

## MAKE YOUR VOICE HEARD

Welcome to the **Sound Defense Alliance** guide to making yourself heard. You have joined us in our shared concern over a proposal to increase Growler military jet landing practice operations over central Whidbey Island from 6,100 to 23,700 annually and to add 36 Growlers to the 82 already stationed at Whidbey Island Naval Air Station. We're pleased you've chosen to become a **Sound Defender**.

The Secretary of the Navy will soon make a decision on this proposal. Right now, the most effective thing you can do is to voice your opposition to those who can influence the Secretary of the Navy: Governor Jay Inslee, Senator Patty Murray, Senator Maria Cantwell, Representatives Rick Larsen, Derek Kilmer, and Adam Smith. You can also write the Secretary of the Navy, Richard Spencer. Find contact information after the talking points and before the footnotes.

Although there are plenty of reasons to oppose additional Growlers over Puget Sound, you don't have to choose just one. State a different reason every time you call, email, or write a postcard/letter. Every reason counts, every contact counts, every citizen counts.

If you have time for only six words, you can make it short and simple: **No New Jets. No New Flights.** If you have time for more, read on. You might even consider making it a daily practice to express a different point to a different official each day. There are thousands of people across NW Washington who are **Sound Defenders**. Join us.

We need to be louder than the Growlers. We need to raise our voices loudly, together, and often. Get started by finding the facts that speak loudest to you, and SPEAK UP!

### **Toxic Noise**

- The intensity, frequency, duration, and altitude of the Growlers is a threat to public health, igniting a firestorm of protest in several counties because of the deafening and toxic noise they produce.<sup>1</sup>
- Aircraft noise levels included in the Navy's DEIS are wrong. They are generated by a flawed and outdated computer model. In addition, they represent only an average of flying and non-flying times. They do not reflect actual noise measurements at Coupeville's Outlying Field (OLF). The Navy's noise assessment is inaccurate and misleading.<sup>2</sup>

- Real-time measurements taken at Ebey's Reserve near Coupeville show damaging levels of noise, up to 115 decibels—well past the 85-decibel level that begins to cause permanent hearing loss.<sup>3</sup>
- Children exposed to loud noise show decreased reading comprehension, delayed development, impaired cognition, and memory loss. In 2013, the US Air Force disclosed that operations of the F-16 fighter aircraft in a Vermont neighborhood assaults children with noise sufficient to cause learning impairment and estimated that 45 percent more children will have their learning impaired if the F-35 jets are based in that neighborhood. The children of Central Whidbey are at risk.<sup>4</sup>
- A moving aircraft causes compression and rarefaction, setting air molecules in motion and producing pressure waves. High-thrust engines, like those in the Growlers, emit low-frequency “windows rattling” pressure waves that penetrate into body organs and cause medical problems.<sup>5</sup>
- The Navy recognizes the dangers of jet noise and protects its pilots and ground personnel. All personnel working in such areas receive hearing protection devices and are routinely monitored for health effects. Residential areas under the OLF flight path far exceed the Navy’s threshold of a hazardous noise zone, yet civilians are left to fend for themselves.

### **Risk of an Accident**

- The Growler’s F-18 airframe is one of the most accident-prone military airframes in existence. Between 1980 and 2014, the F-18 sustained 39 accidents; 22 crashes of the EA-18G and F/A-18 E,F have occurred since 2000. The F-18 Super Hornet platform has a mishap rate well above the average of all military aircraft, including two serious mishaps involving EA-18G Growlers, since December of 2016.<sup>6</sup> Given this history, increased flights would endanger schools, hospitals, homes, parks/play fields, and highways located near the runway. Parts of state Route 20, the only north-south highway on Whidbey Island, lie beneath the Growler's highest-risk crash zone. Coupeville's elementary, middle, and high schools are all located within four miles of the runway. Hospitals and fire stations are also close by, as are businesses and residences.
- To provide acceptable civilian safeguards and livability, the Navy prefers at least 2,000 *unsettled* acres to conduct a training

program of this kind.<sup>7</sup> Yet, repeatedly, the Navy has granted itself waivers on Whidbey, and local policymakers have looked the other way. Today, there are training missions over 664 acres of *populated* land on Whidbey Island. Thus, the Navy is in violation of its own safety standards, thereby putting islanders at risk.

