

To: EA-18G Growler EIS Project Manager  
Naval Facilities Engineering Command Atlantic  
6506 Hampton Boulevard  
Norfolk, VA 23508

Attn: Code EV21/SS

Subject: Navy Draft EIS – EA-18G Growlers at Naval Air Station Whidbey Island

Date: February 23, 2017

Dear Sir or Madam,

Thank you for the opportunity to comment on the Navy’s 1400-page Growler Draft Environmental Impact Statement (DEIS). We appreciate need for pilot training, and we are grateful for the sacrifices made by the members of our military and their families. We hope that our comments here are taken in the spirit of strengthening the protection for our country, the communities you sacrifice to protect, and our shared environment.

We strongly believe that this DEIS does not adequately address significant potential impacts from the unprecedented expansion of Navy activities into civilian areas that have previously been unaffected. Our comments focus on procedural and substantive problems that we feel must be addressed. The DEIS has significant gaps, inaccuracies, and therefore underreports and does not analyze direct, indirect and cumulative impacts to human health, endangered species, land and marine environment, and historic sites of importance. We seek to point out specific areas that must be addressed, and provide recommendations to correct the problems we identify with this comment.

By way of example of the seriousness of DEIS’ deficiencies, one of the most significant gaps in the DEIS, is that it does not include approximately 40 additional Growlers that are in the process of purchase and delivery, beyond the 35 or 36 identified in the proposed action. The DEIS only analyzes 50% of the action, and 50% of the potential impact. This is an inappropriate segmentation of the proposed action. The DEIS states in Volume 1, Abstract 1, that the total

number of Growler aircraft at Ault Field will be 117 or 118. However, a Department of Defense (DOD) report<sup>1</sup> from 2016 states:

“The procurement profile of the FY 2017 PB adds 7 EA-18G aircraft in FY 2016. The result of this addition will be a FY 2016 FRP contract for Lot 40 EA-18G aircraft, which increases the total Program of Record (PoR) from 150 to 157. ... These aircraft are in the process of delivery ...”

“Initial aircrew training will be conducted at NAS Whidbey Island, WA. ... Limited I-Level for some EA-18G and F/A-18E/F common maintenance tasks has been established at Whidbey Island, WA. Airborne Electronic Attack (AEA) I-Level maintenance will be stood up at Whidbey Island and aboard the CVWs commencing FY18.”

The Draft EIS has not fulfilled its obligation to “evaluate[s] the potential environmental impacts ... as well as the cumulative impacts of the Proposed Action and other local projects.” Council on Environmental Quality (CEQ) Regulation 1502.9 states:

(c) Agencies: (1) Shall prepare supplements to either draft or final environmental impact statements if: (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

**We therefore recommend that the Navy revise and issue a new DEIS to address the 40 additional Growlers, and any and all others destined to be stationed at Naval Air Station Whidbey Island, and to allow further opportunity for public comment before the Final EIS is prepared.**

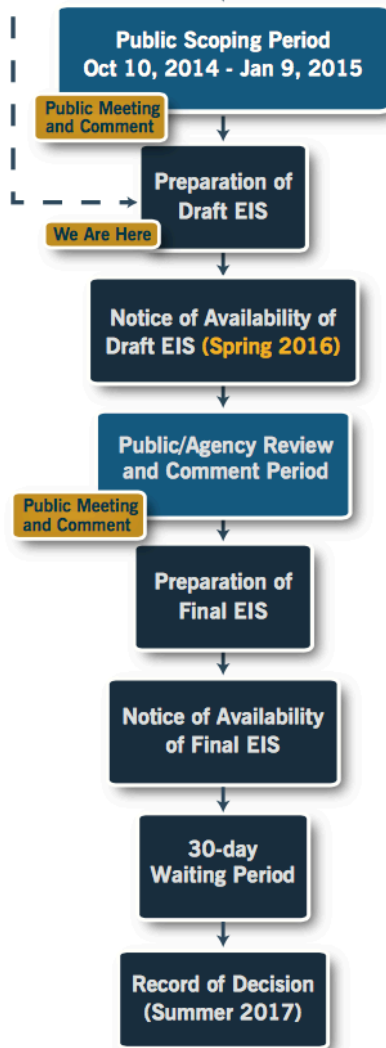
The public access to information and opportunity to comment has been inappropriately limited in the procedure followed by the Navy for this action. An internet search reveals that the current comment period ending on February 24, 2017, may be the last chance the public will have to comment on the matter within an official comment period under NEPA. According to a flow chart in an online Navy brochure that has not been updated to reflect delays,<sup>2</sup> the Navy does not intend to allow a public comment period on the Final EIS.

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<sup>1</sup> Selected Acquisition Report (SAR), RCS: DD-A&T (Q&A) 823-378, EA-18G Growler Aircraft (EA 18G), As of FY 2017 President's Budget, March 17, 2016, pg. 7. <https://goo.gl/IQrY4K>

<sup>2</sup> US Navy. Growler Aircraft Operations at NAS Whidbey Island and OLF Coupeville, online brochure, page 6. View at:

<http://www.cnrc.navy.mil/content/dam/cnrc/cnrcnw/pdfs/NASWIfactsheets/Whidbey%20Island%20Growler%20OPS%20OLF%20Brochure.pdf>



*Above from online brochure, see footnote #2.*

The “30-day waiting period” the Navy proposes for the Final is not a public comment period. It would not allow the public to evaluate whether the Navy has considered comments made at the Draft EIS phase. Our concerns also include the fact that this DEIS does not provide the public with opportunity to access information, nor the full scope of direct, indirect and cumulative impacts, because so many of them have been excluded from this DEIS. An agency must prepare a revised DEIS if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.<sup>3</sup> The addition of 40 more Growler aircraft represents significant new information relevant to the environmental effects that have bearing on the proposed action and its impacts. A Revised DEIS must also include adequate public access to information and opportunity to comment.

