

# Environmental Impact Statement for EA-18G “Growler” Airfield Operations at Naval Air Station Whidbey Island Complex

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Volume I

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November 2016

Prepared for:





**Environmental Impact Statement for EA-18G “Growler” Airfield  
Operations at Naval Air Station Whidbey Island Complex  
Volume 1**

**November 2016**

**Prepared by:**



**United States Department of the Navy**

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## Abstract

Designation: Environmental Impact Statement

Title of Proposed Action: Environmental Impact Statement for EA-18G “Growler” Airfield Operations at Naval Air Station Whidbey Island Complex

Project Location: Naval Air Station Whidbey Island, Washington

Lead Agency for the EIS: Department of the Navy

Affected Region: Island County Region, Washington

Action Proponent: United States Fleet Forces, Department of the Navy

Point of Contact: Naval Facilities Engineering Command Atlantic  
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Norfolk, VA 23508

Date: November 2016

The Department of the Navy has prepared this Environmental Impact Statement in accordance with the National Environmental Policy Act, as implemented by the Council on Environmental Quality Regulations and Navy regulations for implementing the National Environmental Policy Act. The Proposed Action would:

- continue and expand existing Growler operations at the Naval Air Station Whidbey Island complex, which includes field carrier landing practice by Growler aircraft that occurs at Ault Field and Outlying Landing Field Coupeville
- increase electronic attack capabilities by adding 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
- station additional personnel and their family members at the Naval Air Station Whidbey Island complex and in the surrounding community

In addition, the Navy will continue to support all flight operations of other aircraft at the NAS Whidbey Island complex. This Environmental Impact Statement evaluates the potential environmental impacts associated with a No Action Alternative (per Council on Environmental Quality regulations) and three action alternatives. The three action alternatives consider options for increasing the number of additional Growler aircraft, as appropriated by Congress, at the NAS Whidbey Island complex. Each action alternative contains further analysis of three operational scenarios that involve different distributions of annual field carrier landing practice airfield operations between Ault Field and Outlying Landing Field Coupeville. Each action alternative evaluates the effects resulting from each of these three operational scenarios. The Environmental Impact Statement evaluates the potential environmental impacts associated with the following resource areas: airspace, noise, safety, air quality, land use, cultural resources, American Indian traditional resources, biological resources, water resources, socioeconomics, environmental justice, transportation, infrastructure, geological resources, hazardous materials and wastes, climate change and greenhouse gases, as well as the cumulative impacts of the Proposed Action and other local projects.

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## EXECUTIVE SUMMARY

### Proposed Action

Beginning as early as 2017, the United States (U.S.) Department of the Navy (Navy), as the lead agency, proposes to:

- continue and expand existing Growler operations at the Naval Air Station (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 mission for identifying, tracking, and targeting 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

In addition, the Navy would continue to support all flight operations of other aircraft at the NAS Whidbey Island complex.

The NAS Whidbey Island complex 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 City of Oak Harbor. OLF Coupeville is located approximately 10 miles south of Ault Field and is dedicated primarily to FCLP. The NAS Whidbey Island complex includes two additional areas, the Seaplane Base and Lake Hancock. The Seaplane Base is included in this analysis because it contains housing and support facilities that would be used by personnel and their dependents. Section 2.3.2 provides a description of the squadrons and aircraft under consideration for the Proposed Action. The Proposed Action would not impact resources at Lake Hancock; therefore, Lake Hancock will not be discussed further in this analysis.

### Purpose of and Need for the Proposed 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.

### Alternatives Considered

In developing the proposed range of alternatives that meet the purpose of and need for the Proposed Action, the Navy reviewed requirements for Growler squadrons and unit-level squadron training in light of Title 10 responsibilities, existing training requirements and regulations, existing Navy infrastructure, and Chief of Naval Operations guidance to support operating Naval forces. The Navy also reviewed comments received through the public scoping process. Considerations included:

- the NAS Whidbey Island complex is home to the Navy's Electronic Attack mission, including the training squadron, all U.S.-based squadrons, and substantial infrastructure and training ranges that have been established during the past 40-plus years
- location of suitable airfields that provide for the most realistic training environment
- distance aircraft would have to travel to accomplish training
- expense of duplicating capabilities that already exist at the NAS Whidbey Island complex
- operational readiness and synergy of the small Growler community
- access to training ranges, Special Use Airspace, and military training routes
- effective use of existing infrastructure
- management of aircraft inventories, simulators, maintenance equipment, and logistical support
- effective use of personnel to improve operational responsiveness and readiness