- The runway itself is unsafe. The 5,400-foot runway, built prior to 1943 to accommodate aircraft built in the 1940s, is nearly 3,500 feet too short for Growler jet “touch and go” operations, which require 8,800 feet. The runway cannot be extended. For 32 years, the runway has failed to meet Navy runway safety standards.<sup>8</sup> Thus, the Navy is putting its own pilots in danger by asking them to train on an inadequate runway.
- Our pilots should have the best possible training, and the Navy should provide a training site that provides realistic carrier landing and takeoff conditions in a way that does not needlessly endanger pilots or civilians.
- A single Growler costs \$85-100 million. These very expensive weapons, paid for by taxpayers, should be deployed in an area equipped to handle their needs. At present, the runway cannot do that.

### **Property Values and Property Taxes**

- Proposed increased operations will likely cause Accident Potential Zones (APZs) to be imposed. Island County will have to change zoning designations to prevent development. Similar downzoning has had negative effects on other communities, making mortgages and home loans difficult, impeding housing sales, and reducing property values.<sup>9</sup> Unoccupied houses and deterioration of affected areas presents social, public health, and safety issues. Approximately 4,400 land parcels with an assessed value of \$1.3 billion will be affected.<sup>10</sup>
- As property use is restricted and people move away, revenue from property taxes may fall, leaving remaining Island County residents to shoulder the burden of paying more taxes to support firefighting, police, emergency, and other essential local services. Who will pay the costs of APZ-required land actions? Homes outside the APZs but within the sound field (areas where sound is disturbing, dependent on the direction the jet's tailpipe is aimed) will decline in value, stripping many property owners of

their single biggest asset, their home, and further lowering property tax revenue for the county. Why is a small county being forced to subsidize the nation's military? Why should its citizens face negative economic consequences?

## **Tourism**

- Many communities around Puget Sound depend on tourism, especially those on the Olympic Peninsula and our islands. (Olympic National Park is by far the largest contributor to the Olympic Peninsula economy.) Allowing the area to become a giant military staging ground will cripple the tourism industry and threaten small businesses: inns, B&Bs, restaurants, farms, wineries/distilleries, retailers, and outdoor recreation (whale-watching, diving, kayaking, paddle boarding, boating).
- Coupeville is the second oldest town in Washington State. It attracts upwards of 90,000 tourists per year.<sup>11</sup> A four-fold increase in Growler flights would drive tourists away and diminish the economic vitality of Coupeville.
- Outdoor recreation is valued at \$21.6 billion and helps to create 199,000 jobs. Outdoor enthusiasts spend the most when they are recreating on the water.<sup>12</sup> This is more than the \$15 billion contributed to our economy by military and defense industries. Jobs in Washington depend on its pristine skies, lands, and waters.

## **Farming, Fishing, Local Economies**

- Farms on Central Whidbey produce food for the island and for restaurants throughout the region. They contribute to the island's local economy and food security. But farmers cannot tend their crops during Growler operations because of noise deemed unsafe for workers by the Occupational Safety and Health Administration. Quadrupling flights threatens farming on Central Whidbey.
- Jet engines do not burn cleanly, but their toxic by-products tend to disperse high in the atmosphere. But, because the Growlers fly at low altitudes during landing practices, toxic particulates fill our air, fall into our waters, and drift down to our soils.<sup>13</sup> Healthy food cannot grow on acreage exposed to constant pollution from above, which is why California—with strict clean air regulations—prohibits such maneuvers.
- The average annual commercial value for Puget Sound crab, shrimp, mussel, oyster, geoduck, and other clams is \$44 million.

