPEVILLE, WA 98239	S7530-00-00011-0	Not Determined	1955
625783		Coupeville	S7400-00-01008-0	Not Determined	1955
625787		Coupeville	R23117-435-1680	Not Determined	1956
625788		Coupeville	S7400-00-01015-0	Not Determined	1956
625789		Coupeville	S7400-00-01012-0	Not Determined	1956
625790		702 NE KINNEY ST, COUPEVILLE, WA 98239	S6415-00-18005-0	Not Determined	1956
625791		207 NW BROADWAY ST, COUPEVILLE, WA 98239	R13233-194-2500	Not Determined	1956
625792		401 NW COVELAND ST, COUPEVILLE, WA 98239	S6025-00-02004-0	Not Determined	1956
625793		2072 TWIN LAGOON LN, COUPEVILLE, WA 98239	S7530-00-0B010-0	Not Determined	1956
625794		Coupeville	S7400-00-03007-0	Not Determined	1956
625795		801 NE OTIS ST, COUPEVILLE, WA 98239	S8270-00-0F001-0	Not Determined	1956
625796		Coupeville	S7400-00-01037-0	Not Determined	1956
625797		2108 MADRONA WAY, COUPEVILLE, WA 98239	S7530-00-00001-0	Not Determined	1956
625798		704 NE PERKINS ST, COUPEVILLE, WA 98239	S8270-00-0F002-2	Not Determined	1956
625799		Coupeville	S7400-00-01027-0	Not Determined	1956
625800		1673 MADRONA WAY, COUPEVILLE, WA 98239	R13232-174-4330	Not Determined	1956

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625801		Coupeville	R13113-422-4920	Not Determined	1957
625803		Coupeville	R23106-029-3200	Not Determined	1957
625804		Coupeville	R23107-450-3210	Not Determined	1957
625805		26535 SR 20, COUPEVILLE, WA 98239	S8060-00-48001-0	Not Determined	1957
625806		707 NE 6TH ST, COUPEVILLE, WA 98239	S8270-00-0E004-0	Not Determined	1957
625807		703 NE 6TH ST, COUPEVILLE, WA 98239	S8270-00-0E002-0	Not Determined	1957
625808		Coupeville	S7400-00-05004-0	Not Determined	1957
625809		705 NE 6TH ST, COUPEVILLE, WA 98239	S8270-00-0E003-0	Not Determined	1957
625810		Coupeville	S7400-00-03025-0	Not Determined	1957
625811		Coupeville	S7400-00-01031-0	Not Determined	1957
625812		Coupeville	S7400-00-02003-0	Not Determined	1957
625813		704 NE 6TH ST, COUPEVILLE, WA 98239	S8270-00-0F007-2	Not Determined	1957
625814		639 NE OTIS ST, COUPEVILLE, WA 98239	S8270-00-0F004-2	Not Determined	1957
625815		701 NE 6TH ST, COUPEVILLE, WA 98239	S8270-00-0E001-0	Not Determined	1957
625816		Coupeville	S7400-00-03006-0	Not Determined	1957
625817		2411 LIBBEY RD, COUPEVILLE, WA 98239	R03225-245-5130	Not Determined	1957
625822		Coupeville	S8300-00-01024-0	Not Determined	1958
625823		Coupeville	S7400-00-02015-0	Not Determined	1958
625824		401 NE FRONT ST, COUPEVILLE, WA 98239	S6415-00-06001-0	Not Determined	1958
625825	Residence	706 NE 6TH ST, COUPEVILLE, WA 98239	S8270-00-0F007-1	Not Determined	1958

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625826		Coupeville	S7400-00-02004-0	Not Determined	1958
625827		Coupeville	S7490-00-00026-0	Not Determined	1958
625828		703 NE OTIS ST, COUPEVILLE, WA 98239	S8270-00-0F002-1	Not Determined	1958
625829		121 VINE ST, COUPEVILLE, WA 98239	R13233-190-1000	Not Determined	1958
625830		801 NE 6TH ST, COUPEVILLE, WA 98239	S8270-00-0E005-0	Not Determined	1958
625831		Coupeville	S7400-00-03008-0	Not Determined	1958
625832		Coupeville	R13103-120-2950	Not Determined	1958
625833		404 NE KINNEY ST, COUPEVILLE, WA 98239	S6415-00-33003-1	Not Determined	1958
625834		Coupeville	S7400-00-03003-0	Not Determined	1958
625835		Coupeville	S7400-00-02014-0	Not Determined	1958
625836		1977 PENN COVE RD, COUPEVILLE, WA 98239	S8060-00-0E016-0	Not Determined	1958
625837		Coupeville	R13235-326-0200	Not Determined	1958
625838		Coupeville	R23107-523-3320	Not Determined	1958
625839		Coupeville	S7400-00-01005-0	Not Determined	1958
625840		Coupeville	S8270-00-0F005-2	Not Determined	1958
625841		Coupeville	S7400-00-01011-0	Not Determined	1958
625842		Coupeville	R13233-182-4600	Not Determined	1958
625843		Coupeville	R13230-345-0440	Not Determined	1958
625844		Coupeville	S8270-00-0F004-1	Not Determined	1958
625845		Coupeville	S7400-00-03002-0	Not Determined	1958
625846		Coupeville	S8270-00-0F003-0	Not Determined	1958
625847		Coupeville	S8270-00-0F005-1	Not Determined	1958
625848		Coupeville	R13233-094-1050	Not Determined	1958
625849		Coupeville	R13104-109-4100	Not Determined	1958

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625850		Coupeville	R13110-222-4560	Not Determined	1959
625851		Coupeville	S8300-00-01007-0	Not Determined	1959
625854		Coupeville	S8270-00-0E007-0	Not Determined	1959
625855		Coupeville	S8270-00-0A010-0	Not Determined	1959
625856		Coupeville	R13103-110-3240	Not Determined	1959
625857		Coupeville	S8270-00-0G006-0	Not Determined	1959
625858		Coupeville	S8270-00-0G007-0	Not Determined	1959
625859	Coupeville Courier Printing Office	Coupeville	S6415-00-07006-0	Not Determined	1959
625860		Coupeville	R03225-246-3560	Not Determined	1959
625861		Coupeville	S8270-00-0G005-0	Not Determined	1959
625862		Coupeville	R13104-481-2280	Not Determined	1959
625863		Coupeville	S8270-00-0A009-0	Not Determined	1959
625864		Coupeville	S8270-00-0E006-0	Not Determined	1959
625865	Private	Coupeville	R13103-150-3420	Determined Not Eligible	1959
625866		Coupeville	S6415-00-07003-0	Not Determined	1959
625867		Coupeville	S7350-00-0A006-0	Not Determined	1959
625868		Coupeville	S8270-00-0A008-2	Not Determined	1959
625869		Coupeville	S7530-00-0B002-0	Not Determined	1959
625870		Coupeville	S6415-00-06008-0	Not Determined	1959
625871		Coupeville	S6415-00-06007-0	Not Determined	1959
625872		Coupeville	S8300-00-02021-0	Not Determined	1960
625874		Coupeville	R13109-005-3830	Not Determined	1960
625875		Coupeville	R23107-080-5240	Not Determined	1960
625876		Coupeville	S8300-00-01027-0	Not Determined	1960

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625877		Coupeville	R13116-507-3830	Not Determined	1960
625878		Coupeville	S8010-00-00037-0	Not Determined	1960
625879		Coupeville	R13105-454-5070	Not Determined	1960
625880		Coupeville	S8270-00-0A013-1	Not Determined	1960
625881		Coupeville	S8270-00-0A007-0	Not Determined	1960
625882		Coupeville	S6415-00-16001-0	Not Determined	1960
625883		Coupeville	R13105-493-4950	Not Determined	1960
625884		Coupeville	S8270-00-0E009-1	Not Determined	1960
625885		Coupeville	S8270-00-0A012-0	Not Determined	1960
625886		Coupeville	R13234-442-4120	Not Determined	1960
625887		Coupeville	S8270-00-0A011-0	Not Determined	1960
625888		Coupeville	R13105-251-3790	Not Determined	1960
625889		Coupeville	S8010-00-00066-0	Not Determined	1960
625890		Coupeville	S8270-00-0A008-1	Not Determined	1960
625891		Coupeville	S6415-00-39001-0	Not Determined	1960
625892		Coupeville	S6415-00-33003-2	Not Determined	1960
625893		Coupeville	S8010-00-00083-0	Not Determined	1960
625894		Coupeville	S7400-00-01010-0	Not Determined	1960
625895		Coupeville	S8270-00-0E008-0	Not Determined	1960
625896		Coupeville	S7400-00-02008-0	Not Determined	1960
625897	Private	Coupeville	R13103-183-3330	Determined Not Eligible	1960
625898		Coupeville	R13232-126-2790	Not Determined	1960

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625899		Coupeville	R13232-191-5020	Not Determined	1960
625900		Coupeville	S8300-00-01017-0	Not Determined	1961
625904		Coupeville	S8300-00-01037-0	Not Determined	1961
625905		Coupeville	S8300-00-01021-0	Not Determined	1961
625909		Coupeville	S7490-00-00027-0	Not Determined	1961
625910		Coupeville	S7095-01-00008-0	Not Determined	1961
625911		Coupeville	S7400-00-01043-0	Not Determined	1961
625912		Coupeville	S7400-00-01045-0	Not Determined	1961
625913		Coupeville	S8010-00-00001-1	Not Determined	1961
625916		Coupeville	S8300-00-01026-0	Not Determined	1962
625917		Coupeville	S6370-00-58010-0	Not Determined	1962
625919		Coupeville	S8150-00-01004-0	Not Determined	1962
625920		Coupeville	S7400-00-02002-0	Not Determined	1962
625921		Coupeville	S7400-00-01016-0	Not Determined	1962
625923		Coupeville	S7095-01-00006-0	Not Determined	1962
625924		Coupeville	S7350-00-0A022-0	Not Determined	1962
625925		Coupeville	S8150-00-01003-0	Not Determined	1963
625928		Coupeville	S8150-02-03021-0	Not Determined	1963
625931		Coupeville	S8150-00-01005-0	Not Determined	1963
625933		Coupeville	S8440-00-00017-0	Not Determined	1963
625934	Patricia Powell	Coupeville	R13233-188-2280	Determined Not Eligible	1963
625935		Coupeville	R13233-182-4680	Not Determined	1963
625936		Coupeville	S7400-00-05012-0	Not Determined	1963
625937		Coupeville	R13103-049-5150	Not Determined	1963
625938		Coupeville	R03225-413-4300	Not Determined	1963
625939		Coupeville	S7530-00-0000A-1	Not Determined	1963
625940		Coupeville	R13232-162-0230	Not Determined	1963



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625941		Coupeville	R13232-133-2400	Not Determined	1963
625942		Coupeville	S8440-00-00028-0	Not Determined	1963
625945		Coupeville	S6010-00-01016-0	Not Determined	1964
625946		Coupeville	S6010-00-04028-0	Not Determined	1964
625947		Coupeville	S6010-00-01028-0	Not Determined	1964
625948		Coupeville	S8150-00-02005-0	Not Determined	1964
625949		Coupeville	S6010-00-04019-0	Not Determined	1964
625950		Coupeville	S6010-00-01025-0	Not Determined	1964
625951		Coupeville	S8150-02-03011-0	Not Determined	1964
625952		Coupeville	S8150-00-02004-0	Not Determined	1964
625953		Coupeville	S6010-00-03029-0	Not Determined	1964
625954		Coupeville	S6010-00-02025-0	Not Determined	1964
625956		Coupeville	S6010-00-05016-0	Not Determined	1964
625957		Coupeville	S8150-02-03008-0	Not Determined	1964
625958		Coupeville	S6370-00-61008-0	Not Determined	1964
625959		Coupeville	S6010-00-01010-0	Not Determined	1964
625960		Coupeville	S6010-00-01015-0	Not Determined	1964
625961		Coupeville	S8150-00-01012-0	Not Determined	1964
625962		Coupeville	S8440-00-00032-0	Not Determined	1964
625963		Coupeville	S8440-00-00016-0	Not Determined	1964
625964		Coupeville	S8010-00-00082-0	Not Determined	1964
625965		Coupeville	S6005-00-14001-2	Not Determined	1964
625966		Coupeville	S7490-00-00010-0	Not Determined	1964
625967		Coupeville	R13103-115-4620	Not Determined	1964
625968		Coupeville	R13230-043-3150	Not Determined	1964
625969		Coupeville	S7350-00-0A023-0	Not Determined	1964
625970		Coupeville	S7400-00-05001-1	Not Determined	1964
625973		Coupeville	S8150-02-04002-0	Not Determined	1965
625978		Coupeville	S8300-00-01004-0	Not Determined	1965

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
625979		Coupeville	S8150-02-03002-0	Not Determined	1965
625980		Coupeville	S6010-00-02005-0	Not Determined	1965
625981		Coupeville	S7530-00-00009-0	Not Determined	1965
625982		Coupeville	S7530-00-0000A-3	Not Determined	1965
625983		Coupeville	S8010-00-00036-0	Not Determined	1965
625984		Coupeville	S8440-00-00007-0	Not Determined	1965
625985		Coupeville	S7365-00-00007-0	Not Determined	1965
625986		Coupeville	R13104-496-3880	Not Determined	1965
625987		Coupeville	S8440-00-00030-0	Not Determined	1965
625988		Coupeville	R13103-270-2050	Not Determined	1965
625989		Coupeville	S7450-00-00013-0	Not Determined	1965
625990		Coupeville	R13234-381-4590	Not Determined	1965
625991		Coupeville	S8010-00-00005-0	Not Determined	1965
625992		Coupeville	R23106-022-3980	Not Determined	1965
625993		Coupeville	S6010-02-01004-0	Not Determined	1966
625999		Coupeville	S8150-02-03013-0	Not Determined	1966
626001		Coupeville	S8300-00-01003-0	Not Determined	1966
626003		Coupeville	R13114-116-3680	Not Determined	1966
626004		Coupeville	S8150-00-02007-0	Not Determined	1966
626005		Coupeville	S6010-00-04017-0	Not Determined	1966
626007		Coupeville	S7450-00-00001-0	Not Determined	1966
626008		Coupeville	R13234-317-5000	Not Determined	1966
626009		Coupeville	S8010-00-00069-0	Not Determined	1966
626010		Coupeville	R13103-407-4060	Not Determined	1966
626011		Coupeville	S7400-00-01007-0	Not Determined	1966
626012		Coupeville	R13103-105-2830	Not Determined	1966
626013		Coupeville	S8010-00-00068-0	Not Determined	1966
626014		Coupeville	R23106-010-3450	Not Determined	1966

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
626015		Coupeville	S7530-00-00005-0	Not Determined	1966
626016		Coupeville	S6010-03-0000D-2	Not Determined	1967
626018		Coupeville	S6010-06-00065-0	Not Determined	1967
626020		Coupeville	S6010-00-01005-0	Not Determined	1967
626024		Coupeville	S6010-00-01021-0	Not Determined	1967
626026		Coupeville	S7400-00-01006-0	Not Determined	1967
626027		Coupeville	S7530-00-0B011-0	Not Determined	1967
626028		Coupeville	R13234-333-4800	Not Determined	1967
626029		Coupeville	R13219-237-3790	Not Determined	1967
626030		Coupeville	R13234-460-2740	Not Determined	1967
626031		Coupeville	S7350-00-0A016-0	Not Determined	1967
626032		Coupeville	R13233-354-1910	Not Determined	1967
626033		Coupeville	S7400-00-01001-0	Not Determined	1967
626034		Coupeville	S7070-00-08001-0	Not Determined	1967
626035		Coupeville	S6010-00-01042-0	Not Determined	1968
626036		Coupeville	S6010-03-00171-0	Not Determined	1968
626037		Coupeville	S6010-00-02024-0	Not Determined	1968
626038		Coupeville	S6010-00-04033-0	Not Determined	1968
626039		Coupeville	S8300-00-01006-0	Not Determined	1968
626040		Coupeville	S6010-00-01023-0	Not Determined	1968
626042		Coupeville	S6010-06-00073-0	Not Determined	1968
626043		Coupeville	S6010-05-00092-0	Not Determined	1968
626044		Coupeville	S6010-00-01004-0	Not Determined	1968
626045		Coupeville	S6010-00-01041-0	Not Determined	1968
626046		Coupeville	S8300-00-01029-0	Not Determined	1968
626047		Coupeville	S6010-03-00027-0	Not Determined	1968
626050		Coupeville	S6010-03-00147-0	Not Determined	1968

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
626051		Coupeville	S8300-00-01009-0	Not Determined	1968
626053		Coupeville	S8150-02-03020-0	Not Determined	1968
626054		Coupeville	S6010-00-03013-0	Not Determined	1968
626055		Coupeville	S6010-00-02030-0	Not Determined	1968
626056		Coupeville	S6010-02-04009-0	Not Determined	1968
626057		Coupeville	S6010-00-03021-0	Not Determined	1968
626059		Coupeville	S6010-00-04039-0	Not Determined	1968
626060		Coupeville	S8150-00-02011-0	Not Determined	1968
626061		Coupeville	R13109-162-0730	Not Determined	1968
626062		Coupeville	S7450-00-00002-0	Not Determined	1968
626063		Coupeville	S7760-00-01003-0	Not Determined	1968
626064		Coupeville	R13101-315-0190	Not Determined	1968
626065		Coupeville	S7150-00-00004-0	Not Determined	1968
626066		Coupeville	S6310-00-00009-0	Not Determined	1968
626067		Coupeville	R13103-457-1910	Not Determined	1968
626068		Coupeville	S8010-00-00091-0	Not Determined	1968
626069		Coupeville	S8160-00-19002-0	Not Determined	1968
626070		Coupeville	S8010-00-00023-0	Not Determined	1968
626071		Coupeville	R13235-440-0630	Not Determined	1968
626072		Coupeville	R13219-363-3640	Not Determined	1968
626073		Coupeville	R13233-320-1350	Not Determined	1968
626074		Coupeville	S7365-00-00003-0	Not Determined	1968
626075		Coupeville	R13110-403-2890	Not Determined	1968
626076		Coupeville	S6415-00-33007-0	Not Determined	1968
626077		Coupeville	S7490-00-00029-0	Not Determined	1968
626078		Coupeville	S7365-00-00002-0	Not Determined	1968

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
626079		Coupeville	S6010-04-00019-0	Not Determined	1969
626080		Coupeville	R13109-141-0860	Not Determined	1969
626081		Coupeville	S6010-03-00038-0	Not Determined	1969
626082		Coupeville	S8300-00-01032-0	Not Determined	1969
626085		Coupeville	S6010-00-01013-0	Not Determined	1969
626087		Coupeville	S6010-00-01035-0	Not Determined	1969
626088		Coupeville	S6010-00-03019-0	Not Determined	1969
626090		Coupeville	S6010-00-04004-0	Not Determined	1969
626091		Coupeville	S6010-00-03015-0	Not Determined	1969
626092		Coupeville	S6010-06-00087-0	Not Determined	1969
626093		Coupeville	S6010-00-02031-0	Not Determined	1969
626095		Coupeville	S6010-05-00016-0	Not Determined	1969
626097		Coupeville	S6010-00-02041-0	Not Determined	1969
626098		Coupeville	S7400-00-01024-0	Not Determined	1969
626099		Coupeville	S8160-00-03006-0	Not Determined	1969
626100		Coupeville	S8160-00-13009-0	Not Determined	1969
626101		Coupeville	S8440-00-00004-0	Not Determined	1969
626102		Coupeville	S7760-00-03004-0	Not Determined	1969
626103		Coupeville	S7400-00-04005-0	Not Determined	1969
627599		Oak Harbor	R13302-247-5150	Not Determined	1895
627600		Oak Harbor	R13336-465-2400	Not Determined	1899
627601		Oak Harbor	R13221-061-3980	Not Determined	1899
627603		Oak Harbor	S7650-00-00001-0	Not Determined	1900
627604		Oak Harbor	R23330-157-1110	Not Determined	1900
627608	Private	Oak Harbor	R13436-479-1170	Not Determined	1910, 1913
627613		Oak Harbor	R13301-230-1710	Not Determined	1906
627616		Oak Harbor	R23330-375-4690	Not Determined	1907

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
627618		Oak Harbor	R23306-269-2380	Not Determined	1908
627620		Oak Harbor	R13327-497-1820	Not Determined	1908
627621		Oak Harbor	S8420-00-00001-2	Not Determined	1909
627626		Oak Harbor	R23331-420-4160	Not Determined	1910
627627		Oak Harbor	R13312-099-3180	Not Determined	1910
627628		Oak Harbor	R13435-083-4650	Not Determined	1910
627632		Oak Harbor	R13327-521-3910	Not Determined	1912
627634		Oak Harbor	R13312-168-1600	Not Determined	1912
627635		Oak Harbor	R13303-121-4290	Not Determined	1912
627636		Oak Harbor	R13221-046-1290	Not Determined	1912
627638		Oak Harbor	R13222-114-3380	Not Determined	1912
627640		Oak Harbor	S7740-00-00032-0	Not Determined	1913
627643		Oak Harbor	R13436-463-0820	Not Determined	1913
627645		Oak Harbor	R13336-443-1500	Not Determined	1913
627646		Oak Harbor	R23320-295-0400	Not Determined	1913
627650		Oak Harbor	R23330-049-5120	Not Determined	1914
627660		Oak Harbor	S7295-00-00025-0	Not Determined	1915
627661		Oak Harbor	R23319-445-5110	Not Determined	1915
627662		Oak Harbor	R13311-034-5090	Not Determined	1915
627665		Oak Harbor	R23330-239-4990	Not Determined	1917
627670		Oak Harbor	R13326-039-0630	Not Determined	1918
627674		Oak Harbor	R23329-484-0390	Not Determined	1918
627675		Oak Harbor	R23318-329-2390	Not Determined	1918
627682		Oak Harbor	R13312-175-4400	Not Determined	1920
627689		Oak Harbor	R13311-503-1120	Not Determined	1922
627691		Oak Harbor	R13303-141-5200	Not Determined	1922
627695		Oak Harbor	R13222-114-3760	Not Determined	1922
627698		Oak Harbor	R13311-067-4290	Not Determined	1923

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
627699		Oak Harbor	R23318-298-1470	Not Determined	1923
627707		Oak Harbor	R23317-431-3670	Not Determined	1923
627708		Oak Harbor	R13436-480-1340	Not Determined	1923
627709		Oak Harbor	R13435-150-3530	Not Determined	1924
627710		Oak Harbor	R13223-378-0540	Not Determined	1924
627711		Oak Harbor	R23306-462-0260	Not Determined	1924
627712		Oak Harbor	R23307-191-3230	Not Determined	1925
627714		Oak Harbor	R13335-487-0700	Not Determined	1925
627716		Oak Harbor	R13436-106-0110	Not Determined	1925
627720		Oak Harbor	R13312-146-1110	Not Determined	1925
627721		Oak Harbor	R13312-345-5100	Not Determined	1925
627723		Oak Harbor	R13221-015-2700	Not Determined	1925
627734		Oak Harbor	R23318-350-4160	Not Determined	1925
627736		Oak Harbor	R23318-402-5080	Not Determined	1927
627742		Oak Harbor	R13324-242-2140	Not Determined	1928
627743		Oak Harbor	R13324-069-2030	Not Determined	1928
627745		Oak Harbor	R23318-186-0260	Not Determined	1928
627748		Oak Harbor	R13301-282-3520	Not Determined	1928
627751		Oak Harbor	R23308-268-0780	Not Determined	1928
627756		Oak Harbor	R13313-299-0810	Not Determined	1928
627758		Oak Harbor	R13312-243-0490	Not Determined	1929
627759		Oak Harbor	R23330-324-4240	Not Determined	1929
627760		Oak Harbor	R13311-028-1950	Not Determined	1929
627762		Oak Harbor	R13311-495-4600	Not Determined	1930
627763		Oak Harbor	R13221-471-5100	Not Determined	1930
627765		Oak Harbor	R13327-293-1200	Not Determined	1930
627771	Private	Oak Harbor	R13303-210-4850	Determined Not Eligible	1931

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
627773		Oak Harbor	R23308-429-0900	Not Determined	1932
627778		Oak Harbor	R23318-162-0360	Not Determined	1933
627779		Oak Harbor	R13323-046-2810	Not Determined	1933
627780		Oak Harbor	R13324-020-3510	Not Determined	1933
627784		Oak Harbor	R13302-040-4840	Not Determined	1933
627788		Oak Harbor	R13436-440-1590	Not Determined	1935
627789		Oak Harbor	R23320-266-0390	Not Determined	1935
627791		Oak Harbor	R13311-288-3200	Not Determined	1935
627796		Oak Harbor	R13311-305-2050	Not Determined	1936
627800		Oak Harbor	R13222-490-4950	Not Determined	1936
627802		Oak Harbor	R13311-309-2840	Not Determined	1936
627804		Oak Harbor	S8050-00-02012-0	Not Determined	1937
627805		Oak Harbor	R13222-060-2620	Not Determined	1937
627806		Oak Harbor	R13220-188-3000	Not Determined	1937
627807		Oak Harbor	R23330-314-4920	Not Determined	1937
627808		Oak Harbor	R23320-469-3160	Not Determined	1937
627813		Oak Harbor	R23330-350-4900	Not Determined	1938
627814		Oak Harbor	S8420-00-00001-1	Not Determined	1938
627820		Oak Harbor	R13312-064-0060	Not Determined	1939
627822		Oak Harbor	S8060-00-73003-4	Not Determined	1939
627832		Oak Harbor	S7575-00-03016-0	Not Determined	1940
627836		Oak Harbor	R13302-429-4610	Not Determined	1940
627840		Oak Harbor	R13313-190-2060	Not Determined	1940
627849		Oak Harbor	R23317-450-2020	Not Determined	1941
627853		Oak Harbor	R13301-033-1640	Not Determined	1941
627854		Oak Harbor	R23306-182-0340	Not Determined	1942
627864		Oak Harbor	R13303-331-4980	Not Determined	1942
627867		Oak Harbor	R13326-371-0880	Not Determined	1942