The remainder of our comments on the Growler Draft EIS include the following deficiencies:

<sup>3</sup> CEQ NEPA Regulations, 40 C.F.R. § 1502.9(c).

- 1. National Environmental Policy Act (NEPA) noncompliance**
- 2. National Historic Preservation Act (NHPA) noncompliance**
- 3. Noise has not been analyzed on Olympic Peninsula**
- 4. Flying on weekends not disclosed in DEIS**
- 5. Air crash dangers not addressed in the DEIS**
- 6. Navy is piecemealing Growler public process**
- 7. Noise modeling software outdated, legally questionable**
- 8. Flight tracks and Military Operating Areas not adequately considered in noise analysis**
- 9. Climate change and air quality analysis piecemealed, inadequate**
- 10. Water and soil contamination from Growler-related activities not addressed**
- 11. Cumulative impacts to wildlife, threatened and endangered species inadequate**

**1. NEPA noncompliance:** The Navy’s Growler Draft Environmental Impact Statement (DEIS) does not comply with the National Environmental Policy Act of 1969 (NEPA) on several counts. When an agency intentionally attempts to circumvent NEPA by dividing a federal action into smaller components in order to allow those smaller component pieces to avoid evaluating the overall impacts of the single project, then “improper segmentation” has occurred. It is unlawful for agencies to evade their responsibilities under NEPA by artificially dividing a major federal action into smaller components, each without significant impact. To more than double the number of aircraft being evaluated in this DEIS amounts to what case law has labeled a non-comprehensive consideration of a project by dividing it into smaller parts, each of which when taken alone may or may not have a significant impact, but when taken as a whole definitely have significant impact. This is a clear example of noncompliance under NEPA.

A four-factor test developed by the Court and published as a Final Rule on January 13, 2014, determines whether improper segmentation has occurred. These factors include whether the proposed segment:

- (1) has logical termini [rational endpoints];
- (2) has substantial independent utility;
- (3) does not foreclose the opportunity to consider alternatives; and
- (4) does not irretrievably commit federal funds for closely related projects.<sup>4</sup>

By considering only takeoff and landing noise produced immediately adjacent to runways at Ault Field and OLF Coupeville, the DEIS violates NEPA §1508.25 by failing to consider the wider area of functionally related impacts caused by naval flight operations. By failing to enlarge the scope of its analysis beyond the immediate environs of Naval Air Station Whidbey Island (NASWI), the DEIS fails to consider interdependent parts of a larger action that cannot proceed without takeoffs and landings, fails to consider the automatically-triggered additional impacts from takeoffs and landings, and fails to evaluate cumulative effects. In addition, the annual Day-Night Noise Level (DNL) used to establish projected noise levels does not take into account the low frequency noise that Growlers make. The DEIS also averages peak noise events over 365

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<sup>4</sup> Veenendaal, Elijah. Avoiding Improper Segmentation and Accounting for Cumulative Impacts During Deployment of a Broadband Infrastructure, July 2012. <http://westcoastactionalliance.org/wp-content/uploads/2015/05/E.-Veenendaal-NEPA-Segmentation.pdf>

days of quiet periods to get the 65-dB (decibel) average level, and it holds up as scientifically valid an outdated, misleading and scientifically invalidated DNL threshold for high noise annoyance. This violates NEPA §1508.23, which says that effects must be meaningfully evaluated. By failing to offer the public a reasonable alternative that would reduce noise levels, the Navy violates NEPA §1506.1.

It is illegal to irretrievably commit funding to a project before completion of the public NEPA process, yet the abovementioned 2016 DOD report clearly demonstrates that funds have been committed. The Navy's NEPA representative at a December 2016 open house confirmed to a crowd of people that funding had been committed for the manufacture of these new Growlers prior to initiation of NEPA; she justified it by saying the jets had not yet been *delivered*. This is nonsensical. When funding is committed before the NEPA process is begun, it forecloses public options. Such a delay of NEPA initiation and completion amounts to an inappropriate retrofit of the public process to decisions already made, and it makes proposed alternatives, even if there was one offering a reduction in noise, into mere window dressing. This is in violation of 40 CFR §1506.1, which says:

Limitations on actions during NEPA process. (a) Until an agency issues a record of decision as provided in §1505.2 (except as provided in paragraph (c) of this section), no action concerning the proposal shall be taken which would: (2) Limit the choice of reasonable alternatives.

By failing to consider all of the above, the DEIS does not evaluate all potential direct, indirect, and cumulative environmental impacts under its three action alternatives. The Navy is well aware of public concerns that were raised in writing about these problems in 2014 during the scoping process, but it has not addressed those concerns. In addition, neither the 3 action alternatives nor the no-action alternative in the DEIS offers a reduction in noise, as is required by NEPA.

Navy NEPA regulations as issued in OPNAVINST 5090.1B<sup>5</sup> state:

Involve interested and affected agencies, governments, organizations and individuals early in the agency planning and decision making process when significant impacts are or may be expected to the quality of the human environment from implementation of proposed major Federal actions; and

Conduct and document environmental reviews and related decisions appropriately and efficiently.

