# 1 Purpose of and Need for the Proposed Action

## 1.1 Introduction

This environmental assessment (EA) evaluates the potential environmental impacts associated with the U.S. Department of the Navy's (DON or *the Navy*'s) proposed action to transition the Expeditionary electronic attack (VAQ) squadrons at Naval Air Station (NAS) Whidbey Island, Washington, from the aging EA-6B Prowler aircraft to the newer EA-18G Growler aircraft. The proposed action is planned to begin in 2012 and will take approximately two years to complete. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969; the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500–1508); Navy procedures for implementing NEPA (32 CFR 775); and Office of the Chief of Naval Operations Instruction (OPNAVINST) 5090.1C, Change 1 (U.S. Navy July 18, 2011).

## 1.2 Background

NAS Whidbey Island is located in Island County, Washington, on Whidbey Island in northern Puget Sound (Figure 1-1). The air station is located in the north-central part of the island, adjacent to the Town of Oak Harbor and is divided into four distinct parcels. Ault Field, the training and operational center of NAS Whidbey Island, is the focus of this EA's analysis. The remaining three parcels—Lake Hancock, Outlying Landing Field (OLF) Coupeville, and the Seaplane Base— would not be affected by the proposed action and, therefore, are not discussed further. All proposed construction and renovation activities would take place within the installation boundary at Ault Field—specifically, in previously developed areas near or on the existing flight line.

NAS Whidbey Island has supported the electronic attack (VAQ) community for more than 30 years. There are two distinct VAQ communities: the Carrier Air Wing (CVW) Fleet VAQ squadrons and the Expeditionary VAQ squadrons. Each community has similar missions but differ in where they deploy (onboard aircraft carriers for the Fleet VAQ squadrons vs. land-based VAQ squadrons). Expeditionary VAQ squadrons are not required to conduct field carrier landing practice (FCLP) training because they do not deploy on aircraft carrier. As a result, the Expeditionary VAQ squadrons, unlike the Fleet VAQ squadrons, do not train at OLF Coupeville. NAS Whidbey Island is currently home to the following tenants:

Ecology & Environment, Inc. GIS Department Project:
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Source: ESRI, 2010; NAVFAC GeoRediness Center, 2006;
NAS Whidbey Island, 2007.


**Figure 1-1**
General Location
Transition of Expeditionary EA-6B Prowler Squadrons to
EA-18G Growler at NAS Whidbey Island, Washington

- Three Expeditionary VAQ EA-6B squadrons, which forward-deploy to land-based sites
- Nine CVW VAQ Fleet squadrons (currently transitioning from EA-6B aircraft to EA-18G aircraft, to be completed by 2013), which deploy on naval aircraft carriers
- The VAQ Fleet replacement squadron (FRS), which provides post-graduate training for assigned personnel (aircrews and maintainers) for both CVW and Expeditionary VAQ squadrons
- Three P-3 maritime patrol squadrons (with phased transition to P-8A aircraft beginning in 2016)
- Two EP-3 Fleet air reconnaissance squadrons
- One C-9 Fleet logistics squadron
- MH-60S search-and-rescue helicopters
- 26 other tenant commands.

Aircraft stationed at NAS Whidbey Island train in national and international airspace, in designated special use airspace (SUA) and in low-altitude military training routes located in the Northwest Training Range Complex (NWTRC), as well as in training ranges in SUA scheduled and/or controlled by other military services. The potential environmental impacts associated with related training activities of VAQ squadrons in existing military training ranges are analyzed separately in the *Northwest Training Range Complex (NWTRC) Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS*) (U.S. Navy 2010).

The primary mission of the Expeditionary VAQ squadrons (EA-6B Prowler and EA-18G Growler) includes electronic surveillance and electronic attack (e.g., use of jamming equipment and high-speed anti-radiation missiles) against hostile radar and communication systems. CVW and Expeditionary squadrons fulfill the same mission. When deployed, CVW VAQ squadrons operate from an aircraft carrier, whereas Expeditionary VAQ squadrons operate from forward-deployed land bases as directed by the U.S. Department of Defense (DOD). The current Expeditionary VAQ force structure at NAS Whidbey Island consists of three EA-6B Prowler squadrons. Previously, a fourth Expeditionary EA-6B Prowler squadron was homebased at NAS Whidbey Island but was disestablished in September 2004. A reserve Expeditionary EA-6B squadron is currently homebased at Joint Base Andrews, Maryland.

## 1.3 The Proposed Action

The DON proposes to transition the Expeditionary VAQ squadrons at NAS Whidbey Island from the aging EA-6B Prowler to the newer EA-18G Growler in the 2012-2014 timeframe (see Figure 1-2). This includes the following:

- Retaining the existing Expeditionary VAQ mission capabilities at NAS Whidbey Island
- In-place transitioning of three existing Expeditionary VAQ squadrons homebased at NAS Whidbey Island from the older EA-6B aircraft to the newer EA-18G aircraft
- Potentially relocating one reserve Expeditionary VAQ EA-6B squadron from Joint Base Andrews to NAS Whidbey Island and transitioning this reserve squadron from the older EA-6B aircraft to the newer EA-18G aircraft
- Adding up to 11 EA-18G aircraft to the FRS at NAS Whidbey Island to support the Expeditionary VAQ community
- Modifying certain facilities at Ault Field to provide facilities and functions to support the new aircraft type and an increase in personnel (up to 311 personnel, representing a 3.1% increase in the base population) to support the Expeditionary VAQ community.