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
627869		Oak Harbor	R23318-304-2250	Not Determined	1943
627870		Oak Harbor	R13302-282-1150	Not Determined	1943
627871		Oak Harbor	S6525-00-0300B-0	Not Determined	1943
627872		Oak Harbor	S7740-00-00033-0	Not Determined	1943
627873		Oak Harbor	S8050-00-12005-0	Not Determined	1943
627874		Oak Harbor	S6525-00-0300C-0	Not Determined	1943
627878		Oak Harbor	R13326-086-0670	Not Determined	1943
627879		Oak Harbor	S6525-00-02004-0	Not Determined	1943
627880		Oak Harbor	R23318-304-2370	Not Determined	1943
627881		Oak Harbor	R13326-120-0040	Not Determined	1943
627882		Oak Harbor	R23318-300-1820	Not Determined	1943
627883		Oak Harbor	S6525-00-02002-0	Not Determined	1943
627885		Oak Harbor	R23318-255-2570	Not Determined	1943
627886		Oak Harbor	R13301-298-0460	Not Determined	1943
627887		Oak Harbor	R13303-092-3820	Not Determined	1943
627888		Oak Harbor	R13312-496-0340	Not Determined	1943
627889		Oak Harbor	R23318-305-2500	Not Determined	1943
627890		Oak Harbor	S6525-00-02003-0	Not Determined	1943
627892		Oak Harbor	S6525-00-02001-0	Not Determined	1943
627893		Oak Harbor	S7055-00-00009-0	Not Determined	1943
627899		Oak Harbor	R23330-302-4720	Not Determined	1944
627902		Oak Harbor	S8060-00-35002-0	Not Determined	1945
627908		Oak Harbor	R23320-517-0300	Not Determined	1945
627911		Oak Harbor	R13302-121-4750	Not Determined	1945
627923		Oak Harbor	R23329-246-0260	Not Determined	1946
627925		Oak Harbor	R23319-154-3290	Not Determined	1946
627927		Oak Harbor	R13312-062-2900	Not Determined	1946
627931		Oak Harbor	R23330-290-4390	Not Determined	1946
627932		Oak Harbor	R23319-070-4950	Not Determined	1946

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
627942		Oak Harbor	R13303-181-3890	Not Determined	1947
627950		Oak Harbor	R23307-161-4440	Not Determined	1948
627952		Oak Harbor	R23307-505-1000	Not Determined	1948
627961		Oak Harbor	S7730-00-00003-4	Not Determined	1948
627964		Oak Harbor	R13223-415-0580	Not Determined	1948
627965		Oak Harbor	S7730-00-00014-3	Not Determined	1948
627972		Oak Harbor	R13323-081-2520	Not Determined	1948
627977		Oak Harbor	S7740-00-00041-0	Not Determined	1948
627981		Oak Harbor	S7730-00-00016-1	Not Determined	1948
627982		Oak Harbor	R23318-033-4910	Not Determined	1948
627986		Oak Harbor	R13216-026-5110	Not Determined	1949
627992		Oak Harbor	R13311-141-1940	Not Determined	1949
628002		Oak Harbor	R13311-158-1590	Not Determined	1949
628006		Oak Harbor	S7730-00-00014-2	Not Determined	1949
628009		Oak Harbor	R23307-331-4800	Not Determined	1949
628011		Oak Harbor	S7730-00-00010-2	Not Determined	1949
628024		Oak Harbor	S7730-00-00004-3	Not Determined	1949
628031		Oak Harbor	R13313-348-0320	Not Determined	1950
628033		Oak Harbor	R23307-191-2840	Not Determined	1950
628034		Oak Harbor	S7730-00-00005-4	Not Determined	1950
628038		Oak Harbor	S7730-00-00014-1	Not Determined	1950
628039		Oak Harbor	R13324-495-0500	Not Determined	1950
628043		Oak Harbor	R13311-128-2550	Not Determined	1950
628045		Oak Harbor	S7730-00-00011-3	Not Determined	1950

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628048		Oak Harbor	S7730-00-00017-2	Not Determined	1950
628049		Oak Harbor	R23318-333-3000	Not Determined	1950
628053		Oak Harbor	R13220-034-3440	Not Determined	1950
628055		Oak Harbor	R13303-147-3780	Not Determined	1950
628056		Oak Harbor	S7575-00-01027-0	Not Determined	1950
628058	John & Connie Hudgins	Oak Harbor	R13303-165-3850	Determined Not Eligible	1950
628059		Oak Harbor	S7730-02-00059-0	Not Determined	1950
628060		Oak Harbor	R23330-202-5010	Not Determined	1950
628061		Oak Harbor	S7730-00-00010-1	Not Determined	1950
628062		Oak Harbor	R23307-103-1050	Not Determined	1950
628063		Oak Harbor	S7730-00-00013-5	Not Determined	1950
628072		Oak Harbor	R13312-280-0330	Not Determined	1950
628075		Oak Harbor	S7730-00-00020-3	Not Determined	1950
628076		Oak Harbor	S7575-00-01026-0	Not Determined	1950
628077		Oak Harbor	R13312-084-1130	Not Determined	1950
628080		Oak Harbor	S8370-00-00001-0	Not Determined	1950
628084		Oak Harbor	R13301-456-0630	Not Determined	1950
628085		Oak Harbor	R13303-158-3780	Not Determined	1950
628093		Oak Harbor	R23307-303-4470	Not Determined	1950
628094		Oak Harbor	R13313-313-0150	Not Determined	1950
628096		Oak Harbor	R23330-385-4220	Not Determined	1950
628098		Oak Harbor	S7575-00-01024-0	Not Determined	1950
628101		Oak Harbor	R23330-385-4920	Not Determined	1950
628104		Oak Harbor	R13313-030-2320	Not Determined	1951
628108		Oak Harbor	R13228-519-1480	Not Determined	1951

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628111		Oak Harbor	R13302-198-0680	Not Determined	1951
628123		Oak Harbor	S7575-00-01028-0	Not Determined	1951
628130		Oak Harbor	S7730-00-00004-2	Not Determined	1951
628132		Oak Harbor	R13312-200-2450	Not Determined	1951
628133		Oak Harbor	S7740-00-00043-0	Not Determined	1951
628140		Oak Harbor	S7020-00-00001-1	Not Determined	1951
628146		Oak Harbor	R13335-427-3400	Not Determined	1951
628147		Oak Harbor	S7730-00-00005-2	Not Determined	1951
628148		Oak Harbor	S7730-00-00006-1	Not Determined	1951
628154		Oak Harbor	R13222-361-0130	Not Determined	1951
628159		Oak Harbor	S7730-00-00022-1	Not Determined	1951
628161		Oak Harbor	R13221-152-5230	Not Determined	1952
628163		Oak Harbor	S7730-00-00008-4	Not Determined	1952
628164		Oak Harbor	R13312-146-2380	Not Determined	1952
628166		Oak Harbor	S7730-00-00008-2	Not Determined	1952
628167		Oak Harbor	S7730-00-00003-3	Not Determined	1952
628168		Oak Harbor	S7730-00-00008-1	Not Determined	1952
628171		Oak Harbor	S7285-30-03008-0	Not Determined	1952
628172		Oak Harbor	S7730-02-00006-0	Not Determined	1952
628173		Oak Harbor	R13313-152-0130	Not Determined	1952
628176		Oak Harbor	R13223-329-0620	Not Determined	1952
628178		Oak Harbor	S7730-00-00006-2	Not Determined	1952
628179		Oak Harbor	S7730-00-00007-1	Not Determined	1952

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628181		Oak Harbor	R13313-030-1990	Not Determined	1952
628182		Oak Harbor	R13435-081-1760	Not Determined	1952
628184		Oak Harbor	S7730-00-00019-1	Not Determined	1952
628187		Oak Harbor	R13222-042-2320	Not Determined	1952
628188		Oak Harbor	S7730-00-00015-1	Not Determined	1952
628193		Oak Harbor	S6335-00-00007-0	Not Determined	1952
628195		Oak Harbor	R13335-394-3230	Not Determined	1952
628199		Oak Harbor	S7740-00-00018-0	Not Determined	1952
628200		Oak Harbor	S7730-00-00005-1	Not Determined	1952
628210		Oak Harbor	S7730-00-00009-1	Not Determined	1952
628211		Oak Harbor	S8370-00-00004-0	Not Determined	1952
628213		Oak Harbor	R13436-407-1940	Not Determined	1952
628214		Oak Harbor	S7740-00-00044-0	Not Determined	1952
628216		Oak Harbor	R13302-110-1160	Not Determined	1952
628218		Oak Harbor	R23319-055-3650	Not Determined	1952
628222		Oak Harbor	R13303-139-3950	Not Determined	1952
628225		Oak Harbor	R13312-099-2070	Not Determined	1952
628229		Oak Harbor	S8370-00-00005-0	Not Determined	1953
628231		Oak Harbor	R13328-483-4730	Not Determined	1953
628237		Oak Harbor	S7730-02-00025-0	Not Determined	1953
628247		Oak Harbor	R23318-306-2630	Not Determined	1953
628250		Oak Harbor	S7730-00-00008-3	Not Determined	1953
628252		Oak Harbor	S7725-00-00001-0	Not Determined	1953
628255		Oak Harbor	R13326-313-3310	Not Determined	1953

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628257		Oak Harbor	S7730-02-00063-0	Not Determined	1953
628263		Oak Harbor	S7020-00-00002-0	Not Determined	1953
628275		Oak Harbor	R13221-010-3550	Not Determined	1953
628278		Oak Harbor	S7730-00-00009-3	Not Determined	1953
628283		Oak Harbor	R23330-282-0700	Not Determined	1953
628288		Oak Harbor	S7730-02-00007-0	Not Determined	1953
628290		Oak Harbor	S7575-00-01029-0	Not Determined	1953
628291		Oak Harbor	S7730-00-00016-2	Not Determined	1953
628296		Oak Harbor	S7730-00-00021-0	Not Determined	1953
628297		Oak Harbor	S7730-00-00017-1	Not Determined	1953
628299		Oak Harbor	R23307-135-1920	Not Determined	1953
628300		Oak Harbor	S6335-00-00013-0	Not Determined	1953
628302		Oak Harbor	S7730-02-00060-0	Not Determined	1953
628305		Oak Harbor	S7730-00-00012-1	Not Determined	1954
628306		Oak Harbor	R13436-450-1370	Not Determined	1954
628307		Oak Harbor	S7730-02-00031-0	Not Determined	1954
628308		Oak Harbor	S6055-00-02007-0	Not Determined	1954
628310		Oak Harbor	S7730-00-00022-2	Not Determined	1954
628314		Oak Harbor	S8055-00-00003-0	Not Determined	1954
628318		Oak Harbor	R13313-233-2820	Not Determined	1954
628320		Oak Harbor	S7730-00-00009-2	Not Determined	1954
628327		Oak Harbor	R23307-129-1430	Not Determined	1954
628329		Oak Harbor	R13302-297-5120	Not Determined	1954
628331		Oak Harbor	R13436-462-1370	Not Determined	1954

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628332		Oak Harbor	S8055-00-00009-0	Not Determined	1954
628334		Oak Harbor	S7295-00-00029-0	Not Determined	1954
628337		Oak Harbor	R13221-087-3580	Not Determined	1954
628340		Oak Harbor	R13436-414-1760	Not Determined	1954
628341		Oak Harbor	S7725-00-00005-0	Not Determined	1954
628345		Oak Harbor	S7730-00-00012-3	Not Determined	1954
628350		Oak Harbor	R13323-063-2810	Not Determined	1954
628351		Oak Harbor	R13335-427-3300	Not Determined	1954
628354		Oak Harbor	S7730-02-00044-0	Not Determined	1954
628356		Oak Harbor	R13436-017-0190	Not Determined	1954
628359		Oak Harbor	S7295-00-00005-0	Not Determined	1955
628360		Oak Harbor	S7295-00-00023-0	Not Determined	1955
628362		Oak Harbor	S7295-00-00017-0	Not Determined	1955
628366		Oak Harbor	R13302-313-0330	Not Determined	1955
628370		Oak Harbor	S6055-00-02010-0	Not Determined	1955
628371		Oak Harbor	S7295-00-00016-0	Not Determined	1955
628372		Oak Harbor	S7730-02-00048-0	Not Determined	1955
628373		Oak Harbor	S6055-00-02006-0	Not Determined	1955
628374		Oak Harbor	R23305-154-2920	Not Determined	1955
628375		Oak Harbor	R13221-048-2090	Not Determined	1955
628377		Oak Harbor	R13335-422-3530	Not Determined	1955
628381		Oak Harbor	R13222-164-2540	Not Determined	1955
628382		Oak Harbor	S7295-00-00015-0	Not Determined	1955
628385		Oak Harbor	R13221-010-1970	Not Determined	1955
628387		Oak Harbor	R13223-470-0630	Not Determined	1955

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628388		Oak Harbor	R13312-115-0720	Not Determined	1955
628389		Oak Harbor	S7730-00-00012-2	Not Determined	1955
628397		Oak Harbor	S7295-00-00013-0	Not Determined	1955
628399		Oak Harbor	S7730-00-00003-1	Not Determined	1955
628401		Oak Harbor	R13436-469-0930	Not Determined	1955
628402		Oak Harbor	S6055-00-03007-0	Not Determined	1955
628404		Oak Harbor	R13313-299-0480	Not Determined	1955
628405		Oak Harbor	S7575-00-01019-0	Not Determined	1955
628409		Oak Harbor	R13313-281-0170	Not Determined	1955
628411		Oak Harbor	S7730-00-00003-2	Not Determined	1955
628413		Oak Harbor	R23330-324-4920	Not Determined	1955
628416		Oak Harbor	R13328-241-4830	Not Determined	1955
628418		Oak Harbor	S6055-00-02011-0	Not Determined	1955
628420		Oak Harbor	S7575-00-11015-0	Not Determined	1955
628421		Oak Harbor	S7295-00-00002-0	Not Determined	1956
628424		Oak Harbor	S7295-00-00022-0	Not Determined	1956
628425		Oak Harbor	S7295-00-00014-0	Not Determined	1956
628428		Oak Harbor	S7295-00-00003-0	Not Determined	1956
628430	Barn, Maurer Barn	Oak Harbor	R13435-015-1720	Not Determined	1956
628436		Oak Harbor	S7295-00-00021-0	Not Determined	1956
628439		Oak Harbor	S7730-02-00029-0	Not Determined	1956
628445		Oak Harbor	S7730-02-00051-0	Not Determined	1956
628449		Oak Harbor	R13312-146-2280	Not Determined	1956
628450		Oak Harbor	S7730-00-00006-3	Not Determined	1956
628451		Oak Harbor	S7730-02-00053-0	Not Determined	1956
628455		Oak Harbor	R13325-122-1680	Not Determined	1956



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628458		Oak Harbor	S7295-00-00018-0	Not Determined	1956
628461		Oak Harbor	S7295-00-00001-0	Not Determined	1956
628463		Oak Harbor	S7730-02-00057-0	Not Determined	1956
628469		Oak Harbor	R23307-250-0200	Not Determined	1956
628473		Oak Harbor	R13313-106-2430	Not Determined	1956
628476		Oak Harbor	S6055-00-02009-0	Not Determined	1956
628477		Oak Harbor	S7295-00-00008-0	Not Determined	1956
628478		Oak Harbor	S7295-00-00011-0	Not Determined	1956
628481		Oak Harbor	S7730-02-00061-0	Not Determined	1956
628488		Oak Harbor	S6055-00-03009-0	Not Determined	1956
628489		Oak Harbor	S7295-00-00024-0	Not Determined	1956
628490		Oak Harbor	R13336-210-0620	Not Determined	1956
628510		Oak Harbor	R13311-166-3870	Not Determined	1957
628511		Oak Harbor	S7730-02-00037-1	Not Determined	1957
628513		Oak Harbor	R13336-218-0190	Not Determined	1957
628516		Oak Harbor	S7730-02-00082-0	Not Determined	1957
628527		Oak Harbor	S7730-02-00069-0	Not Determined	1957
628531		Oak Harbor	R23329-102-0060	Not Determined	1957
628534		Oak Harbor	S7730-02-00067-0	Not Determined	1957
628554		Oak Harbor	S7730-00-00001-0	Not Determined	1957
628556		Oak Harbor	R13313-253-0590	Not Determined	1957
628558		Oak Harbor	R23319-415-4900	Not Determined	1957
628565		Oak Harbor	R13335-390-0580	Not Determined	1957
628568		Oak Harbor	R23331-427-1900	Not Determined	1957
628577		Oak Harbor	R13311-455-1770	Not Determined	1957
628578		Oak Harbor	R13436-478-1060	Not Determined	1957

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628586		Oak Harbor	R23308-345-0950	Not Determined	1957
628587		Oak Harbor	S7520-00-01001-0	Not Determined	1957
628592		Oak Harbor	S6055-00-03008-0	Not Determined	1957
628598		Oak Harbor	R13301-319-0100	Not Determined	1957
628599		Oak Harbor	R23331-415-2680	Not Determined	1957
628608		Oak Harbor	S7730-02-00035-2	Not Determined	1957
628616		Oak Harbor	S7730-02-00075-0	Not Determined	1957
628622		Oak Harbor	R13301-303-0100	Not Determined	1957
628624		Oak Harbor	S7730-02-00023-0	Not Determined	1957
628626		Oak Harbor	S6055-00-03010-0	Not Determined	1957
628630		Oak Harbor	S7730-02-00070-2	Not Determined	1957
628631		Oak Harbor	S7730-02-00066-0	Not Determined	1957
628636		Oak Harbor	R13326-185-0350	Not Determined	1957
628637		Oak Harbor	S7730-02-00068-0	Not Determined	1957
628638		Oak Harbor	R13324-091-2150	Not Determined	1957
628643		Oak Harbor	R23318-379-4850	Not Determined	1957
628652		Oak Harbor	S7730-02-00073-0	Not Determined	1957
628658		Oak Harbor	S7730-02-00021-0	Not Determined	1957
628663		Oak Harbor	R23307-115-0260	Not Determined	1957
628668		Oak Harbor	S7730-02-00034-0	Not Determined	1957
628669		Oak Harbor	S7730-02-00036-2	Determined Not Eligible	1957
628671		Oak Harbor	S7730-02-00035-1	Not Determined	1957
628674		Oak Harbor	R13303-173-3900	Not Determined	1958
628676		Oak Harbor	S7520-00-02016-0	Not Determined	1958

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628678		Oak Harbor	S7285-30-05006-0	Not Determined	1958
628680		Oak Harbor	S7285-30-09005-0	Not Determined	1958
628681		Oak Harbor	S7285-30-09008-0	Not Determined	1958
628684		Oak Harbor	S7065-00-00008-0	Not Determined	1958
628685		Oak Harbor	R23318-186-0510	Not Determined	1958
628688		Oak Harbor	S7065-00-00002-0	Not Determined	1958
628690		Oak Harbor	S7285-30-03009-0	Not Determined	1958
628691		Oak Harbor	S7285-30-08005-0	Not Determined	1958
628692		Oak Harbor	R13336-235-0190	Not Determined	1958
628693		Oak Harbor	S7065-00-00016-0	Not Determined	1958
628695		Oak Harbor	S7285-30-05003-0	Not Determined	1958
628696		Oak Harbor	S7285-30-09002-0	Not Determined	1958
628699		Oak Harbor	S7065-00-00006-0	Not Determined	1958
628700		Oak Harbor	S7285-40-00002-0	Not Determined	1958
628701		Oak Harbor	S7285-30-10002-0	Not Determined	1958
628702		Oak Harbor	S7285-30-05002-0	Not Determined	1958
628703		Oak Harbor	S7065-00-00011-0	Not Determined	1958
628704		Oak Harbor	R13325-019-1000	Not Determined	1958
628707		Oak Harbor	S8050-02-19004-0	Not Determined	1958
628708		Oak Harbor	S7520-00-03004-0	Not Determined	1958
628712		Oak Harbor	S7740-00-00026-0	Not Determined	1958
628713		Oak Harbor	S7285-30-05001-0	Not Determined	1958
628716		Oak Harbor	R13336-235-0080	Not Determined	1958
628722		Oak Harbor	S7065-00-00007-0	Not Determined	1958
628723		Oak Harbor	S7285-40-00008-0	Not Determined	1958
628725		Oak Harbor	R13221-187-5200	Not Determined	1958
628726		Oak Harbor	S7285-30-09007-0	Not Determined	1958
628728		Oak Harbor	S7520-00-02014-0	Not Determined	1958
628730		Oak Harbor	S7285-40-00004-0	Not Determined	1958

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628732		Oak Harbor	S7065-00-00014-0	Not Determined	1958
628738		Oak Harbor	R13313-055-0680	Not Determined	1958
628740		Oak Harbor	S7285-30-03016-0	Not Determined	1958
628741		Oak Harbor	S7295-00-00009-0	Not Determined	1958
628745		Oak Harbor	R13436-445-0590	Not Determined	1958
628747		Oak Harbor	S7065-00-00001-3	Not Determined	1958
628749		Oak Harbor	S7285-30-03010-0	Not Determined	1958
628751		Oak Harbor	S7285-30-11002-0	Not Determined	1958
628752		Oak Harbor	R23307-140-2510	Not Determined	1958
628753		Oak Harbor	S7285-30-04016-0	Not Determined	1958
628754		Oak Harbor	S7285-30-09003-0	Not Determined	1958
628756		Oak Harbor	S7520-00-02015-0	Not Determined	1958
628757		Oak Harbor	S7285-30-09001-0	Not Determined	1958
628762		Oak Harbor	S7520-00-02012-0	Not Determined	1958
628764		Oak Harbor	S7285-30-09006-0	Not Determined	1958
628765		Oak Harbor	S7285-30-04015-0	Not Determined	1958
628769		Oak Harbor	S7285-30-04003-0	Not Determined	1958
628771		Oak Harbor	S7285-40-00007-0	Not Determined	1958
628783		Oak Harbor	S7520-00-03002-0	Not Determined	1958
628787		Oak Harbor	S7285-30-10001-0	Not Determined	1958
628788		Oak Harbor	S7285-30-11001-0	Not Determined	1958
628793		Oak Harbor	S7520-00-02013-0	Not Determined	1958
628797		Oak Harbor	S7285-30-08006-0	Not Determined	1958
628799		Oak Harbor	S6515-00-01010-0	Not Determined	1958
628805		Oak Harbor	S7285-30-04013-0	Not Determined	1958
628807		Oak Harbor	S7285-30-05005-0	Not Determined	1958
628809		Oak Harbor	R23329-502-1030	Not Determined	1958
628814		Oak Harbor	S7730-02-00019-0	Not Determined	1958
628816		Oak Harbor	S7285-30-04001-0	Not Determined	1958

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628817		Oak Harbor	R13335-433-3520	Not Determined	1958
628822		Oak Harbor	R23317-425-0400	Not Determined	1958
628824		Oak Harbor	S7285-30-04006-0	Not Determined	1958
628825		Oak Harbor	S7285-30-04014-0	Not Determined	1958
628826		Oak Harbor	S7065-00-00015-0	Not Determined	1958
628827		Oak Harbor	S7520-00-02017-0	Not Determined	1958
628829		Oak Harbor	R13328-206-4900	Not Determined	1958
628832		Oak Harbor	S7065-00-00003-0	Not Determined	1958
628840		Oak Harbor	S7285-30-05004-0	Not Determined	1958
628842		Oak Harbor	R13336-218-0080	Not Determined	1958
628843		Oak Harbor	S7065-00-00012-0	Not Determined	1958
628848		Oak Harbor	S7655-00-01006-0	Not Determined	1958
628849		Oak Harbor	S7285-30-04008-0	Not Determined	1958
628850		Oak Harbor	S7285-30-08004-0	Not Determined	1958
628861		Oak Harbor	S7065-00-00005-0	Not Determined	1958
628862		Oak Harbor	S7285-30-04004-0	Not Determined	1958
628865		Oak Harbor	R13221-050-1970	Not Determined	1958
628868		Oak Harbor	S7065-00-00013-0	Not Determined	1958
628875		Oak Harbor	S7285-30-04005-0	Not Determined	1958
628876		Oak Harbor	S7285-30-06001-0	Not Determined	1958
628877		Oak Harbor	S7285-30-03012-0	Not Determined	1958
628880		Oak Harbor	S7295-00-00012-2	Not Determined	1958
628884		Oak Harbor	S7655-00-01007-0	Not Determined	1958
628885		Oak Harbor	S7285-30-10003-0	Not Determined	1958
628887		Oak Harbor	S7285-40-00003-0	Not Determined	1958
628888		Oak Harbor	R23319-039-2810	Not Determined	1958
628889		Oak Harbor	S8055-00-00005-0	Not Determined	1958
628891		Oak Harbor	R13336-461-4370	Not Determined	1958
628892		Oak Harbor	S7065-00-00004-0	Not Determined	1958

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628893		Oak Harbor	S7655-00-01008-0	Not Determined	1958
628897		Oak Harbor	S7285-30-04011-0	Not Determined	1958
628902		Oak Harbor	S7285-30-03011-0	Not Determined	1958
628903		Oak Harbor	S7520-00-03003-0	Not Determined	1958
628904		Oak Harbor	S7285-30-06002-0	Not Determined	1958
628907		Oak Harbor	S8297-00-00009-0	Not Determined	1958
628908		Oak Harbor	S7285-30-08002-0	Not Determined	1959
628920		Oak Harbor	S7285-30-04012-0	Not Determined	1959
628925		Oak Harbor	S7285-30-07001-0	Not Determined	1959
628926		Oak Harbor	S6535-00-00012-0	Not Determined	1959
628927		Oak Harbor	S7285-30-07004-0	Not Determined	1959
628929		Oak Harbor	S7655-00-01010-0	Not Determined	1959
628930		Oak Harbor	S7655-00-01009-0	Not Determined	1959
628935		Oak Harbor	S6600-00-01011-0	Not Determined	1959
628938		Oak Harbor	S7285-30-03013-0	Not Determined	1959
628940		Oak Harbor	S7285-30-09004-0	Not Determined	1959
628941		Oak Harbor	S6535-00-00010-0	Not Determined	1959
628951		Oak Harbor	R23331-419-2500	Not Determined	1959
628961		Oak Harbor	S6600-00-01010-0	Not Determined	1959
628964		Oak Harbor	S7285-30-07003-0	Not Determined	1959
628965		Oak Harbor	S7285-30-02016-0	Not Determined	1959
628972		Oak Harbor	S7285-30-03015-0	Not Determined	1959
628975		Oak Harbor	R13223-340-0720	Not Determined	1959
628976		Oak Harbor	S7520-00-03005-0	Not Determined	1959
628981		Oak Harbor	S7655-00-01014-0	Not Determined	1959
628987		Oak Harbor	S7285-30-04007-0	Not Determined	1959
628990		Oak Harbor	R13228-511-1960	Not Determined	1959
628991		Oak Harbor	S6535-00-00011-0	Not Determined	1959
628993		Oak Harbor	S7285-40-00009-0	Not Determined	1959