Based on the considerations mentioned above, the Navy is analyzing three action alternatives, each of which has three operational scenarios that meet the purpose and need for the Proposed Action, as well as a No Action Alternative, per Council on Environmental Quality regulations. More details on the alternative selection process are found in Section 2.2 (Development of the Range of Action Alternatives). The action alternatives consist of force structure and operational changes to support an expanded Department of Defense capacity and include variations of the following factors:

- total number of aircraft to be purchased
- number of aircraft assigned per squadron
- number of expeditionary squadrons
- number of personnel
- distribution of aircraft operations at Ault Field and OLF Coupeville

### **No Action Alternative**

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 Environmental Impact Statement (EIS), the Navy is using the year 2021 as representative of the No Action Alternative because it represents the conditions when events at Ault Field affecting aircraft loading, facility and infrastructure assets, personnel levels, and number of aircraft are expected to be fully implemented and complete from previous aircraft home basing, retirement, and other related decisions. Therefore, with these other actions complete, the analysis clearly reflects the impacts of this Proposed Action of adding additional Growler aircraft and personnel and associated construction.

### **Action 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 Squadron (FRS) with eight additional aircraft (a net increase of 35 aircraft). Alternative 1 would add 371 Navy personnel and 509 dependents to the region.



**Action 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 664 Navy personnel and 910 dependents to the region.

**Action 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 377 Navy personnel and 894 dependents to the region.

This EIS evaluates three operational scenarios for each of the action alternatives for a total of nine alternatives analyzed:

**Scenario A**

Twenty percent of all FCLPs would be conducted at Ault Field, and 80 percent of all FCLPs would be conducted at OLF Coupeville.

**Scenario B**

Fifty percent of all FCLPs would be conducted at Ault Field, and 50 percent of all FCLPs would be conducted at OLF Coupeville.

**Scenario C**

Eighty percent of all FCLPs would be conducted at Ault Field, and 20 percent of all FCLPs would be conducted at OLF Coupeville.

The above three scenarios (A, B, and C), in combination with the alternatives, provide a total of nine operational conditions that are fully evaluated in this EIS analysis. The Secretary of the Navy will be able to select a final alternative/scenario combination from the range of nine analyzed in this EIS.

Scenarios are based on the distribution of FCLP between Ault Field and OLF Coupeville. The FCLP percentages for each scenario that are expressed in this analysis are intended to analyze levels of total aircraft operations. FCLPs are not expected to exceed those analyzed in this document. 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 pattern and conditions at sea and therefore provides superior training. However, because the Navy recognizes that noise impacts to the community are an unavoidable adverse effect of the Proposed Action, this EIS analyzes three operational scenarios at the expense of ideal training.

Alternatives considered but not carried forward for detailed analysis in this EIS because they did not meet the purpose of and need for the project are described in detail in Section 2.5 (Alternatives Considered but Not Carried Forward for Further Analysis).

**Summary of Environmental Resources Evaluated in the EIS**

The National Environmental Policy Act (NEPA), Council on Environmental Quality regulations, and Navy regulations for implementing NEPA specify that an EIS should address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level

of environmental impact. This EIS assesses the potential environmental effects of continuing and expanding the existing Growler operations at the NAS Whidbey Island complex, and it analyzes aircraft operations conducted in the vicinity of Ault Field and OLF Coupeville, including the effects of additional military personnel and their families who would move to the area. The following topics are evaluated in this EIS:

- Airspace and Airfield Operations
- Noise Associated with Aircraft Operations (Noise)
- Public Health and Safety
- Air Quality
- Land Use
- Cultural Resources
- American Indian Traditional Resources
- Biological Resources
- Water Resources
- Socioeconomics
- Environmental Justice
- Transportation
- Infrastructure
- Geological Resources
- Hazardous Materials and Wastes
- Climate Change and Greenhouse Gases

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

**Airspace and Airfield Operations.** Alternative 1 proposes a net increase of 35 Growler aircraft, while Alternatives 2 and 3 propose a net increase of 36 Growler aircraft. Annual airfield operations at the NAS Whidbey Island complex would increase by approximately 46 percent (Alternatives 2 and 3) to 47 percent (Alternative 1) over the No Action Alternative to support the addition of 35 or 36 new aircraft assigned to Ault Field. The increase in total annual airfield operations at the NAS Whidbey Island complex would range from approximately 40,100 (Alternative 3, Scenarios B and C) to 41,400 (Alternative 1). The increase in annual airfield operations at Ault Field would range from 12,300 (Alternative 1, Scenario A) to 38,700 (Alternative 1, Scenario C), while the increase in annual airfield operations at OLF Coupeville would range from 2,200 (Alternative 3, Scenario C) to 29,000 (Alternative 1, Scenario A). Airfield operations may include aircraft arrival and departure, interfacility flights, and closed-loop flights (such as FCLP). These operational conditions would be similar to historic flight operations experienced in the 1970s, 1980s, and 1990s for the NAS Whidbey Island complex, as indicated in Section 1.4. Ault Field and OLF Coupeville meet all the operational requirements and have sufficient capacity under routine operating conditions to support the airfield operations of the additional Growler aircraft proposed under each alternative and scenario. Airfield operations at Ault Field may experience scheduling difficulty under Scenario C of all three of the action alternatives, because approximately 80 percent of FCLPs would be conducted at Ault Field under that scenario. When more