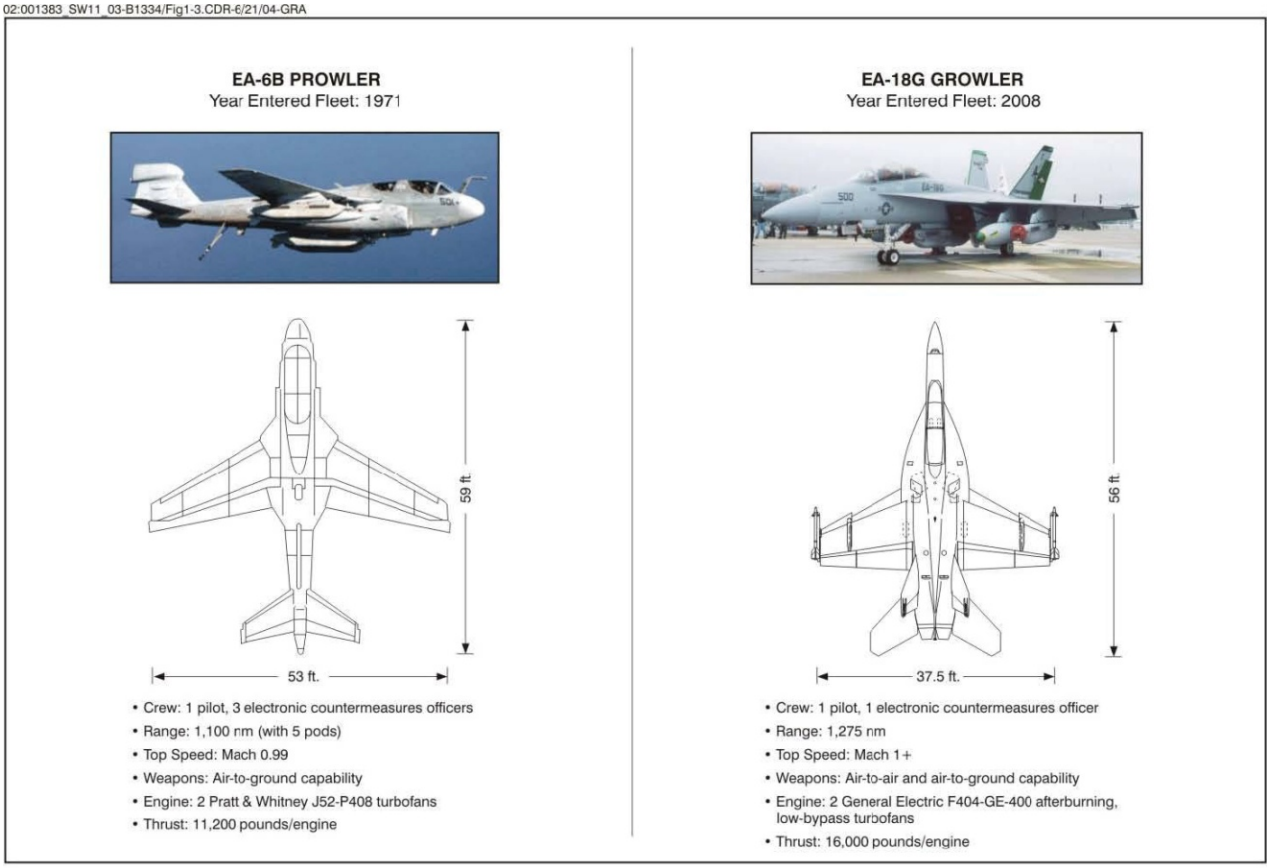


**Figure 1-2 The EA-6B and the EA-18G**

## 1.4 Purpose and Need

The purpose of the proposed action is to provide deployable land-based Expeditionary electronic attack community assets that meet DOD requirements. The proposed action is needed to retain the Expeditionary VAQ mission and capabilities. In 2005, the DOD directed the U.S. Navy to disestablish the Expeditionary VAQ capabilities and directed the U.S. Air Force to absorb the Expeditionary VAQ mission by 2012. However, in October 2009, a Deputy Secretary of Defense memorandum directed the U.S. Navy to maintain the Expeditionary VAQ capabilities indefinitely. Although the EA-6B Prowler airframe has remained operationally viable through systematic upgrades, it is approaching the end of its service life and potentially is affecting operational readiness. Thus, in December 2010, the U.S. Congress authorized the procurement of 14 additional EA-18G aircraft in part to support the Navy's plans to transition the aging Expeditionary VAQ EA-6G aircraft to the newer EA-18G aircraft.

Use of existing infrastructure and assets at NAS Whidbey Island optimizes facilities and functions to support both the CVW and Expeditionary VAQ communities and is consistent with the *N3/N5 Strategic Laydown and Dispersal of Ships and Aircraft* (U.S. Navy 2008). Specifically, single-siting the CVW and Expeditionary VAQ community enhances existing training, maintenance, and support infrastructure; offers operational synergy; and improves the ability to deploy VAQ forces quickly and efficiently. Transitioning the Expeditionary VAQ squadrons, including a small FRS component, to any other base would increase operational risks associated with the ability to meet training requirements and deployment schedules, reduce operational synergies within the VAQ community, and significantly increase the life-cycle costs of the proposed action. NAS Whidbey Island has hosted the Navy's VAQ capability for more than 30 years and is the only installation able to provide facilities for the Expeditionary VAQ squadrons within the transition timeline. For these reasons, the Navy is proposing to retain the Expeditionary VAQ mission and transition to the new EA-18G aircraft at NAS Whidbey Island.