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
628996		Oak Harbor	S7295-00-00010-0	Not Determined	1959
628999		Oak Harbor	S6515-00-01008-0	Not Determined	1959
629001		Oak Harbor	S6535-00-00014-0	Not Determined	1959
629005		Oak Harbor	S7285-30-02015-0	Not Determined	1959
629008		Oak Harbor	S6600-00-01012-0	Not Determined	1959
629009		Oak Harbor	S7285-30-05007-0	Not Determined	1959
629013		Oak Harbor	S7285-30-08001-0	Not Determined	1959
629014		Oak Harbor	S7285-40-00001-0	Not Determined	1959
629015		Oak Harbor	S7285-30-07002-0	Not Determined	1959
629016		Oak Harbor	S7285-30-11004-0	Not Determined	1959
629019		Oak Harbor	R23330-418-0700	Not Determined	1959
629024		Oak Harbor	S7285-30-06003-0	Not Determined	1959
629026		Oak Harbor	S7285-30-03001-0	Not Determined	1959
629029		Oak Harbor	R13302-151-1520	Not Determined	1959
629030		Oak Harbor	S6535-00-00015-0	Not Determined	1959
629032		Oak Harbor	S7285-30-03014-0	Not Determined	1959
629035		Oak Harbor	R13301-292-0100	Not Determined	1959
629037		Oak Harbor	R13302-067-0530	Not Determined	1960
629041		Oak Harbor	R23308-318-1000	Not Determined	1960
629045		Oak Harbor	S7295-00-00019-0	Not Determined	1960
629046		Oak Harbor	R13311-391-1770	Not Determined	1960
629047		Oak Harbor	S8050-00-04007-0	Not Determined	1960
629052		Oak Harbor	R23319-342-5150	Not Determined	1960
629053		Oak Harbor	S7285-30-05010-0	Not Determined	1960
629054		Oak Harbor	S7730-02-00084-0	Not Determined	1960
629055		Oak Harbor	R23331-484-1370	Not Determined	1960
629056		Oak Harbor	S7520-00-02018-0	Not Determined	1960
629057		Oak Harbor	S7285-30-03002-0	Not Determined	1960
629058		Oak Harbor	S6535-00-00006-0	Not Determined	1960

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629059		Oak Harbor	S8055-00-00007-0	Not Determined	1960
629061		Oak Harbor	S8050-00-08042-0	Not Determined	1960
629068		Oak Harbor	S7730-02-00096-0	Not Determined	1960
629069		Oak Harbor	S7520-00-02019-0	Not Determined	1960
629070		Oak Harbor	R13301-196-2760	Not Determined	1960
629072		Oak Harbor	S7005-00-02015-0	Not Determined	1960
629073	Private	Oak Harbor	S7655-02-03007-0	Determined Not Eligible	1960
629074		Oak Harbor	S8050-00-09012-0	Not Determined	1960
629077		Oak Harbor	R13436-408-1490	Not Determined	1960
629079		Oak Harbor	S6515-00-03007-0	Not Determined	1960
629080		Oak Harbor	S7730-02-00003-0	Not Determined	1960
629081		Oak Harbor	S8050-00-13003-0	Not Determined	1960
629082		Oak Harbor	R13303-122-4920	Not Determined	1960
629083		Oak Harbor	R23317-236-3500	Not Determined	1960
629084		Oak Harbor	S6535-00-00008-0	Not Determined	1960
629086		Oak Harbor	S7295-00-00004-0	Not Determined	1960
629088		Oak Harbor	S7285-40-00006-0	Not Determined	1960
629089		Oak Harbor	R13326-185-0060	Not Determined	1960
629091		Oak Harbor	S7285-30-05012-0	Not Determined	1960
629093		Oak Harbor	R13302-013-1210	Not Determined	1960
629094		Oak Harbor	S6515-00-03002-0	Not Determined	1960
629095		Oak Harbor	R13335-429-3050	Not Determined	1960
629096		Oak Harbor	R23317-434-3570	Not Determined	1960
629097		Oak Harbor	S6515-00-02004-0	Not Determined	1960
629098		Oak Harbor	S7730-02-00030-0	Not Determined	1960



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629100		Oak Harbor	S6535-00-00001-0	Not Determined	1960
629102		Oak Harbor	R13223-445-0580	Not Determined	1960
629103		Oak Harbor	S8050-00-09022-0	Not Determined	1960
629105		Oak Harbor	S7285-30-02014-0	Not Determined	1960
629107		Oak Harbor	S7285-30-04002-0	Not Determined	1960
629108		Oak Harbor	S6535-00-00007-0	Not Determined	1960
629109		Oak Harbor	S7655-02-03006-0	Not Determined	1960
629110		Oak Harbor	R13301-411-0100	Not Determined	1960
629112		Oak Harbor	S6535-00-00005-0	Not Determined	1960
629113		Oak Harbor	S8050-00-07031-0	Not Determined	1960
629114		Oak Harbor	R13325-011-1850	Not Determined	1960
629115		Oak Harbor	R13436-460-1660	Not Determined	1960
629116		Oak Harbor	S6535-00-00017-2	Not Determined	1960
629117		Oak Harbor	R23318-296-1240	Not Determined	1960
629118		Oak Harbor	R13328-191-4110	Not Determined	1960
629119		Oak Harbor	S7520-00-02020-0	Not Determined	1960
629120		Oak Harbor	R13311-198-2970	Not Determined	1960
629123		Oak Harbor	S7655-00-01012-0	Not Determined	1960
629124		Oak Harbor	S6535-00-00004-0	Not Determined	1960
629125		Oak Harbor	S7285-30-05015-0	Not Determined	1960
629129		Oak Harbor	R13221-062-5200	Not Determined	1960
629130		Oak Harbor	R23318-196-0140	Not Determined	1960
629136		Oak Harbor	R13435-165-4310	Not Determined	1961
629138		Oak Harbor	S7285-30-05016-0	Not Determined	1961
629142		Oak Harbor	S8050-00-07026-0	Not Determined	1961
629145		Oak Harbor	S7285-30-02006-0	Not Determined	1961
629147		Oak Harbor	S7285-30-02005-0	Not Determined	1961

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629150		Oak Harbor	R13336-236-0710	Not Determined	1961
629153		Oak Harbor	S7285-30-05009-0	Not Determined	1961
629156		Oak Harbor	S6525-00-01008-0	Not Determined	1961
629159		Oak Harbor	S7285-30-01003-0	Not Determined	1961
629161		Oak Harbor	S8050-00-13008-0	Not Determined	1961
629163		Oak Harbor	R13312-280-4040	Not Determined	1961
629164		Oak Harbor	R23307-282-0080	Not Determined	1961
629165		Oak Harbor	S8050-00-04001-0	Not Determined	1961
629166		Oak Harbor	S7285-30-01006-0	Not Determined	1961
629168		Oak Harbor	S7285-30-01002-0	Not Determined	1961
629169		Oak Harbor	S6515-00-04002-0	Not Determined	1961
629170		Oak Harbor	S7285-30-02013-0	Not Determined	1961
629172		Oak Harbor	S7655-02-03003-0	Not Determined	1961
629173		Oak Harbor	R13303-141-4400	Not Determined	1961
629174		Oak Harbor	S7655-02-04007-0	Not Determined	1961
629175		Oak Harbor	S7285-30-05014-0	Not Determined	1961
629177		Oak Harbor	S7730-02-00001-0	Not Determined	1961
629178		Oak Harbor	S6515-00-01001-0	Not Determined	1961
629181		Oak Harbor	S7520-00-03010-0	Not Determined	1962
629182		Oak Harbor	R13221-032-2250	Not Determined	1962
629185		Oak Harbor	S6515-02-10005-0	Not Determined	1962
629186		Oak Harbor	S7520-00-03009-0	Not Determined	1962
629187		Oak Harbor	S7285-30-02007-0	Not Determined	1962
629189		Oak Harbor	S6535-00-00009-0	Not Determined	1962
629195		Oak Harbor	S8050-00-07007-0	Not Determined	1962
629196		Oak Harbor	S7740-00-00009-0	Not Determined	1962
629197		Oak Harbor	R13324-495-1150	Not Determined	1962

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629199		Oak Harbor	S8468-00-00021-0	Not Determined	1962
629202		Oak Harbor	S8050-00-01002-0	Not Determined	1962
629203		Oak Harbor	R13223-511-1120	Not Determined	1962
629204		Oak Harbor	S7285-30-01008-0	Not Determined	1962
629207		Oak Harbor	R13324-247-4930	Not Determined	1962
629208		Oak Harbor	S7655-02-04009-0	Not Determined	1962
629209		Oak Harbor	R23318-208-1700	Not Determined	1962
629212		Oak Harbor	R13223-307-0450	Not Determined	1962
629213		Oak Harbor	S7285-30-01005-0	Not Determined	1962
629215		Oak Harbor	R13326-071-0230	Not Determined	1962
629216		Oak Harbor	S7285-30-01004-0	Not Determined	1962
629218		Oak Harbor	S7655-02-02000-0	Not Determined	1962
629219		Oak Harbor	S7285-30-01007-0	Not Determined	1962
629223		Oak Harbor	R13221-025-3670	Not Determined	1962
629225		Oak Harbor	S7285-30-03005-0	Not Determined	1962
629227		Oak Harbor	S7285-30-03004-0	Not Determined	1962
629230		Oak Harbor	S6535-00-00016-0	Not Determined	1962
629232		Oak Harbor	S7285-30-05013-0	Not Determined	1962
629234		Oak Harbor	S7285-30-02010-0	Not Determined	1962
629235		Oak Harbor	R13325-010-2500	Not Determined	1962
629236		Oak Harbor	S7285-30-02009-0	Not Determined	1962
629238		Oak Harbor	S7655-02-03004-0	Not Determined	1962
629240		Oak Harbor	S7285-30-02004-0	Not Determined	1962
629241		Oak Harbor	S6515-00-01004-0	Not Determined	1962
629242		Oak Harbor	S7285-30-03003-0	Not Determined	1962
629243		Oak Harbor	S6515-00-04011-0	Not Determined	1962
629246		Oak Harbor	S7285-30-04010-0	Not Determined	1962
629251		Oak Harbor	R23318-306-0300	Not Determined	1962

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629252		Oak Harbor	R13335-454-3221	Not Determined	1963
629253		Oak Harbor	R13302-317-1150	Not Determined	1963
629255		Oak Harbor	S6515-02-08003-0	Not Determined	1963
629256		Oak Harbor	R13327-265-1490	Not Determined	1963
629259		Oak Harbor	S7520-00-03008-0	Not Determined	1963
629260		Oak Harbor	R23320-062-0660	Not Determined	1963
629261		Oak Harbor	S7730-02-00008-0	Not Determined	1963
629262		Oak Harbor	S8140-00-01006-0	Not Determined	1963
629265		Oak Harbor	S8050-00-07010-0	Not Determined	1963
629267		Oak Harbor	S7730-02-00090-0	Not Determined	1963
629269		Oak Harbor	R13436-148-0330	Not Determined	1963
629270		Oak Harbor	R23306-016-2470	Not Determined	1963
629275		Oak Harbor	S7655-02-03005-0	Not Determined	1963
629276		Oak Harbor	S6535-00-00018-0	Not Determined	1963
629281		Oak Harbor	R13301-232-0670	Not Determined	1963
629285		Oak Harbor	S7520-00-02003-0	Not Determined	1963
629291		Oak Harbor	S6535-00-00021-0	Not Determined	1963
629294		Oak Harbor	S7520-00-02001-0	Not Determined	1963
629295		Oak Harbor	S6535-00-00002-0	Not Determined	1963
629296		Oak Harbor	S7655-02-04001-0	Not Determined	1963
629299		Oak Harbor	R23319-384-5210	Not Determined	1963
629301		Oak Harbor	S7295-00-00027-0	Not Determined	1963
629303		Oak Harbor	S7285-30-05011-0	Not Determined	1963
629304		Oak Harbor	R13336-238-0530	Not Determined	1963
629306		Oak Harbor	R23318-036-4270	Not Determined	1963
629307		Oak Harbor	R13336-238-0620	Not Determined	1963
629308		Oak Harbor	S7520-00-03007-0	Not Determined	1963
629309		Oak Harbor	S6525-00-03019-0	Not Determined	1963

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629310		Oak Harbor	S7285-30-02003-0	Not Determined	1963
629311		Oak Harbor	R13221-044-4240	Not Determined	1963
629312		Oak Harbor	S7730-02-00028-0	Not Determined	1964
629313		Oak Harbor	S7655-02-03002-0	Not Determined	1964
629315		Oak Harbor	S7285-30-02011-0	Not Determined	1964
629318		Oak Harbor	S6515-02-08004-0	Not Determined	1964
629319		Oak Harbor	S7005-00-01009-1	Not Determined	1964
629320		Oak Harbor	S6515-00-05005-0	Not Determined	1964
629321		Oak Harbor	S8415-00-00004-0	Not Determined	1964
629325		Oak Harbor	R13327-147-1120	Not Determined	1964
629326		Oak Harbor	S7415-00-00003-0	Not Determined	1964
629327		Oak Harbor	R13221-016-1760	Not Determined	1964
629328		Oak Harbor	S7285-30-08003-0	Not Determined	1964
629329		Oak Harbor	S8415-00-00010-0	Not Determined	1964
629334		Oak Harbor	S7005-02-03008-0	Not Determined	1964
629337		Oak Harbor	S7655-02-04005-0	Not Determined	1964
629338		Oak Harbor	S7520-00-02002-0	Not Determined	1964
629341		Oak Harbor	S7655-02-04002-0	Not Determined	1964
629342		Oak Harbor	S7520-00-02009-0	Not Determined	1964
629344		Oak Harbor	S7285-30-02008-0	Not Determined	1964
629346		Oak Harbor	S7655-02-04006-0	Not Determined	1964
629347		Oak Harbor	S7285-30-04009-0	Not Determined	1964
629350		Oak Harbor	R13301-237-0140	Not Determined	1964
629351		Oak Harbor	R23319-227-0300	Not Determined	1964
629355		Oak Harbor	S7520-00-02010-0	Not Determined	1964
629356		Oak Harbor	S8050-00-04022-0	Not Determined	1964
629357		Oak Harbor	S7520-00-02004-0	Not Determined	1964

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629359		Oak Harbor	S7520-00-02008-0	Not Determined	1964
629361		Oak Harbor	S8255-00-00016-0	Not Determined	1964
629363		Oak Harbor	R13436-084-1780	Not Determined	1964
629368		Oak Harbor	R13434-100-4030	Not Determined	1965
629370		Oak Harbor	S8015-00-00001-0	Not Determined	1965
629371		Oak Harbor	S6535-00-00020-0	Not Determined	1965
629372		Oak Harbor	S7655-02-03010-0	Not Determined	1965
629374		Oak Harbor	R13326-444-2810	Not Determined	1965
629376		Oak Harbor	S7730-02-00015-0	Not Determined	1965
629379		Oak Harbor	S6055-00-02012-0	Not Determined	1965
629380		Oak Harbor	S7520-00-03006-0	Not Determined	1965
629391		Oak Harbor	R13312-167-3620	Not Determined	1965
629394		Oak Harbor	S6535-00-00003-0	Not Determined	1965
629398		Oak Harbor	S7655-02-04008-0	Not Determined	1965
629402		Oak Harbor	R13221-051-1540	Not Determined	1965
629403		Oak Harbor	S8050-00-08044-0	Not Determined	1965
629405		Oak Harbor	S8050-00-04008-0	Not Determined	1965
629406		Oak Harbor	S6515-03-12010-0	Not Determined	1965
629414		Oak Harbor	S8015-00-00007-0	Not Determined	1965
629415		Oak Harbor	S8050-00-10041-0	Not Determined	1965
629417		Oak Harbor	S7740-00-00002-0	Not Determined	1965
629418		Oak Harbor	R13327-302-1500	Not Determined	1965
629419		Oak Harbor	S7005-00-01003-0	Not Determined	1965
629420		Oak Harbor	S7730-02-00092-0	Not Determined	1966
629423		Oak Harbor	S6600-00-05003-0	Not Determined	1966
629427		Oak Harbor	R23330-382-1480	Not Determined	1966

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629429		Oak Harbor	R23305-165-1200	Not Determined	1966
629433		Oak Harbor	S7655-02-04004-0	Not Determined	1966
629436		Oak Harbor	S6515-00-01007-0	Not Determined	1966
629438		Oak Harbor	S6535-00-00019-0	Not Determined	1966
629439		Oak Harbor	S7740-00-00006-0	Not Determined	1966
629442		Oak Harbor	R23330-252-4280	Not Determined	1966
629443		Oak Harbor	S6515-03-11004-0	Not Determined	1966
629444		Oak Harbor	S7285-30-05008-0	Not Determined	1966
629445		Oak Harbor	S8050-00-05007-0	Not Determined	1966
629446		Oak Harbor	S7415-00-00002-0	Not Determined	1966
629448		Oak Harbor	S7730-00-00018-1	Not Determined	1966
629450		Oak Harbor	R13434-229-4010	Not Determined	1966
629451		Oak Harbor	S7415-00-00004-0	Not Determined	1966
629453		Oak Harbor	R23320-495-1180	Not Determined	1966
629454		Oak Harbor	S8050-00-05018-0	Not Determined	1966
629455		Oak Harbor	R13326-144-0680	Not Determined	1966
629456		Oak Harbor	R23319-156-2230	Not Determined	1966
629457		Oak Harbor	S8015-00-00006-0	Not Determined	1966
629459		Oak Harbor	S6515-03-11003-0	Not Determined	1966
629461		Oak Harbor	S7655-02-03008-0	Not Determined	1966
629464		Oak Harbor	S7520-00-02011-0	Not Determined	1966
629467		Oak Harbor	R13313-055-0970	Not Determined	1966
629470		Oak Harbor	S7655-00-01002-0	Not Determined	1967
629471		Oak Harbor	S7730-02-00052-0	Not Determined	1967
629472		Oak Harbor	S7730-00-00013-4	Not Determined	1967
629473		Oak Harbor	S7655-00-01004-0	Not Determined	1967
629476		Oak Harbor	S7730-02-00038-1	Not Determined	1967

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629478		Oak Harbor	S7730-02-00045-0	Not Determined	1967
629482		Oak Harbor	S6515-04-00020-0	Not Determined	1967
629484		Oak Harbor	S8015-00-00011-0	Not Determined	1967
629486		Oak Harbor	S7730-02-00039-0	Not Determined	1967
629487		Oak Harbor	S7730-02-00022-0	Not Determined	1967
629488		Oak Harbor	S7730-02-00064-1	Not Determined	1967
629492		Oak Harbor	S8015-00-00005-0	Not Determined	1967
629498		Oak Harbor	R13312-072-4180	Not Determined	1967
629505		Oak Harbor	S7520-00-02007-0	Not Determined	1967
629506		Oak Harbor	R23330-495-2340	Not Determined	1967
629507		Oak Harbor	R13324-151-4860	Not Determined	1967
629508		Oak Harbor	R13326-014-0230	Not Determined	1967
629510		Oak Harbor	S7295-00-00028-0	Not Determined	1967
629511		Oak Harbor	S7730-02-00074-0	Not Determined	1967
629515		Oak Harbor	S7730-02-00065-0	Not Determined	1967
629516		Oak Harbor	S7295-00-00026-0	Not Determined	1967
629517		Oak Harbor	S6515-05-15003-0	Not Determined	1967
629519		Oak Harbor	S8050-00-09029-0	Not Determined	1967
629520		Oak Harbor	R13303-106-3830	Not Determined	1967
629521		Oak Harbor	S7730-02-00041-1	Not Determined	1967
629524		Oak Harbor	S7730-02-00049-0	Not Determined	1967
629527		Oak Harbor	R23319-178-0820	Not Determined	1967
629528		Oak Harbor	S7730-02-00054-0	Not Determined	1967
629530		Oak Harbor	S7285-30-03006-0	Not Determined	1967



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629533		Oak Harbor	S7730-00-00013-1	Not Determined	1967
629535		Oak Harbor	S7730-02-00046-0	Not Determined	1967
629536		Oak Harbor	S7730-02-00040-0	Not Determined	1967
629537		Oak Harbor	S8015-02-00024-0	Not Determined	1967
629538		Oak Harbor	S7730-02-00024-0	Not Determined	1967
629540		Oak Harbor	S7730-02-00038-0	Not Determined	1967
629541		Oak Harbor	S7415-00-00005-0	Not Determined	1967
629543		Oak Harbor	R13221-169-5200	Not Determined	1967
629544		Oak Harbor	S7730-00-00013-3	Not Determined	1967
629550		Oak Harbor	R13326-288-3170	Not Determined	1967
629551		Oak Harbor	R23330-133-1720	Not Determined	1967
629552		Oak Harbor	S8015-00-00010-0	Not Determined	1967
629553		Oak Harbor	R13325-513-3740	Not Determined	1967
629554		Oak Harbor	S7285-30-03007-0	Not Determined	1967
629555		Oak Harbor	S7730-02-00041-0	Not Determined	1967
629556		Oak Harbor	R13313-231-1530	Not Determined	1967
629557		Oak Harbor	S7730-02-00020-0	Not Determined	1967
629560		Oak Harbor	S8015-00-00004-0	Not Determined	1967
629561		Oak Harbor	S7730-00-00013-2	Not Determined	1967
629563		Oak Harbor	S8265-00-01010-0	Not Determined	1967
629566		Oak Harbor	S8140-00-02025-0	Not Determined	1968
629568		Oak Harbor	S8140-00-05010-0	Not Determined	1968
629570		Oak Harbor	S7575-00-11028-0	Not Determined	1968
629571		Oak Harbor	R13325-249-3660	Not Determined	1968
629572		Oak Harbor	S8140-00-05002-0	Not Determined	1968

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629573		Oak Harbor	S7730-02-00064-2	Not Determined	1968
629574		Oak Harbor	S8140-00-05014-0	Not Determined	1968
629576		Oak Harbor	S7730-02-00088-2	Not Determined	1968
629578		Oak Harbor	S7730-02-00087-0	Not Determined	1968
629580		Oak Harbor	S8140-00-05003-0	Not Determined	1968
629582		Oak Harbor	S7730-02-00088-1	Not Determined	1968
629583		Oak Harbor	S8140-00-02023-0	Not Determined	1968
629584		Oak Harbor	S6515-03-12015-0	Not Determined	1968
629585		Oak Harbor	S7730-02-00085-0	Not Determined	1968
629586		Oak Harbor	S6515-07-00049-0	Not Determined	1968
629588		Oak Harbor	S6455-00-00003-0	Not Determined	1968
629590		Oak Harbor	S8055-00-00010-0	Not Determined	1968
629591		Oak Harbor	S8140-00-05011-0	Not Determined	1968
629592		Oak Harbor	S8050-02-18009-2	Not Determined	1968
629593		Oak Harbor	R13327-302-1820	Not Determined	1968
629594		Oak Harbor	R13311-099-1880	Not Determined	1968
629600		Oak Harbor	R13221-510-5130	Not Determined	1968
629601		Oak Harbor	S8140-00-02021-0	Not Determined	1968
629605		Oak Harbor	S8140-00-01003-0	Not Determined	1968
629607		Oak Harbor	R13434-200-4000	Not Determined	1968
629609		Oak Harbor	S8140-00-02013-0	Not Determined	1968
629610		Oak Harbor	S7575-00-01002-0	Not Determined	1968
629613		Oak Harbor	S8015-02-00013-0	Not Determined	1968
629614		Oak Harbor	S8015-02-00020-0	Not Determined	1968
629615		Oak Harbor	S8050-02-18005-0	Not Determined	1968
629616		Oak Harbor	R13301-228-2110	Not Determined	1968

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629617		Oak Harbor	S8055-00-00008-0	Not Determined	1968
629618		Oak Harbor	S8015-00-00009-0	Not Determined	1968
629620		Oak Harbor	S8140-00-02001-0	Not Determined	1968
629621		Oak Harbor	S8140-00-02020-0	Not Determined	1968
629624		Oak Harbor	S8140-00-01004-0	Not Determined	1968
629626		Oak Harbor	S8140-00-02024-0	Not Determined	1968
629627		Oak Harbor	S7730-02-00017-1	Not Determined	1968
629628		Oak Harbor	S7285-40-00005-0	Not Determined	1968
629630		Oak Harbor	S8140-00-05012-0	Not Determined	1968
629631		Oak Harbor	S6515-03-12008-0	Not Determined	1968
629633		Oak Harbor	R13311-448-0820	Not Determined	1968
629637		Oak Harbor	S8140-00-02018-0	Not Determined	1968
629638		Oak Harbor	S8140-00-01002-0	Not Determined	1968
629639		Oak Harbor	S6455-00-00021-0	Not Determined	1968
629640		Oak Harbor	S8015-02-00022-0	Not Determined	1968
629643		Oak Harbor	S7005-00-0000R-3	Not Determined	1968
629644		Oak Harbor	R13434-179-4010	Not Determined	1968
629648		Oak Harbor	S8140-00-02017-0	Not Determined	1968
629652		Oak Harbor	S8140-00-01001-0	Not Determined	1968
629653		Oak Harbor	S7730-02-00086-0	Not Determined	1968
629654		Oak Harbor	S6430-00-00003-0	Not Determined	1968
629655		Oak Harbor	S6455-00-00020-0	Not Determined	1968
629658		Oak Harbor	S8140-00-05013-0	Not Determined	1968
629660		Oak Harbor	S8140-00-02014-0	Not Determined	1968
629662		Oak Harbor	S8140-00-02015-0	Not Determined	1968
629666		Oak Harbor	R13327-316-0980	Not Determined	1968
629668		Oak Harbor	S8140-00-02019-0	Not Determined	1968
629670		Oak Harbor	S8140-00-02002-0	Not Determined	1968