FCLPs are flown at Ault Field, other flights and aircraft training operations occurring at Ault Field are restricted or delayed. This would cause more people off base to be affected because training is extended later into the night, and more aircraft are held in larger or extended flight patterns while FCLP is conducted. For more information on airspace and airfield operations, see Sections 3.1 and 4.1.

**Noise Associated with Aircraft Operations.** The U.S. Department of Defense recommends land use controls beginning at the 65 decibel (dB) day-night average sound level (DNL). Research has indicated that about 87 percent of the population is not highly annoyed by outdoor sound levels below 65 dB DNL (FICUN [Federal Interagency Committee on Urban Noise], 1980). Most people are exposed to sound levels of 50 to 55 dB DNL or higher on a daily basis. Therefore, the 65 dB DNL contour is used to help determine compatibility of local land use with military aircraft operations, particularly for land use associated with airfields, and is the lower analysis range for this analysis. There would be new areas impacted by noise that are not currently within the 65 dB DNL noise contour generated by Navy aircraft operations under all alternatives and scenarios. Although some of these areas are over water, others are over land and would therefore result in additional people living within the 65 dB DNL noise contour.

The number of additional people who are estimated to be within the 65 dB DNL noise contour ranges from a high of 2,514 (Alternative 1, Scenario C) to a low of 1,651 (Alternative 2, Scenario A) for the entire NAS Whidbey Island complex. When examined by individual airfield, Ault Field would have the largest increase of individuals within the 65 dB DNL noise contour under Scenario C (up to 1,979 people for Alternative 1, Scenario C), while the lowest increase would be 395 individuals under Alternative 2, Scenario A. For OLF Coupeville, the largest increase of individuals within the 65 dB DNL noise contour would be under Scenario A (up to 1,316 people for Alternative 1, Scenario A), while the lowest increase would be 512 individuals under Alternative 2, Scenario C. Additionally, supplemental metrics were used to identify potential impacts from noise exposure that could be realized under the action alternatives. These include additional events of indoor and outdoor speech interference, an increase in the number of events causing classroom/learning interference, an increase in the probability of awakening, and an increase in the population that may be vulnerable to a potential hearing loss of 5 dB or more. Therefore, the Proposed Action would have a significant impact on the noise environment as it relates to aircraft operations at Ault Field and OLF Coupeville.

It is Commanding Officer, NAS Whidbey Island policy to conduct required training and operational flights with as minimal impact as possible, including noise, on surrounding communities. All aircrews using NAS Whidbey Island are responsible for the safe conduct of their mission while complying with published course rules, established noise-abatement procedures, and good common sense. Each aircrew must be familiar with the noise profiles of its aircraft and is expected to minimize noise impacts without compromising operational and safety requirements. Specific noise-abatement procedures and policy are outlined in Section 3.2. For more information on noise from aircraft operations, see Sections 3.2 and 4.2.

**Public Health and Safety.** Increased operations increase the potential for flight incidents and bird-animal aircraft strike hazard, but existing management strategies would manage risk. Scenarios with high numbers of operations at OLF Coupeville may require the development of Accident Potential Zones (APZs) through the Air Installation Compatible Use Zone (AICUZ) update process, including Alternative 1, Scenario A; Alternative 1, Scenario B; Alternative 2, Scenario A; Alternative 2, Scenario B; Alternative 3, Scenario A; and Alternative 3, Scenario B. Conceptual APZs are presented for the purpose of analyzing

potential land use impacts of the Proposed Action. At this time, no decision has been made with regard to additional APZs. The Navy will perform an AICUZ update upon completion of this EIS and share official recommendations with the community.

Under Executive Order (EO) 13045, Environmental Health Risks and Safety Risks to Children, the Navy identifies that there would be an increase in the number of children (19 years of age and younger) within the noise contours under all alternatives and scenarios; the increase in the number of children likely to be affected by the greater than 65 dB DNL contours would range from a low of 426 children under Alternative 1, Scenario A, to a high of 678 children under Alternative 3, Scenario C, under the average year. Based on the limited scientific literature available, there is no proven positive correlation between noise-related events and physiological changes in children. Additionally, the aircraft noise associated with the action alternatives is intermittent; therefore, the Navy does not anticipate any significant, disproportionate health impacts to children caused by aircraft noise. Unless there is a place where children congregate within an APZ, such as a school, there is not a disproportionate safety risk to children residing in that APZ. There are no schools located within the APZs at Ault Field and OLF Coupeville under any of the alternatives or scenarios; therefore, there is no disproportionate environmental health and safety risk to children as a result of possible aircraft mishaps. For more information on public health and safety, see Sections 3.3 and 4.3.