Recreational shell fishing is valued at \$42 million per year; recreational fishing in Puget Sound at \$57 million a year; commercial fishing at \$4 million a year. What might the additional noise and carbon dioxide pollution from more military jets do to water quality and to these economies?

### **Wildlife/Marine Life/Bird Populations**

- Puget Sound is the nation's second largest estuary. The waters of the Salish Sea are some of the most biologically significant and productive marine areas in the world, home to both abundant and threatened species of marine life, including six endangered whale species, threatened Stellar sea lions, threatened and endangered salmon, steelhead, and rockfish species, and endangered leatherback sea turtles. The rivers of Olympic Peninsula are important habitat where salmon reproduce. Aircraft noise and sonic booms have been implicated as a cause of lowered reproduction in a variety of animals.<sup>14</sup>
- The pod of Southern resident orcas that inhabits the Salish Sea is on the decline; only 74 remain. Both high and low frequency noise have negative impacts on whales' ability to navigate and identify food. The carbon dioxide in jet exhaust acidifies the water, damaging the web of marine life that sustain salmon, the orca's primary food source. Additionally, chemical compounds from the Navy's fire fighting fire retardant, already in Whidbey's aquifer, enter Puget Sound as surface run-off. These effects, taken together, will further stress the pod and may make the difference between survival and extinction.
- The Olympic Coast National Marine Sanctuary includes 3,188 square miles of marine waters off the rugged Olympic Peninsula coastline. The sanctuary extends 25 to 50 miles seaward, covering much of the continental shelf and several major submarine canyons. The sanctuary protects a productive upwelling zone, home to marine mammals and seabirds. Along its shores are thriving kelp and intertidal communities, teeming with fishes and other sea life. Scattered communities of deep-sea coral and sponges form habitats for fish and other important marine wildlife.
- Olympic National Park is home to the endangered spotted owl and the endangered marbled murrelet. Its coastline is the biannual flyway for billions of migrating birds that depend on navigational signals disrupted by the jets. Growlers also collide with birds. <sup>15</sup> Reported "mishaps" include "large flock of birds hit

after takeoff," "bird strike shut down engine," "bird ingested sometime after flight," and "encountered bird flock that FODed (foreign object damage) both engines."

### **National Parks and Other Protected Lands**

- Puget Sound is bordered by 68 state parks and 8 national parks and monuments, wildlife refuges, forests, and public lands. These assets help drive approximately \$9.5 billion in travel spending, including 88,000 tourist-related jobs that bring \$3 billion to the region, much of it to Washington State.
- Increased noise over the Olympic National Park threatens its status as a UNESCO World Heritage Site and Biosphere Reserve.
- The San Juan Islands National Monument encompasses 1,000 acres spread across a unique archipelago of 450 islands, rocks, and pinnacles that includes scientific and historic treasures, a refuge for wildlife, and a classroom for generations of Americans.
- Deception Pass State Park is Washington's most-visited state park, offering fishing, swimming, hiking, and bird-watching opportunities. During flyovers by the jets, campers have chosen to pull up stakes and fold up their tents, shortening their stay to escape the noise.<sup>16</sup>
- America has a proud tradition of setting aside lands for public enjoyment. Public enjoyment is inconsistent with the purposes of a military installation conducting warfare exercises.
- Pacific Northwest reserves, parks, and monuments provide a home for birds, mammals, and marine life. Migration patterns, mating habits, and feeding patterns are disturbed by noise from the Growlers. The presence of the Growlers conflicts with an important mission of the National Parks Service to preserve the soundscape of parks.<sup>17</sup>

### **A Historical Reserve Assaulted by Growlers**

- Whidbey Island's Ebey's Landing National Historical Reserve, the first and only in the nation, tells the story of the Native Americans who occupied the prairies and forests and the settlers who followed. The Reserve draws visitors seeking to experience an authentic setting; its tilled fields, estuaries, and quiet skies represent the best of "heritage tourism." Yet, Ebey's Reserve bears the brunt of Growler jets as they "touch and go" on the nearby runway. Noisy jets flying overhead are incompatible with the peace and authenticity of a historical reserve.