## 1.5 Scope of the Environmental Assessment

This EA identifies and analyzes the potential impacts on the natural and human environment associated with implementation of three action alternatives and a No Action alternative. It describes the environmental conditions at NAS Whidbey Island under current air operations, identifies reasonable alternatives to the proposed action, evaluates the direct and indirect environmental consequences that may result from implementation of the proposed action

or alternatives, and addresses potential cumulative impacts resulting from past, present, and reasonably foreseeable projects. Information contained in this EA was derived from interviews with Navy personnel and review of documents listed in the reference section (Section 8).

This EA describes potential environmental impacts on airspace and airfield operations, noise, land use, threatened and endangered species and other biological resources, water resources, air quality, cultural resources, socioeconomics, and environmental management that would be associated with changes in aircraft operation numbers, personnel transitions, and new construction and renovation of existing structures at NAS Whidbey Island. The study area for this EA is the natural and human environment in the vicinity of Ault Field at NAS Whidbey Island. Because the proposed action only covers the Expeditionary VAQ squadrons that do not deploy on aircraft carriers and do not need to conduct FCLPs at the OLF, the study area does not include OLF Coupeville.

The resources described in this EA provide baseline information that can be used to compare and evaluate potential impacts on the human environment that may result from implementation of the alternatives. Although the baseline is based upon the conditions resulting at the end state of the *2005 Environmental Assessment for Replacement of EA-6B Aircraft at Naval Air Station Whidbey Island, Washington* (which transitions only the carrier version of the EA-6B to EA-18G aircraft), it has been modified to account for current conditions (calendar year [CY] 2011) in order to give the reader a better understanding and comparison of existing and future conditions. The discussion of the existing environment focuses only on those resource areas where there is a potential for impacts. The following existing environmental resources are not addressed in detail in this EA because implementation of the proposed action and its alternatives would have a negligible effect or no effect on them: community services, transportation, socioeconomics (regional population, housing, business impacts, property values, and tourism), infrastructure and utilities, vegetation, and soils. More detailed information on these resources is located in Section 3.1.

## 1.6 Regulatory Compliance

### 1.6.1 National Environmental Policy Act

NEPA (42 U.S. Code [U.S.C.] §4321–4370d) requires federal agencies to take into consideration the potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, or enhance the environment through well-informed federal decisions. This EA will assist the Navy in deciding the recommended

alternative for implementation through an analysis of environmental impacts associated with each alternative (see Section 2 for a discussion of alternatives). The CEQ was established under NEPA to implement and oversee federal processes. In 1978, the CEQ issued *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* [40 CFR §1500–1508]. These regulations specify that an EA should briefly provide sufficient analysis and evidence for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI) determination; aid in an agency's compliance with NEPA when an EIS is deemed unnecessary; and facilitate EIS preparation when one is necessary.

To comply with NEPA and other pertinent environmental laws and regulations (e.g., the Clean Air Act [CAA], the National Historic Preservation Act [NHPA], the Endangered Species Act [ESA], the Coastal Zone Management Act [CZMA], and the Marine Mammal Protection Act [MMPA]), this EA has been developed as part of the decision-making process for the proposed action at NAS Whidbey Island. Its primary purpose is to address the potential environmental consequences associated with the proposed action.

As required under NEPA, this EA considers various federal and state laws, ordinances, rules, regulations, and policies that are pertinent to implementation of the proposed action. Section 4 of this EA describes the impacts of each proposed action alternative to determine if it would result in significant impacts in relation to the resources of the affected environment.

### 1.6.2 Agency Consultation

The Navy prepared and submitted a *Biological Assessment for the Expeditionary Electronic Attack Squadron Realignment and Transition at Naval Air Station Whidbey Island* to the U.S. Fish and Wildlife Service (USFWS) on April 4, 2012 (see Appendix A). In a letter dated May 25, 2012, the USFWS concluded informal consultation pursuant to Section 7(a)(2) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.)* and concurred with the Navy's determination that the proposed action may affect but is not likely to adversely affect the marbled murrelet, a sea bird species that is federally listed as threatened, and that forages near NAS Whidbey Island (see Appendix A, Biological Assessment).

The Navy consulted with the Washington State Historic Preservation Office (SHPO) requesting concurrence on each of the proposed alternatives for new construction and non-historic structures that the proposed action would have no adverse effect on National Register of Historic Places (NRHP)-eligible or listed historic and cultural resources. A letter of concurrence

on this finding was received on July 3, 2012. Details are provided in Sections 3.7 and 4.7. Copies of the correspondence are provided in Appendix B.

The Navy has determined there would be no significant impacts on tribal treaty resources, tribal rights, or Indian lands and, therefore government-to-government consultation was not required. A letter was sent to the interested tribes on June 27, 2012, notifying them of the project and the Navy's effect determination (see Appendix B).

Based on a comprehensive coastal consistency program and policy analysis, the Navy has determined the proposed action would not affect the coastal resources or uses of Washington State. The Navy submitted a negative Coastal Consistency Determination on May 10, 2012. In a letter dated June 12, 2012, the Washington State Department of Ecology concurred with the Navy's negative determination. Copies of the Navy's negative determination and the Washington State Department of Ecology response are included in Appendix B.

## 1.7 Public Participation

The Navy released the Draft EA for public review on July 27, 2012, to inform the public of the proposed action and to allow the opportunity for public comment. The Draft EA public comment period began with the public notice published in the *Whidbey News Times* and the *Skagit Valley Herald* indicating the availability of the Draft EA and the locations of public review copies. A press release also was distributed to media outlets serving the area surrounding NAS Whidbey Island.

One hard copy and one electronic copy of the Draft EA were placed in the following public locations for review:

Oak Harbor Library
1000 SE Regatta Dr.
Oak Harbor, WA 98277-3091

La Conner Regional Library
614 Morris Street
La Conner, WA 98257

The Draft EA was also made available on the NAS Whidbey Island Web site: http://www.cnic.navy.mil/Whidbey/OperationsAndManagement/EnvironmentalSupport/index.htm.