**Air Quality.** Potential impacts to air quality from implementation of the Proposed Action when compared to the No Action Alternative would be similar between all three action alternatives and scenarios but greatest under Alternative 2, Scenario A. For air emissions, the difference in aircraft emissions between the scenarios within each alternative is more distinctive than the differences in aircraft emissions between the alternatives. For all three alternatives, Scenario A, the option to conduct 80 percent of FCLPs at OLF Coupeville and 20 percent of FCLPs at Ault Field, would result in the greatest increase in emissions.

Construction impacts would be minor and temporary, and would not result in significant impacts on air quality. Operations would result in an increase in stationary and mobile emissions sources. Increased stationary sources would be covered under the existing NAS Whidbey Island air operating permit and would have no significant impact. Changes in mobile emissions are not subject to permit requirements or emission thresholds; however, these emissions contribute to regional emission totals and may affect compliance with National Ambient Air Quality Standards. The region is currently in attainment for all National Ambient Air Quality Standards, and the Northwest Clean Air Agency continues to monitor ambient air emission levels to confirm continued compliance. For more information on air quality, see Sections 3.4 and 4.4.

**Land Use.** Each of the action alternatives would result in an increase in the land area within the projected greater than 65 dB DNL noise contours (range of 14 percent to 19 percent). There would be an increase in residential land use within the greater than 65 dB DNL noise contour as compared to the No Action Alternative, ranging from an increase of 8 percent (Alternative 1, Scenario A) to 17 percent (Alternative 1, Scenario C) at Ault Field and an increase of 26 percent (Alternative 2, Scenario C) to 48 percent (Alternative 1, Scenario A, and Alternative 3, Scenario A) at OLF Coupeville.

Under all action alternatives and scenarios, the Proposed Action would have no impact to on-station land use, on-station land use controls, or regional land use, but it would have an impact on regional land use controls. Land within the conceptual APZs at OLF Coupeville would increase under Scenarios A and B of each action alternative. Conceptual APZs at OLF Coupeville would impact 1,301 acres of residential

land under Scenario A and 503 acres under Scenario B under all three action alternatives, if developed. If warranted and depending upon the alternative and scenario selected, the APZs could be updated by completing an AICUZ update and coordinating with local communities to provide appropriate new land use recommendations as necessary, which could impact regional land-use controls.

With regard to recreation and wilderness areas, there would be minor impacts from use of recreation areas as a result of increased demand under all alternatives. Due to increased noise exposure from Growler operations, a range of impacts from long-term minor to long-term moderate would be expected at the federal, state, and local recreation areas and parks located within the greater than 65 dB DNL noise contour. Alternative 1, Scenarios A and B; Alternative 2, Scenarios A and B; and Alternative 3, Scenarios A and B would have localized significant impacts on a county park (Driftwood Park) as a result of increased annual average noise levels. Alternative 3, Scenario C, would have localized significant impacts on a municipal park (Oak Harbor Off-leash Dog Park) as a result of increased annual average noise levels. Alternative 1, Scenario C, and Alternative 2, Scenario C, would have no significant impacts on the management or use of recreational areas. There are no wilderness areas within the study area, and therefore there would be no impact on them. For more information on land use, see Sections 3.5 and 4.5.

**Cultural Resources.** Archaeological and architectural resources were evaluated with regard to direct and indirect effects under NEPA and Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA). Direct effects may occur within those areas where construction will take place on the installation. Indirect effects are those that may occur within the 65 dB DNL noise contours, and those that result from construction (on station) at Ault Field or from aircraft operations (on and off station)<sup>1</sup> occurring at both Ault Field and OLF Coupeville.

With regard to archaeological resources, minimal to no impact would result to known or intact archaeological sites within Ault Field during construction and operation. In accordance with Section 106 of the NHPA, the Navy is consulting with the Washington State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation, American Indian tribes and nations, and consulting parties regarding archaeological resources. A full list of consulting parties is provided in Section 3.6.2.4.