- Forty years ago, the community on Central Whidbey made the decision to protect Ebey's Reserve; property owners gave up their development rights. Allowing military jets unlimited access to the airspace above the Reserve diminishes the significance of this community effort. Historical structures—barns, cabins, storehouses—are threatened by Growlers that fly 300-600 feet overhead.
- Section 106 of the National Historic Preservation Act requires that adverse effects on historic properties must be avoided, minimized, or mitigated. While weakening of the structures and outright damage from intense low frequency vibrations from the Growlers is virtually guaranteed with 100 flights on busy training days, the Section 106 requirement has been disregarded. Although the Navy is required to consult with local authorities—mayors, commissioners, and managers of Ebey's Reserve—it has failed to do so, instead issuing a “memorandum of agreement” that none of the partners have agreed to. The Navy terminated negotiations in November.

### **Climate Change**

- A four-fold increase in Growler flights will add 60,000 metric tons of additional carbon dioxide—a known cause of climate change—and speed ocean acidification, harming coral reefs, shellfish, and marine ecosystems.

### **Native Americans**

- An increase in Growler flights will impinge on the treaty-promised hunting and fishing rights of native peoples. Pacific Northwest native tribes rely on the forests, rivers, and oceans for their survival and way of life. The lands and seas on which they depend are subjected to military maneuvers: bombing practice, ship-sinking, and sonar buoys that have killed whales, dolphins, porpoises, and other marine mammals.

### **Water (Drinking, Agricultural)**

- For years, Navy personnel trained with a chemical foam to extinguish a potential fire at a Growler crash site. Two of Coupeville's community wells have been contaminated by these chemicals. While industry and local fire stations are required by law to eliminate this type of fire-fighting foam, the Navy—along with refineries and chemical plants—is exempt and maintains a

stockpile. A four-fold increase in operations at the OLF increases the likelihood that foam will be used.

- Central and South Whidbey islanders have no access to fresh water apart from the aquifer underlying the island. This natural reservoir makes Whidbey Island habitable. One Growler crash could contaminate all of Central Whidbey's water supply and its single-source aquifer.
- New studies reveal safe levels of these toxins is a tenth of the current EPA standard. Coupeville water is above the new limits.<sup>18</sup>
- In August of 2018, Senator Maria Cantwell, joined by other senators, introduced legislation to hold federal agencies, including active and decommissioned military bases, responsible for contamination of ground water by fire-fighting chemicals.

### **Economic Effects of Hosting the Naval Base**

- The presence of the Navy means lost revenue for Island County and increased demand for county services in the following ways:
- Although Navy children attend district schools, the school system is reimbursed only 25 percent of the cost of educating them.
- Sailors often use local support services funded by sales and property taxes paid by civilians.
- The military brings in people who are given a "market rate" housing allowance that has driven up rent prices, forcing out those who can no longer afford higher rents.
- A workforce housing crisis exists on Whidbey Island. Local businesses cannot keep up with demand for housing or expand because employees cannot find affordable places to rent.
- Although only 109 new housing units are created annually in Island County, the Growler squadron expansion will import an estimated 634 personnel and their families. The Navy has no plans to expand housing on the base. Why not? Housing additional Navy personnel off base creates more hardship for working class community members.
- The external costs of living with jet noise is imposed without warning or recourse on citizens across the region: in San Juan, Skagit, Jefferson, Clallam, and even Snohomish and Okanogan Counties. The proposed expansion will likely increase these costs.
- The effects of inflated housing markets and increased traffic congestion in Island County are also felt by residents of Island

County's neighbor, Skagit County. The proposed expansion will likely magnify these effects.

### **National Security and Operational Readiness**

- It runs counter to military policy to station all crucial defense assets on one base, yet the Department of Defense plans on doing just that by locating the entire Growler squadron on Whidbey Island.<sup>19</sup>
- Whidbey and the surrounding islands would become a prime target for any enemy that attacks the United States.<sup>20</sup> Whidbey is accessible by two ferries and one bridge. In an attack, military personnel and civilians would be
- trapped.
- Whidbey Island sits atop five fault lines. Growler squadrons are vulnerable to an earthquake.