The Navy does not make it easy to learn about commencement of its NEPA processes in a timely way. Our Board members have tried three times over the span of a year and a half to subscribe to the Navy's mailing list that notifies interested parties of NEPA processes that may affect them; the first time was in August 2015, after a meeting with Navy Public Affairs Officer Chris Haley, who assured us that our contact information was added to the email database. When no notice of the Final EIS published 45 days later appeared and caused a week's delay in learning of its existence, we contacted Chris again, and also went back to the database to re-enter contact

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<sup>5</sup>[http://www.navfac.navy.mil/navfac\\_worldwide/atlantic/fecs/southwest/about\\_us/our\\_services/Environmental/planning/nepa.html](http://www.navfac.navy.mil/navfac_worldwide/atlantic/fecs/southwest/about_us/our_services/Environmental/planning/nepa.html)[http://www.navfac.navy.mil/navfac\\_worldwide/atlantic/fecs/southwest/about\\_us/our\\_services/Environmental/planning/nepa.html](http://www.navfac.navy.mil/navfac_worldwide/atlantic/fecs/southwest/about_us/our_services/Environmental/planning/nepa.html)

information. When nothing arrived for further notifications through mid-2016, we contacted Public Affairs Officer Sheila Murray, who said to sign up, which we did, again, yet no notifications ever arrived. We also requested in writing, twice, hard copies or CDs; none have ever been received. We must therefore conclude that the Navy's database for interested parties is either nonexistent, defunct, or that contact information for some constituents has been repeatedly lost. Since the email list that NASWI uses for announcements and press releases was inadvertently made public earlier this year and includes, besides members of the press, a number of civilians known to be enthusiastic in their support of the Navy, it's clear that the Navy knows how to keep some, but not all, people informed.

Regarding "ownership" of the airspace above non-military lands and waters, one could argue, as has the Navy and economist Murray Rothbard at the Cato Institute, that airports which were long ago built "far from any residential areas" enjoy a sort of "homestead principle" which gives them the right to radiate loud sound waves across surrounding vacant or agricultural land. Navy personnel have repeatedly argued that "new" residents have no right to complain about the noise, and that the Navy's presence since 1941 gives them the right to "trump" the quiet enjoyment of residential properties. Rothbard's argument continues: "The airport, through homesteading, has earned an easement right to create x decibels of noise. This "homesteaded easement" is an example of the ancient legal concept of "prescription," in which a certain activity earns a prescriptive property right to the person engaging in the action." Given this statement, made to one of our members at a November 19, 2014 Navy public meeting in Pacific Beach, Washington, by Northwest Training and Testing Range Manager Kent Mathes, -- "We own the airspace and there's nothing you or anyone else can do about it" -- it would appear that the Navy's assertion of what amounts to an acoustic eminent domain has been based on such arguments.

Where this argument fails, however, is on three points: first, the land was not vacant; the Ebey family homesteaded the area in the 1850s, and their descendants are still there. Development of the Admiral's Cove community near OLF-Coupeville started in 1963, with many homes and community infrastructure completed by the early 2000s. As a result, the Navy's normal buffer of vacant land around this reactivated WW2-era runway does not exist. That is not the fault of the community. Second, the Navy was considered a good neighbor until the Growlers arrived in the mid-2000s; whatever "homestead easement" may have been theoretically established by the noise levels produced between 1941 and 2005, no longer exists. There is no real or theoretical "easement" for the far louder and expanded noise footprint, no logic for not measuring or modeling it, and no justification for the harm to businesses and private individuals. And third, not even an implied historic "noise easement" would extend to the Olympic National Park or to residential properties and businesses that are across the Sound or Strait, many miles from NASWI. Locations of these electronic warfare mobile emitters are right next to Park boundaries, and the jets will be homing in on them. Currently the Growlers make low sweeps for many miles up the Hoh River and throughout the West End, diminishing public enjoyment of State, Park and private lands. The Growlers are loud enough to drown out the sounds made by the Hoh River or ocean surf, even if one is sitting within a few meters of these waters.

The National Park Service, via Soundscape Management Policy 4.9, Cultural Soundscape Management Policy 5.3.1.7, and Director's Order #47, directs park staff to preserve and restore the soundscape, which is defined as "...all natural sounds occurring in parks, the capacity for

transmitting those sounds, and the relationships among natural sounds.” While the Navy enjoys certain exemptions, it is still important to note that the soundscape at Olympic National Park is additionally governed and protected by the following, as well as NEPA: Wilderness Act 36 CFR Section 2.12 Audio Disturbance; and NPS Policy 8.2.3 re: Use of Motorized Equipment. When noise levels reach the point where park visitors as well as communities for thousands of square miles on both sides of the Strait of Juan de Fuca and throughout Puget Sound are suffering and complaining about Navy noise, it is incumbent upon the government agencies that are creating or facilitating such noise to first offer solutions that reduce it, and then to present a fair and balanced analysis for an honest dialog with other agencies and the public about mitigating its impacts. Unfortunately, this is not happening.

**We urge the Navy to comply with the spirit and letter of NEPA requirements by proposing alternatives that reduce the noise, by properly and accurately evaluating noise and other impacts in all affected areas, by making actual noise measurements as well as computer modeling throughout the affected areas, and by using scientifically valid standards that measure the more realistic aspects of noise, as previously requested by local governments in surrounding communities. This should be accomplished via preparation of a revised EIS that addresses the full scope of impacts, with a public comment period of adequate length. We further request a reliable method of notification that will facilitate prompt public awareness and minimize the delays that reduce available time during comment periods.**

**2. NHPA noncompliance:** The Navy’s Growler DEIS does not comply with the National Historic Preservation Act because its Area of Potential Effect is too small and too narrowly focused on the immediate environs around the runways at NASWI, and it does not consider harm to historic and cultural properties outside that narrow area. It focuses on takeoffs and landings only, and not on noise from flight operations. It does not take into account the potential effects of chronic low-frequency noise produced by Growlers that can impact historic buildings, including potential structural weakening that could render them and the people who occupy them, more vulnerable to earthquakes. The Navy was made aware of this concern by local and Tribal governments and individuals prior to publication of the DEIS. However, the Navy has not addressed those concerns. It has evidently chosen to ignore the August 2016 request for consultation under this federal statute, from the City of Port Townsend, which maintains two Historic Districts whose quiet settings and structural integrities are being directly impacted by Navy jet noise. **A revised EIS is required, that expands the Area of Potential Effect to include all areas affected by noise from this significant increase in Growler jet activities. The Navy must respond to all requests from local governments for consultation under Section 106 of the National Historic Preservation Act.**

**3. Noise has not been analyzed on Olympic Peninsula:** The Navy has not adequately considered direct, indirect or cumulative effects of jet noise on the Olympic Peninsula in previous NEPA processes; its claims of analyzed noise via previous “tiered” NEPA documents are not accurate. For example: although the Navy said it evaluated noise for the Olympic Peninsula in 2010 with the Northwest Training Range Complex EIS, that document did not do so. Had the activities contemplated by the proposed Electronic Warfare Range been evaluated by

that EIS, the ground-based mobile emitters should have been listed as an emission source. They were not. For Electronic Combat and Electronic Attack, the only areas listed by activity and training area, warfare type, and Range and Training Site were the Darrington Area east of Whidbey Island, and W-237 offshore from the coast. Neither is on the Olympic Peninsula. Had noise been properly evaluated, the Olympic Military Operating Areas (MOAs) were required to be listed and evaluated. They were not.