With regard to architectural resources, potential direct and indirect impacts during construction would be likely to occur to and in proximity to Building 2737 (Hangar 12); however, the hangar has been determined not eligible for listing in the National Register of Historic Places under the Cold War Era historic context statement. Indirect impacts, including visual, auditory, and/or vibratory impacts, may be experienced in the immediate proximity of construction activities on Ault Field and in those areas on and off the installation within the 65 dB DNL noise contours during aircraft operations. Minimal indirect impacts are anticipated to occur with the operation of the additional Growler aircraft or from the new construction and expansion of facilities on station. Minimal to moderate indirect impacts are anticipated to occur to off station historic resources during aircraft operations. Under Scenario A (for all action alternatives), resources that are closer to OLF Coupeville may experience a higher level of visual, auditory, and/or vibratory impact and more frequent occurrences of aircraft appearances, noise, and vibration than those located elsewhere due to the increased FCLPs at OLF Coupeville for this scenario as

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<sup>1</sup> On station refers to those areas within Ault Field and OLF Coupeville. Off station refers to those resources located outside these areas and, for the cultural resources discussion, that also are within the area of potential effect.

compared to Scenarios B and C. Under Scenario B, resources that are proximate to both Ault Field and OLF Coupeville may experience a higher level of impact. Under Scenario C, resources that are proximate to Ault Field (and not OLF Coupeville) may experience a higher level of impact and OLF Coupeville a lower level of impact. In accordance with Section 106 of the NHPA, the Navy is consulting with the Washington SHPO, Advisory Council on Historic Preservation, American Indian tribes and nations, and consulting parties regarding architectural resources. A full list of consulting parties is provided in Section 3.6.2.4. For more information on cultural resources, see Sections 3.6 and 4.6.

**American Indian Traditional Resources.** The implementation of the Proposed Action at NAS Whidbey Island would not result in significant impacts to American Indian traditional resources because there would be no change to current tribal access and no additional potential to impact traditional resources in the study area. In accordance with executive orders and U.S. Department of Defense and Navy policies, the Navy invited government-to-government consultation with the following federally recognized American Indian tribes and nations that could potentially be affected by the Proposed Action and evaluated whether such consultation was desired:

- Jamestown S'Klallam Tribe
- 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

To date, no tribes have requested government-to-government consultation on the Proposed Action. For more information on American Indian traditional resources, see Sections 3.7 and 4.7.

**Biological Resources.** Minimal habitat loss from construction activities would not significantly impact terrestrial wildlife because construction is within the urban/industrial area of the installation and has habitat of poor quality and would not impact marine habitat. Animals in the study area are already exposed to a high level of long-term aircraft operations and other human-made disturbances to which they have presumably habituated. Wildlife inhabiting the study area throughout the year increase the risk of a strike, but with the continued implementation of a bird-animal aircraft strike hazard plan, the Proposed Action would not significantly impact local wildlife populations. For Endangered Species Act listed species, this EIS concludes that the Proposed Action may affect, but is not likely to adversely affect, the Southern Resident killer whale, humpback whale, bull trout, green sturgeon, eulachon, Chinook salmon, Hood Canal summer-run chum, steelhead, bocaccio rockfish, canary rockfish, and yelloweye rockfish. The Proposed Action may affect the marbled murrelet, and the Navy will consult with the U.S. Fish and Wildlife Service. In accordance with the Endangered Species Act, the Navy will consult with the U.S. Fish and Wildlife Service and National Marines Fisheries Service, as appropriate. For Migratory Bird Treaty Act-protected species, U.S. Department of Defense installations are exempt from "take" because aircraft operations would not have a significant impact at the population level. During construction, impacts on Migratory Bird Treaty Act-protected species would be largely avoided and minimized and would not rise to the level of take. For more information on biological resources, see

Sections 3.8 and 4.8. The Navy has determined that the Proposed Action is not expected to result in injury or harassment of any marine mammal as defined by the Marine Mammal Protection Act.

**Water Resources.** There would be no significant impacts on water resources from construction activities or operation of new aircraft. No construction would extend to a depth that may impact groundwater resources, and there would be a minimal increase in demand for groundwater. Although fuel or other chemicals could be spilled during construction, implementation of best management practices (BMPs), such as immediate cleanup of these spills, would prevent any infiltration into the underlying groundwater. There would be no direct impact on water quality because construction would not be occurring within resource areas. Potential indirect impacts on water quality due to 2 acres of new impervious surface at Ault Field (a 1-percent increase over existing conditions) would slightly increase stormwater flow. Impacts would be minimized and avoided through implementation of BMPs. For more information on water resources, see Sections 3.9 and 4.9.