### **Public Response, Public Participation**

- 4,355 comments were submitted to the Navy in response to its Draft Environmental Impact Statement (DEIS). Over the past few years, an additional 33,000 letters have been sent to the Secretaries of Agriculture and the Interior, the Navy, the Forest Service, and elected officials at all levels.<sup>21</sup> Hundreds of calls have been made to the Navy's noise complaint hotline.
- A DEIS is mandated to be fewer than 300 pages. The DEIS for proposed Growler flights exceeds 1,400 pages, making it difficult for citizens to review.
- Despite its length, the DEIS failed to provide essential information. Important statistics (like the 22 crashes since 2000 of the EA-18G and its closely related F/A-18 E,F aircraft) were withheld. It also omitted several aggravating factors at the Outlying Field that are conducive to catastrophic accidents capable of endangering the populace, the environment, local properties, and the pilots themselves.<sup>22</sup>
- For months, local leaders have requested a meeting with the Navy to discuss the Section 106 Process relevant to Ebey's Historical Reserve. For months, the Navy has ignored these requests. This action by the Navy does not honor public process and must be challenged.
- This decision—to single site all Growlers in Puget Sound—comes from "the other Washington," which has no sense of our state, regional, or local conditions and needs.

- We demand a fair chance to be heard regarding this unprecedented encroachment on public and private lands and waters, in our state and national parks, and in the skies over our communities. All along, we have voiced our opposition; the Navy and the Department of Defense have refused to hear us.

## **Contact Information: Write, Call, or email**

Representative Rick Larsen  
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Senator Maria Cantwell  
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Website: <http://access.wa.gov>

Richard V. Spencer  
Secretary of the Navy  
1000 Navy Pentagon  
Washington, DC 20350-1000

## Sources

<sup>1</sup> "Hearing loss caused by occupational or recreational noise exposure is highly prevalent and constitutes a public health threat needing preventive and therapeutic strategies. ...nonauditory health effects of environmental noise are manifold, serious and, because of the widespread exposure, very prevalent. These factors stress the need to regulate and reduce environmental noise exposure (ideally at the source) and to enforce exposure limits to mitigate negative health consequences of chronic exposure to environmental noise." The Lancet, Vol. 383, April 12, 2014

<sup>2</sup> "Although the noise levels of commercial jet airliners have been decreasing, the noise levels of tactical jet aircraft have not. In all likelihood, tactical jet noise levels have increased as the velocity and airflow from these engines have increased to produce added thrust." "There has never been a requirement for a maximum noise level in military aircraft, and today the Department of Defense does not have adequate understanding of supersonic jet engine noise to establish a realistic maximum noise requirement." "Military aircraft have no existing noise level requirements, and DoD has no accepted military measurement standards or procedures." Naval Research Advisory Committee Report on Jet Engine Noise Reduction, April 2009

"Current mathematical models do not accurately predict noise levels." Naval Research Advisory Committee Report on Jet Engine Noise Reduction, April 2009

<sup>3</sup> National Institutes of Health ([nidcd.nih.gov/health/noise-induced-hearing-loss](http://nidcd.nih.gov/health/noise-induced-hearing-loss))

<sup>4</sup> <https://truthout.org/articles/f-16-and-f-35-bombers-threaten-cognitive-health-of-children-in-vermont-town/>

<https://truthout.org/articles/burlington-vermont-says-no-to-f-35s-in-its-community-setting-off-a-chain-reaction/>

<sup>5</sup> Low frequency noise annoyance is related to headaches, unusual tiredness,

lack of concentration, irritation, and pressure on the eardrum. Data suggest that sleep may be negatively affected.