Additionally, the Draft EA was made available on the Naval Facilities Engineering Command, Northwest (NAVFAC NW) Web site: https://portal.navfac.navy.mil/portal/page/portal/navfac/NAVFAC_WW_PP/NAVFAC_EFANW_PP

The public comment period was initially scheduled to last 15 days, ending August 13, 2012. However, in response to requests from local officials, the Navy extended the public review period until August 31, 2012. The Navy issued a press release on August 14, 2012, announcing the extension of the public review period and submitted letters to the local officials who made the request. Additional hard and electronic copies of the Draft EA were placed in the following public locations for review:

Coupeville Library
788 Alexander St
Coupeville WA 98239

Anacortes Public Library
1220 10th Street
Anacortes, WA 98221

### 1.7.1 Public Comments

A total of 233 comments were received during the public review period of which 129 comments expressed support for the proposed action and 104 comments expressed concern about the existing operations. Of the 104 comments expressing concern, 54 were specifically concerned about the noise environment in the city of Coupeville and the areas surrounding OLF Coupeville. Although Fleet CVW Growler squadrons routinely fly in the vicinity of Coupeville, the Expeditionary VAQ sqadrons identified in this proposed action do not fly at OLF Coupeville. Additionally, several emails and letters were received requesting extensions of the public review period, calling for comments from other individuals, and providing news articles and media releases.

Some citizens who voiced support for the proposed action expressed that NAS Whidbey Island and the military are an important part of the local community. Many commenters expressed their support for the continued training mission, and cited the positive socioeconomic impacts and the role of military and family members in their community as scout leaders, coaches, and civic members. Many citizens acknowledged the proactive land use planning policies implemented by the county, including real estate disclosures.

Primary concerns are addressed in the following paragraphs. The changes between the Draft EA and the Final EA are summarized in Section 1.7.2.

#### 1.7.1.1 OLF Coupeville

**Comment Summary.** Several commenters stated that the EA for the proposed action is inadequate and an EIS should be prepared. The commenters said that the analysis should include impacts to the area surrounding OLF Coupeville consistent with the *EA for Replacement of EA-6B Aircraft with EA-18G Aircraft at Naval Air Station Whidbey Island (2005).* Some commenters stated that an EIS should have been prepared in 2005. These commenters stated that since the 2005 EA should have been an EIS and this information was used to develop the baseline for this proposed action that the baseline is flawed for this proposed action.

**Response.** The Navy complied with Navy Regulations as detailed in OPNAVINST 5090.1C, federal law, and CEQ regulations. The proposed action would not impact flights at OLF Coupeville. The Expeditionary VAQ squadrons are land-based aircraft and do not deploy on aircraft carriers. As a result, the Expeditionary VAQ squadrons do not have a requirement to train or conduct field carrier landing practice (commonly referred to as FCLPs) at OLF Coupeville. Although the proposed action could increase the number of aircraft in the Expeditionary VAQ squadron and the overall number of operations would increase at Ault Field by 2.7% to 3.1%, there would be no direct or indirect increased use of OLF Coupeville under the proposed action. Ault Field has operational capacity to accommodate the increase in flight operations as a result of the proposed action. As a result, other aircraft would not be required to relocate to OLF Coupeville for training. Therefore, the proposed action would not impact the existing or future conditions at OLF Coupeville and the surrounding area. Further analysis is not required for any resource area including, but not limited to, noise, historic structures, impacts to wildlife, and socioeconomic impacts.

The baseline for the proposed action is based upon the conditions resulting at the end state of the *EA for Replacement of EA-6B Aircraft at Naval Air Station Whidbey Island, Washington* (*2005)* (which transitions only the carrier version of the Prowler aircraft to Growlers). It has been modified to account for current conditions (CY2011) in order to give the reader a better understanding and comparison of existing and future conditions.

Each resource is analyzed in accordance with NEPA and other federal laws/regulations. The analysis supports a no significant impact finding for each resource. Therefore, an EIS is not required.

#### 1.7.1.2 Flight Patterns/Operations

**Comment Summary.** Some commenters remarked about changes or variations in flight patterns, the increased number of aircraft flying together in flight patterns, and an overall increase in air traffic over Whidbey Island. These comments say that changes in flight patterns created a change in the level of noise that residents are exposed to from the aircraft. Commenters requested redirecting training operations to occur over the ocean as a method of reducing the air traffic over land. Many commenters stated they were exposed to noise associated with the longer training sessions in which aircraft are flying continuously for several hours and late-night training occurring after 10:00 p.m. Many commenters also stated that Navy aircraft are flying low over their property.

**Response.** Annual operations are dependent on training schedules, deployment cycles, weather events, and global events. The Navy strives to be good neighbors at all installations and recognizes public concern over aircraft operations. The Navy must however meet mission requirements to ensure ready forces. All of the airspace over Whidbey Island is part of the National Airspace System and is used by both civil and military aircraft. There are no established "no fly zones" over Oak Harbor, Whidbey Island, or the surrounding area; however, the Navy has developed designated flight tracks that represent the predominant airspace usage in the vicinity of NAS Whidbey Island. Current NAS Whidbey Island Ault Field and OLF Coupeville course rules and flight tracks are expected to remain the same because the EA-18G Growler Expeditionary VAQ squadrons would conduct the same type of operations and would use similar flight tracks as the EA-6B Prowler Expeditionary VAQ squadrons.