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629671		Oak Harbor	S8015-02-00018-0	Not Determined	1968
629673		Oak Harbor	S8140-00-05005-0	Not Determined	1968
629675		Oak Harbor	S8140-00-05001-0	Not Determined	1968
629676		Oak Harbor	S8140-00-02016-0	Not Determined	1968
629678		Oak Harbor	S8140-00-05004-0	Not Determined	1968
629679		Oak Harbor	S8140-00-05009-0	Not Determined	1968
629682		Oak Harbor	R13303-254-3900	Not Determined	1968
629683		Oak Harbor	S8140-00-02022-0	Not Determined	1968
629684		Oak Harbor	S7730-02-00018-0	Not Determined	1968
629685		Oak Harbor	S8015-00-00008-0	Not Determined	1968
629687		Oak Harbor	S7730-02-00086-1	Not Determined	1968
629688		Oak Harbor	R13327-369-1850	Not Determined	1968
629689		Oak Harbor	S8140-00-05008-0	Not Determined	1968
629690		Oak Harbor	R23330-493-3080	Not Determined	1968
629694		Oak Harbor	S6515-00-02007-0	Not Determined	1968
629696		Oak Harbor	S7655-00-01011-0	Not Determined	1968
629697		Oak Harbor	S8140-00-05007-0	Not Determined	1968
629698		Oak Harbor	S8265-00-01003-1	Not Determined	1968
629699		Oak Harbor	S8050-00-06011-0	Not Determined	1968
629701		Oak Harbor	S8140-00-05006-0	Not Determined	1968
629704		Oak Harbor	S8015-02-00025-0	Not Determined	1968
629707		Oak Harbor	S8140-00-01005-0	Not Determined	1969
629708		Oak Harbor	S8050-00-10021-0	Not Determined	1969
629712		Oak Harbor	S7730-02-00083-0	Not Determined	1969
629715		Oak Harbor	S6515-03-12009-0	Not Determined	1969
629716		Oak Harbor	S7730-02-00079-0	Not Determined	1969
629717		Oak Harbor	S8140-00-01014-0	Not Determined	1969

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629718		Oak Harbor	S8140-00-01009-0	Not Determined	1969
629719		Oak Harbor	R13434-220-4010	Not Determined	1969
629720		Oak Harbor	S8015-02-00021-0	Not Determined	1969
629721		Oak Harbor	S8140-00-01017-0	Not Determined	1969
629723		Oak Harbor	R13324-035-3100	Not Determined	1969
629725		Oak Harbor	S8140-00-01019-0	Not Determined	1969
629726		Oak Harbor	S6305-00-00021-0	Not Determined	1969
629727		Oak Harbor	S8140-00-01007-0	Not Determined	1969
629729		Oak Harbor	R13311-442-1520	Not Determined	1969
629731		Oak Harbor	S8140-00-01012-0	Not Determined	1969
629732		Oak Harbor	S7575-00-03051-0	Not Determined	1969
629734		Oak Harbor	S7730-02-00081-0	Not Determined	1969
629737		Oak Harbor	S7730-02-00080-0	Not Determined	1969
629740		Oak Harbor	S7730-02-00076-1	Not Determined	1969
629741		Oak Harbor	S6455-00-00057-0	Not Determined	1969
629742		Oak Harbor	S8140-00-02011-0	Not Determined	1969
629743		Oak Harbor	R23330-035-1770	Not Determined	1969
629745		Oak Harbor	S8140-00-02012-0	Not Determined	1969
629746		Oak Harbor	S6515-03-12002-0	Not Determined	1969
629747		Oak Harbor	S8050-00-01001-2	Not Determined	1969
629748		Oak Harbor	R13324-202-4130	Not Determined	1969
629749		Oak Harbor	R13221-164-3400	Not Determined	1969
629752		Oak Harbor	S7730-02-00080-1	Not Determined	1969
629753		Oak Harbor	S8140-00-01013-0	Not Determined	1969
629754		Oak Harbor	S8140-00-01010-0	Not Determined	1969
629756		Oak Harbor	S8140-00-04003-0	Not Determined	1969
629758		Oak Harbor	S7730-02-00078-1	Not Determined	1969

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629760		Oak Harbor	S7575-00-07001-0	Not Determined	1969
629762		Oak Harbor	S8015-02-00014-0	Not Determined	1969
629764		Oak Harbor	S8055-00-00002-0	Not Determined	1969
629766		Oak Harbor	S8140-00-01015-0	Not Determined	1969
629768		Oak Harbor	S8140-00-02003-0	Not Determined	1969
629771		Oak Harbor	S7730-00-00012-4	Not Determined	1969
629772		Oak Harbor	S7725-00-00008-0	Not Determined	1969
629776		Oak Harbor	S8140-00-01011-0	Not Determined	1969
629777		Oak Harbor	R13303-150-4990	Not Determined	1969
629778		Oak Harbor	R13311-108-3050	Not Determined	1969
629780		Oak Harbor	S8140-00-01018-0	Not Determined	1969
629781		Oak Harbor	S8140-00-01016-0	Not Determined	1969
629783		Oak Harbor	R13301-008-3590	Not Determined	1969
629785		Oak Harbor	R23307-123-0720	Not Determined	1969
629786		Oak Harbor	S7730-02-00077-0	Not Determined	1969
629792		Oak Harbor	S8140-00-01008-0	Not Determined	1969
629793		Oak Harbor	S7730-02-00091-0	Not Determined	1969
629796		Oak Harbor	S7575-00-01023-0	Not Determined	1969
629797		Oak Harbor	S7730-02-00076-2	Not Determined	1969
629800		Oak Harbor	R23307-380-0640	Not Determined	1969
629801		Oak Harbor	R13311-021-3190	Not Determined	1969
629802		Oak Harbor	S7730-02-00078-0	Not Determined	1969
629809		Coupeville	R13233-310-1640	Not Determined	1935
629810		Coupeville	S6415-00-27008-0	Not Determined	1941
629811		Coupeville	S6415-00-23006-0	Not Determined	1941
629812		Coupeville	S6005-00-13002-0	Not Determined	1942

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629813		Coupeville	S6415-00-27001-0	Not Determined	1942
629814		Coupeville	R13233-260-3800	Not Determined	1969
629823		Oak Harbor	R13335-422-0770	Not Determined	1913
629832		Oak Harbor	R23329-068-0130	Not Determined	1935
629836		Oak Harbor	R13312-248-5080	Not Determined	1940
629837		Oak Harbor	R13326-150-0250	Not Determined	1942
629838		Oak Harbor	R23318-307-2030	Not Determined	1943
629839		Oak Harbor	R13312-256-5200	Not Determined	1943
629841		Oak Harbor	S7740-00-00012-0	Not Determined	1943
629842		Oak Harbor	R23308-359-0150	Not Determined	1943
629843		Oak Harbor	S6525-00-03012-0	Not Determined	1943
629844		Oak Harbor	S7740-00-00004-0	Not Determined	1943
629845		Oak Harbor	R13311-505-1270	Not Determined	1943
629846		Oak Harbor	S6525-00-0300A-0	Not Determined	1943
629847		Oak Harbor	R13336-508-0550	Not Determined	1946
629849		Oak Harbor	R13336-511-0360	Not Determined	1946
629856		Coupeville	S8370-00-00002-0	Not Determined	1952
629861		Oak Harbor	R13335-483-4090	Not Determined	1958
629864		Oak Harbor	S7740-00-00029-0	Not Determined	1960
629865		Oak Harbor	R13325-017-1560	Not Determined	1960
629873		Oak Harbor	R13327-334-1130	Not Determined	1963
629886		Oak Harbor	S8265-00-02004-0	Not Determined	1967
629889		Oak Harbor	R23307-139-2170	Not Determined	1967
629893		Oak Harbor	S7740-00-0000B-5	Not Determined	1968
629894		Oak Harbor	S8265-02-04001-0	Not Determined	1968
629900		Coupeville	R13230-187-0370	Not Determined	1959
629901		Coupeville	R13233-249-3680	Not Determined	1968
629904		Oak Harbor	R13326-150-0350	Not Determined	1942

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629906		Oak Harbor	R13326-045-0230	Not Determined	1942
629907		Oak Harbor	R13311-274-2180	Not Determined	1943
629908		Oak Harbor	R13335-513-4360	Not Determined	1943
629909		Oak Harbor	R23318-240-2180	Not Determined	1943
629910		Oak Harbor	S7740-00-00001-0	Not Determined	1943
629912		Oak Harbor	R13335-297-0280	Not Determined	1950
629913		Oak Harbor	R13311-462-1390	Not Determined	1952
629925		Coupeville	S7246-00-00012-0	Not Determined	1890
629928		Oak Harbor	R13327-198-1980	Not Determined	1922
629929		Oak Harbor	R13335-444-1230	Not Determined	1938
629930		Oak Harbor	R23330-167-5220	Not Determined	1950
629931		Oak Harbor	R13335-316-1140	Not Determined	1957
629933		Oak Harbor	R13335-412-4330	Not Determined	1958
629934		Oak Harbor	R13301-350-2950	Not Determined	1968
629936		Coupeville	R13102-427-4250	Not Determined	1955
629938		Oak Harbor	R13325-106-0190	Not Determined	1957
629940		Oak Harbor	R13335-367-4010	Not Determined	1959
629942		Coupeville	S8300-00-01002-0	Not Determined	1959
629946		Oak Harbor	R13326-421-2780	Not Determined	1945
629947		Oak Harbor	R13326-338-2970	Not Determined	1946
629956		Coupeville	S6415-00-09003-0	Not Determined	1910
629957		Coupeville	R13104-460-4100	Not Determined	1920
629958		Coupeville	R13104-475-3900	Not Determined	1947
629960		Coupeville	R13104-427-3800	Not Determined	1968
629969		Coupeville	R13104-409-3940	Not Determined	1952
629970		Oak Harbor	S7740-00-0000A-6	Not Determined	1954
629975		Oak Harbor	R13335-275-3920	Not Determined	1956
629976		Oak Harbor	R13335-517-4710	Not Determined	1963
629977		Oak Harbor	R13327-502-2520	Not Determined	1963



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
629979		Coupeville	R13233-193-3970	Not Determined	1935
629988		Coupeville	R13233-211-3980	Not Determined	1965
630009		Coupeville	S8060-00-10001-0	Not Determined	1880
630048		Oak Harbor	R13335-402-3810	Not Determined	1950
630049		Oak Harbor	S7740-00-0000A-5	Not Determined	1953
630050		Oak Harbor	S7740-00-0000A-4	Not Determined	1953
630057		Oak Harbor	S7740-00-0000B-3	Not Determined	1958
630061		Oak Harbor	R13435-336-3050	Not Determined	1963
630062		Oak Harbor	R13302-251-1430	Not Determined	1964
630063		Oak Harbor	S7020-00-00009-2	Not Determined	1964
630064		Oak Harbor	S7740-00-0000B-4	Not Determined	1965
630070		Oak Harbor	S7020-01-00003-0	Not Determined	1969
630073		Coupeville	R13233-040-4160	Not Determined	1956
630074		Coupeville	S6415-00-31004-0	Not Determined	1961
630081	Chapman Rental House	Coupeville	R13104-436-3940	Not Determined	1918
630087		Oak Harbor	R13335-261-3850	Not Determined	1959
630092		Oak Harbor	R13335-386-3750	Not Determined	1967
630093		Oak Harbor	R13335-275-2640	Not Determined	1968
630099		Coupeville	R13233-258-3970	Not Determined	1951
630100		Coupeville	R13233-250-3850	Not Determined	1956
630101		Coupeville	S6415-00-31007-0	Not Determined	1958
630102		Coupeville	R13233-363-4140	Determined Not Eligible	1960
630103		Coupeville	R13233-133-4550	Determined Not Eligible	1969
630121		Oak Harbor	R13326-341-0520	Not Determined	1968
630124	Island County Courthouse	Coupeville	S6415-00-21000-0	Not Determined	1948
630125		Coupeville	R13233-240-3830	Not Determined	1968
630131		Coupeville	R13122-410-0750	Not Determined	1940

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
630132		Coupeville	R13116-271-4200	Not Determined	1940
630141		Coupeville	R13233-380-3350	Not Determined	1874
630142		Coupeville	R13233-230-3860	Not Determined	1959
630151		Oak Harbor	R13335-414-3700	Not Determined	1950
630156		Oak Harbor	R13326-012-3520	Not Determined	1964
630157		Oak Harbor	R13335-320-2850	Not Determined	1964
630158		Oak Harbor	R13326-365-0580	Not Determined	1965
630159		Oak Harbor	R13326-484-2530	Not Determined	1967
630184		Oak Harbor	R13326-314-2460	Not Determined	1945
630189		Coupeville	R13104-375-5250	Not Determined	1950
630192		Oak Harbor	S8050-00-09001-0	Not Determined	1965
630232		Coupeville	R13219-100-1950	Not Determined	1860
630233		Coupeville	R13105-478-4660	Not Determined	1876
630234		Coupeville	R13104-305-1970	Not Determined	1890
630235		Coupeville	R13109-465-4760	Not Determined	1891
630236		Coupeville	R13110-085-1980	Not Determined	1902
630237		Coupeville	R13103-332-1790	Not Determined	1910
630238		Coupeville	R13109-500-4220	Not Determined	1948
630239		Coupeville	R23119-235-0880	Not Determined	1963
630240		Coupeville	R13103-502-4800	Not Determined	1969
630251		Oak Harbor	R23332-443-0120	Not Determined	1917
630252		Oak Harbor	R13222-320-0550	Not Determined	1923
630254		Oak Harbor	R13435-064-3640	Not Determined	1924
630257		Oak Harbor	R23330-143-4350	Not Determined	1926
630259		Oak Harbor	R13436-065-1990	Not Determined	1930
630261		Oak Harbor	R13313-305-3320	Not Determined	1945
630264		Oak Harbor	R23330-312-0600	Not Determined	1956

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
630265		Oak Harbor	R13325-184-3900	Not Determined	1957
630270		Oak Harbor	R13324-462-1970	Not Determined	1948
630273		Oak Harbor	R13435-084-0670	Not Determined	1910
630276		Oak Harbor	S8475-00-00003-0	Not Determined	1967
665633	North Fork Levee, North Fork Levee	Skagit City	33030900140003/P15559	Not Determined	1885, 1935
665634	Dugualla Bay Levee, Dugualla Bay Levee	Whidbey Island	R233070734030	Not Determined	1920
665641	NASW Pump Station, NASW Pump Station	Oak Harbor		Not Determined	1952
665755	Reynolds House	Coupeville		Determined Not Eligible	1928
666001	Private	Coupeville		Determined Not Eligible	1951
666911	Kathleen Ryan	Coupeville		Determined Not Eligible	1960
668248	Private	Oak Harbor	R13323-0623-2810	Determined Not Eligible	1954
668319	Island County Dike District # 3 Dike, Dugualla Bay Dike	Oak Harbor		Determined Not Eligible	1914
669208	Private	Oak Harbor		Determined Not Eligible	1927
669783	Island Property Management	Oak Harbor		Determined Not Eligible	1940
670504	Coupeville Water Treatment Building	Coupeville	699453R13233-169-4320	Determined Not Eligible	1968
671319	Private	Oak Harbor		Determined Not Eligible	1952

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
671568	Building 985 - Survival Equipment Shop, Building 985 - Survival Equipment Shop	NAS Whidbey Island		Determined Not Eligible	1967
671589	Building 2681, Hangar 9, Building 2681, Hangar 9	NAS Whidbey Island		Determined Not Eligible	1984
672268	Joe & Val Hillers	Coupeville		Determined Not Eligible	1960
672297	NAS Whidbey Island- Building 2699, Hangar 10	NAS Whidbey Island		Determined Not Eligible	1986
672367	Ground Support Equipment (GSE) Shop, GSE Compound - Building 995	NAS Whidbey Island		Determined Not Eligible	1969
672368	South Parking Shed, Ground Support Equipment (GSE) Compound - Building 995A	NAS Whidbey Island		Determined Not Eligible	1969
672370	North Parking Shed, Ground Support Equipment (GSE) Compound - Building 995B	NAS Whidbey Island		Determined Not Eligible	1969
672371	Ground Support Equipment (GSE) Powder Coat Facility, GSE Compound - Building 995C	NAS Whidbey Island		Determined Not Eligible	1969
672379	Facility 2525 - Turbo Fan Jet Engine Test Facility, Facility 2525 - Aircraft Turbo Jet Test Cell	NAS Whidbey Island		Determined Not Eligible	1971
672380	Test Cell Fuel Storage Tanks , Facility 2525A - Test Cell Fuel Storage Tanks	NAS Whidbey Island		Determined Not Eligible	1971
672382	Racon Hill - Building 2665, ASR-8 Radar Building	NAS Whidbey Island		Determined Not Eligible	1982

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
672399	Building 2740 - Medium Attack Weapons School, Pacific, Building 2740 - Fleet Aviation Specialized Operational (FASO) Academic Training Building	NAS Whidbey Island		Determined Not Eligible	1988
672401	Building 2528 - Air Start Building, Building 2528 - Air Start Building	NAS Whidbey Island		Determined Not Eligible	1970
672402	Building 2557, South Wash Rack Control Building, Building 2557, South Wash Rack Control Building	NAS Whidbey Island		Determined Not Eligible	1973
672403	Racon Hill - Facility 2664, Facility 2664 - Radar Tower	NAS Whidbey Island		Determined Not Eligible	1982
672404	Building 2558, North Wash Rack Control Building, Building 2558, North Wash Rack Control Building	NAS Whidbey Island		Determined Not Eligible	1973
672405	Building 2581, Air Start/Compression Building, Building 2581, Air Start/Compression Building	NAS Whidbey Island		Determined Not Eligible	1975
672415	Fire and Rescue, Vehicle Alert , Facility 201714 - Ault Field Fire and Rescue, Vehicle Alert	NAS Whidbey Island		Determined Not Eligible	1962
672417	Equipment Shelter, Building 2577 - Ault Field Equipment Shelter	NAS Whidbey Island		Determined Not Eligible	1974
672419	AN/SPN 42T3 Generator Building , Building 2524 - Ault Field AN/SPN 42T3 Generator Building	NAS Whidbey Island		Determined Not Eligible	1970
672420	Precision Approach Radar (PAR) , Facility 201821 - Ault Field PAR	NAS Whidbey Island		Determined Not Eligible	1963
672423	WWII-era navigation marker , Ault Field - WWII-era navigation marker	NAS Whidbey Island		Determined Not Eligible	1942

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
672433	Building 2734, Air Passenger Terminal, Building 2734, Air Passenger Terminal	NAS Whidbey Island		Determined Not Eligible	1988
672434	Building 2631, Building 2631 - VP AW Training	NAS Whidbey Island		Determined Not Eligible	1978
672435	Building 2584, POD Administration/Avionics and Storage, Building 2584, POD Administration/Avionics and Storage	NAS Whidbey Island		Determined Not Eligible	1975
672436	Building 2621 - Liquid Oxygen (LOX) Facility, Building 2621 - LOX Facility	NAS Whidbey Island		Determined Not Eligible	1978
672437	OLF Coupeville - Building 10, Runway Lighting Vault, Building 10, Runway Lighting Vault	NAS Whidbey Island		Determined Not Eligible	1967
672438	OLF Coupeville - Building 11, Potable Water Well Pump House, Building 11, Potable Water Well Pump House	NAS Whidbey Island		Determined Not Eligible	1967
672439	OLF Coupeville - Building 2709, Crash Truck Shelter, Building 2709, Crash Truck Shelter	NAS Whidbey Island		Determined Not Eligible	1986
672440	OLF Coupeville - Radome, Radome	NAS Whidbey Island		Determined Not Eligible	0
672445	Low Frequency Homer Beacon Building , Ault Field - Building 2678, Low Frequency Homer Beacon Building	NAS Whidbey Island		Determined Not Eligible	1945
672446	Tactical Air Navigation (TACAN) Building , Building 2596 - Ault Field TACAN Building	NAS Whidbey Island		Determined Not Eligible	1976

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
672447	Jet Aircraft Power Check Facility , Facility 201796 - Ault Field Jet Aircraft Power Check Facility	NAS Whidbey Island		Determined Not Eligible	1944
672449	Chaff Build-Up Facility , Building 2561 - Ault Field Chaff Build-Up Facility	NAS Whidbey Island		Determined Not Eligible	1973
672450	Building 976 - Systems Training Building , Building 976 - Aircraft Systems Training Building	NAS Whidbey Island		Determined Not Eligible	1966
672587	Whidbey Island Game Farm, Pacific Rim Institute for Environmental Stewardship	Coupeville		Determined Eligible	1946
672688	Private	Coupeville		Determined Eligible	1890
672825	Ault Field - Quarters G, Building 3230	NAS Whidbey Island		Determined Eligible	1935
672826	Ault Field - Quarters R, Building 3220	NAS Whidbey Island		Determined Eligible	1930
672828	Ault Field - Quarters P, Building 1140	NAS Whidbey Island		Determined Eligible	1900
672829	Ault Field - Riksen Farm House, Quarters O, Building 920	NAS Whidbey Island		Determined Eligible	1900
672830	Ault Field - Quarters F, Building 3305	NAS Whidbey Island		Determined Eligible	1935
672831	Ault Field - Quarters E, Building 3295	NAS Whidbey Island		Determined Eligible	1935
673039	Naval Air Station Whidbey - Whidbey Lanes Bowling Alley, BUILDING 2510	NAS Whidbey Island		Determined Not Eligible	1969

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
673907	Ault Field - Operational Storage, Building 2704	NAS Whidbey Island		Determined Not Eligible	1984
673908	Ault Field - Shop Space, Building R-14	NAS Whidbey Island		Determined Not Eligible	1976
673909	Ault Field - Shop Space, Building R-12	NAS Whidbey Island		Determined Not Eligible	1976
673910	Ault Field - LOX Cart Shelter, Building 2732	NAS Whidbey Island		Determined Not Eligible	1987
673911	Ault Field - Pump House/Air Craft Rince Facility, Building 2635	NAS Whidbey Island		Determined Not Eligible	1978
673912	Ault Field - Inert Store House, Building 2666	NAS Whidbey Island		Determined Not Eligible	1984
673913	Ault Field - Airfield Taxiways and Aprons	NAS Whidbey Island		Determined Not Eligible	1954, 1964
674221	Fort Casey Building 2, Campground Comfort Station	NAS Whidbey Island		Determined Not Eligible	1964
674330	Dean House, Patmore House, Zustiak House	Coupeville	264840/ S7070-00-10007-0	Not Determined	1918
674429	Auto Hobby Shop, Bldg 2549	NAS Whidbey Island		Determined Not Eligible	1974
674432	CHILD DEVELOPMENT CENTER, BLDG 2679	NAS Whidbey Island		Determined Not Eligible	1984
674433	MT RAINIER BLDG, BARRACKS #13, BLDG 2701	NAS Whidbey Island		Determined Not Eligible	1988
674532	Campground Comfort Station, Comfort Station #6	Oak Harbor		Determined Not Eligible	1965
674821	R-13	NAS Whidbey Island		Determined Not Eligible	1976
675127	R-21, Medical Storage	NAS Whidbey Island		Determined Not Eligible	1977



HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
675467	R-45, Line Maintenance Shelter	NAS Whidbey Island		Determined Not Eligible	1976
675601	Potable Water Tank, Building 197, Water Tank	Oak Harbor		Determined Not Eligible	1944
676190	Private	Oak Harbor		Determined Not Eligible	1950
676408	House	Coupeville	R13233-310-1640	Not Determined	1935
676414	House	Coupeville	R13233-276-1160	Not Determined	1946
676884	TAXIWAY, FACILITY 201422	NAS Whidbey Island		Determined Not Eligible	1951
676890	CHAIN ARRESTING GEAR, FACILITY 201926	NAS Whidbey Island		Determined Not Eligible	1967
676891	CARRIER DECK LIGHTING, FACILITY 201926	NAS Whidbey Island		Determined Not Eligible	1968
676892	RUNWAY EDGE LIGHTING, FACILITY 201929	NAS Whidbey Island		Determined Not Eligible	1968
676893	OPTICAL LANDING SYSTEM, FACILITY 201961	NAS Whidbey Island		Determined Not Eligible	1971
676910	FLEET & FAMILY INFO CENTER, BUILDING 2556	NAS Whidbey Island		Determined Not Eligible	1975
676911	TEST CELL II, BUILDING 2765	NAS Whidbey Island		Determined Not Eligible	1994
676950	Crew Shelter, R-75	NAS Whidbey Island		Determined Not Eligible	1970
677631	WATER TANK-2712	NAS Whidbey Island		Determined Not Eligible	1965
677632	Potable Water Tank - 867	NAS Whidbey Island		Determined Not Eligible	1986
677633	Potable Water Reservoir 388/389	NAS Whidbey Island		Not Determined	1970
677634	POTABLE WATER TANK - 2849	NAS Whidbey Island		Not Determined	2004