Computer modeling for the “Affected Noise Environment” immediately adjacent to Naval Air Station Whidbey Island (NASWI) runways extends to the year 2021 and clearly demonstrates the Navy’s ability to model noise impacts, yet no computer noise modeling was done for Port Townsend, Port Angeles, the northern San Juans, or the highly impacted West End of the Olympic Peninsula. These areas have different terrain and weather conditions from those found at NASWI. For example, the Hoh River is surrounded by steep-sloped mountains which amplify and echo noise. Port Townsend is on a peninsula surrounded on three sides by water, which echoes sound. Port Angeles gets reflected sound from the Strait of Juan de Fuca to its north and from the Olympic Mountains to its south. Some of these communities may not hear takeoffs and landings, but they are severely affected by Navy over flight operations. Models for the flatter NASWI runway terrain and Whidbey Island weather simply do not apply in these other areas, as evidenced by separate NOAA weather forecasts for them. The DEIS’s attempt, for example, in Table 4.2-23 on page 4-103, to lay out an average number events per hour in which outdoor speech interference from Growler noise occurs is inaccurate for Port Townsend. While the table shows zero instances of speech interference outdoors, residents can attest that jet noise drowns out speech numerous times, not just outdoors but also indoors, unless windows are tightly shut. In addition, we will discuss later in more detail the reasons why the software the Navy uses to model noise is outdated and does not account for the noise characteristics of newer aircraft.

Therefore, for reasons cited above, Growler jet noise has not been properly analyzed for the Olympic Peninsula. This is an egregious omission considering that the Aircraft Environmental Support Office directs Navy aircraft “...to avoid towns and populated areas by 1 nm (nautical mile) or overfly 1,000 feet AGL (above ground level),” and, “over sparsely populated areas, aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.”<sup>6</sup> A Growler generates 150 dB at takeoff. Such low altitude flying generates in excess of 100 decibels, shortens exposure times for permanent hearing damage, causes serious non-auditory effects, especially to children, and degrades wildlife habitat. The DEIS acknowledges a study that “...found a linear relation between chronic aircraft noise exposure and impaired reading comprehension and recognition memory. No associations were found between chronic road traffic noise exposure and cognition.”

The DEIS concludes, not without irony, that it “...cannot be conclusively stated that a causal link exists between aircraft noise exposure and the various type of non-auditory health effects that were studied,” but goes on to say that the jury is still out on whether noise causes physiological harm to wildlife. This inappropriately ignores known potential effects from multiple analyses, and justifies itself by claiming lack of clear evidence. In complete violation of the Precautionary Principle and despite medical documentation from members of the public, it states, “...no scientific consensus exists that noise causes non-auditory health impacts to human beings,” and

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<sup>6</sup> DEIS, Chapter 3.



also, "...while the literature on non-auditory health effects of environmental noise is extensive, the scientific evidence of the relationship between noise and non-auditory effects is still contradictory. As a result, it is not possible to state that there is sound scientific evidence that aircraft noise is a significant contributor to health disorders." Nevertheless, the DEIS contradicts that statement in section A.3.12: "The relationships between potential auditory/physiological effects and species interactions with their environments are not well understood. Mancini et al. (1988), assert that the consequences that physiological effects may have on behavioral patterns are vital to understanding the long-term effects of noise on wildlife. Questions regarding the effects (if any) on predator-prey interactions, reproductive success, and intra-inter specific behavior patterns remain." **We request that the Navy, using Best Available Science, document and analyze the potential non-auditory impacts to both wildlife, including endangered species, and human health. The Navy must revise the EIS to complete the analysis of direct, indirect and cumulative impacts which include this source of potential significant harm to wildlife and human health.**

A technical report from DOD's Environmental Research Program says, "...acoustic propagation [from newer jets] cannot be modeled using the same simple linear theories employed in the classic noise models."<sup>7</sup> It expresses concern about "legally defensible" noise assessments using outdated software. **Therefore, the DEIS's computer modeled noise levels which used this "classic" system do not accurately account for actual noise levels. The DEIS-modeled noise levels are underreported and not accurately assessed. Impacts based upon this model are inaccurate. A revised EIS must be completed to correct the deficiency.**

The acoustic environments in the vicinity of newer aircraft such as the F-35, F-22, and the F/A-18E/F differ from those of most prior aircraft, with high noise levels associated with higher thrust engines. At those high levels, acoustic propagation cannot be modeled using the same simple linear theories employed in the classic noise models. Furthermore, the F-22 has a rectangular exhaust geometry which changes the sound radiation patterns. Both the F-35 and the F-22 employ engine thrust vectoring which cannot be easily incorporated into classic models. Little reliable data had existed on the noise produced by such jets in the thrust vectoring mode. Moreover, the segmented flight path modeling approach typical of integrated noise models do not properly account for the complex operational and noise characteristics of the new aircraft.

New models, which take advantage of today's computer computational capabilities, were needed to provide legally defensible noise assessments of current and future aircraft operations in protecting bases and airspace for training purposes, and minimizing restrictions based on noise. The objective of this project was to provide environmental specialists with tools, based on the latest technology, for assessing and mitigating the noise impact around bases and on ranges of the new generation of fighter aircraft operating under all possible weather and terrain conditions.