Flight tracks represent a general area where aircraft normally fly rather than a line in the sky. However, there are times when aircraft would fly in areas other than the flight tracks to enhance the safety of flight and for compliance with federal aviation regulations. Changes in atmospheric conditions such as wind speed and direction, as well as other aircraft operations, can influence an aircraft's exact position within the flight track. The Navy continually reviews its own established course rules in an effort to minimize community impacts. Sometimes requirements to alter established course rules to conform to Federal Aviation Administration (FAA) restrictions and local air traffic conditions may result in a temporary increase in noise.

Night training is required for carrier pilots to maintain operational readiness. Pilots must train using night-vision goggles and this training must occur in the dark without moonlight. During the summer months, pilots must wait until after 10:00 p.m. locally to initiate this training and ensure complete darkness. NAS Whidbey Island guidelines indicate training generally

should conclude by midnight; however, if conditions or emergent mission conditions occur, training can be extended.

All Navy pilots comply with FAA regulations and Navy regulations, which dictate allowable aircraft flight elevations. Flight altitudes are determined by many variables such as designation of flight tracks, distance between takeoff and landing locations, mission and other air traffic. Other than takeoff and landing, low-altitude flights are conducted for specific training requirements in approved areas and on approved routes.

#### 1.7.1.3 Safety

**Comment Summary.** Some commenters made statements pertaining to aircraft safety and the safety of the residents and businesses in the community.

**Response.** The Navy places an extremely high priority on safety during training and real-world operations, and safety is important at NAS Whidbey Island. Navy pilots are well-trained, and their training includes extensive use of flight simulators and frequent practice in emergency procedures. The Navy's aviation safety record has continually improved over the past 20 years. New aircraft are subject to an extensive systems development and demonstration phase, which involves developmental testing of the engine and system-level testing of the entire aircraft prior to flight testing. Throughout testing procedures, the engine and aircraft are evaluated for endurance and reliability to ensure safe performance.

In addition, the Navy works with communities adjacent to airfields to prevent development that would be incompatible with a military airfield. The Air Installations Compatible Use Zones (AICUZ) program provides a vehicle for achieving this outcome. The primary goal of the AICUZ program is to protect the health, safety, and welfare of those living on and near a military airfield while preserving the operational capability of the airfield. Although, it is difficult to project future safety/mishap rates for any new aircraft. In all cases, the DOD maximizes the use of lessons learned and current technology to minimize the chances of aircraft mishaps (refer to Sections 3.4.3 and 4.4.3).

#### 1.7.1.4 Noise

**Comment Summary.** Commenters stated that an increase in operations would create additional noise at their residence/business while others have commented that the EA-18G Growler is louder than the EA-6B Prowler. Some commenters also mentioned the low-frequency vibration associated with the EA-18G Growler. Additionally, commenters stated that

pets and wildlife were negatively affected by the noise associated with the EA-18G Growler and cited a 2009 report on jet engine noise reduction for jet engine noise levels.

**Response.** The Navy conducted a comprehensive noise study to determine the noise impacts associated with the proposed action (see Appendix C for details). The day-night average sound level (DNL) is the metric used by all federal agencies for predicting human annoyance and other potential noise effects on humans. While "loudness" of an event may be the first reaction many people have to aircraft noise, the number (or duration) of events, and the time of day also influence community perception of noise and are also included in DNL. The 24-hour DNL is a reliable measure of community sensitivity to aircraft noise and is the FAA and DOD standard noise metric used in the United States (except California, which uses a similar metric) to measure the effects of aircraft noise for both commercial airports and military installations. DNL takes into account both the noise levels of all individual events that occur during a 24-hour period and the number of events and the times of those events. Since ambient noise is generally lowest during this time interval, acoustic night (10 p.m. to 7 a.m.) carries a 10–decibel (dB) penalty for any aircraft operations modeled during this period. The modeled noise contours for NAS Whidbey Island include this 10-db penalty for nighttime operations. DNL noise contours have historically been used as the noise metric for NAS Whidbey Island and 65 DNL is the lowest noise contour for which Navy land use guidance is provided and is the standard under which previous NAS Whidbey Island noise studies were conducted.

Compared to the current noise environment (CY2011, which is the baseline for this EA), the noise generated by operations of the Expeditionary EA-18G VAQ squadron flights at and around Ault Field is expected to be less based on noise modeling conducted specifically for this proposed action. The DOD analyzes aircraft noise near military airfields through a suite of computer-based programs, collectively called NOISEMAP. NOISEMAP examines all the primary factors influencing aircraft noise, including:

- Aircraft type;
- Number and time of operations;
- Flight tracks
- Aircraft power settings, speeds and altitudes;
- Numbers, duration and location of engine maintenance run-ups;
- Terrain; and

- Environmental data (temperature and humidity).

For the noise generated by specific aircraft, the DOD draws on a vast aircraft noise library. This library contains acoustic information on aircraft in the military inventory measured under controlled conditions. Aircraft noise characteristics from the noise library are used in NOISEMAP, adjusting the characteristics to local environmental conditions, to accurately predict the noise environment. Models, like NOISEMAP, are particularly useful in predicting the noise environment where operational tempos and even aircraft types are projected to change.

NOISEMAP uses the DNL metric to present noise contours in the near airfield environment. The noise contours presented for the action alternatives connect points of equal value and range from 60 DNL to 85 DNL in 5-dB increments. The Navy makes land use recommendations for compatible development. Residential land uses are normally considered incompatible with noise levels above 65 DNL. Please see Section 4.3 and the complete Noise Report in Appendix C for a more detailed description.