**Socioeconomics.** The Proposed Action would have minor impacts on the local and regional population, ranging from a net increase of 880 people under Alternative 1 to 1,574 people under Alternative 2. Construction impacts would result in temporary and positive impacts to the local economy. There would be up to \$122.5 million in direct construction expenditures, up to 839 projected short-term employment positions from construction activities, and an additional 371 (Alternative 1) to 664 (Alternative 2) personnel in the region spending money. The increase in local government tax receipts would range from \$235,000 in Island County and \$59,000 in Skagit County under Alternative 1 to \$421,000 in Island County and \$105,000 in Skagit County under Alternative 2. Up to between 371 (Alternative 1) and 664 (Alternative 2) households would relocate to the area. In 2015, a housing study completed for the NAS Whidbey Island complex found that there was a surplus of 591 acceptable family housing units in the area. Under Alternative 2, the regional housing supply may not have sufficient vacancies to handle the influx of households (664 households), causing a moderate impact on the housing market. Under Alternatives 1 and 3, regional housing would be able to handle the increase in demand (371 and 377 households, respectively) and therefore have a minor impact on housing. Under all three alternatives, local school districts, particularly the Oak Harbor School District, would experience an increase in enrollment. The projected increase in enrollment ranges from 191 students under Alternative 1 to 341 students under Alternative 2. The increased enrollment at the Oak Harbor School district would further exacerbate the existing overcrowding problem and have a significant adverse impact on the district. Minimal to no impact is expected on medical, police, and fire services under all three alternatives. For more information on socioeconomics, see Sections 3.10 and 4.10.

**Environmental Justice.** Under all alternatives and scenarios, there are minority populations and low-income populations living within the affected environment. The Navy has concluded that although there are environmental justice communities within the affected area and there are significant impacts outlined within the EIS to populations living within the affected area (noise impacts to those living within the 65 dB DNL noise contours and overcrowding at Oak Harbor School District schools), these impacts do not disproportionately impact environmental justice communities. For more information on environmental justice, see Sections 3.11 and 4.11.

**Transportation.** Construction impacts would result in increased traffic on and off the installation, but roadways would be able to handle the increase. An increase in personnel and dependents would result in an increase in traffic on local roads. New trips per weekday would be lowest under Alternative 1 and highest under Alternative 2, regardless of the scenario selected. Under Alternative 1, there would be an

estimated 171 to 2,321 new trips per weekday on major roadways off base, and under Alternative 2, there would be an estimated 306 to 4,154 new trips per weekday on major roadways off base. Traffic would be spread throughout roads in Island and Skagit Counties, and, although there would be some degradation of service, it would not be expected to result in level of service falling below established level of service standards. An area of concern at the intersection of State Route 20 and Banta Road would see an increase of between 231 daily trips under Alternative 3 and 407 daily trips under Alternative 2; however, a traffic signal will be installed there by 2021. An increase in gate traffic of approximately 3 percent to 8 percent over No Action Alternative traffic volumes entering and exiting the installation may result in queuing of vehicles, but this would be limited to peak hours. No significant increase in use of transit, pedestrian, and bicycle facilities would occur because the majority of new traffic would be car based. For more information on transportation, see Sections 3.12 and 4.12.

**Infrastructure.** Increased consumption or demand would occur for water, wastewater, stormwater, solid waste management, energy, and communications systems from the increase in population that would be spread throughout Island and Skagit Counties. Existing and future capacity is expected to handle the increases in demand; therefore, no significant impacts are expected. Increased consumption or demand is lowest under Alternative 1 (371 additional households in the region) and highest under Alternative 2 (664 additional households in the region) for all types of infrastructure analyzed. New facilities under each alternative would also result in increased demand for infrastructure resources on station. For more information on infrastructure, see Sections 3.13 and 4.13.

**Geological Resources.** Construction would not include clearing or blasting of earth or rock, and only minor grading activities would occur; therefore, no significant impacts on geologic resources would occur. There would be no impact on resistance to seismic events because all buildings constructed under the Proposed Action would be designed to conform to the seismic provisions of the Washington State Building Code, and a Spill Prevention, Control, and Countermeasure plan would be in place during construction. Impacts to soils during construction could include compaction and rutting from vehicle traffic and an increase in erosion, but impacts would be minimized through the use of BMPs. No significant impacts would occur. BMPs would be implemented to further reduce or eliminate any potential impacts. For more information on geological resources, see Sections 3.14 and 4.14.

**Hazardous Waste and Materials.** No significant impacts related to hazardous waste and materials would occur due to construction activities or from the addition and operation of additional Growler aircraft. Hazardous materials and wastes would increase in quantity but would be managed under existing law and Navy regulation and management practices. Impacts under Alternatives 2 and 3 would be negligibly higher (36 aircraft) than under Alternative 1 (35 aircraft). The existing practices and strategies would successfully manage the use and disposal of these materials. No proposed construction activities would occur within or in proximity to any Defense Environmental Restoration Program sites; therefore ongoing remedial programs would not be impacted. For more information on hazardous waste and materials, see Sections 3.15 and 4.15.