*See footnote #7.*

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<sup>7</sup> <https://www.serdp-estcp.org/Program-Areas/Weapons-Systems-and-Platforms/Noise-and-Emissions/Noise/WP-1304>

The Navy claims that the no-longer flown EA-6B Prowler was about 30 percent louder than the EA-18G Growler that replaced it, and thus used the Prowler as its benchmark for noise. Yet the number of complaints about Growlers is exponentially greater than the number ever made about Prowlers, which did not have afterburners and could fly at only half the speed of a Growler. According to a retired Navy carrier pilot, “The EA-18G Growler is about 20% louder than my F-4 Phantom at military (non-afterburner) power. I didn't think that was possible. In full AB, it's nearly 30% louder. Its max weight is 10,000 lbs. heavier and it has a better thrust-to-weight ratio, hence 29% more thrust. It's about 26% noisier than the basic F/A-18 Hornet that the Blue Angels fly.”<sup>8</sup>

As a result of failing to accurately model noise and leaving out vast areas where noise and other impacts are not being recognized but will occur (and are occurring now), the DEIS eliminates far too many direct, indirect and cumulative impacts to be considered a valid analysis. By law, the public has the right to address the full scope of impacts, not just a narrow sliver of them. **We therefore ask that noise and other impact evaluations for the Olympic Peninsula and other affected areas, including the San Juan Islands, the southwestern Canadian coastline and Gulf Islands, must be conducted in order to have a scientifically valid noise analysis, which must include actual measurements as well as computer modeling. This should be analyzed in a revised EIS with an adequate public comment period.**

**4. Flying on weekends not disclosed in DEIS:** The DEIS excluded important elements of the action, including complete operational zones described above and timing of flying training missions, one of the key reasons the Navy proposes to undertake in its action. Flying training missions on weekends is not mentioned in the Growler DEIS, yet the Forest Service’s Draft Permit [for mobile emitters] says on page 11 that the Navy will be allowed to fly on weekends so long as it does not interfere with “...opening day and associated opening weekend of Washington State’s Big Game Hunting Season for use of rifle/guns.”<sup>9</sup>

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<sup>8</sup> Personal communication.

<sup>9</sup> US Forest Service Draft Permit (Appendix C, page 11, bullets 5 & 7). Click on “2016-11-29.NavyPermitDNAAppendixC\_DraftPermit,” (View here: <https://www.fs.usda.gov/project/?project=42759>)

## FOREST SERVICE PROJECT DESIGN FEATURES

### **GENERAL:**

- One week prior to initial operations, the Permit Holder must notify the Forest Service Authorized Officer.
- The Permit Holder will provide the Forest Service an anticipated schedule of the emitter locations prior to operating on Forest lands, and the Navy will update the schedule monthly or at an agreed upon frequency.
- The Permit Holder will submit changes and additions to the schedule/plans must to the Forest Service for discretionary approval prior to implementing the schedule/plans.
- Semi-annually, the Permit Holder will provide the Forest Service a list that indicates the sites used and the duration of use at those sites during the previous 6 months (due by July 15 and January 15).
- The Permit Holder will schedule activities to avoid the opening day and associated opening weekend of Washington State's Big Game Hunting Season for use of rifle/guns. No activities will be conducted from noon on an opening day Friday through 6:00 a.m. on the Monday following the opening week end. [The Washington Department of Fish and Wildlife annually determines the Big Game Hunting Season.]
- The Permit Holder will not conduct activities during Federal holidays.
- The Permit Holder will not usually conduct activity on weekends. The Permit Holder may request specific limited weekend activity 30 days in advance of desired use, which is at the sole discretion of the Forest Service to grant or deny.

*See footnote #9.*

An exemption for one user group among the many that are impacted is highly unusual, and shows unusual preferential treatment to one user group while excluding others with no objective rationale for doing so, given that so many other users will likely be affected. Why was weekend flight training not mentioned in the DEIS? It has long been understood, and the DEIS acknowledges, that the Navy will cooperate with local officials and populations by not flying training missions on weekends and holidays. No communities have had the opportunity to evaluate these additional noise impacts, especially given that the DEIS evaluates less than half of the scheduled incoming Growlers. Weekends are peak times for local economies, and to have that quiet obliterated by jet noise from a rapidly expanding mega-base is a threat to local economies and public health. People come here throughout all 4 seasons to relax in peaceful, unspoiled surroundings. To not disclose weekend flying in the DEIS, and then to extend such a courtesy to one user group without consulting with municipalities and other economically viable (and vulnerable) tourism and recreation entities, is unwise, irresponsible, and does nothing to rebuild trust between the Navy and the public. 157 to 160 jets and weekend flying will also make the Navy's current noise level projections obsolete even before they are finalized. **This new activity was not discussed in the DEIS; nor were any exemptions for public or private entities mentioned, other than big game hunters. Since a significant exemption is being granted for one user group, the same consideration must be given for other constituents that use the forest and adjacent park year-round. This new weekend activity must be fully considered including impacts on all user groups in a revised EIS with an adequate public comment period.**