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
678355	Building 2614, Waste Water Treatment Plant	NAS Whidbey Island		Determined Not Eligible	1977
678416	HOSPITAL, BUILDING 993	NAS Whidbey Island		Determined Not Eligible	1969
678955	R-25, A/C Line Maintenance (6d)	NAS Whidbey Island		Determined Not Eligible	1976
678956	R-24, A/C Line Maintenance (6d)	NAS Whidbey Island		Determined Not Eligible	1976
678957	R-31, A/C Line Maintenance	NAS Whidbey Island		Determined Not Eligible	1976
678958	Building 2511, Morale, Welfare, Recreation Storage	NAS Whidbey Island		Determined Not Eligible	1968
678959	Building 2640, Compressor Building	NAS Whidbey Island		Determined Not Eligible	1972
679036	Building 2753, CNAF/FITT Team	NAS Whidbey Island		Determined Not Eligible	1973
679302	Building 2555: Public Works Storage, Building 2555: Ault Field Recycling Center	NAS Whidbey Island		Determined Not Eligible	1974
679303	Building 2595: Navy Exchange Gas Station, Building 2595: Navy Exchange Gas Station	NAS Whidbey Island		Determined Not Eligible	1978
679304	Building 2641: Arts and Crafts Hobby Shop, Building 2641: Security Training	NAS Whidbey Island		Determined Not Eligible	1980
679309	Building 2537, Storage Tank Non Potable	NAS Whidbey Island		Determined Not Eligible	1970
679857	Building 2848: McDonald's,	NAS Whidbey Island		Determined Not Eligible	1984

HISTORIC_I	SiteNameHi	Location	TaxParcel_	RegisterTy	BuiltYear
680638	Forest Loop Campground Comfort Station No. 2, Building 2	NAS Whidbey Island		Determined Not Eligible	1964
700399	Willowood Barn, Willowood Farm; Smith Ranch	Coupeville		Determined Eligible	1880
700400	Barn, Tessaro Barn	Coupeville		Determined Eligible	1905
700454	Barn, Summers Farm	Mount Vernon		Determined Eligible	1895
700711	Pratt Sheep Barn I, Pratt Farm	Coupeville		Determined Eligible	1935
700757	Pratt Sheep Barn, Pratt Sheep Barn II	Coupeville		Determined Eligible	1935
700759	Crockett, Hugh, Barn, Boyer Farm	Coupeville		Determined Eligible	1860
628900		Oak Harbor		Not Determined	1958



Heritage Barn Register Listed

SITE_ID	Comments	Location
IS00227	LeSourd Barn and Granary	Coupeville
IS00229	Kineth, John Jr., Barn	Coupeville
IS00231	Sherman Hog House	Coupeville
IS00232	Willowood Barn	Coupeville
IS00234	Barn	Coupeville
IS00295	Jenne, Edward and Agnes, Farm	Coupeville
IS00302	Calhoun, Thomas and Mary, Farm	Coupeville
IS00313	Boyer, Freeman, Barn	Coupeville
IS00314	Keith, Sam, Farm	Coupeville
IS00338	Clark Sherman Farm	Coupeville
IS00339	Rip, Lawrence and Joyce, Farm	Coupeville
IS00340	Gus Reuble Farm	Coupeville
IS00343	James, William and Florence, Farm	Oak Harbor
IS00344	Pratt Sheep Barn I	Coupeville
IS00345	Ernest Watson House	Coupeville
IS00346	Harmon/Pearson/Engle Farm	Coupeville
IS00347	Aloha Farms	Coupeville
IS00348	Barn	Oak Harbor
IS00352	Pratt Sheep Barn	Coupeville
IS00353	Case Farm	Oak Harbor
IS00354	Gallagher/Schreck/Sherman Farm	Coupeville
IS00355	Crockett, Hugh, Barn	Coupeville
IS00356	Hookstra, Lambert, Farm	Oak Harbor



Washington Heritage Register

SITE_ID	Comments	Location
IS00226	Crockett, Colonel Walter, Barn	Coupeville
IS00098	Grennan and Cranney Store	Coupeville
SK00337	Barn	Mount Vernon
IS00310	Deception Pass State Park	Oak Harbor





ELNHR 2016 Inventory

Name	Area	Status
Charlie Mitchell Barn	San de Fuca Uplands	Contributing
Zylstra/Sherod House	San de Fuca Uplands	Contributing
Oly Allison/Burke House	San de Fuca Uplands	Not Contributing
Earlywine/Nienhuis Property (John Neinhuis Place/L. Lewis Property)	San de Fuca Uplands	Contributing
Old Power Place	San de Fuca Uplands	Contributing
Gouchin/Criswell House	San de Fuca Uplands	Not Contributing
San de Fuca School	San de Fuca Uplands	Contributing
Lee/Hall House	San de Fuca Uplands	Not Contributing
Capt. R.B. Holbrook House	San de Fuca Uplands	Contributing
Maddex House	San de Fuca Uplands	Not Contributing
Nienhuis/Leach Place	San de Fuca Uplands	Contributing
Gabriel/Reynolds House	San de Fuca Uplands	Not Contributing
Liberal League Hall/San de Fuca Community Chapel	San de Fuca Uplands	Contributing
Hingston House	San de Fuca Uplands	Contributing
Tuft Cottage/Mrs. J. Arnold House	San de Fuca Uplands	Contributing

Name	Area	Status
Armstrong/Trumball House	San de Fuca Uplands	Contributing
Fisher/Hingston/Trumball General StoreL	San de Fuca	Contributing
Hingston/Trumball Store	San de Fuca Uplands	Contributing
Armstrong/Scoby House	San de Fuca Uplands	Contributing
Charles Grimes House	San de Fuca Uplands	Not Contributing
Hordyk Place/VanderVoet Farm	San de Fuca Uplands	Contributing
Walden House	San de Fuca Uplands	Not Contributing
Lupien House	San de Fuca Uplands	Not Contributing
Isaacson/Rector House	San de Fuca Uplands	Not Contributing
Weidenbach House	San de Fuca Uplands	Contributing
VandeWerfhorst House	San de Fuca Uplands	Not Contributing
A.W. Monroe/VandeWerfhorst Place	San de Fuca Uplands	Contributing
Farrell/Johnson House	San de Fuca Uplands	Not Contributing
Van Dam Place	San de Fuca Uplands	Contributing
Eldred Van Dam House	San de Fuca Uplands	Not Contributing
H.H. Rhodes Place	San de Fuca Uplands	Contributing

Name	Area	Status
Arnold Farm	NULSan de Fuca UplandsL	Contributing
Benson/Robinett House	San de Fuca Uplands	Not Contributing
Henry Arnold/Grasser House	San de Fuca Uplands	Contributing
Robart Cottage	San de Fuca Uplands	Contributing
Eerkes/Cleaver House	San de Fuca Uplands	Not Contributing
A.W. Monroe House	San de Fuca Uplands	Contributing
Baher House/San de Fuca Cottage	San de Fuca Uplands	Not Contributing
Samuel Libbey Ranch	San de Fuca Uplands	Contributing
Morris Place	San de Fuca Uplands	Contributing
Frey/Stone House	San de Fuca Uplands	Not Contributing
Case Cabin/Evans House	San de Fuca Uplands	Not Contributing
Art Holmburg Place	West Woodlands	Contributing
Captain Barrington House	West Woodlands	Not Contributing
Maxwell Cottage	West Woodlands	Not Contributing
Silvia House	West Woodlands	Not Contributing
Gelb/Alexander House	West Woodlands	Not Contributing

Name	Area	Status
Garrison House	West Woodlands	Not Contributing
Sherman/Grasser House	West Woodlands	Not Contributing
Cook/Sherman House	West Woodlands	Contributing
Old Art Black Barn	Coupeville	Contributing
Powell House	Coupeville	Contributing
Edmonds House (Pinkston House)	Coupeville	Contributing
Wharf Warehouse and Dock	Coupeville	Contributing
Alexander Blockhouse	Coupeville	Contributing
Fire Hall	Coupeville	Contributing
Horace Holbrook House	Coupeville	Contributing
Heckenbury House	Coupeville	Contributing
Telephone Exchange Building	Coupeville	Contributing
Flora A.P. Engle House	Coupeville	Contributing
Leach House	Coupeville	Contributing
Alvah D. Blowers House	Coupeville	Contributing
James Gillespie House	Coupeville	Contributing

Name	Area	Status
John and Jane Kineth Sr. House	Coupeville	Contributing
Methodist Church	Coupeville	Contributing
Carl Gillespie House	Coupeville	Contributing
Highwarden House	Coupeville	Contributing
Jacob Jenne House	Coupeville	Contributing
Dr. White???'s Office	Coupeville	Contributing
Williams House (Higgins House)	Coupeville	Contributing
Joseph Libbey House	Coupeville	Contributing
Libbey House	Coupeville	Not Contributing
Reverend Lindsey House	Coupeville	Contributing
Congregational Church	Coupeville	Contributing
Babcock Place	Coupeville	Not Contributing
Chansey House (Nichols/Bennett House)	Coupeville	Contributing
Sergeant Clark House	Coupeville	Contributing
Frank Newberry House	Coupeville	Contributing
Pickard House	Coupeville	Not Contributing

Name	Area	Status
Chapman House	Coupeville	Contributing
Pat???'s Place	Coupeville	Contributing
Hancock/Partridge House (Dixon/Partridge House)	Coupeville	Contributing
Prairie Center Mercantile	Coupeville	Not Contributing
Will Jenne House	Coupeville	Contributing
James Wanamaker House	Coupeville	Contributing
A.B. Coates House	Coupeville	Contributing
A.S. Coates House	Coupeville	Not Contributing
Morrow/Franzen House (Spangler/Franzen Rental House)	Coupeville	Contributing
Bearss/Barrett House	Coupeville	Contributing
Masonic Lodge No. 15	Coupeville	Contributing
Wangness/Ryan House	Coupeville	Not Contributing
Wanamaker/Youderian House	Coupeville	Not Contributing
Morris House	Coupeville	Contributing
Ed Clark House	Coupeville	Contributing
Howell/Harpole House (Howell/Wright House)	Coupeville	Contributing

Name	Area	Status
Ives House	Coupeville	Contributing
Stark House	Coupeville	Contributing
Ceci House	Coupeville	Not Contributing
Albert Kineth House	Coupeville	Contributing
Polly Harpole???'s Maternity Home	Coupeville	Contributing
County Jail/Boy Scout Building	Coupeville	Contributing
Charles Angel House	Coupeville	Contributing
Pennington Farmhouse	Coupeville	Not Contributing
Newcomb Property	Coupeville	Contributing
Newcomb House	Coupeville	Contributing
Benson House	Coupeville	Not Contributing
Benson/Bunting House	Coupeville	Contributing
Mock House	Coupeville	Contributing
Johnson House	Coupeville	Contributing
Boothe House	Coupeville	Contributing
King/McCabe House	Coupeville	Contributing

Name	Area	Status
Schroeder Rental House	Coupeville	Not Contributing
Black/Lindsey House	Coupeville	Contributing
Dr. White House	Coupeville	Contributing
Dean/Patmore/Zustiak House	Coupeville	Not Contributing
E.O. Lovejoy/Yorioka House	Coupeville	Contributing
Bradt House	Coupeville	Not Contributing
Almberg House	Coupeville	Not Contributing
Bergman House	Coupeville	Contributing
Duvall House	Coupeville	Contributing
Fairhaven	Coupeville	Contributing
Sill/Alexander House	Coupeville	Not Contributing
Gillespie Meat Market	Coupeville	Contributing
Cushen Ford Garage	Coupeville	Not Contributing
Terry's Dryer/Gillespie Livery Building	Coupeville	Contributing
Island County Abstract Office	Coupeville	Contributing
Island County Times Building	Coupeville	Contributing



Name	Area	Status
Judge Still Law Office	Coupeville	Contributing
Benson Confectionery	Coupeville	Contributing
Elkhorn Saloon	Coupeville	Contributing
Tom Howell???'s Barbershop	Coupeville	Contributing
Coupeville Cash Store	Coupeville	Contributing
Post Office	Coupeville	Contributing
John Robertson???'s Store	Coupeville	Contributing
Whidbey Mercantile Company	Coupeville	Contributing
John Robertson House	Coupeville	Contributing
Sedge Building	Coupeville	Contributing
Puget Race Drug Store	Coupeville	Contributing
Glenwood Hotel	Coupeville	Contributing
Col. Granville Haller House	Coupeville	Contributing
Island County Bank	Coupeville	Contributing
Samsel/Zylstra Law Office	Coupeville	Contributing
Capt. Thos. Kinney House	Coupeville	Contributing

Name	Area	Status
Captain Clapp House	Coupeville	Contributing
Fullington House	Coupeville	Contributing
Susie & Aleck House	Coupeville	Not Contributing
Deasy House	Coupeville	Not Contributing
Pontiac Dealership/Auto Barn	Coupeville	Contributing
Cushen House	Coupeville	Contributing
Methodist Parsonage	Coupeville	Contributing
Thomas Griffith House	Coupeville	Contributing
First Methodist Parsonage	Coupeville	Contributing
Jacob Straub House	Coupeville	Contributing
Jefferds House	Coupeville	Contributing
Hesselgrave House	Coupeville	Contributing
Hesselgrave/Folkart House	Coupeville	Not Contributing
Coupeville Courier Printing Office	Coupeville	Contributing
Edwards House	Coupeville	Not Contributing
Clapp/Ghormley House	Coupeville	Contributing

Name	Area	Status
Conrad House	Coupeville	Contributing
Munson House (Ervin Rental)	Coupeville	Contributing
Gould/Canty House	Coupeville	Contributing
Capt. Thomas Coupe House	Coupeville	Contributing
Clark House	Coupeville	Not Contributing
Solid Granary	Coupeville	Not Contributing
Chris Solid House	Coupeville	Contributing
Chromy House	Coupeville	Contributing
Fred Nuttall???'s House	Coupeville	Contributing
Howard House	Coupeville	Contributing
Ernest Watson House	Coupeville	Contributing
Bob Cushen House	Coupeville	Not Contributing
Larios House	Coupeville	Not Contributing
Dominick House	Coupeville	Not Contributing
Abbott House	Coupeville	Not Contributing
Coupeville City Hall	Coupeville	Contributing
James Zylstra House	Coupeville	Contributing

Name	Area	Status
Todd/Lovejoy House	Coupeville	Contributing
Meyer House	Coupeville	Not Contributing
Courthouse Vault	Coupeville	Contributing
McCutcheon Honeymoon Cottage	Coupeville	Not Contributing
Peralta House	Coupeville	Not Contributing
Williams House	Coupeville	Contributing
Hanks House	Coupeville	Not Contributing
Ward/Clark House	Coupeville	Contributing
Abbott/Knowles House	Coupeville	Contributing
Frain/Burton Engle House	Coupeville	Contributing
Reuble Squash Barn	Coupeville	Contributing
Thomas/Sullivan House	East Woodlands	Contributing
Carl Marsh House	East Woodlands	Not Contributing
Lewis Shop	East Woodlands	Not Contributing
Thomas E. Clark House	East Woodlands	Not Contributing
Strong Granary	East Woodlands	Contributing
Willard/Argent Place	East Woodlands	Not Contributing

Name	Area	Status
Fort Casey Family Housing/Smith House	East Woodlands	Not Contributing
Thomas/Sullivan/Patmore House	East Woodlands	Not Contributing
Strong Farm	East Woodlands	Contributing
Mulder House	East Woodlands	Contributing
Myers Property	East Woodlands	Contributing
John Kineth, Jr. Farmhouse	Smith Prairie	Contributing
Harp Place	Smith Prairie	Contributing
Old Marvin Place	Penn Cove	Not Contributing
Muzzall Farm	Penn Cove	Contributing
Muzzall Rental House	Penn Cove	Not Contributing
Gates House	Penn Cove	Not Contributing
Preacher Lowdy Place	Penn Cove	Not Contributing
McWilliams Bungalow	Penn Cove	Contributing
Still Log Cabin	Penn Cove	Contributing
San de Fuca Dock/Standard Oil Dock	Penn Cove	Not Contributing
Melvin Grasser House	Penn Cove	Contributing

Name	Area	Status
Brown Cottage/Shelton House	Penn Cove	Not Contributing
Old County Courthouse/Grennan & Cranney Store	Penn Cove	Contributing
George Libbey House	Penn Cove	Contributing
Fisher Place	Penn Cove	Contributing
Dean House	Penn Cove	Not Contributing
Hart House	Penn Cove	Not Contributing
Whid-Isle Inn/Captain Whidbey Inn	Penn Cove	Contributing
Cove Cottage	Penn Cove	Not Contributing
Stone House	Penn Cove	Not Contributing
Smith Cottage	Penn Cove	Contributing
Smith/Davison House	Penn Cove	Not Contributing
Smith Net House	Penn Cove	Contributing
Pratt Boathouses	Penn Cove	Contributing
Old Hewitt Place	Penn Cove	Not Contributing
Old Grade School/Priest Place	Penn Cove	Not Contributing
A. Kineth House	Penn Cove	Contributing

Name	Area	Status
Sabin Shop	Penn Cove	Not Contributing
Sabin House	Penn Cove	Not Contributing
Well's Duplex	Penn Cove	Not Contributing
Walton Aubert House - Fiddler???'s Green	Penn Cove	Contributing
Tom Briscoe House	Penn Cove	Not Contributing
O'Leary Cottage/Snakelum House	Penn Cove	Contributing
Andherst Cottage	Penn Cove	Not Contributing
Davis Blockhouse & Sunnyside Cemetery	Ebey's Prairie	Contributing
O'Dell/F. Reuble House	Ebey's Prairie	Contributing
NPS Sheep Barn	Ebey's Prairie	Contributing
TNC Sheep Barn	Ebey's Prairie	Contributing
Frank Pratt House	Ebey's Prairie	Contributing
Jacob & Sarah Ebey House & Blockhouse	Ebey's Prairie	Contributing
Ferry House	Ebey's Prairie	Contributing
Ralph Engle Worker Housing	Ebey's Prairie	Contributing
John Gould House	Ebey's Prairie	Contributing

Name	Area	Status
Francis A. LeSourd House	Ebey's Prairie	Contributing
John LeSourd House	Ebey's Prairie	Contributing
Comstock/Sherman House	Ebey's Prairie	Not Contributing
Sherwood/Abbott/Franzen House	Ebey's Prairie	Not Contributing
Cawsey House	Ebey's Prairie	Contributing
Harmon/Pearson/Engle House	Ebey's Prairie	Contributing
Glazier/Herrett House	Ebey's Prairie	Contributing
Gallagher/Shreck Place (Gallagher Place/A. Sherman House)	Ebey's Prairie	Contributing
Samuel E. Hancock House	Ebey's Prairie	Contributing
Ed Jenne House	Ebey's Prairie	Contributing
Elisha Rockwell House	Ebey's Prairie	Contributing
Stoddard/Engle House	Ebey's Prairie	Not Contributing
William Engle House	Ebey's Prairie	Contributing
Old Boyer Place	Ebey's Prairie	Contributing
Charles T. Terry House	Ebey's Prairie	Contributing
James Place	Ebey's Prairie	Not Contributing



Name	Area	Status
Tuft House	Ebey's Prairie	Contributing
John Crockett House	Ebey's Prairie	Contributing
Hancock Granary	Ebey's Prairie	Contributing
Sherman Squash Barn	Ebey's Prairie	Contributing
Comstock Barn (Old Al Comstock Place)	Ebey's Prairie	Contributing
Fort Casey Officers Quarters	Fort Casey Uplands	Contributing
Wiley Barn	Fort Casey Uplands	Contributing
Keith House	Fort Casey Uplands	Contributing
Reuble Farm	Fort Casey Uplands	Contributing
Old Anderson Place	Fort Casey Uplands	Contributing
Partridge House	Fort Casey Uplands	Not Contributing
Waterman Logging House	Fort Casey Uplands	Not Contributing
Fort Casey Military Reservation/Camp Casey	Fort Casey Uplands	Contributing
Fort Casey Military Reservation/Fort Casey State Park	Fort Casey Uplands	Contributing
Old Hunting Lodge	Fort Casey Uplands	Contributing
Sherman Hog House	Fort Casey Uplands	Contributing

Name	Area	Status
R.C. Hill Home/J.T. Fielding Place	Fort Casey Uplands	Contributing
Gillespie House/Reuble Farm	Fort Casey Uplands	Contributing
Crockett/Boyer Barn (Hugh Crockett House)	Crockett Prairie	Contributing
Quonset House	Crockett Prairie	Not Contributing
Col. Walter Crockett Farmhouse & Blockhouse	Crockett Prairie	Contributing
Fort Casey Storage Buildings	Crockett Prairie	Contributing
Gilbert Place/Eggerman Farm	Crockett Prairie	Contributing
Calhoun House (Sam Crockett House)	Crockett Prairie	Contributing
Clarence Wanamaker Farm	Crockett Prairie	Contributing
Fort Casey Pump House	Crockett Prairie	Contributing
Hapton/Gould House (John Gould/Miller House)	Crockett Prairie	Contributing
Old Fort Casey Wharf	Crockett Prairie	Contributing
Keystone Cottage	Crockett Prairie	Not Contributing
Schulke House (Schulke/Steadman House)	Crockett Prairie	Contributing
Fort Ebey State Park	Coastal Strip	Contributing

NR Listed Historic Properties

Reference Number	Name	Type	Location
73001869	Central Whidbey Island Historic District	District	Central Whidbey Island - Coupeville
82004285	Deception Pass	Structure	Highway 20 - Anacortes



Archaeological Sites

SITE_ID	Comments	Elig_Name
IS00013	SNAKELUM POINT MIDDEN, PRE CONTACT VILLAGE, PRE CONTACT SHELL MIDDEN, PRE CONTACT LITHIC MATERIAL, FEATURE, HISTORIC OBJECTS, 900 X 15M	Survey/Inventory
IS00014	TOP OF MAUL, HUMAN SKELETON WAS REBURIED.	Survey/Inventory
IS00031	FCR, STONE DEBITAGE, BONE	Survey/Inventory
IS00032	HOUSE BASEMENT ON TOP OF KNOLL REVEALED BURIALS AND CLAMSHELL.	Survey/Inventory
IS00033	PRE CONTACT SHELL MIDDEN	Survey/Inventory
IS00034	PRE CONTACT SHELL MIDDEN	Survey/Inventory
IS00035	DIKING DISTRICT HAS DREDGED CHANNEL WHERE FISH WEIR WAS REPORTED.	Survey/Inventory
IS00036	FCR, FISH WEIR	Survey/Inventory
IS00037	FORM STATES THAT ARTIFACTS WERE FOUND "IN MIDDEN - ALSO BURIAL".	Survey/Inventory
IS00038	PRE CONTACT SHELL MIDDEN, LITHIC MATERIAL	Determined Not Eligible
IS00039	PRE CONTACT SHELL MIDDEN	Survey/Inventory
IS00043	PRE CONTACT SHELL MIDDEN	Survey/Inventory
IS00048	FCR, BONE, LITHIC ITEMS, ANTLER WEDGES	Survey/Inventory
IS00049	CKWOLA, PRE CONTACT SHILL MIDDEN, BURIAL, FCR, FISH BONE, SHELLFISH, 80 X 5-30M	Survey/Inventory
IS00050	FCR, CHIPPED LITHIC DEBRIS, BONE, POSSIBLE SEMI-CIRCULAR TRENCH NEAR END OF SPIT, ~47 X ~25M	Survey/Inventory
IS00051	FCR, BONE	Survey/Inventory
IS00052	SEMI-CIRCULAR TRENCH. A LARGE POTLATCH HOUSE WAS LOCATED HERE UNTIL THE FIRST DECADE OF THIS CENTURY. LOCALS REPORT BURIALS WITH TRADE GOODS UNCOVERED IN BLUFFS.	Survey/Inventory
IS00053	5 EXCAVATED CAIRNS. DRILLED ANCHOR STONE	Survey/Inventory
IS00054	PRE CONTACT SHELL MIDDEN INCLUDING FCR, BONE, AT LEAST TWO HUMAN BURIALS REMOVED, 330 X 50M, LATE MARPOLE PHASE 820 +/- 80	Survey/Inventory
IS00055	CAMP/ VILLAGE SITE, PRE CONTACT SHELL MIDDEN, WORKED BONE, LITHIC MATERIAL AND ANTLER AND FMR110 X 30M	Determined Eligible

SITE_ID	Comments	Elig_Name
IS00056	PRE CONTACT SHELL MIDDEN, , 10 X 5M	Survey/Inventory
IS00057	SEVERAL MOUNDS AND DEPRESSIONS, ONE BASALT CHIP	Survey/Inventory
IS00058	FCR	Survey/Inventory
IS00059	3 CAIRNS, STONES ENCIRCLING LARGE CIRCULAR DEPRESSION.	Survey/Inventory
IS00060	PRE CONTACT CAMP, SHELL MIDDEN, FMR, BONE AND LITHIC MATERIAL, 70 X 15M	Determined Eligible
IS00061	FCR, BONE. HUMAN BURIALS COLLECTED.	Survey/Inventory
IS00062	FCR, FISH BONES, SHELLFISH	Survey/Inventory
IS00063	PRE CONTACT SHELL MIDDEN, LITHIC MATERIAL, FCR, MAMMAL/ BIRD BONE, 42 X 33 X .8M	Survey/Inventory
IS00064	PRE CONTACT SHEL MIDDEN	Survey/Inventory
IS00065	LOCALS REPORT FINDING LITHIC ITEMS IN THIS AREA APPROX. 15 YEARS AGO.	Survey/Inventory
IS00066	FCR, PRE CONTACT SHELL MIDDEN, 130 X 90CM	Survey/Inventory
IS00067	ANTLER WEDGE ON BEACH, LOCALS HAVE COLLECTED PROJECTILE POINTS FROM HERE OR EBEBY'S LANDING.	Survey/Inventory
IS00068	FCR, MAUL, NET WEIGHTS	Survey/Inventory
IS00069	SHELL MIDDEN, SHELLS, MOSTLY DESTROYED	Survey/Inventory
IS00070	SEVERAL ROCK PILES WITH ADJACENT IRREGULAR PITS. UNCERTAIN IF THESE ARE HISTORIC OR PREHISTORIC.	Survey/Inventory
IS00071	HIGHDENSITY SHELL MIDDEN W/ FCR, CHARCOAL AND ASH (CLOSELY SPACED DEPOSITS), 90 X 10M, 40-70CM IN DEPTH	Determined Eligible
IS00072	FCR, PESTLE	Survey/Inventory
IS00073	FCR, BONE. FORM MENTIONS OLDER HISTORIC REFUSE BUT IS NOT SPECIFIC ABOUT ITEMS.	Survey/Inventory
IS00074	DIRT AND ROCK MOUNDS AND DEPRESSIONS. SOME MAY BE CAIRNS, SOME ARE FROM FARMER'S FIELD.	Survey/Inventory
IS00075	SINGLE STEMMED PROJECTILE POINT. SALVAGED BURIAL.	Survey/Inventory
IS00076	FCR, HOLLOWED OUT ANTLER TINE. LOCALS COLLECTED MANY ARTIFACTS WHEN SITE WAS GRADED.	Survey/Inventory