**Climate Change and Greenhouse Gases.** Climate change will continue to occur, resulting in global impacts affecting Whidbey Island and Puget Sound and the Navy's priorities and mission. Federal, state, and local agencies, including the U.S. Department of Defense, will continue to assess impacts and define adaptation and mitigation strategies to address them.

The increase in greenhouse gas (GHG) emissions from the Proposed Action equates to less than 1 percent of all aircraft GHG emissions in Washington. Therefore, the GHG emissions from the Proposed



Action should not have a significant impact on Washington's GHG emission goals. Stationary GHG emissions would increase by 1 percent (Alternatives 1 and 3) to 3 percent (Alternative 2) under the action alternatives when compared to the No Action Alternative. Mobile GHG emissions would increase by between 39 percent (Alternative 3, Scenario C) and 58 percent (Alternative 2, Scenario A) under the action alternatives when compared to the No Action Alternative. For more information on climate change and GHGs, see Sections 3.16 and 4.16.

Table 4.17-1 (Summary of Potential Impacts to Resource Areas) provides a tabular summary of the potential impacts to the resources associated with each of the action alternatives analyzed. This EIS does not identify any mitigation measures for the implementation of action alternatives but does identify measures that could be taken to develop suggested mitigation techniques, including, but not limited to, stormwater retention practices. As the NEPA process continues, mitigation measures may be developed and altered based on comments received during public and regulatory agency review of the EIS. If mitigation measures are identified during this process, they will be identified in the Final EIS or Record of Decision. These measures would be funded, and efforts to ensure their successful completion or implementation would be treated as compliance requirements.

### **Public Involvement**

The Navy solicited public and agency comments during two scoping periods:

1. September 5, 2013, to January 3, 2014, and reopened from January 13 to January 31, 2014
2. October 8, 2014, through January 9, 2015

Public Scoping meetings were held on:

- December 3, 2013, in Coupeville, Washington
- December 4, 2013, in Oak Harbor, Washington
- December 5, 2013, in Anacortes, Washington
- October 28, 2014, in Coupeville, Washington
- October 29, 2014, in Oak Harbor, Washington
- October 30, 2014, in Anacortes, Washington
- December 3, 2014, in Lopez Island, Washington
- December 4, 2014, in Port Townsend, Washington

Comments received during the two scoping periods were considered in preparing this EIS. Specifically, the Navy solicited scoping comments from elected officials, federally recognized American Indian tribes and nations, agencies, and the general public to determine the scope of this EIS. Section 1.9.4.1 provides a summary of scoping comment topics.

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# Environmental Impact Statement for EA-18G “Growler” Airfield Operations at the Naval Air Station Whidbey Island Complex

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## Appendices

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## Abbreviations and Acronyms

Acronym	Definition	Acronym	Definition
ABD	Average Busy Day	CEQ	Council on Environmental Quality
ACHP	Advisory Council on Historic Preservation	CFR	Code of Federal Regulations
ADT	Average Daily Traffic	CNG	Cascade Natural Gas Corporation
AEMR	Annual Energy Management Report	CNO	Chief of Naval Operations
AESO	Aircraft Environmental Support Office	CO	carbon monoxide
AFFF	aqueous film forming foam	CO <sub>2</sub>	carbon dioxide
AGL	above ground level	CO <sub>2</sub> e	carbon dioxide equivalent
AICUZ	Air Installations Compatible Use Zones	CWA	Clean Water Act
AOP	air operating permit	CY	Calendar Year
APE	Area of Potential Effect	CZMA	Coastal Zone Management Act
APZ	Accident Potential Zone	dB	decibel
AQCR	Air Quality Control Region	dba	A-weighted sound level
ATC	air traffic control	dbc	C-weighted sound level
ATCAA	Air Traffic Controlled Assigned Airspace	DEIS	Draft Environmental Impact Statement
BASH	Bird-animal Aircraft Strike Hazard	DERP	Defense Environmental Restoration Program
BCC	Birds of Conservation Concern	DNL	day-night average sound level
BCR	Bird Conservation Region	DoD	United States Department of Defense
BGEPA	Bald and Golden Eagle Protection Act	DoDI	United States Department of Defense Instruction
BLM	Bureau of Land Management	DPS	Distinct Population Segment
BMP	best management practice	EA	Environmental Assessment
BO	Biological Opinion	EIS	Environmental Impact Statement
CAA	Clean Air Act	EMS	emergency medical service
CCAR	Climate Change Adaptation Roadmap	EO	Executive Order
		EOD	explosive ordnance disposal