**5. Air crash dangers not adequately considered:** The most dangerous aspects of flying are the approach, landing and takeoff—in other words, most of the flight paths around the runways at Ault Field and OLF Coupeville. These risks are particularly significant at the World War 2-era runway at OLF Coupeville, which is 3,000 feet short of standard for Growlers. Normally, the unoccupied buffer area for naval airfields would be 30,000 to 50,000 acres larger than what the Navy currently has at OLF Coupeville, which is mostly a residential area. Therefore Growlers must fly at extremely low altitudes—a couple hundred feet above rooftops—over homes and businesses, the Port Townsend-Keystone Ferry, and over a significant portion of Admiralty Inlet that sees heavy shipping traffic in and out of Seattle and Tacoma. These pilots are mostly students flying the F-18 airframe, which records show is 5.5 times more likely to crash than its EA-6B (Prowler) predecessor. Nine F-18s have crashed in the past several months.<sup>10</sup> On February 4, 2016, the chairman of the House Armed Services Subcommittee on Tactical Air and Land Forces announced that his subcommittee would be looking into a “rise in physiological episodes” among F/A-18 and EA-18G (Growler) pilots.<sup>11</sup> Hypoxia, a state of oxygen deficiency in the blood, tissues and cells sufficient to cause an impairment of body functions, was listed by the Navy as one of the “physiological events” problematic to aircrews flying these planes. Other problems include toxic exposure such as carbon monoxide poisoning, decompression sickness, hyperventilation, spatial disorientation, and loss of consciousness. All Growlers and F-18s were recently grounded due to a mechanical malfunction at NASWI that severely injured two pilots. While everyone wishes these pilots a speedy recovery, there is no room for error when flying a military jet at low altitude over densely populated civilian areas. To allow at OLF Coupeville as many as 35,500 annual low-altitude flights by student pilots making tight circles over residential areas and shipping lanes is to court a magnified tragedy.

Because Fleet Carrier Landing Practice (FCLP) “touch and go” occurs at such low altitudes over these residential/business/marine areas and also over exceptionally rich habitat for a large population of birds, including species that are heavy enough to crash through windshields or otherwise disable aircraft, the increased likelihood of bird strikes further increases the risk of crashes and loss of life. NASWI reports that birds comprised 275 of the 279 reported strikes (98.6 percent) from 2005 through 2015. Most occurred between July and October. Bird species found under Navy flight paths include cormorants, mergansers, loons, grebes, gulls, ducks, guillemots, murrelets, kingfishers, herons, goldeneyes, bufflehead, scaup, eagles, harriers, peregrine falcons, and other species.

The elevated crash risk and consequences cannot be mitigated in any other way than moving the FCLPs to a more suitable location, away from densely populated residential areas. If the FCLPs are moved only to Ault Field, the residents of San Juan County will be plunged into even more misery than they are already experiencing. The level of noise during FCLPs is more than 16 times the level to trigger hearing loss. The Growler mission originated at the 30,000-acre Naval Air Station Lemoore in California, the Navy’s newest and largest Master Jet Base, which hosts

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<sup>10</sup> <https://theaviationist.com/2016/12/07/yet-another-u-s-fa-18-has-just-crashed-in-japan-its-the-9th-legacy-hornet-lost-in-6-months-and-the-crash-rate-is-alarming/>

<sup>11</sup> <http://www.defensemmedianetwork.com/stories/navy-congress-looking-into-fa-18-ea-18g-physiological-episodes/>

five Carrier Air Wings and 20 F/A-18 Super Hornet squadrons and maintains two 13,500-foot runways. Government Accountability Office (GAO) reports have shown for more than a decade that the Department of Defense's utilization of the millions of acres of lands it already owns is inefficient. At a public meeting in 2014, Navy representative John Mosher was videotaped saying that "scheduling problems" were a major reason for increasing Growler presence in the Pacific Northwest, yet this was not mentioned as a justifying reason in the 2014 Electronic Warfare EA. Such justification is irrevocably flawed, especially when it puts so many lives unnecessarily at risk. No scientific evidence, nor plain logic can support the Navy's claim that expanding FCLP flights from 3,200 in 2010 to as many as 35,500 in the coming year, which represents a 1,000 percent increase, will have "no significant impacts."

The risk and impacts of a Growler crash to life and property, and of the aqueous film forming foam that would be used for firefighting to risk contamination of the sole-source aquifer at Whidbey Island, are not addressed in the DEIS. This is unacceptable.

On page 2-34 the DEIS states, "The northern Puget Sound region of the Pacific Northwest has uniquely unencumbered SUA [small unmanned aircraft] and military training routes (MTRs) due primarily to the relatively low volume of commercial air traffic. This limited air traffic and clear airspace allows this SUA and MTRs to support Growler training, including the current and future training requirements." But that statement is contradicted by reports of "stratospheric growth" at Sea-Tac airport; in fact the growth rate is the highest rate in the country. Sea-Tac is categorized in the National Plan of Integrated Airport Systems for 2015-2019 as a primary commercial service (large hub) airport. Sea-Tac is the largest generator of vehicle trips in the state, and its 13,000-car parking garage is North America's largest parking structure under one roof. Forecasts for passenger traffic go from 42.3 million in 2015 (a 13 percent increase over the previous year) to 66 million within as little as 15 years. This represents neither low volume nor unencumbered airspace. To dismiss this region's explosive growth and the resulting air collision risks with Navy student pilots is irresponsible. There are millions of acres already in DOD ownership whose airspaces are far more open and unencumbered. So why would the Navy move so many aircraft into one of the fastest growing air traffic regions in the nation? **We recommend that the Navy should move the Growler FCLP flights to Department of Defense property that does not present such elevated risks to surrounding residential and business communities. Move the Growler fleet to where the mission is historically based, and to where concentrations of military and commercial aircraft are not experiencing such explosive growth. The DEIS should have incorporated this alternative to mitigate the risks, and cumulative impacts of the action. It must therefore be revised to explore this reasonable, and accessible alternative.**

**6. Navy is inappropriately segmenting the Growler public process:** The public does not view the air, sea and ground components of electronic warfare testing and training with Growlers as separate, yet the Navy so far has piecemealed its aircraft training and testing activities affecting Whidbey Island, the San Juan Islands, and the Olympic Peninsula into at least six separate actions:

1. 4 squadrons of P-8A Poseidon Multi-Mission Aircraft;

2. A 2005 EA (57 Growler jets); a 2010 EIS (reaffirming the 57 Growlers that replaced Prowlers);
3. 2012 EA (26 Growlers including 5 from a reserve unit);
4. 2014 EA (Growler electronic warfare activity);
5. 2015 EIS discussing electronic warfare training and testing activity;
6. The current 2016-2017 DEIS (36 Growlers);
7. And, likely, a process for 40 more Growlers.