SITE_ID	Comments	Elig_Name
IS00077	GROUND STONE ANTHROPOMORPHIC BOWL. 1953 SITE FORM LISTS SITE TYPE AS "SHELL MIDDEN. BOX BURIALS. BURIALS PROBABLY SKAGIT."	Survey/Inventory
IS00078	FCR, BONE	Survey/Inventory
IS00082	FCR, DEER AND BIRD BONES	Determined Eligible
IS00088	FCR,BONE, LITHIC DEBRIS, SEMI-CIRCULAR TRENCH	Survey/Inventory
IS00090	FCR, BONE & STONE ARTIFACTS, ASH AND SEA URCHIN LENSES	Survey/Inventory
IS00091	CAMAS OVEN. LITHIC SCATTER. SERIES OF AT LEAST 5 MOUNDS OF FCR. BASALT FLAKE.	Survey/Inventory
IS00093	CHARRED ROCKS, GREEN SEA URCHIN SPINES	Survey/Inventory
IS00097	PRE CONTACT CAMP, SHELL MIDDEN, LITHIC MATERIAL, BONE AND FMR, HISTORIC WELL, 295 X 85M	Determined Eligible
IS00101	FORT CASEY LIGHTHOUSE	Potentially Eligible
IS00103	FORT CASEY STATE PARK	Survey/Inventory
IS00107	FCR, LITHIC DEBRIS. FCR IS CONCENTRATED IN SOME PLACES IN WHAT MAY BE HEARTHES.	Survey/Inventory
IS00110	ALL OBSERVED MATERIALS ARE IN A PRIVATE COLLECTION. 15-30 CHIPPED STONE PROJECTILE POINTS.	Survey/Inventory
IS00111	FCR, LOW DENSITY OF LITHIC MATERIALS	Survey/Inventory
IS00112	ONE BIFACE AND ONE CLOVIS POINT. BOTH IN PRIVATE COLLECTION.	Survey/Inventory
IS00113	FLAKES. CHARCOAL AND MAMMAL BONES ARE PRESENT HERE BUT DO NOT APPEAR TO BE PART OF THE SITE.	Survey/Inventory
IS00114	FCR, FLAKES, FLAKED COBBLE. CHARCOAL AND BONE ARE ALSO PRESENT BUT DO NOT APPEAR TO BE PART OF SITE.	Survey/Inventory
IS00115	FCR, FLAKES. CHARCOAL AND BONE ARE ALSO PRESENT BUT DO NOT APPEAR TO BE PART OF SITE.	Survey/Inventory
IS00116	FCR, LITHIC DEBRIS, BONE.	Survey/Inventory
IS00117	FLAKES, CHOPPERS	Survey/Inventory
IS00118	FLAKES. CHARCOAL AND MAMMAL BONES ARE PRESENT HERE BUT DO NOT APPEAR TO BE PART OF THE SITE.	Survey/Inventory

SITE_ID	Comments	Elig_Name
IS00119	SHELL MIDDEN	Survey/Inventory
IS00120	FCR, FISH BONES, SHELLFISH, LITHIC DEBRIS. FORM MENTIONS THAT "EARLY HISTORIC DEBRIS ALSO OCCURS IN THIS AREA".	Survey/Inventory
IS00121	ALL OBSERVED LITHIC MATERIALS ARE IN A PRIVATE COLLECTION.	Survey/Inventory
IS00124	PRE CONTACT LITHIC MATERIAL/ SHELL MIDDEN	Survey/Inventory
IS00200	FCR, ANTLER, BONE, FLAKES, CHOPPERS	Survey/Inventory
IS00206	EBEYS LANDING ARCHAEOLOGICAL SITE, SITE TYPE SHELL MIDDEN, 90 FT LENGTH, WIDTH UNKNOWN, SHELL MIDDEN MADE UP OF COARSELY BROKEN SHELLS.	Survey/Inventory
IS00207	SITE NAME-UNDETERMINED, SITE DIMENSIONS-53 METERS, DATE OF USE-UNDETERMINED, SHELL MIDDEN.	Survey/Inventory
IS00209	SITE NAME-UNKNOWN, SITE DIMENSIONS-150 X 63 METERS, DATE OF USE-UNDETERMINED, LITHIC SCATTER.	Survey/Inventory
IS00210	SITE NAME-WHIDBEY 1, THE BOTTLE SITE, SITE DIMENSIONS-30 X 5 METERS, DATE OF USE-1870 TO 1917, HISTORIC OBJECTS.	Potentially Eligible
IS00214	ROWLAND, PREHISTORIC SHELL MIDDEN, 9 X 9CM & 5 X 5CM CONCENTRATIONS	Survey/Inventory
IS00215	PREHISTORIC SHELL MIDDEN W/ FCR, FAUNAL MATERIAL (MAMMAL AND FISH BONES) AND ROCK CAIRN, 84 X 25M, 80 CM IN DEPTH	Survey/Inventory
IS00217	LIBBY SHELL MIDDEN, 30 X 31FT	Survey/Inventory
IS00218	PARTRIDGE POINT/ WEST BEACH SHELL MIDDEN/ BURIAL AREA, 100 X100M X 50-60 CM DEEP	Survey/Inventory
IS00221	FERRY HOUSE ARCHAEOLOGICAL SITE, PRE CONTACT HEARTH FEATURE, HISTORIC REFUSE SCATTER, HISTORIC RESIDENTIAL STRUCTURE AND ROAD, 85 X 49M X 70CM, 1850, 9500-200BP	Determined Eligible
IS00222	EBEY BEACH SITE, PRE CONTACT SHELL MIDDEN, 27.43 E/W X 10-11CM	Survey/Inventory
IS00223	PRE CONTACT SHELL MIDDEN, 3 X 3 M	Survey/Inventory
IS00224	JACOB EBAY HOUSE HISTORIC HOMESTEAD, 120 X 80 M, 1850-PRESENT	Determined Eligible
IS00235	PRE-CONTACT BURIAL, SHELL MIDDEN, HUMAN REMAINS, SITE DIMENSIONS UNDETERMINED.	Survey/Inventory



SITE_ID	Comments	Elig_Name
IS00236	HISTORIC STRUCTURE UNKNOWN, CONCRETE AGGREGATE FEATURES, 1250 X 80M, CA. LATE 19TH - EARLY 20TH CENTURY.	Survey/Inventory
IS00237	PRE-CONTACT SHELL MIDDEN, 25 X 20M, BASALT FLAKE.	Survey/Inventory
IS00239	HISTORIC STRUCTURE UNKNOWN, 130 X 96M, CA. LATE 19TH CENTURY - 1941, BRICK FRAGMENTS, CERAMIC TILE, CEMENT FRAGMENTS, PLASTER.	Survey/Inventory
IS00240	PRE-CONTACT SHELL MIDDEN, 500 X 100M, SHELL FRAGMENTS, FISH BONE.	Survey/Inventory
IS00241	HISTORIC DEBRIS SCATTER, 55 GALLON BARREL, GLASS, JARS 175 X 125M, CA. 1940S-1950S.	Potentially Eligible
IS00242	PRE-CONTACT SHELL MIDDEN, 35 X 18M, SHELL.	Survey/Inventory
IS00243	HISTORIC LOGGING, 23 X 34M, CA. LATE 1800S, BURNED LOG, OLD TREE STUMPS, WAGON ROAD.	Survey/Inventory
IS00245	HISTORIC POST MOLD, ISOLATE, CA. 1899.	Survey/Inventory
IS00246	FARM TWO A, PRE-CONTACT LITHIC MATERIAL, 525 X 275M, DEBITAGE, CORES, PROJECTILE POINT FRAGMENTS.	Survey/Inventory
IS00247	FARM TWO B, PRE-CONTACT LITHIC MATERIAL, 175 X 90M, DEBITAGE.	Survey/Inventory
IS00248	FARM TWO C, PRE-CONTACT LITHIC DEBITAGE, 275 X 175M, FLAKED COPBBLE.	Survey/Inventory
IS00249	FARM TWO D, PRE-CONTACT ISOLATE, FLAKE WITHOUT CORTEX.	Survey/Inventory
IS00250	FARM TWO E, PRE-CONTACT LITHIC ISOLATE, FLAKE.	Survey/Inventory
IS00251	FARM ONE A, PRE-CONTACT LITHIC MATERIAL, 125 X 50M, COBBLES, FLAKED COBBLE, COBBLE SPALL, SHATTER.	Survey/Inventory
IS00252	FARM ONE B, HISTORIC AND PRE-CONTACT COMPONENTS, 135 X 125M, FLAKED COBBLES, CERAMIC, FMR, SHATTER, CHINESE STYLE CERAMIC, CA. 1850S - 1900S.	Survey/Inventory
IS00253	FARM ONE C, PRE-CONTACT LITHIC MATERIAL, 175 X 115M, CORE, FLAKE TOOL, SHATTER PIECES.	Survey/Inventory
IS00254	FARM ONE D, PRE-CONTACT LITHIC MATERIAL, 2 X 2M, FLAKE, BIFACE.	Survey/Inventory
IS00255	FARM ONE E, PRE-CONTACT LITHIC MATERIAL, 10 X 10M, FLAKE, SHATTER PIECES.	Survey/Inventory
IS00256	PRE-CONTACT ISOLATE, FARM ONE F, FLAKED COBBLE.	Survey/Inventory
IS00257	PRE-CONTACT ISOLATE, FARM ONE G, FLAKED COBBLE.	Survey/Inventory

SITE_ID	Comments	Elig_Name
IS00258	FARM ONE H, PRE-CONTACT LITHIC ISOLATE, FLAKE.	Survey/Inventory
IS00259	FARM ONE I, PRE-CONTACT ISOLATE, FLAKE.	Survey/Inventory
IS00260	FARM ONE J, PRE-CONTACT LITHIC ISOLATE, FLAKE.	Survey/Inventory
IS00261	FARM ONE K, PRE-CONTACT LITHIC ISOLATE, FLAKED COBBLE.	Survey/Inventory
IS00263	PRE-CONTACT SHELL MIDDEN, FMR, CHARCOAL LENSES, POSSIBLE POST MOLDS, MAMMAL BONES, 57 X 105 M.	Survey/Inventory
IS00264	PRE-CONTACT SHELL MIDDEN, SHELL, FCR, CHARCOAL, 180 X 10M/	Survey/Inventory
IS00265	PRE-CONTACT SHELL MIDDEN, FMR, SHELL, 24.4 X 16.75M.	Survey/Inventory
IS00283	HISTORIC STRUCTURE UNKNOWN, 2 CONCRETE FOUNDATIONS, BRICK DUMP, REFUSE, GLASS, FAUNAL BONE, NAILS, WHITEWARE SHERD, 185 X 45M, CA. MID 20TH CENTURY.	Potentially Eligible
IS00284	HISTORIC STRUCTURE UNKNOWN, 185 X 115M, 2 CONCRETE PADS, CONCRETE FOUNDATION WALL, DEPRESSION, REFUSE, GLASS, TILE, NAILS, SHELL CASINGS, BOTTLE CAP, PLASTIC, FOUR HOLE BUTTON, CERAMIC, CA. MID 20TH CENTURY.	Determined Not Eligible
IS00286	HISTORIC CONCRETE BOX, WATERLINE PIPE, VALVE, CA. 1943, 60 X 84 INCHES	Potentially Eligible
IS00293	PRE CONTACT SHELL MIDDEN, 7 X 7M	Survey/Inventory
IS00294	PRE CONTACT SHELL LENS, 5 X 5M	Survey/Inventory
IS00297	PRE CONTACT SHELL MIDDEN, PRE CONTACT CAIRN, 32 X 13M	Survey/Inventory
IS00300	PIT ROAD SITE, REDEPOSITED SITE (FROM 45IS45), PRE CONTACT HUMAN REMAINS, PRE CONTACT SHELL MIDDEN, 150 X 41 M	Survey/Inventory
IS00303	SCHULKE/STEADMAN HOUSE REFUSE, MAMMAL BONES, GLASS, METAL, CERAMIC, 60 X 30M, CA. 1900-1918	Potentially Eligible
IS00304	KEYSTONE BEACH LITHIC SITE, PRE CONTACT LITHIC MATERIAL, FLAKES, 10 X 5M	Survey/Inventory
IS00305	SHEEP BARN LITHICS, PRE CONTACT LITHIC MATERIAL, FLAKED COBBLE, FLAKED PEBBLE, 30 X 5M	Survey/Inventory
IS00306	HIGHWAY NORTH ISOLATE, PRE CONTACT ISOLATE, SCRAPER OR ADZE BLADE	Survey/Inventory
IS00308	PRE CONTACT SHELL MIDDEN, FCR, SHELL, MAMMAL BONE, FISH BONE, ~30 X ~20M	Survey/Inventory
IS00309	HISTORIC DEBRIS SCATTER, MODIFIED MAMMAL BONE, GLASS, METAL, PORCELAIN, ~ 105 X 182 CM, CA. PRE 1950S	Potentially Eligible

SITE_ID	Comments	Elig_Name
IS00315	PRE-CONTACT ISOLATE, FLAKED COBBLE/COBBLE TOOL	Survey/Inventory
IS00316	KEYSTONE ROAD HISTORIC SITE, STRUCTURAL FOUNDATION REMNANTS, 1,312 X 656 FT, CA. 1943	Potentially Eligible
IS00317	HISTORIC ISOLATE, WHITEWARE FRAGMENT, CA. PRE 1950	Survey/Inventory
IS00318	HISTORIC ISOLATE, WHITEWARE FRAGMENT, CA. PRE 1950	Survey/Inventory
IS00319	HISTORIC GLASS ISOLATE, CA. PRE-1950	Survey/Inventory
IS00320	OLF THRIFTMASTER, HISTORIC OBJECT, CHEVROLET THRIFTMASTER PICKUP TRUCK, CA. 1950	Survey/Inventory
IS00322	PRE-CONTACT SHELL MIDDEN, 51M X ?	Survey/Inventory
IS00323	CASHVALU GAS SITE, GASOLINE PUMP, CEMENT-LINED CAVITY, HARDWARE CLOTH, CONCRETE SLAB, HISTORIC DEBRIS SCATTER, 460 X 330 FT, CA. 1940 - 1950	Potentially Eligible
IS00324	GATE A-65 HISTORIC SCATTER, GLASS, PORCELAIN FRAGMENTS, 10 X 2M, CA. 1940-1950	Potentially Eligible
IS00325	PRE CONTACT BLOCKY FIRE-CRACKED ROCKS, FOUR FRAGMENTS APPEARED TO ONCE HAVE BEEN A SINGLE, LARGER ROCK	Survey/Inventory
IS00327	PRE CONTACT SHELL MIDDEN, ~8 X ~2.5 M	Survey/Inventory
IS00329	PRE-CONTACT SHELL MIDDEN, 28 X 13M	Survey/Inventory
IS00332	HISTORIC ISOLATE, HISTORIC BOTTLE BASE, CA. 1949	Survey/Inventory
IS00334	PRECONTACT SHELL MIDDEN, SHELL, FMR, LITHIC DEBITAGE, 35 X 20M	Survey/Inventory
IS00336	HISTORIC ROAD, WALLS, CONCRETE, WOOD DECKING, 18 X 6FT, CA. PRE 1950	Potentially Eligible
IS00337	PRE CONTACT SHELL MIDDEN, 5 X 2M	Survey/Inventory
IS00350	HISTORIC ERA DEBRIS SCATTER, GLASS INSULATORS, FOUND IN TELEPHONE POL REPLACEMENT BACKFILL, CA. 1920	Potentially Eligible
IS00351	HISTORIC DEBRIS SCATTER, GLASS BOTTLES, JARS, CANS, ~164 X ~82FT, CA. EARLY 1900S, PRE-1950S	Potentially Eligible
IS00360	Pratt Trail Cobble Chopper, pre contact lithic isolate	Survey/Inventory
IS00361	Pre contact camp, Pre contact shell midden, 80 x 13m	Survey/Inventory
SJ00349	SHELL MIDDEN, 16M L X 2M W X 30CM D, CULTURAL MATERIALS INCLUDING FAUNAL MATERIALS CONSISTING OF REMAINS OF AT LEAST 6 VARIETIES OF SHELLFISH	Survey/Inventory

SITE_ID	Comments	Elig_Name
SK00025	THIN SHELL DEPOSIT ON TOP OF ROCKY CLIFFS	Survey/Inventory
SK00027	3 DRYING TRENCHES	Survey/Inventory
SK00033	LONG HOUSE DEPRESSIONS, SHELL MIDDEN CONTAINING BURIALS, DARK SOIL, BONE, FCR.	Survey/Inventory
SK00034	MANY CELTS, SLATE POINTS, ANTLER TOOL, HAMMERS	Survey/Inventory
SK00046	LIGHTHOUSE POINT MIDDEN, SHELL DEPOSIT, 50M L (N/S) X 30M W (E/W) X .5M D, LAYER OF COARSE SHELL	Survey/Inventory
SK00077	FCR, COBBLE TOOL	Survey/Inventory
SK00079	FCR, CHARCOAL	Survey/Inventory
SK00099	FCR, HEARTH, WORKED STONE, BARBED BONE POINT, BASKETRY TWINE, WOOD PLANKS.	Survey/Inventory
SK00114	HISTORIC VILLAGE USED BY FISHERMAN AND AS SUMMER CABINS. HOMEMADE AND COMMERCIALY MADE BOATS, FISHING NETS, DOCK FACILITIES.	Potentially Eligible
SK00121	DUMP CA. 1870 TO PRESENT	Potentially Eligible
SK00168	FCR, CHARCOAL, ASH, BONE	Survey/Inventory

Archaeological Districts

SITE_ID	Comments	Elig_Name
D100011	SQWIKWIKWAB (FISHTOWN ARCH. DISTRICT)	Determined Eligible - NPS



Cemetery Sites

SITE_ID	Comments	Elig_Name
IS00013	SNAKELUM POINT MIDDEN, PRE CONTACT VILLAGE, PRE CONTACT SHELL MIDDEN, PRE CONTACT LITHIC MATERIAL, FEATURE, HISTORIC OBJECTS, 900 X 15M	Survey/Inventory
IS00014	TOP OF MAUL, HUMAN SKELETON WAS REBURIED.	Survey/Inventory
IS00032	HOUSE BASEMENT ON TOP OF KNOLL REVEALED BURIALS AND CLAMSHELL.	Survey/Inventory
IS00037	FORM STATES THAT ARTIFACTS WERE FOUND "IN MIDDEN - ALSO BURIAL".	Survey/Inventory
IS00049	CKWOLA, PRE CONTACT SHILL MIDDEN, BURIAL, FCR, FISH BONE, SHELLFISH, 80 X 5-30M	Survey/Inventory
IS00050	FCR, CHIPPED LITHIC DEBRIS, BONE, POSSIBLE SEMI-CIRCULAR TRENCH NEAR END OF SPIT, ~47 X ~25M	Survey/Inventory
IS00052	SEMI-CIRCULAR TRENCH. A LARGE POTLATCH HOUSE WAS LOCATED HERE UNTIL THE FIRST DECADE OF THIS CENTURY. LOCALS REPORT BURIALS WITH TRADE GOODS UNCOVERED IN BLUFFS.	Survey/Inventory
IS00054	PRE CONTACT SHELL MIDDEN INCLUDING FCR, BONE, AT LEAST TWO HUMAN BURIALS REMOVED, 330 X 50M, LATE MARPOLE PHASE 820 +/- 80	Survey/Inventory
IS00061	FCR, BONE. HUMAN BURIALS COLLECTED.	Survey/Inventory
IS00075	SINGLE STEMMED PROJECTILE POINT. SALVAGED BURIAL.	Survey/Inventory
IS00077	GROUND STONE ANTHROPOMORPHIC BOWL. 1953 SITE FORM LISTS SITE TYPE AS "SHELL MIDDEN. BOX BURIALS. BURIALS PROBABLY SKAGIT."	Survey/Inventory
IS00082	FCR, DEER AND BIRD BONES	Determined Eligible
IS00088	FCR,BONE, LITHIC DEBRIS, SEMI-CIRCULAR TRENCH	Survey/Inventory
IS00217	LIBBY SHELL MIDDEN, 30 X 31FT	Survey/Inventory
IS00218	PARTRIDGE POINT/ WEST BEACH SHELL MIDDEN/ BURIAL AREA, 100 X100M X 50-60 CM DEEP	Survey/Inventory
IS00235	PRE-CONTACT BURIAL, SHELL MIDDEN, HUMAN REMAINS, SITE DIMENSIONS UNDETERMINED.	Survey/Inventory
IS00263	PRE-CONTACT SHELL MIDDEN, FMR, CHARCOAL LENSES, POSSIBLE POST MOLDS, MAMMAL BONES, 57 X 105 M.	Survey/Inventory
IS00271	CEMETERY	Inventory
IS00272	SNAKLIN MONUMENT	Inventory
IS00273	SUNNYSIDE CEMETERY	Inventory
IS00279	FIRCREST CEMETERY	Inventory

SITE_ID	Comments	Elig_Name
IS00280	MAPLE LEAF CEMETERY	Inventory
IS00300	PIT ROAD SITE, REDEPOSITED SITE (FROM 45IS45), PRE CONTACT HUMAN REMAINS, PRE CONTACT SHELL MIDDEN, 150 X 41 M	Survey/Inventory
IS00331	COUPEVILLE BEACH HUMAN SKELETAL REMAINS (HR13-00007)	Inventory
SK00033	LONG HOUSE DEPRESSIONS, SHELL MIDDEN CONTAINING BURIALS, DARK SOIL, BONE, FCR.	Survey/Inventory
SK00035	SHELL MIDDEN WITH BURIALS, WOODEN PEG FROM BURIAL BOX. CELTS, GROUND SLATE KNIVES, HAMMERS, SPEARHEADS. BASKET FRAGMENTS COLLECTED BY OWNER AND STUDENTS.	Survey/Inventory
SK00099	FCR, HEARTH, WORKED STONE, BARBED BONE POINT, BASKETRY TWINE, WOOD PLANKS.	Survey/Inventory



### Historic Districts

SITE_ID	Comments	Elig_Name
D100011	SQWIKWIKWAB (FISHTOWN ARCH. DISTRICT)	National Register, Washington Heritage Register
D100006	Central Whidbey Island Historic District	National Register, Washington Heritage Register



## Appendix G

### Properties No Longer in the Area of Potential Effects

Summary of Sites and Buildings That Are No longer in the APE

Comparison of Initial Inventory and Final Inventory

Type	Initial Inventory	Final Inventory	Difference
Buildings and Structures (50 years and older)	2426	1989	437
Washington Heritage Barn Register Listed	32	23	9
Historic Districts	3	2	1
Washington Heritage Register Listed	5	4	1
National Register of Historic Places Listed	3	2	1
Cemetery Sites	33	27	6
Archaeological Sites	193	151	42
Archaeological Districts	1	1	0
ELNHR 2016 Inventory	280	288	-8

Change between Initial Inventory and Final Inventory

Type	Duplicate Listing	No longer within APE	Total
Buildings and Structures (50 years and older)	362	75	437
Washington Heritage Barn Register Listed	9	0	9
Historic Districts	1	0	1
Washington Heritage Register Listed	1	0	1
National Register of Historic Places Listed*	0	1	1
Cemetery Sites	6	0	6
Archaeological Sites	42	0	42
Archaeological Districts	0	0	0

ELNHR 2016 Inventory**	-8	0	-8
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\* One NR eligible resource was mistakenly included in the initial inventory (Loers Benjamin House)

\*\* Eight Buildings from ELNHR Inadvertently omitted from initial inventory

Note: duplicate records were removed for properties on NASWI and those listed twice in initial inventory because of overlap between ELNHR boundary and the 65 dB DNL

Buildings and Structures (50 years and older) No Longer in the APE

Historic ID	Site Name	Location	Tax Parcel	Register Status	Built Year
102267	Ault Field - Site 201211, Golf Course	Oak Harbor		Determined Eligible Not	
102335	Sea Plane Base - Water Pumphouse, Building 328, Water Pumphouse Well No. 5	Oak Harbor		Determined Eligible Not	
102338	Seaplane Base Pier and Breakwater, Facility 479 - Mooring Pier	Oak Harbor		Determined Eligible	1943
102359	Ault Field - Water Pump House, Building 337, Water Pump House	Oak Harbor		Determined Eligible Not	
115146	Pier Approach and Fuel Pier, Facility 479, Pier/Breakwater	Oak Harbor		Not Determined	
115166	Water Pump House, Building 337, Water Pump House	Oak Harbor		Not Determined	
627701		Oak Harbor	S6055-00-0000B-0	Not Determined	1923
627740		Oak Harbor	R13336-119-0350	Not Determined	1927
627956		Oak Harbor	R13335-227-3990	Not Determined	1948
627963		Oak Harbor	R13335-221-4330	Not Determined	1948
628170		Oak Harbor	S6055-00-01008-0	Not Determined	1952
628279		Oak Harbor	S6055-00-02002-0	Not Determined	1953

Historic ID	Site Name	Location	Tax Parcel	Register Status	Built Year
628285		Oak Harbor	R13335-259-1300	Not Determined	1953
628301		Oak Harbor	S6055-00-01007-0	Not Determined	1953
628315		Oak Harbor	S6055-00-03006-0	Not Determined	1954
628333		Oak Harbor	S6055-00-03004-0	Not Determined	1954
628347		Oak Harbor	S6055-00-03002-0	Not Determined	1954
628355		Oak Harbor	S6055-00-01006-0	Not Determined	1954
628357		Oak Harbor	R13436-445-2100	Not Determined	1954
628407		Oak Harbor	S6055-00-04008-0	Not Determined	1955
628408		Oak Harbor	S6055-00-01003-0	Not Determined	1955
628431		Oak Harbor	R13335-221-4160	Not Determined	1956
628444		Oak Harbor	S6600-00-05009-0	Not Determined	1956
628466		Oak Harbor	S6600-00-01002-0	Not Determined	1956
628467		Oak Harbor	S6055-00-02001-0	Not Determined	1956
628485		Oak Harbor	S6055-00-03003-0	Not Determined	1956
628487		Oak Harbor	S6600-00-05011-0	Not Determined	1956