[https://www.researchgate.net/publication/258400137\\_Noise\\_and\\_Health\\_-\\_Effects\\_of\\_Low\\_Frequency\\_Noise\\_and\\_Vibrations\\_Environmental\\_and\\_Occupational\\_Perspectives](https://www.researchgate.net/publication/258400137_Noise_and_Health_-_Effects_of_Low_Frequency_Noise_and_Vibrations_Environmental_and_Occupational_Perspectives)

It is widely affirmed that exposure to audible low frequency noise can cause adverse health effects in humans. World Health Organization, Guidelines for Community Noise, 1999

<sup>6</sup>[wikipedia.org/wiki/List\\_of\\_accidents\\_and\\_incidents\\_involving\\_military\\_aircraft\\_\(2000-09\)](https://en.wikipedia.org/wiki/List_of_accidents_and_incidents_involving_military_aircraft_(2000-09))

[https://en.wikipedia.org/wiki/List\\_of\\_accidents\\_and\\_incidents\\_involving\\_military\\_aircraft\\_\(2010%E2%80%93present\)](https://en.wikipedia.org/wiki/List_of_accidents_and_incidents_involving_military_aircraft_(2010%E2%80%93present))

<https://www.seattletimes.com/nation-world/navy-investigating-incident-that-left-crew-from-whidbey-naval-air-station-blind-freezing/>

<https://thenewsrep.com/100176/us-navy-ea-18g-growler-cockpit-systems-fail-frostbitten-pilots-forced-to-land-using-gps-watches/>

<https://www.sandiegouniontribune.com/military/sd-me-growler-explosion-20161229-story.html>

<https://www.military.com/daily-news/2017/06/16/the-navy-is-issuing-every-f-a-18-pilot-a-garmin-watch-heres-why.html>

<sup>7</sup> [web.archive.org/web/20090712082423/http://www.olfeis.com:80/land.aspx](http://web.archive.org/web/20090712082423/http://www.olfeis.com:80/land.aspx)

<sup>8</sup> Navy planning document (Navy document 101, 1987) evaluated the OLFC for future use, citing the depth of the concrete and below-standard length of the OLF landing strip as insufficient for new jets and increased use. Additionally, according to the "NAS Whidbey Island Masterplan Update, Existing Conditions Report, Western Division Naval Engineering Facilities Command, September 30, 1986: "Although the field is operationally important as a carrier qualification field, facilities at OLF Coupeville do not now meet criteria established for current FCLP operations levels. The following improvements are required: extend runways, strengthen existing pavement, improve roads and drainage, acquire land in fee (APZ A lands outside the base) 71 acres."

<sup>9</sup> Report from the City of Airway Heights near Fairchild Air Force Base, Spokane County. <http://cawh.org/Home/ShowDocument?id=1046>

<sup>10</sup> A decision to increase Growler flights will trigger a study early in 2019 to

determine "air installation compatibility use zoning" and a subsequent request by the Navy to Island County to impose APZs; areas receiving noise over 65 decibels will be impacted. Flight tracks were overlaid on county maps to determine affected areas and values were determined at the Island County Assessor's office.

<sup>11</sup> Coupeville Chamber of Commerce

<sup>12</sup> <https://www.rco.wa.gov/documents/ORTF/OutdoorEconomicsFactSheet.pdf>

<sup>13</sup> Evaluating Particulate Emissions from Jet Engines: Analysis of Chemical and Physical Characteristics and Potential Impacts on Coastal Environments and Human Health, Transportation Research Record 1517. "The results of this study suggest that the range of size of particulate emissions from some jet engines clusters below 1.5  $\mu\text{m}$  and that the emissions contain heavy metals. Therefore, jet exhaust particulates (JEPs) have the potential to adversely affect both the environment and human health."  
[semanticscholar.org/3c7f/482da5fb9e5ca56907c33cfa021342869945.pdf](https://semanticscholar.org/3c7f/482da5fb9e5ca56907c33cfa021342869945.pdf)