It is unlawful to piecemeal the Navy's expanding activities in this manner, and it makes it impossible for agencies, elected officials and the public to understand the full scope and cumulative nature of impacts. It is also exhausting for local governments, communities, and residents to try and keep up with all these piecemealed NEPA processes. Avoiding cumulative effects analyses for functionally related activities is unlawful. It has been impossible for the public to know just how many Growlers there would be, or what their impacts would be, or what limits, if any, the Navy intends to establish. In just four documents—the 2014 EA, Forest Service permit Draft Decision, and the 2010 and 2015 EISs, there are more than 6,000 pages of complex technical material. 40 C.F.R. § 1502.4 "...does not allow an approach that would permit dividing a project into multiple 'actions,' each of which individually has an insignificant environmental impact, but which collectively have a substantial impact."

The DEIS fails to discuss, describe or even mention any potential impacts associated with electromagnetic radiation in devices employed by the Growlers in locating and interacting with the ground transmitters. It fails to mention any potential impacts associated with the practice on electromagnetic weaponry that will allow the Navy to make good on its statement that it is "turning out fully trained, combat-ready Electronic Attack crews."

In another example of improper segmentation, on page 3-23 section 3.2.4, the DEIS states that the affected noise environment as modeled for Calendar Year 2021 includes P-8A Poseidon aircraft but "does not include the additional Growlers associated with the Proposed Action." Separate noise metrics are also used for Growlers at Ault Field and OLF – why? What is the advantage of isolating (and thus segmenting) this noise impact from a rapidly growing fleet, especially when noise from these specific and very loud jets is not even being considered in areas beyond NASWI's immediate environs? To an already confused public, and to the law, this amounts to a segmentation within a segmentation.

The Navy's pattern of segmenting and omitting impacts analyses is widespread, and it is appropriate here to discuss other examples where this practice has taken place to the detriment of local communities, species, and environment. In the Northern Marianas Islands, the Navy's 1,388-page Draft EIS proposing to turn Pagan Island into a bombing range and Tinian Island into an artillery range overlooks impacts to residents, water supplies, historic sites, and rare species of coral. Human habitation has been documented to go back 3,000 years, yet historic site surveys were halted after only a few of those that exist were documented. No analysis of how rocket fuel could contaminate the aquifer was conducted, and no discussion of cleanup and mitigation for destruction of coral reefs was included. A December 2016 news article stated, "Federal agencies and other organizations found the Navy's analysis was plagued with missing information on

issues ranging from how the Navy would handle hazardous waste to how noise from Navy training could be worsened by concurrent training activities.”<sup>12</sup>

The most astounding instance of NEPA segmentation, mentioned here not because it concerns Growlers but because it’s so extreme, is part of the geographic area impacted by the proposed action, and because we wish to go on the public record with it, is noise in the water (sonar, pile driving, etc). In one 4.7-mile stretch of waterfront at Bangor, there have been 10 separate NEPA processes for driving 2,000 in-water pilings, plus 1 NEPA process at Keyport, 3 at Everett, 2 at Whidbey, 5 at Bremerton, 2 at Manchester, and 2 at Port Angeles. Noise, whether in the water or in the air, is a sensitive issue with significant potential for serious ecological impacts. Pile-driving noise can carry for 18 miles underwater. The total number of public processes on pile-driving alone between 2012 and 2018 number at least 24, with more than 5,200 pilings being driven in Puget Sound and the Strait of Juan de Fuca.<sup>13</sup> A Navy spreadsheet is attached at the end of this letter illustrating this endemic practice of segmentation. For Fiscal Years 2016 through 2018, at least forty findings of no significant impact and records of decision are scheduled by the Navy in the Puget Sound region alone.<sup>14</sup> A Navy spreadsheet is also attached at the end of this letter. Many of these upcoming EAs should be combined into EISs. An internal memo analyzing several courses of action for multiple functionally-related projects concluded that the risk of legal vulnerability from violating NEPA was worth the segmenting of those projects.<sup>15</sup> This memo is attached at the end of this letter. While pilings may not be directly related to Growlers, the segmentation of impacts from the construction of naval infrastructure is one of the most vivid illustrations of the Navy’s avoidance of cumulative impacts analyses. The geographic zone, and species and communities that rely on the marine resources, ARE impacted by Growlers activities and must be considered in these related EISs.

The Navy has been reminded for years, by citizens, elected officials, and Tribes, that its piecemealing of impacts violates both the law and the public trust, but the Navy continues to ignore these concerns and violate its duty to uphold the law. As a public agency whose equipment and salaries are funded by taxpayers who are discovering a pattern of separation of impacts and avoidance of cumulative impacts analysis that extends to wherever the Navy operates, the Navy should know that an awakened public will not stand for such cheating. Because federal law may not be currently enforced does not mean it is not being violated. The Navy has a duty to uphold the constitution and the law, not violate it with short cuts, improper manipulation, and covering up its actions. That is not the Navy we hold dear. Taking short cuts, the easy way out, cheating, is not the Navy we respect. The Navy is revered for its dedication, training, and making the ultimate sacrifice. This practice tarnishes the hard earned reputation of men and women in service and is unbecoming to an American military service.