Historic ID	Site Name	Location	Tax Parcel	Register Status	Built Year
628497		Oak Harbor	S6600-00-02009-0	Not Determined	1957
628504		Oak Harbor	S7285-21-00036-0	Not Determined	1957
628508		Oak Harbor	S7285-21-00041-0	Not Determined	1957
628539		Oak Harbor	S7285-21-00037-0	Not Determined	1957
628569		Oak Harbor	R13436-442-1940	Not Determined	1957
628573		Oak Harbor	S7285-21-00035-0	Not Determined	1957
628584		Oak Harbor	S6055-00-01004-0	Not Determined	1957
628590		Oak Harbor	S6055-00-02003-0	Not Determined	1957
628612		Oak Harbor	S6600-00-01001-0	Not Determined	1957
628620		Oak Harbor	S6600-00-02008-0	Not Determined	1957
628657		Oak Harbor	S6055-00-02004-0	Not Determined	1957
628662		Oak Harbor	R13335-275-0940	Not Determined	1957
628665		Oak Harbor	S6055-00-04009-0	Not Determined	1957
628698		Oak Harbor	S6055-00-03005-0	Not Determined	1958
628775		Oak Harbor	S6600-00-05010-0	Not Determined	1958

Historic ID	Site Name	Location	Tax Parcel	Register Status	Built Year
628913		Oak Harbor	S6600-00-01005-0	Not Determined	1959
628916		Oak Harbor	S6600-00-02005-0	Not Determined	1959
628947		Oak Harbor	S6600-00-05008-0	Not Determined	1959
628953		Oak Harbor	S6600-00-01006-0	Not Determined	1959
628955		Oak Harbor	S6600-00-02007-0	Not Determined	1959
628960		Oak Harbor	S6600-00-02006-0	Not Determined	1959
628973		Oak Harbor	R13335-221-4240	Not Determined	1959
628980		Oak Harbor	S6600-00-01004-0	Not Determined	1959
628994		Oak Harbor	S6600-00-05007-0	Not Determined	1959
629010		Oak Harbor	S6600-00-01007-0	Not Determined	1959
629020		Oak Harbor	S6600-00-01003-0	Not Determined	1959
629025		Oak Harbor	S6600-00-02004-0	Not Determined	1959
629039		Oak Harbor	S6600-00-01009-0	Not Determined	1960
629085		Oak Harbor	S6600-00-05006-0	Not Determined	1960
629111		Oak Harbor	S7285-21-00033-0	Not Determined	1960



Historic ID	Site Name	Location	Tax Parcel	Register Status	Built Year
629151		Oak Harbor	R13336-128-0340	Not Determined	1961
629192		Oak Harbor	S6055-00-01005-0	Not Determined	1962
629226		Oak Harbor	S6410-02-00002-0	Not Determined	1962
629332		Oak Harbor	S6055-00-01009-0	Not Determined	1964
629345		Oak Harbor	R13436-407-2330	Not Determined	1964
629358		Oak Harbor	S6410-03-00039-0	Not Determined	1964
629441		Oak Harbor	R13336-111-0340	Not Determined	1966
629477		Oak Harbor	S6600-00-05005-0	Not Determined	1967
629500		Oak Harbor	S6600-00-05004-0	Not Determined	1967
629619		Oak Harbor	R13335-269-2310	Not Determined	1968
629790		Oak Harbor	S8140-00-04005-0	Not Determined	1969
629895		Oak Harbor	S7285-21-00034-0	Not Determined	1968
629982		Oak Harbor	S7285-00-0A001-2	Not Determined	1958
629999		Oak Harbor	S7285-00-0A001-4	Not Determined	1956
630054		Oak Harbor	S7285-00-0A002-0	Not Determined	1956

Historic ID	Site Name	Location	Tax Parcel	Register Status	Built Year
630079		Oak Harbor	S7285-00-0A001-1	Not Determined	1968
630088		Oak Harbor	S7285-01-00003-0	Not Determined	1960
630116		Oak Harbor	S7285-01-00001-0	Not Determined	1959

NR Register Listed Historic Properties No Longer in the APE

Reference Number	Name	Type	Location
77001334	Loers, Benjamin, House	Building	2046 Swantown Road - Oak Harbor

Note: Loers, Benjamin, House was inadvertently listed on the initial inventory but it is not within the APE



**Appendix H**  
**Maps of Archaeological and Cemetery Sites in the Area of Potential**  
**Effects**

**Not for Public Distribution**

**Appendix H**  
**Maps of Archaeological and Cemetery Sites in the Area of Potential**  
**Effects**

**Not for Public Distribution**

## Appendix I

### Central Whidbey Island Contributing Structures, Roads, and Views

## ELNHR 2016 Inventory

Name	Area	Status
Charlie Mitchell Barn	San de Fuca Uplands	Contributing
Zylstra/Sherod House	San de Fuca Uplands	Contributing
Earlywine/Nienhuis Property (John Neinhuis Place/L. Lewis Property)	San de Fuca Uplands	Contributing
Old Power Place	San de Fuca Uplands	Contributing
San de Fuca School	San de Fuca Uplands	Contributing
Capt. R.B. Holbrook House	San de Fuca Uplands	Contributing
Nienhuis/Leach Place	San de Fuca Uplands	Contributing
Liberal League Hall/San de Fuca Community Chapel	San de Fuca Uplands	Contributing
Hingston House	San de Fuca Uplands	Contributing
Tuft Cottage/Mrs. J. Arnold House	San de Fuca Uplands	Contributing
Armstrong/Trumball House	San de Fuca Uplands	Contributing
Fisher/Hingston/Trumball General StoreL	San de Fuca	Contributing
Hingston/Trumball Store	San de Fuca Uplands	Contributing
Armstrong/Scoby House	San de Fuca Uplands	Contributing
Hordyk Place/VanderVoet Farm	San de Fuca Uplands	Contributing
Weidenbach House	San de Fuca Uplands	Contributing
A.W. Monroe/VandeWerfhorst Place	San de Fuca Uplands	Contributing
Van Dam Place	San de Fuca Uplands	Contributing
H.H. Rhodes Place	San de Fuca Uplands	Contributing

Name	Area	Status
Arnold Farm	NULSan de Fuca UplandsL	Contributing
Henry Arnold/Grasser House	San de Fuca Uplands	Contributing
Robart Cottage	San de Fuca Uplands	Contributing
A.W. Monroe House	San de Fuca Uplands	Contributing
Samuel Libbey Ranch	San de Fuca Uplands	Contributing
Morris Place	San de Fuca Uplands	Contributing
Art Holmburg Place	West Woodlands	Contributing
Cook/Sherman House	West Woodlands	Contributing
Old Art Black Barn	Coupeville	Contributing
Powell House	Coupeville	Contributing
Edmonds House (Pinkston House)	Coupeville	Contributing
Wharf Warehouse and Dock	Coupeville	Contributing
Alexander Blockhouse	Coupeville	Contributing
Fire Hall	Coupeville	Contributing
Horace Holbrook House	Coupeville	Contributing
Heckenbury House	Coupeville	Contributing
Telephone Exchange Building	Coupeville	Contributing
Flora A.P. Engle House	Coupeville	Contributing
Leach House	Coupeville	Contributing
Alvah D. Blowers House	Coupeville	Contributing
James Gillespie House	Coupeville	Contributing
John and Jane Kineth Sr. House	Coupeville	Contributing
Methodist Church	Coupeville	Contributing



Name	Area	Status
Carl Gillespie House	Coupeville	Contributing
Highwarden House	Coupeville	Contributing
Jacob Jenne House	Coupeville	Contributing
Dr. White???'s Office	Coupeville	Contributing
Williams House (Higgins House)	Coupeville	Contributing
Joseph Libbey House	Coupeville	Contributing
Reverend Lindsey House	Coupeville	Contributing
Congregational Church	Coupeville	Contributing
Chansey House (Nichols/Bennett House)	Coupeville	Contributing
Sergeant Clark House	Coupeville	Contributing
Frank Newberry House	Coupeville	Contributing
Chapman House	Coupeville	Contributing
Pat???'s Place	Coupeville	Contributing
Hancock/Partridge House (Dixon/Partridge House)	Coupeville	Contributing
Will Jenne House	Coupeville	Contributing
James Wanamaker House	Coupeville	Contributing
A.B. Coates House	Coupeville	Contributing
Morrow/Franzen House (Spangler/Franzen Rental House)	Coupeville	Contributing
Bearss/Barrett House	Coupeville	Contributing
Masonic Lodge No. 15	Coupeville	Contributing
Morris House	Coupeville	Contributing
Ed Clark House	Coupeville	Contributing
Howell/Harpole House (Howell/Wright House)	Coupeville	Contributing

Name	Area	Status
Ives House	Coupeville	Contributing
Stark House	Coupeville	Contributing
Albert Kineth House	Coupeville	Contributing
Polly Harpole???'s Maternity Home	Coupeville	Contributing
County Jail/Boy Scout Building	Coupeville	Contributing
Charles Angel House	Coupeville	Contributing
Newcomb Property	Coupeville	Contributing
Newcomb House	Coupeville	Contributing
Benson/Bunting House	Coupeville	Contributing
Mock House	Coupeville	Contributing
Johnson House	Coupeville	Contributing
Boothe House	Coupeville	Contributing
King/McCabe House	Coupeville	Contributing
Black/Lindsey House	Coupeville	Contributing
Dr. White House	Coupeville	Contributing
E.O. Lovejoy/Yorioka House	Coupeville	Contributing
Bergman House	Coupeville	Contributing
Duvall House	Coupeville	Contributing
Fairhaven	Coupeville	Contributing
Gillespie Meat Market	Coupeville	Contributing
Terry's Dryer/Gillespie Livery Building	Coupeville	Contributing
Island County Abstract Office	Coupeville	Contributing
Island County Times Building	Coupeville	Contributing

Name	Area	Status
Judge Still Law Office	Coupeville	Contributing
Benson Confectionery	Coupeville	Contributing
Elkhorn Saloon	Coupeville	Contributing
Tom Howell's Barbershop	Coupeville	Contributing
Coupeville Cash Store	Coupeville	Contributing
Post Office	Coupeville	Contributing
John Robertson's Store	Coupeville	Contributing
Whidbey Mercantile Company	Coupeville	Contributing
John Robertson House	Coupeville	Contributing
Sedge Building	Coupeville	Contributing
Puget Race Drug Store	Coupeville	Contributing
Glenwood Hotel	Coupeville	Contributing
Col. Granville Haller House	Coupeville	Contributing
Island County Bank	Coupeville	Contributing
Samsel/Zylstra Law Office	Coupeville	Contributing
Capt. Thos. Kinney House	Coupeville	Contributing
Captain Clapp House	Coupeville	Contributing
Fullington House	Coupeville	Contributing
Pontiac Dealership/Auto Barn	Coupeville	Contributing
Cushen House	Coupeville	Contributing
Methodist Parsonage	Coupeville	Contributing
Thomas Griffith House	Coupeville	Contributing
First Methodist Parsonage	Coupeville	Contributing
Jacob Straub House	Coupeville	Contributing

Name	Area	Status
Jefferds House	Coupeville	Contributing
Hesselgrave House	Coupeville	Contributing
Coupeville Courier Printing Office	Coupeville	Contributing
Clapp/Ghormley House	Coupeville	Contributing
Conrad House	Coupeville	Contributing
Munson House (Ervin Rental)	Coupeville	Contributing
Gould/Canty House	Coupeville	Contributing
Capt. Thomas Coupe House	Coupeville	Contributing
Chris Solid House	Coupeville	Contributing
Chromy House	Coupeville	Contributing
Fred Nuttall???'s House	Coupeville	Contributing
Howard House	Coupeville	Contributing
Ernest Watson House	Coupeville	Contributing
Coupeville City Hall	Coupeville	Contributing
James Zylstra House	Coupeville	Contributing
Todd/Lovejoy House	Coupeville	Contributing
Courthouse Vault	Coupeville	Contributing
Williams House	Coupeville	Contributing
Ward/Clark House	Coupeville	Contributing
Abbott/Knowles House	Coupeville	Contributing
Frain/Burton Engle House	Coupeville	Contributing
Reuble Squash Barn	Coupeville	Contributing
Thomas/Sullivan House	East Woodlands	Contributing
Strong Granary	East Woodlands	Contributing

Name	Area	Status
Strong Farm	East Woodlands	Contributing
Mulder House	East Woodlands	Contributing
Myers Property	East Woodlands	Contributing
John Kineth, Jr. Farmhouse	Smith Prairie	Contributing
Harp Place	Smith Prairie	Contributing
Muzzall Farm	Penn Cove	Contributing
McWilliams Bungalow	Penn Cove	Contributing
Still Log Cabin	Penn Cove	Contributing
Melvin Grasser House	Penn Cove	Contributing
Old County Courthouse/Grennan & Cranney Store	Penn Cove	Contributing
George Libbey House	Penn Cove	Contributing
Fisher Place	Penn Cove	Contributing
Whid-Isle Inn/Captain Whidbey Inn	Penn Cove	Contributing
Smith Cottage	Penn Cove	Contributing
Smith Net House	Penn Cove	Contributing
Pratt Boathouses	Penn Cove	Contributing
A. Kineth House	Penn Cove	Contributing
Walton Aubert House - Fiddler???'s Green	Penn Cove	Contributing
O'Leary Cottage/Snakelum House	Penn Cove	Contributing
Davis Blockhouse & Sunnyside Cemetery	Ebey's Prairie	Contributing
O'Dell/F. Reuble House	Ebey's Prairie	Contributing
NPS Sheep Barn	Ebey's Prairie	Contributing
TNC Sheep Barn	Ebey's Prairie	Contributing

Name	Area	Status
Frank Pratt House	Ebey's Prairie	Contributing
Jacob & Sarah Ebey House & Blockhouse	Ebey's Prairie	Contributing
Ferry House	Ebey's Prairie	Contributing
Ralph Engle Worker Housing	Ebey's Prairie	Contributing
John Gould House	Ebey's Prairie	Contributing
Francis A. LeSourd House	Ebey's Prairie	Contributing
John LeSourd House	Ebey's Prairie	Contributing
Cawsey House	Ebey's Prairie	Contributing
Harmon/Pearson/Engle House	Ebey's Prairie	Contributing
Glazier/Herrett House	Ebey's Prairie	Contributing
Gallagher/Shreck Place (Gallagher Place/A. Sherman House)	Ebey's Prairie	Contributing
Samuel E. Hancock House	Ebey's Prairie	Contributing
Ed Jenne House	Ebey's Prairie	Contributing
Elisha Rockwell House	Ebey's Prairie	Contributing
William Engle House	Ebey's Prairie	Contributing
Old Boyer Place	Ebey's Prairie	Contributing
Charles T. Terry House	Ebey's Prairie	Contributing
Tuft House	Ebey's Prairie	Contributing
John Crockett House	Ebey's Prairie	Contributing
Hancock Granary	Ebey's Prairie	Contributing
Sherman Squash Barn	Ebey's Prairie	Contributing
Comstock Barn (Old Al Comstock Place)	Ebey's Prairie	Contributing
Fort Casey Officers Quarters	Fort Casey Uplands	Contributing

Name	Area	Status
Wiley Barn	Fort Casey Uplands	Contributing
Keith House	Fort Casey Uplands	Contributing
Reuble Farm	Fort Casey Uplands	Contributing
Old Anderson Place	Fort Casey Uplands	Contributing
Fort Casey Military Reservation/Camp Casey	Fort Casey Uplands	Contributing
Fort Casey Military Reservation/Fort Casey State Park	Fort Casey Uplands	Contributing
Old Hunting Lodge	Fort Casey Uplands	Contributing
Sherman Hog House	Fort Casey Uplands	Contributing
R.C. Hill Home/J.T. Fielding Place	Fort Casey Uplands	Contributing
Gillespie House/Reuble Farm	Fort Casey Uplands	Contributing
Crockett/Boyer Barn (Hugh Crockett House)	Crockett Prairie	Contributing
Col. Walter Crockett Farmhouse & Blockhouse	Crockett Prairie	Contributing
Fort Casey Storage Buildings	Crockett Prairie	Contributing
Gilbert Place/Eggerman Farm	Crockett Prairie	Contributing
Calhoun House (Sam Crockett House)	Crockett Prairie	Contributing
Clarence Wanamaker Farm	Crockett Prairie	Contributing
Fort Casey Pump House	Crockett Prairie	Contributing
Hapton/Gould House (John Gould/Miller House)	Crockett Prairie	Contributing
Old Fort Casey Wharf	Crockett Prairie	Contributing
Schulke House (Schulke/Steadman House)	Crockett Prairie	Contributing
Fort Ebey State Park	Coastal Strip	Contributing





**Contributing View Listed on the 1998 Central Whidbey Island Historic District National Register Form**

Ebey's Prairie from the cemetery, and from Engle Road

Entry to Coupeville (from Ebey's Prairie into Prairie Center, and along Main Street) and Front Street in Coupeville View from Front Street and the Wharf, across Penn Cove

View to Crockett Prairie and Camp Casey from Wanamaker Road

View to Crockett Prairie and uplands from the top of Patmore Road

View to Crockett Prairie and uplands from Keystone Spit

View to Grasser's Lagoon from Highway 20

Views to and across Penn Cove along Madrona Way

Views from the bluff trail to Ebey's Prairie and Coastal Strip

View of Smith Prairie from Highway 20, entering the Reserve

Views from Monroe's Landing across the cove to Coupeville

Views from fort Casey across Keystone Spit and Crockett Lake

View from Hwy 20 across Ebey's Prairie

Engle Road to Uplands and west coast

Views to Grasser's Hill from Madrona Way



**Contributing Roads Listed on the 1998 Central Whidbey Island Historic District National Register Form**

Fort Casey Road

Engle Road

Wanamaker Road

Keystone Road

Patmore Road

Parker Road

Front Street

Main Street

Ebey Road

Terry Road (Includes Broadway north of Hwy. 20) Sherman Road

Cemetery Road

Cook Road

Madrona Way

Libby Road

Zylstra Road

Pen Cove Road

Monroe's Landing Road

Scenic Heights Road

Van Dam Road

West Beach Road



## Appendix J

### Eligible and Listed Properties within Substantive Change in Noise Exposure Area

#### Eligible and Listed Historic Districts in Substantive Change in Noise Exposure Area

Site ID	Name	Listing
D100006	Central Whidbey Island Historic District	National Register, Washington Heritage Register

#### Archaeological Sites in Substantive Change in Noise Exposure Area

Site ID	Comments	Elig_Name
IS00316	KEYSTONE ROAD HISTORIC SITE, STRUCTURAL FOUNDATION REMNANTS, 1,312 X 656 FT, CA. 1943	Potentially Eligible
IS00351	HISTORIC DEBRIS SCATTER, GLASS BOTTLES, JARS, CANS, ~164 X ~82FT, CA. EARLY 1900S, PRE-1950S	Potentially Eligible

#### Eligible Buildings and Structures in Substantive Change in Noise Exposure Area

HISTORIC_I	SiteNameHi	Loc_FullAd	TaxParcel_	RegisterTy	BuiltYear
700759	Crockett, Hugh, Barn, Boyer Farm	Coupeville		Determined Eligible	1860
672587	Whidbey Island Game Farm, Pacific Rim Institute for Environmental Stewardship	Coupeville		Determined Eligible	1946

## Heritage Barn Register Listed Properties in Substantive Change in Noise Exposure Area

SITE_ID	Comments	Elig_Name
IS00229	Kineth, John Jr., Barn	National Register, Washington Heritage Barn Register, Washington Heritage Register
IS00314	Keith, Sam, Farm	Washington Heritage Barn Register
IS00340	Gus Reuble Farm	Washington Heritage Barn Register
IS00343	James, William and Florence, Farm	Washington Heritage Barn Register
IS00355	Crockett, Hugh, Barn	Washington Heritage Barn Register
IS00356	Hookstra, Lambert, Farm	Washington Heritage Barn Register

## Contributing ELNHR Buildings and Structures Within the Substantive Change in Noise Exposure Area

Name	Parcel	Area
Hapton/Gould House (John Gould/Miller House)	R13114-120-5030	Crockett Prairie
Fort Casey Pump House	R13114-250-4610	Crockett Prairie
Clarence Wanamaker Farm	R13114-333-2200	Crockett Prairie
Calhoun House (Sam Crockett House)	R13115-345-4930	Crockett Prairie
Gilbert Place/Eggerman Farm	R13111-060-0100, R13111-066-0660	Crockett Prairie
Col. Walter Crockett Farmhouse & Blockhouse	R13115-220-2200	Crockett Prairie
Crockett/Boyer Barn (Hugh Crockett House)	R13110-134-3980	Crockett Prairie
Gillespie House/Reuble Farm	R13110-338-3570	Fort Casey Uplands
Old Anderson Place	R13110-085-1980	Fort Casey Uplands

Name	Parcel	Area
Reuble Farm	R13110-316-2920	Fort Casey Uplands
Keith House	R13103-078-2490	Fort Casey Uplands
Wiley Barn	R13103-139-2760	Fort Casey Uplands
O'Leary Cottage/Snakelum House	S8010-00-00070-0	Penn Cove
Walton Aubert House – Fiddler's Green	S8010-00-00006-0	Penn Cove
Harp Place	R13111-248-4630	Smith Prairie
John Kineth, Jr. Farmhouse	R13101-287-1000	Smith Prairie
Myers Property	R13111-198-0120	East Woodlands
Mulder House	R13103-419-2630	East Woodlands
Thomas/Sullivan House	R13103-332-1790	East Woodlands
Reuble Squash Barn	R13104-419-4450	Coupeville
Bearss/Barrett House	R13104-280-4190	Coupeville
Morrow/Franzen House (Spangler/Franzen Rental House)	R13104-310-3980	Coupeville
A.B. Coates House	R13104-336-3990	Coupeville
James Wanamaker House	R13104-331-4200	Coupeville
Melvin Grasser House	R13230-215-2340	Penn Cove



Name	Parcel	Area
Old County Courthouse/Grennan & Cranney Store	R13230-060-2580	Penn Cove
George Libbey House	R13230-154-2610	Penn Cove
Fisher Place	R13230-099-2780	Penn Cove
Whid-Isle Inn/Captain Whidbey Inn	S7530-00-00005-0	Penn Cove
Smith Cottage	R13232-197-0060	Penn Cove
A. Kineth House	R13232-136-1940	Penn Cove
Still Log Cabin	S8060-00-0E012-0	Penn Cove
San de Fuca School	S8060-00-14001-0	San de Fuca Uplands
Capt. R.B. Holbrook House	S8060-00-19004-1	San de Fuca Uplands
Liberal League Hall/San de Fuca Community Chapel	S8060-00-09032-0	San de Fuca Uplands
Hingston House	S8060-00-09001-0	San de Fuca Uplands
Tuft Cottage/Mrs. J. Arnold House	S8060-00-10013-0	San de Fuca Uplands
Armstrong/Trumball House	S8060-00-10006-0	San de Fuca Uplands
Fisher/Hingston/Trumball General StoreL	S8060-00-10001-0	San de Fuca Uplands
Hingston/Trumball Store	S8060-00-10001-0	San de Fuca Uplands
Armstrong/Scoby House	S8060-00-17002-0	San de Fuca Uplands

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Name	Parcel	Area
Henry Arnold/Grasser House	R13220-030-2950	San de Fuca Uplands
Robart Cottage	R13221-046-1290	San de Fuca Uplands
NPS Sheep Barn	R13105-270-3320	Ebey's Prairie

**Appendix K**  
**Maps of Archaeological and Cemetery Sites within Substantive Change**  
**in Noise Exposure Area**  
**Not for Public Distribution**

**Appendix K**  
**Maps of Archaeological and Cemetery Sites within Substantive Change**  
**in Noise Exposure Area**  
**Not for Public Distribution**

## Government-to-Government Consultation Documentation

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# Appendix C

## Government-to-Government Consultation Documentation

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<ul style="list-style-type: none"> <li>- Jamestown S’Klallam Tribe (letter provided)</li> <li>- Lummi Tribe of the Lummi Reservation</li> <li>- Samish Indian Nation</li> <li>- Stillaguamish Tribe of Indians of Washington</li> <li>- Suquamish Indian Tribe of the Port Madison Reservation</li> <li>- Swinomish Indian Tribal Community</li> <li>- Tulalip Tribes of Washington</li> <li>- Upper Skagit Indian Tribe</li> </ul>	
November 30, 2016 – Informational Letter to American Indian Tribes and Nations .....	C-1013
<ul style="list-style-type: none"> <li>- Confederated Tribes and Bands of the Yakama Nation (letter provided)</li> <li>- Confederated Tribes of the Chehalis Reservation</li> <li>- Confederated Tribes of the Colville Reservation</li> <li>- Cowlitz Indian Tribe</li> <li>- Hoh Indian Tribe</li> <li>- Kalispel Tribe</li> <li>- Lower Elwha Klallam Tribe</li> <li>- Makah Tribe</li> <li>- Muckleshoot Indian Tribe</li> <li>- Nisqually Indian Tribe</li> <li>- Nooksack Indian Tribe</li> <li>- Port Gamble S’Klallam Tribe</li> <li>- Puyallup Tribe</li> <li>- Quileute Nation</li> <li>- Quinault Nation</li> <li>- Sauk-Suiattle Indian Tribe</li> <li>- Shoalwater Bay Tribe</li> </ul>	

- Skokomish Indian Tribe
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December 13, 2016 – Swinomish Indian Tribal Community – Request for Government-to-Government Consultation ..... C-1015

December 20, 2016 – Email to Jo Jo Jefferson and James Harrison, Swinomish Indian Tribal Community ..... C-1017

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June 7, 2017 – Email to Debra Lekanoff, Swinomish Indian Tribal Community ..... C-1021

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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 N44/1504  
10 October 2014

The Honorable W. Ron Allen  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382

Dear Chairman Allen,

SUBJECT: NOTIFICATION OF PROPOSED INCREASE OF THE EA-18G  
GROWLER AIRCRAFT AT NAVAL AIR STATION (NAS) WHIDBEY  
ISLAND IN OAK HARBOR, WASHINGTON

I would like to inform you that the Department of the Navy (Navy) is preparing an Environmental Impact Statement (EIS) for the proposed increase of EA-18G Growler aircraft and aircraft operations, and development of support facilities, at Naval Air Station Whidbey Island, Washington. The Notice of Intent to study the environmental effects of this proposed action will be published in the Federal Register on October 10, 2014 and additional information is available on the project website at [www.whidbeyeis.com](http://www.whidbeyeis.com).