"Besides the gaseous species, aircraft engines emit aerosol particles and aerosol precursors. Soot and metal particles are directly emitted by aircraft engines." "There are a number of gaseous pollutants, ions, aerosol precursors, charged and neutral soot particles in the engine exhaust." "The amount of volatile aerosol particles depends on the fuel sulfur content, type of combustor, parameters at the combustor inlet, engine design, and **flight altitude.**" Gaseous and Particulate Emissions with Jet Engine Exhaust and Atmospheric Pollution, A.M. Starik

<sup>14</sup> According to a report for the US Department of the Interior, "Effects Of Aircraft Noise and Sonic Booms on Domestic Animals and Wildlife: A Literature Synthesis," the reproductive effects have primarily been the result of disturbance of the animal's behavior during the reproductive cycle.  
[www.fs.fed.us/eng/techdev/IM/sound\\_measure/Manci\\_et\\_al\\_1988.pdf](http://www.fs.fed.us/eng/techdev/IM/sound_measure/Manci_et_al_1988.pdf)

<sup>15</sup> According to the US Fish & Wildlife Service, bird and other wildlife strikes to aircraft cause an estimated \$900+ million in damage to U.S. civil and military aircraft annually. Furthermore, these strikes put the lives of aircraft crew members and their passengers at risk: over 250 people have been killed worldwide as a result of wildlife strikes since 1988. Although collisions between birds and airplanes can occur at any time, the majority are **relatively low altitudes during take-off and landing.**  
<https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/aircrafts.php>

<sup>16</sup> [https://www.tripadvisor.com/ShowUserReviews-g58643-d141364-r302164660-Deception\\_Pass\\_State\\_Park-Oak\\_Harbor\\_Whidbey\\_Island\\_Washington.html](https://www.tripadvisor.com/ShowUserReviews-g58643-d141364-r302164660-Deception_Pass_State_Park-Oak_Harbor_Whidbey_Island_Washington.html)

<https://www.campendium.com/deception-pass-state-park>

<sup>17</sup> National Parks Service Management Policy, Chapter 4.9 Soundscape Management: The National Park Service will preserve, to the greatest extent possible, the natural soundscapes of parks. Natural soundscapes exist in the absence of human-caused sound. The Service will restore degraded soundscapes to the natural condition whenever possible, and will protect natural soundscapes from degradation due to noise (undesirable human-caused sound).

<sup>18</sup> <https://theintercept.com/2018/02/10/firefighting-foam-afff-pfos-pfoa-epa/>

<sup>19</sup> This single siting of bases is unique to the Growler, with all other Navy aircraft having at least two bases in the Continental US.  
[en.wikipedia.org/wiki/List\\_of\\_United\\_States\\_Navy\\_aircraft\\_squadrons](https://en.wikipedia.org/wiki/List_of_United_States_Navy_aircraft_squadrons)

Single siting of any military function is a violation of the Technical Joint Cross Service Group (TJCSG) guidelines. TJCSG was formed in the wake of the Base Realignment and Closure Act of 1990 (BRAC) to make recommendations to optimize defense structure for cost and strategy. One of the TJCSG's two guiding principles was *"Maintain competition of ideas by retaining at least two geographically separated sites, each of which would have similar combination of technologies and functions. This will also provide continuity of operations in the event of unexpected disruption."*

<sup>20</sup> "...the EA-18G and EA-6B Airborne Electronic Attack (AEA) platforms are the only ones capable of operating in a high threat environment. ... The Growlers and Prowlers take care of rolling back the adversary's air defenses. This includes Suppression of Enemy Air Defense, airspace dominance, and rapid reaction support (jamming)."

"Airborne Electronic Attack (AEA) is not particularly well managed as an enterprise when it comes to the DoD. Services come up with individual solutions to solve micro problems."

[foxtrotalpha.jalopnik.com/confessions-of-a-us-navy-ea-18g-growler-electronic-warf-1694954599](https://foxtrotalpha.jalopnik.com/confessions-of-a-us-navy-ea-18g-growler-electronic-warf-1694954599)

<sup>21</sup> Communications 12/20/16, Save Our Olympic Peninsula

<sup>22</sup> Letter to EA-18 Growler EIS Project Manager dated February 18, 2017