The Navy uses other noise metrics, such as Sound Exposure Level (SEL) to help paint a complete picture of the noise environment. The EA-18 Growler Expeditionary VAQ squadrons would continue the same type of operations and would use similar flight tracks as the EA-6B Prowler Expeditionary VAQ squadrons. At an altitude of 1,000 feet, noise modeling takes into account individual aircraft profiles and local environmental conditions to determine that the SEL acoustical energy emitted by the EA-18G Growler demonstrates that there is a decrease in noise levels by approximately 2 to 8 dB when compared to the EA-6B Prowler for most operations. For departures, the EA-6B Prowler SEL is 18 to 23 dB higher than the EA-18G Growler (see Appendix C, the Noise Report, for more information). The existing population exposed to noise levels greater than 80 dB DNL would decrease slightly under the proposed action. No new areas of population would be exposed to noise levels greater than 80 dB DNL. Under the proposed action, the land area in the noise zones would be reduced by as much as 14% and, therefore, the corresponding population in these noise zones would be reduced by as much as 9%. The proposed 65 to 75 dB DNL zone would decrease as much as 1 mile relative to the baseline scenario (see Section 4.3). The area within the DNL noise zones would decrease by approximately 5,032 acres, a large portion of which would be located over the open waters of Puget Sound and Skagit Bay. Additionally, the population exposed within the 65 DNL and greater noise zones associated with the proposed action would decrease by an estimated 948 people (see Section 4.3).

**Vibration -** 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. In general, such noise-induced vibrations occur at peak sound levels of 110 dB or greater. Structural damage would be expected if sound levels exceed 130 C-weighted decibels (dBC). However, the take-off condition has sound levels greater than 110 dBC for both EA-6B Prowler and EA-18G Growler aircraft, creating an environment conducive for noise-induced vibration. Additional information is provided in Section 4.3; also see Section 7.2 of the Noise Report in Appendix C.

**Operations/Night Training -** The EA-6B Prowler Squadrons have operated continuously at NAS Whidbey Island since 1971. Annual operations are dependent on training schedules, deployment cycles, weather events, and global events. The Navy strives to be good neighbors at all of its installations and recognizes public concern over noise. The Navy must however meet mission requirements to ensure ready forces; readiness requires night training. This EA addresses the effects of replacing the EA-6B Prowler Expeditionary VAQ squadron with the EA-18G Growler Expeditionary VAQ squadron. During the noise modeling process for baseline aircraft operations, the Navy included other aircraft that contribute to the noise at the installation. Since the noise data from these other aircraft are incorporated into the modeled baseline noise contours, the change in noise environment as discussed in the EA is representative of the difference between the Expeditionary EA-6B Prowler and the Expeditionary EA-18G Growler aircraft. The other aircraft modeled operations remained constant for each alternative evaluated.

In regards to the public comment about permanent restrictions for nighttime and weekend operating hours, NAS Whidbey Island Ault Field is a military airfield that is open 24 hours a day, 7 days a week. Night training is required for pilots to maintain operational readiness. Pilots must train using night-vision goggles and this training must occur in the dark. During the summer months, pilots must wait until after 10:00 p.m. locally to perform this training to ensure complete darkness. NAS Whidbey Island guidelines indicate training generally should conclude by midnight; however, if conditions or emergent mission conditions occur, training can be extended.

As a good neighbor, the Navy will continue to make every attempt to minimize its noise impacts to nearby communities. These efforts include limiting late-night flying to only mission-essential activities, locating engine run-up areas away from populated areas, and minimizing flights over heavily populated areas, while fulfilling mission requirements. In addition, the Navy works with communities to develop their land use plans to minimize noise impacts to residents.

**Animals** - The Navy prepared a comprehensive noise study in the preparation of this EA. The noise study evaluates the impacts of Navy aircraft to the federally threatened marbled murrelet and the EA analyzed the impacts of the proposed action on wildlife. Section 4.6 provides an analysis of the impacts of the proposed action on wildlife. Information on how the Navy analyzes noise and the impacts of noise on the environment is provided in Appendix C, the Noise Report. In the Noise Report, see Appendix B, "Discussion of Noise and its Effects on the Environment," for further information on impacts to domestic and wild animals.

**2009 Report on Jet Engine Noise Reduction** - The Naval Research Advisory Committee's Report on Jet Engine Noise Reduction (U.S. Navy 2009) primarily discusses the noise on the flight line and on the deck of an aircraft carrier and concerns workplace noise. While the report does discuss possible ways to reduce engine noise, the technology is not yet mature enough to be implemented. The report also suggests that the Navy examine noise limits on the design of future aircraft. This statement does not refer to the EA-18G Growler.

#### 1.7.1.5 Health Effects

**Comment Summary.** Many commenters stated that late night flights occurring after 10:00 p.m. and sometimes not ending until around 1:00 a.m. are impacting their ability to get enough sleep. Commenters also mentioned the potential for EA-18G aircraft noise to negatively impact people's health and hearing. Some commenters requested the Navy to perform more studies on the impacts of aircraft noise on health.

**Response.** The Navy prepared a comprehensive noise study in the preparation of this EA (Appendix C). The noise study evaluated the health, safety, and well-being of citizens in and around NAS Whidbey Island. The analysis concluded that the noise contours under the proposed action would result in a decrease in land area and in population exposed to noise from the current baseline conditions. As a result, there would be a reduction in the noise and its associated effects experienced by the community. The land area in the noise zones would be reduced by as much as 14% and, therefore, the corresponding population in the noise zones would be reduced by as much as 9%. The proposed 65 to 75 dB DNL contour would decrease as much as 1 mile relative

to the baseline scenario (see Section 4.3). The area within the DNL noise zones would decrease by as much as 5,032 acres, a large portion of which would be located over the open waters of Puget Sound and Skagit Bay. The population exposed within the 65 DNL and greater noise zone would decrease by as much as 948 people. As discussed in Section 4.3, no person off-station would be exposed to noise levels that would have the potential to cause hearing loss and sleep disturbance related to effects from the proposed action. Additional information on studies and health impacts can be found in Appendix C, the Noise Report. In the Noise Report, Appendix B provides more detailed information.