Although in the preliminary stages of development, I would like to invite you to review the enclosed information on the proposed action to be studied in the EIS and evaluate whether you believe there may be a potential for this action to significantly affect tribal treaty harvest rights, resources or lands. This invitation is made pursuant to the Navy's policy for government-to-government consultation with American Indian and Alaska Native tribes.

In 2013, the Department of Defense (DoD) identified a need to increase electronic attack capability and Congress authorized the procurement of additional aircraft to meet new mission requirements. The primary aircraft that supports electronic attack capability in the DoD is the Navy's EA-18G Growler aircraft. NAS Whidbey Island is the home to the Navy's tactical electronic attack community and the infrastructure that supports them. The Navy initiated an EIS in September 2013 to analyze increasing the number of EA-18G aircraft (addition of 13 aircraft) at NAS Whidbey Island, along with a corresponding increase in training operations.

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Ser N44/1504  
10 October 2014

Since then, the Navy revised the scope of the ongoing EIS to analyze the potential increase in EA-18G aircraft from 13 to up to 36 aircraft. The number of EA-18G aircraft ultimately procured will be determined by Congress. Nonetheless, the Navy has elected to include the potential increase in the ongoing EIS in order to be transparent and to ensure a holistic analysis of environmental impacts from the proposed action. In support of the EIS process, the Navy will hold public scoping meetings on October 28, 29, and 30. You will be receiving a separate notification letter inviting you and your staff to attend these meetings if you would like to ask questions in person.

If you would like to initiate government-to-government consultation, please provide the name(s) and title(s) of the tribal officials to contact to coordinate our first meeting. I look forward to discussing your questions and concerns about this proposed project.

If you have questions or concerns, or require further information regarding the proposed undertaking please contact me directly at michael.nortier@navy.mil, or (360)257-2037, or, have your staff contact Ms. Kendall Campbell the installation Cultural Resources Program Manager at kendall.campbell1@navy.mil or (360) 257-6780.

Sincerely,



M. K. NORTIER  
Captain, U.S. Navy  
Commanding Officer

Enclosure: 1. Description of Proposed Action and Proposed Alternatives

Copy to:  
Mr. Gideon U. Cauffman  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342



ENCLOSURE 1. DESCRIPTION OF PROPOSED ACTION AND PROPOSED ALTERNATIVES

Naval Air Station (NAS) Whidbey Island is located in Island County, Washington, on Whidbey Island in the northern Puget Sound region. The main air station (Ault Field) is located in the north-central part of the island, adjacent to the Town of Oak Harbor. Outlying Landing Field (OLF) Coupeville is located approximately 10 miles south of Ault Field in the Town of Coupeville. OLF Coupeville is primarily dedicated to Field Carrier Landing Practice (FCLP) operations.

NAS Whidbey Island is the only naval aviation installation in the Pacific Northwest and has supported the electronic attack (VAQ) community for more than 35 years. It is the only home base location for the VAQ community in the United States and provides facilities and support services for: nine Carrier Air Wing (CVW) squadrons, three Expeditionary (EXP) squadrons, one Reserve squadron and one Fleet Replacement Squadron (FRS).

The Navy proposes to support and conduct VAQ airfield operations and provide facilities and functions to home base additional VAQ aircraft at NAS Whidbey Island. No changes to existing ranges or airspace are proposed. The proposed action includes the following:

- Continue and expand the existing VAQ operations at NAS Whidbey Island complex, which includes Ault Field and OLF Coupeville;
- Increase VAQ capabilities and augment the VAQ FRS (an increase of between 13 and 36 aircraft) to support an expanded DoD mission for identifying, tracking and targeting in a complex electronic warfare environment;
- Construct and renovate facilities at Ault Field to accommodate additional aircraft; and
- Station ~~up to 860~~ additional personnel ~~at~~ and ~~relocate~~ ~~approximately 2,150~~ ~~their~~ family members ~~at~~ ~~the~~ NAS Whidbey Island and the surrounding community.

The purpose of the proposed action is to improve the Navy's electronic attack capability and to provide the most effective force structure and tactical airborne electronic attack capabilities to operational commanders.

The action alternatives represent force structure changes that support an expanded DoD mission for identifying, tracking and targeting in a complex electronic warfare environment. This EIS will address the No Action Alternative and four alternatives:

**No Action Alternative:** Implementing the No Action Alternative, or taking "no action," means that legacy EA-6B Prowlers would



continue to gradually transition to next generation EA-18G Growler aircraft (82 aircraft) and annual EA-18G Growler airfield operations would be maintained at levels consistent with those identified in the 2005 and 2012 transition EAs. Under the No Action Alternative the Navy would not improve the Navy's Electronic Attack capability by adding VAQ squadrons or aircraft. While the No Action Alternative does not meet the purpose and need of the proposed action, it serves as a baseline against which impacts of the proposed action can be evaluated.

The Navy will analyze the potential environmental impacts of airfield operations, facilities and functions at NAS Whidbey Island associated with the following four force structure alternatives:

**Action Alternative 1:** Expand EXP capabilities by establishing two new EXP squadrons and augmenting FRS by three additional aircraft (a net increase of 13 aircraft);

**Action Alternative 2:** Expand CVW capabilities by adding two additional aircraft to each existing CVW squadron and augmenting FRS by six additional aircraft (a net increase of 24 aircraft);

**Action Alternative 3:** Expand CVW capabilities by adding three additional aircraft to each existing CVW squadron and augmenting FRS by eight additional aircraft (a net increase of 35 aircraft); and

**Action Alternative 4:** Expand EXP and CVW capabilities by establishing two new EXP squadrons, adding two additional aircraft to each existing CVW squadron, and augmenting FRS by eight additional aircraft (a net increase of 36 aircraft).

The environmental analysis in the EIS will focus on several aspects of the proposed action: aircraft operations at Ault Field and OLF Coupeville; facility construction; and personnel changes. Resource areas to be addressed in the EIS will include, but not be limited to: air quality, noise, land use, socioeconomic, natural resources, biological resources, cultural resources, and safety and environmental hazards.

The analysis will evaluate direct and indirect impacts, and will account for cumulative impacts from other relevant activities near the installation. Relevant and reasonable measures that could avoid or mitigate environmental effects will also be analyzed. Additionally, the DoN will undertake any consultation applicable by law and regulation. No decision will be made to implement any alternative until the EIS process is completed and a Record of Decision is signed by the Assistant Secretary of the Navy (Energy, Installations and Environment) or designee.



DEPARTMENT OF THE NAVY

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

5090

Ser N44/2515

November 30, 2016

The Honorable W. Ron Allen  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342

Dear Chairman Allen:

SUBJECT: CONTINUATION OF GOVERNMENT TO GOVERNMENT  
CONSULTATION AND NOTIFICATION OF DRAFT ENVIRONMENTAL  
IMPACT STATEMENT FOR THE PROPOSED INCREASE OF THE EA-18G  
GROWLER AIRCRAFT AT NAVAL AIR STATION WHIDBEY ISLAND,  
ISLAND COUNTY, WASHINGTON

In recognition of our government-to-government responsibilities, I would like to update you on the Navy's ongoing National Environmental Policy Act (NEPA) review for the proposed increase of EA-18G Growler aircraft and aircraft operations at Naval Air Station (NAS) Whidbey Island, Island County, Washington. The Department of the Navy released a Draft Environmental Impact Statement (DEIS) on November 10, 2016 which is available on the project website at [www.whidbeyeis.com](http://www.whidbeyeis.com).

I would like to invite you to review the DEIS to evaluate whether you believe there may be a potential for this action to significantly affect tribal treaty harvest rights, resources, and/or lands. This invitation is made pursuant to the Navy's policy for government-to-government consultation with American Indian and Alaska Native tribes.

The DEIS was prepared by the Navy over the past two years since our initial government-to-government communication with you in November of 2014. The DEIS includes the Navy's preliminary analysis addressing the continued support of the electronic attack mission at NAS Whidbey Island and describes the Navy's proposed actions including:


- Continue and expand the existing electronic attack operations at the NAS Whidbey Island complex, which includes Ault Field and OLF Coupeville;
- Increase electronic attack capabilities by adding 35 or 36 aircraft to support an expanded DoD mission for identifying, tracking, and targeting in a complex electronic warfare environment;
- Construct and renovate facilities at Ault Field to accommodate additional aircraft; and
- Station additional personnel and their family members at NAS Whidbey Island and in the surrounding community.

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Ser N44/2515  
November 30, 2016

If you would like to initiate government-to-government consultation, please provide the name(s) and title(s) of the tribal officials to contact to coordinate our first meeting. If you have any questions or concerns, or require further information regarding the proposed action, please contact me directly at (360) 257-2037 or geoffrey.moore@navy.mil. You may also have your staff contact Kendall Campbell, Cultural Resources Program Manager, at (360) 257-6780 or kendall.campbell1@navy.mil.

Thank you for your continued partnership, and I look forward to discussing your questions and concerns about this proposed project.

Sincerely,

  
G. C. MOORE  
Captain, U. S. Navy  
Commanding Officer

Copy to: Mr. David Brownell  
Cultural Resource Specialist  
Jamestown S'Klallam Tribe  
1033 Old Blyn Highway  
Sequim, WA 98382-9342



DEPARTMENT OF THE NAVY

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

5090

Ser N44/2512

30 Nov 16

The Honorable JoDe L. Goudy  
Confederated Tribes and Bands of the Yakama Nation  
PO Box 151  
Toppenish, WA 98948-0151

Dear Chairman Goudy:

I am writing to make you aware that the United States Navy has released a Draft Environmental Impact Statement (EIS) for the proposed increase of EA-18G Growler aircraft and aircraft operations at Naval Air Station (NAS) Whidbey Island, Island County, Washington. Our goal is to ensure that you are receiving the most accurate and up-to-date information that is available and to promote open discussion and relationship building.

The mission of the U.S. Navy adapts to address evolving global events, increasing geopolitical tensions, and emerging threats. As our mission evolves so do the requirements we place on our natural surroundings. This requires the preparation of EIS and Environmental Assessments in compliance with the National Environmental Policy Act (NEPA), as well as Section 106 consultation under the National Historic Preservation Act, and government-to-government consultations with Indian tribes. These processes are intended to ensure that decision makers consider the potential environmental and cultural effects of proposed actions, provide the opportunity for public involvement, and help guarantee that the U.S. Navy is a responsible steward of our shared environment.

In 2013, the Department of Defense (DoD) identified a need to increase electronic attack capability and Congress authorized the procurement of additional aircraft to meet the new mission requirements. The primary aircraft that supports electronic attack capability in the DoD is the Navy's EA-18G Growler aircraft. NAS Whidbey Island is the home to the Navy's tactical electronic attack community and the infrastructure that supports them. The Navy initiated an EIS to analyze increasing the number of EA-18G Growler aircraft at NAS Whidbey Island, along with a corresponding increase in training operations at the installation.

The Navy has just released the Draft EIS for comment and review. The Draft EIS can be found at [www.whidbeyeis.com](http://www.whidbeyeis.com). The Draft EIS provides the Navy's preliminary analysis addressing the continued support of the electronic attack mission at NAS Whidbey Island and describes the Navy's proposed actions including:

- Continue and expand the existing electronic attack operations at the NAS Whidbey Island complex, which includes Ault Field and Outlying Field Coupeville;
- Increase electronic attack capabilities by adding 35 or 36 aircraft to support an expanded DoD mission for identifying, tracking, and targeting in a complex electronic warfare environment;

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Ser N44/2512  
30 Nov 16


- Construct and renovate facilities at Ault Field to accommodate additional aircraft; and
- Station additional personnel and their family members at NAS Whidbey Island and in the surrounding community.

The Draft EIS for this proposed action specifically looks at impacts resulting from the increase and aircraft and operations at the NAS Whidbey Island Installation. An environmental analysis of training and testing at existing range complexes throughout the Northwest Training and Testing Study Area was recently completed, and can be found at [www.nwtteis.com](http://www.nwtteis.com).

If you would like more information on the Draft EIS for the home basing of the EA-18G Growler please do not hesitate to contact Lisa Padgett, Home Basing NEPA Program Manager, at (757) 836-8446 or [lisa.padgett@navy.mil](mailto:lisa.padgett@navy.mil). For more information on training and testing throughout the Northwest, please contact John Mosher, U.S. Pacific Fleet Northwest Environmental Manager, at (360) 257-3234 or [john.g.mosher@navy.mil](mailto:john.g.mosher@navy.mil).

The United States Navy remains committed to doing our best to keep our nation safe while also protecting our environment and building partnerships with our sovereign neighbors and partners.

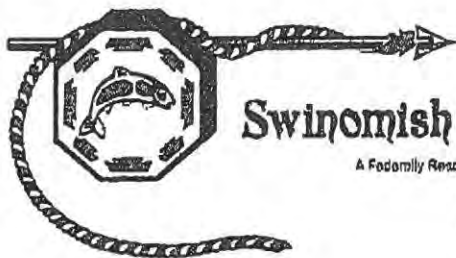
Sincerely,



G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer

Enclosure: United States Department of the Navy Draft Environmental Impact Statement for EA-18G Growler Airfield Operations at the Naval Air Station Whidbey Island Complex





Phone (360) 466-7280  
Fax (360) 466-1815

## Swinomish Indian Tribal Community

A Federally Recognized Indian Tribe Organized Pursuant to 25 U.S.C. § 470

11430 Moorage Way  
LaConner, WA 98257

December 13, 2016

Commanding Officer G.C. Moore  
Naval Air Station Whidbey Island  
3730 North Charles Porter Avenue  
Oak Harbor, Washington 98278

**RE: Your Letter of November 30, 2016: Request for Government-to-Government Consultation Regarding Draft Environmental Impact Statement and Proposed Increase of the EA-18G Growler Aircraft at NAS Whidbey Island**

Dear Captain Moore,

The Swinomish Indian Tribal Community is formally requesting a Government-to-Government consultation with regard to the Draft Environmental Assessment regarding a proposed increase of EA-18G Growler aircraft at NAS Whidbey Island as discussed in your letter dated November 30, 2016.

We look forward to conferring with you about this important issue. Please contact the following individuals in order to set up a meeting: Mrs. Josephine Jefferson, Tribal Historic Preservation Officer at (360) 466-7352 [jjefferson@swinomish.nsn.us] or Mr. James Harrison, Deputy Tribal Historic Preservation Officer at (360) 466-2722 [jharrison@swinomish.nsn.us].

Sincerely,

A handwritten signature in black ink that reads "Brian Cladoosby". The signature is written in a cursive, flowing style.

M. Brian Cladoosby  
Chairman, Swinomish Indian Senate

Chairman Swinomish Indian Tribal Community  
11404 Moorage Way  
LaConner, WA 98257



## Kirchler-Owen, Leslie

---

**From:** Campbell, Kendall D CIV NAVFAC NW, PRW4 <kendall.campbell1@navy.mil>  
**Sent:** Tuesday, December 20, 2016 6:00 PM  
**To:** Stallings, Sarah CIV NAVFAC Atlantic; Padgett, Lisa M CIV USFF, N46  
**Cc:** Williamson, Todd H CIV NAVFAC LANT, EV; Romero, Joseph CAPT USFF, N01L; Bianchi, Michael C NAVFAC NW, PRW4; Meders, Laura E CIV NAS Whidbey Is, N00S  
**Subject:** FW: Chairman Cladoosby's request for GtG consultation  
**Attachments:** Request for GtG for Growler EIS (Swinomish) Dec 13 2016.pdf

Lisa,

Per our conversation earlier today I wanted to forward for the record my second attempt to contact Swinomish staff to coordinate the tribe's requested GtG consultation. I also called and left a phone message for Jo Jo today.

I have attached a faxed copy of the letter we received today from Chairman Cladoosby requesting the GtG consultation. As soon as mail control provides me with a scan or copy of the original I will provide a another copy of the letter.

As I mentioned, Jo Jo and James are Swinomish staff member that I routinely communicate with regarding projects at NASWI. I will keep you all posted as I hear back from the tribe.

Happy Holidays!!!!

Best,  
Kendall

-----Original Message-----

From: Campbell, Kendall D CIV NAVFAC NW, PRW4  
Sent: Tuesday, December 20, 2016 3:44 PM  
To: 'jjefferson@swinomish.nsn.us'; 'James Harrison'  
Subject: Chairman Cladoosby's request for GtG consultation

Hi Jo Jo,

Following up on the message I left for you earlier, the Navy received today Chairman Cladoosby's request for Government to Government consultation regarding the Draft Environmental Impact Assessment for the Proposed Increase of the EA-18G Growler Aircraft at NASWI. He listed you and James as the staff points of contact to set up the meeting.

I am exceedingly pleased Chairman Cladoosby desires to share the tribe's interest in this DEIS and I am contacting you to begin coordinating this consultation.

At this time I know of a few dates in January that are available and several days in March. Currently Captain Moore and the Navy team are available all day Friday January 20th and Friday January 27th in the afternoon. Our schedule is fairly flexible in the month of March with availability the first week and a half of March (except for March 10) and the final two weeks of March. Will any of these dates work with Chairman Cladoosby and the tribes schedule?

This week I am in the office all week except for Friday and will be back (after my birthday!) on Dec 29. I am looking forward to working with you and James to coordinate this meeting.

All my best to you and your family this holiday season.

Warmest Regards,  
Kendall

Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexinton Dr.  
Oak Harbor, WA 98278-3500  
Kendall.campbell1@navy.mil  
360-257-6780



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

5090  
Ser N44/2736  
December 21, 2016

The Honorable M. Brian Cladoosby  
Swinomish Indian Tribal Community  
11404 Moorage Way  
La Conner, WA 98257-9450

Dear Chairman Cladoosby:

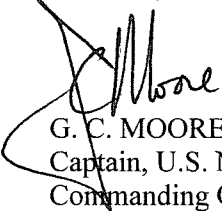
SUBJECT: REQUEST FOR GOVERNMENT-TO-GOVERNMENT CONSULTATION  
REGARDING THE DEPARTMENT OF THE NAVY DRAFT  
ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED  
INCREASE OF THE EA-18G GROWLER AIRCRAFT AT NAVAL AIR  
STATION WHIDBEY ISLAND

Thank you for your letter of December 13, 2016, requesting government-to-government consultation with the Navy on the Draft Environmental Impact Statement for the Proposed Increase of the EA-18G Growler Aircraft at Naval Air Station (NAS) Whidbey Island. I value the Swinomish Indian Tribal Community's (Swinomish) concern for the potential effects the proposed action may have to tribal rights and resources.

I am fully committed to taking appropriate action to fulfill our federal trust responsibility and government-to-government consultation with the Swinomish. My staff will contact your staff to coordinate a time and place for our consultation.

In the interim, please let me know if you have any additional concerns. You may contact me directly at 360-257-2037 or [geoffrey.moore@navy.mil](mailto:geoffrey.moore@navy.mil).

Sincerely,



G. C. MOORE  
Captain, U.S. Navy  
Commanding Officer



From: Campbell, Kendall D CIV NAVFAC NW, PRW4 [<mailto:kendall.campbell1@navy.mil>]

Sent: Wednesday, June 7, 2017 11:15 AM

To: Debra Lekanoff <[dlekanoff@swinomish.nsn.us](mailto:dlekanoff@swinomish.nsn.us)>; Josephine Jefferson <[jjefferson@swinomish.nsn.us](mailto:jjefferson@swinomish.nsn.us)>

Cc: James Harrison <[jharrison@swinomish.nsn.us](mailto:jharrison@swinomish.nsn.us)>; Meders, Laura E CIV NAS Whidbey Is, N00S <[laura.meders@navy.mil](mailto:laura.meders@navy.mil)>

Subject: Chairman Cladoosby request for GtG Consultation with NASWI

Good Morning Debra,

I hope you are enjoying the beautiful start to January in the Northwest. I am crossing my fingers we escape the typical grey skies of January this year.

I wanted to touch base with you regarding the December 2016 request from Chairman Cladoosby's for GtG with NAS Whidbey Island regarding the EA-18G Growler operations EIS. The Navy has provided possible dates for this consultation on several occasions and I want to update those dates again, as well as provide you an advanced copy of a second response letters to Chairman Cladoosby from NAS Whidbey Island Commanding Officer, Captain Geoffrey Moore. The attached letter went out in the mail this morning, so you will hopefully have the hard copy by Monday.

The last set of dates I provided were in May and June. The majority of those dates have passed or are no longer available. The next sets of dates we have set aside are:

June 23 and the afternoon of June 26

Aug 21, 22

Sept 13, 14

Although those dates are specifically set aside on our calendar for this meeting, we are more than happy to discuss potential dates that may work better for the Swinomish.

Please feel free to contact me if you have any questions and do not hesitate to call if we can do anything further to help facilitate this consultation.

All My Best,  
Kendall

Kendall Campbell  
NASWI Archaeologist and Cultural Resources Program Manager  
1115 W. Lexington Dr.  
Oak Harbor, WA 98278-3500  
[Kendall.campbell1@navy.mil](mailto:Kendall.campbell1@navy.mil)  
360-257-6780





From: Debra Lekanoff

Sent: Wednesday, June 07, 2017 2:00 PM

To: Campbell, Kendall D CIV NAVFAC NW, PRW4; Josephine Jefferson; Larry Wasserman

Cc: James Harrison; Meders, Laura E CIV NAS Whidbey Is, N00S; Kelly George; James Jannetta; Tom Ehrlichman ([tom@dykesehrlichman.com](mailto:tom@dykesehrlichman.com))

Subject: RE: Chairman Cladoosby request for GtG Consultation with NASWI

Thank you for the follow up, as I have been busy and not able to get back to you. Let me check with my staff on their availability and see if our technical staff can engage with your technical staff to review the project

Debra



From: Debra Lekanoff [<mailto:dlekanoff@swinomish.nsn.us>]

Sent: Wednesday, September 27, 2017 7:41 AM

To: Campbell, Kendall D CIV NAVFAC NW, PRW4; Larry Wasserman; Josephine Jefferson; Stan Walsh

Cc: Stephen LeCuyer; Kelly George

Subject: [Non-DoD Source]

Kelly,

I'm sorry ,we must have crossed paths between now and then and the message must have been lost that we do not require consultation on this project at this time.

Just a quick update, we've had some shifting and employment and we've had quite a busy schedule the past few months. However a few months back, after reviewing the information on The Growler project, the Environmental Policy Director Larry Wasserman thought we needed to track the project but we would not need consultation at this time. I would pause and ask if you thought there was an environmental concern thought perhaps you need to resend the information any updates to Mr. Wasserman and to his team, Mr. Stan Walsh.

Also, if there is a there was a cultural component that you are aware of the project, we would have our THPO Josephine Jefferson, engage directly with you. If you can resend her the information any updates as well.

Thank you for your patience and we apologize for the late reply back . Again if you have updates on this project, please send them to Mr. Wasserman, Mr. Walsh and Mrs. Jefferson. and they will review and get back to you.

If they believe there is a need for consultation they'll coordinate with us both and if you feel there is a need for consultation on the environmental or culture component please advise.

Debra



## Other Agency Consultations

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From: Mark Buford  
Sent: Friday, May 19, 2017 2:49:49 PM  
To: Stewart, Jennifer A CIV NAVFAC NW, PRW4  
Cc: Bengtson, Melanie L CIV NAVFAC NW, PRW4; Agata McIntyre  
Subject: [Non-DoD Source] RE: Navy Growler Environmental Impact Statement: e-mail reply request

Hello Jennifer,

I do recall our conversation on April 3, 2017 during which I relayed that the Northwest Clean Air Agency does not have plans to comment on the Draft Growler Environmental Impact Statement (EIS). That remains the case.

Best,

Mark

Mark Buford

Executive Director  
Northwest Clean Air Agency  
1600 South 2nd Street  
Mount Vernon, WA 98273  
[markb@nwcleanairwa.gov](mailto:markb@nwcleanairwa.gov)  
(360) 428-1617

-----Original Message-----

From: Stewart, Jennifer A CIV NAVFAC NW, PRW4 [<mailto:jennifer.a.stewart2@navy.mil>]  
Sent: Friday, May 19, 2017 2:35 PM  
To: Mark Buford <[MarkB@nwcleanairwa.gov](mailto:MarkB@nwcleanairwa.gov)>  
Cc: Bengtson, Melanie L CIV NAVFAC NW, PRW4 <[melanie.l.bengtson@navy.mil](mailto:melanie.l.bengtson@navy.mil)>  
Subject: Navy Growler Environmental Impact Statement: e-mail reply request

Hi Mark,

As you may recall, I contacted you asking if NWCAA had plans to comment on the Draft Growler Environmental Impact Statement (EIS) on April 3, 2017. The Navy has requested that I provide documentation of our conversation for the administrative record. I apologize for the inconvenience, but I would greatly appreciate it if you could take a moment and email me your response. Thankfully, an email is sufficient for the administrative record.

Very respectfully,  
Jen

Jennifer A. Stewart  
Air Program Manager

NAVFAC NW/PWD Whidbey - Environmental  
NAS Whidbey Island  
1115 W. Lexington St., Bldg. 103  
Oak Harbor, WA 98278-3500  
p: 360-257-5320  
f: 360-257-5175  
c: 360-265-3589 (text only)  
e: [jennifer.a.stewart2@navy.mil](mailto:jennifer.a.stewart2@navy.mil)