Acronym	Definition	Acronym	Definition
ESA	Endangered Species Act	$L_{eq(24)}$	24-hour Equivalent Sound Level
FAA	Federal Aviation Administration	$L_{max}$	maximum A-weighted sound level
FCLP	field carrier landing practice	LID	low-impact development
FEMA	Federal Emergency Management Agency	LOS	level of service
FONSI	Finding of No Significant Impact	LSO	Landing Signal Officer
FRS	Fleet Replacement Squadron	LTO	landing and takeoff operation
FWHCAs	Fish and Wildlife Habitat Conservation Areas	MBTA	Migratory Bird Treaty Act
FY	Fiscal Year	MCAS	Marine Corps Air Station
GCA	Ground Controlled Approach	$\mu\text{Pa}$	Micropascal
GHG	greenhouse gas	mgd	million gallons per day
HAP	hazardous air pollutant	MMA	Mission Maritime Aircraft
Hz	hertz	MMPA	Marine Mammal Protection Act
IBA	Important Bird Area	MOVES	Motor Vehicle Emission Simulator
ICRMP	Integrated Cultural Resources Management Plan	mph	miles per hour
IFLOLS	Improved Fresnel Lens Optical Landing System	MoA	Memorandum of Agreement
IFR	Instrument Flight Rules	MOA	Military Operations Area
in/sec	inches per second	MSAT	Mobile Source Air Toxics
INRMP	Integrated Natural Resources Management Plan	MSL	mean sea level
IPaC	Information for Planning and Conservation	MT	metric ton
ITPO	Island Transportation Planning Organization	MTCO <sub>2e</sub>	metric tons carbon dioxide equivalent
JLUS	joint land use study	MTR	military training route
$L_{eq}$	Equivalent Sound Level	MW	megawatt
$L_{eq(8)}$	8-hour Equivalent Sound Level	NAAQS	National Ambient Air Quality Standards
		NAF	Naval Air Facility
		NAS	Naval Air Station
		Navy	The U.S. Department of the Navy

Acronym	Definition	Acronym	Definition
NAWS	Naval Air Weapons Station	OU	Operable Unit
NEPA	National Environmental Policy Act	PFC	perfluorinated compound
NHPA	National Historic Preservation Act	PFOA	perfluorooctanic acid
NIPTS	Noise Induced Permanent Threshold Shift	POI	Point of Interest
nm	nautical miles	POV	Personally Owned Vehicles
nm <sup>2</sup>	square nautical miles	PSD	Prevention of Significant Deterioration
NMFS	National Marine Fisheries Service	PSE	Puget Sound Energy
NO <sub>2</sub>	nitrogen dioxide	PUD	Public Utility District
NPDES	National Pollutant Discharge Elimination System	RCW	Revised Code of Washington
NPS	National Park Service	RDT&E	Research, Development, Test, and Evaluation
NRHP	National Register of Historic Places	ROD	Record of Decision
NRNW F&ES	Navy Region Northwest Fire and Emergency Services	RTIP	Regional Transportation Improvement Program
NWCAA	Northwest Clean Air Agency	RTPO	Regional Transportation Planning Organization
NWR	National Wildlife Refuge	SCOG	Skagit Council of Governments
NWSTF	Naval Weapons Systems Training Facility	SDZ	Surface Danger Zone
NWTRC	Northwest Training Range Complex	SEL	sound exposure level
NWTT	Northwest Training and Testing	SHPO	State Historic Preservation Office(r)
ODO	Operations Duty Officer	SIP	State Implementation Plan
OEIS	Overseas Environmental Impact Statement	SO <sub>2</sub>	sulfur dioxide
OLF	outlying landing field	SPBHD	Seaplane Base Historic District
OPAREA	operating area	SPCC	Spill Prevention Control and Countermeasure
OPNAVINST	Office of the Chief of Naval Operations Instruction	SR	State Route
		STIP	Statewide Transportation Improvement Program
		SUA	Special Use Airspace
		TCP	traditional cultural property
		T&G	touch-and-go

Acronym	Definition	Acronym	Definition
U&A	usual and accustomed	USFWS	United States Fish and Wildlife Service
UIC	Underground Injection Control	VFR	Visual Flight Rules
U.S.C.	United States Code	VOC	volatile organic compound
U.S.	United States	VQ	Fleet Air Reconnaissance
USACE	United States Army Corps of Engineers	WAC	Washington Administrative Code
USDA	United States Department of Agriculture	WDFW	Washington Department of Fish and Wildlife
USEPA	United States Environmental Protection Agency	WGMA	Washington State Growth Management Act
USFS	United States Forest Service	WSDOT	Washington State Department of Transportation