#### 1.7.1.6 Socioeconomics

**Comment Summary.** Some commenters expressed an opinion that they could experience impacts to property value, loss of business, and a potential decrease in tourism due to increasing the noise associated with the EA-18G Growler.

**Response.** A comprehensive noise study was conducted as part of this EA and concluded that under all alternatives there would result in a decrease in land area and in population within the 65 dB DNL or greater noise contours as compared to baseline conditions (see Appendix C). As a result, no impacts to housing, property values, tourism, or other socioeconomic factors are expected.

Real property values are dynamic and are influenced by a combination of factors, including market conditions, neighborhood characteristics, and individual real property characteristics (e.g., the age of the property, its size, and amenities). The degree to which a particular factor may affect property values is influenced by many other factors that fluctuate widely with time and market conditions (see Section 3.1).

#### 1.7.1.7 Jet Fuel and other Hazardous Materials

**Comment Summary.** A few commenter stated that the island is becoming polluted by jet fuel and other hazardous materials used by the base.

**Response.** The Navy has existing procedures in place to store, handle, and dispose of hazardous materials and complies with all federal and state regulations that govern their use and disposal. The Navy monitors fuel tanks and complies with all federal and state regulations that govern their use, spill prevention, and reporting requirements.

The Navy does not routinely dump fuel from aircraft. To do so would not only be environmentally unsound policy, but also would be fiscally unsound given the cost of fuel. If forced to do so because of an emergency, Navy pilots would typically attempt to dump fuel at an

altitude at which the fuel would dissipate before reaching the ground and over an unpopulated area in accordance with FAA regulations.

NAS Whidbey Island is a recognized leader in environmental stewardship by its municipal and federal partners. Most recently, NAS Whidbey Island won the 2012 Northwest Bainbridge Community Award based on the following activities: leading annual Earth Day events, conducting on-base and off-base clean-up actions, working in partnership with the Northwest Marine Mammal Stranding Network, and implementation of salt water marsh restoration to improve salmon habitat with key partners such as the Skagit River Systems Cooperative which includes the Swinomish and Sauk-Suiattle Tribes, and several other programs. Additionally, NAS Whidbey Island achieved a 31% energy reduction since 2003, a 10% water use reduction since 2007, and has diverted 76% of its waste from landfills by integrating recycling programs on base. Lastly, the installation received the 2009 DOD pollution prevention award from Vice President Joe Biden.

#### 1.7.1.9 Public Outreach

**Comment Summary.** Many commenters stated that they would like to see more public outreach from NAS Whidbey Island on matters of interest to the local communities. Some commenters stated they would like the base to publish training schedules and provide more information to the public about airfield operations. Some commenters wrote that their concerns/complaints are not important to NAS Whidbey Island and that they are unsatisfied with the past responses from the Navy.

**Response.** These comments have been submitted to NAS Whidbey Island for further consideration. NAS Whidbey Island takes all noise concerns seriously. Noise complaints are received by NAS Whidbey Island Air Operations and Public Affairs via a designated hotline. The Noise Hotline phone number is: 360-257-2681.

The Navy recognizes the importance of being good neighbors with the local communities and makes every effort to balance noise abatement with the need to train Navy pilots. There are times, however, when pilots must make varying approaches/departures that are not part of the "typical" pattern, but are consistent with FAA regulations.

Noise complaint calls are answered and information is collected from the caller concerning the time, location, and description of the noise-generating event. The calls are logged and responded to the following business day. Each complaint is reviewed by NAS Whidbey Island Air Operations, and (when appropriate) the responsible flight squadron is

notified and any deviations from standard procedures are discussed to determine the need for corrective action. Upon request, the Community Planning Liaison Officer will contact the individual who complained and will provide follow-up information and explanation.

#### 1.7.1.10 Mitigation

**Comment Summary.** Some commenters suggested that the Navy take appropriate measures to mitigate noise and recommended the following measures: relocating flights to be more over the water, reduce the number of nighttime flights, fly at a higher elevation, and compensate homeowners for noise impacts and potential home improvement.

**Response.** The Navy remains dedicated to working with the community to find ways to mitigate noise effects from airfield operations where possible and will continue the extensive noise abatement procedures already in place. These include limiting 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.

#### 1.7.1.11 Close NAS Whidbey Island or Relocate Aircraft

**Comment Summary.** Some commenters advocated closing NAS Whidbey Island or relocating the louder aircraft such as the EA-18G Growler to another Navy base that is in a less populated location. Some commenters stated that the base is a health and safety concern for the island's community. Some commenters stated that in order to preserve the rural character of the island, the Navy should relocate, while other commenters suggested that Whidbey Island is no longer a rural farming community and that the urban environment is not conducive to the impacts associated with loud aircraft.

**Response**. Closing or realigning NAS Whidbey Island is beyond the scope of this EA and would require Congressional action. The Navy has no plans to recommend closing NAS Whidbey Island as it provides a vital national defense mission as the sole homebase for the Navy's electronic attack community**.**

### 1.7.2 Changes from the Draft EA to the Final EA

In response to input received during the public comment period, the following updates have been made to the Final EA.

**Executive Summary**

- An explanation of why the proposed action would not impact OLF Coupeville has been added to ES.2.

**Section 1**

- An explanation of why the proposed action would not impact OLF Coupeville has been added to Section 1.5.
- An explanation of the how the baseline was developed has been added to Section 1.5.
- A synopsis of public comments and the Navy's response to those comments has been added to Section 1.7.
- A more detailed description of the EA for Replacement of EA-6B Aircraft with EA-18G Aircraft at Naval Air Station Whidbey Island, Washington (U.S. Navy July 2005) has been added to Section 1.8.

**Section 2**

- An explanation of why the proposed action would not impact OLF Coupeville has been added to Section 2.1.
- An explanation of the how the baseline was developed has been added to Section 2.2.4.

**Section 3**

- Section 3.1, "Regional Population and Housing" was renamed "Socioeconomics." Section 3.1 discusses population density, housing, property values, and tourism.
- A statement has been added to Section 3.4.3 stating that Island County has adopted a closed racetrack FCLP accident potential zone (APZ) pattern for land use regulations.

**Section 4**

- Additional explanation of the noise modeling process has been added to Section 4.3.
- Additional analysis has been added to Section 4.3 under Alternatives 1, 2, and 3. This analysis provides more detail on the differences between EA-6B and EA-18G noise profiles, low-frequency vibrations, and the decrease in noise associated with Expeditionary EA-18G operations when compared to baseline conditions.
- Additional citations have been included in Section 4.3.

**Section 5**

- This section has been reformatted and additional analysis has been included in Sections 5.3.5.1.2 and 5.3.5.1.3 to support the conclusion.

## 1.8 Related Environmental Documents

A number of environmental studies and assessments have been conducted at NAS Whidbey Island. These have been considered in the preparation of this document and are summarized below.

### 1.8.1 The Environmental Assessment for Replacement of EA-6B Aircraft with EA-18G Aircraft at Naval Air Station Whidbey Island, Washington (U.S. Navy July 2005)

This document analyzed the environmental consequences of transitioning the CVW VAQ squadrons at NAS Whidbey Island from the older EA-6B Prowler aircraft to the newer EA-18G Growler aircraft. The EA for the transition to the EA-18G Growler also analyzed an increase of one additional aircraft assigned to each CVW VAQ squadron. EA-6B squadrons have four aircraft each, while EA-18G squadrons have five aircraft each. As discussed previously in Section 1.4, this document also includes the disestablishment of the Expeditionary VAQ squadrons by 2012. Therefore, the Navy anticipated an overall decrease in the number of both CVW and Expeditionary VAQ aircraft and personnel at NAS Whidbey Island. Note: The proposed action in this document reverses that decision to disestablish the Expeditionary VAQ squadrons, and transitions the Expeditionary VAQ squadrons (not the CVW squadrons) to the EA-18G airframe.

### 1.8.2 Final Environmental Impact Statement (FEIS) for the Introduction of the P-8A Multi-Mission Maritime Aircraft (MMA) into the U.S. Navy Fleet (U.S. Navy December 2008)

The FEIS analyzed the environmental consequences of the U.S. Navy's proposed action to provide facilities and functions to support the homebasing of 12 P-8A MMA squadrons (72 aircraft) and one FRS (12 aircraft) at established maritime patrol homebases in NAS Jacksonville, Florida; NAS Whidbey Island, Washington; and Marine Corps Base (MCB) Hawaii, Kaneohe Bay, Hawaii. The FEIS analyzed personnel transition, new construction or renovation of structures, and all airfield operations necessary to accommodate the basing of the P-8A MMA as the Navy phases the P-3C Orion out of service, beginning in 2012. The P-8A squadrons would use the existing ranges used for P-3C squadron tactical training. Additionally, the number and type of P-8A MMA tactical training operations were projected to be the same as the P-3C training operations and would use the same weapons systems and sonobuoys currently used by the P-3C. The analysis in the 2008 FEIS also assumed the disestablishment of three Expeditionary VAQ EA-6B squadrons at NAS Whidbey Island by 2012. The FEIS resulted in a Record of Decision (ROD), dated December 30, 2008, and directed the homebasing of four P-8A squadrons to NAS Whidbey Island.

Based on the 2008 ROD, the P-8A MMA transition plan forecasts that P-3C squadrons at NAS Whidbey Island would begin transitioning to P-8A aircraft beginning in 2016. (Since the Expeditionary VAQ proposed action would occur in the 2012 to 2014 timeframe, the cumulative

effects of the P-8A transition on the Expeditionary VAQ proposed action are discussed in Section 5, Cumulative Impacts.)

### 1.8.3 Northwest Training Range Complex (NWTRC) Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS) (U.S. Navy October 2010)

In the Final NWTRC EIS/OEIS, the Navy evaluated the potential environmental effects of current, emerging, and future training; research and development; and test and evaluation activities in the NWTRC to achieve required levels of operational readiness of aviation, surface ship, submarine, and explosive ordnance disposal (EOD) units homebased and homeported at NAS Whidbey Island; Naval Station (NS) Everett; Puget Sound Naval Shipyard; Naval Base Kitsap-Bremerton; and Naval Base Kitsap-Bangor. The NWTRC includes ranges, operating areas, and airspace that extend 250 nautical miles (nm) west from the coasts of Washington, Oregon, and northern California and to the east just beyond the Washington/Idaho border.

All aircraft stationed at NAS Whidbey Island train in the national airspace, in designated SUA, and in low-altitude military training routes located within the NWTRC, as well as in training ranges in SUA scheduled and/or controlled by other military services. The potential environmental impacts associated with related training activities of VAQ squadrons in existing military training ranges were analyzed in the 2010 NWTRC EIS/OEIS. The ROD was signed October 25, 2010.