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<sup>12</sup> “Missing Data Plagues Military Training Plans In The Marianas,” Honolulu Civil Beat, December 2016. <http://www.civilbeat.org/2016/12/what-the-military-isnt-saying-about-its-training-plans-in-the-marianas/>

<sup>13</sup> US Navy Region Northwest. *NRNW In Water Construction Projects. XL spreadsheet*, attached at end of letter. <http://westcoastactionalliance.org/wp-content/uploads/2015/09/1in9w2atr3con8stru4ct5ion6pr7oj.xlsx>

<sup>14</sup> U.S. Navy, NW-NEPA-Report-12-15-2015. View at: <http://westcoastactionalliance.org/wp-content/uploads/2016/11/NW-NEPA-Report-12.15.15-4.xlsx>

<sup>15</sup> US Navy – Goodman, Layna. Proposed NEPA Approach for Planned Waterfront Projects Which May Require Environmental Impact Statements, Naval Base Kitsap Bangor. (attached at end of letter.) <http://westcoastactionalliance.org/wp-content/uploads/2015/09/re1ci2pe34ne5pa6.docx>

**The Navy must revise the Growler EIS to include all relevant areas of activities, and end the improper segmentation of its activities. There is no rationale that supports anything less.**

**7. Noise modeling software outdated, legally questionable:** The DEIS uses an outdated noise simulation model. A DOD commissioned study found this is not appropriate for Growler engines. To quote it, aircraft noise levels represented in the DEIS are, “generated by a computer model and not actual noise measurements at Ault Field or OLF Coupeville.” The modeling was done using software called NOISEMAP. It was developed in the 1970s. Version 7.2, used in this EIS, was used for studies completed as long as 12 years ago. A Department of Defense Strategic Environmental Research and Development Program determined that new software was needed “...to provide **legally defensible noise assessments** of current and future aircraft operations.”<sup>16</sup> The final report found that NOISEMAP’s linear acoustics were inadequate for modeling the acoustic environments in the vicinity of higher thrust engines used in the Growler, stating, “Moreover, the segmented flight path modeling approach typical of integrated noise models do not properly account for the complex operational and noise characteristics of the new aircraft.”

In 2010 a new noise model, the Advanced Acoustic Model (AAM), was developed under DOD contract to address these shortcomings. But the Navy’s continued use of the outdated NOISEMAP has rendered the noise analysis scientifically inaccurate and, potentially, legally indefensible with respect to the requirements of the National Environmental Policy Act (NEPA). It is certainly not an example of Best Available Science. Even if NOISEMAP modeling was scientifically sound for these newer jets, the quality of data used as inputs into the model would still be questionable. It is unclear what kind of empirical noise data were used as a basis for noise simulation. The only mention found in the 1400 page DEIS was that the computer model draws from “a library of actual noise measurements” with no details provided. Without data transparency, it is impossible to assess if the empirical noise data used in noise simulation is scientifically defensible.

The lack of data transparency is not surprising given that it was the Navy itself who identified the problem of inadequate noise measurement data. The Naval Research Advisory Committee (NRAC) issued a report on jet noise and found that “...the Air Force maintains the only known acoustic database for tactical aircraft.” NRAC’s findings highlighted the Navy’s lack of empirical jet noise data measurements, lack of consistent measurement methodology and standards, and lack of a jet noise database and its proper maintenance. NRAC’s insightful assessments and sensible recommendations have been made to the Navy since April 2009. If the Navy has not yet acted on the NRAC’s recommendations, **it must start now by taking proper Growler noise measurements as a key input for preparing a scientifically and legally defensible revised EIS.** Nearby communities, including San Juan County, have done actual noise measurements and have shared their data<sup>17</sup> with the Navy. Unfortunately, these data do not appear to have been used in the DEIS. **Because computer modeling using the**

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<sup>16</sup> <https://www.serdp-estcp.org/Program-Areas/Weapons-Systems-and-Platforms/Noise-and-Emissions/Noise/WP-1304> (Third paragraph)

<sup>17</sup> San Juan County Aircraft Noise Reports. Downloadable database: [http://data.sjcgis.opendata.arcgis.com/datasets/30e08036e4f4463dabe19bc98d6c9b81\\_0](http://data.sjcgis.opendata.arcgis.com/datasets/30e08036e4f4463dabe19bc98d6c9b81_0) (As of January 2017, there are more than 6,400 complaints over a 2½ year period.)



**recommendations of the Department of Defense Strategic Environmental Research and Development Program would likely reveal new information not previously available to the public, the Navy should include it and all of these other data in a revised EIS, and adequate comment period.**

**8. Flight tracks and Military Operating Areas not adequately considered in noise analysis:**

The aircraft Military Operating Areas (MOAs) discussed in Chapter 3 include, besides the Olympic MOA, several other MOAs that have “floors,” or low flight altitude limits, of 300 feet. These include the 47,000 acre Chinook MOAs over the eastern end of the Strait of Juan de Fuca, the 3.7 million-acre Okanogan and 4.6 million-acre Roosevelt MOAs in north central Washington, and the 47,000-acre Boardman MOA in Oregon, the latter located within 200 miles of Whidbey Island. In addition to those, the DEIS also lists twelve Military Training Routes, (6 VFR and 6 IFR), all “within 250 miles of NASWI,” some with floors as low as 200 feet above ground level. These areas are receiving direct and cumulative impacts that are functionally related to takeoffs and landings, yet they are not included in noise analyses, and for the number of Growlers now coming to NASWI, have not been evaluated for noise at such levels in any previous NEPA documents.

Each Military Training Route has two widely separated tracks, one for departure and the other arrival, as shown on page 3-8; therefore, each route is actually two routes, generating noise exposures in completely separate areas for inbound and outbound flights. The reality of considering actual rather than modeled noise impacts would mean that the twelve Military Training Routes are really 24 separate flight tracks that directly affect surrounding communities. The DEIS maps only show flight tracks within approximately 10 miles of NASWI, so these tracks over outlying areas remain unknown. A public request to the Navy in early December for a map showing the rest of these routes and flight tracks was denied. These routes should have been included in the DEIS.

As stated previously, the DEIS quotes guidance from the Aircraft Environmental Support office: “aircraft are directed to avoid towns and populated areas by 1 nm (nautical mile) or overfly 1,000 feet AGL (above ground level) and to avoid airports by 3 nm or overfly 1,500 AGL. Over sparsely populated areas, aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.” It is therefore puzzling that Table 3.1-2, titled “Representative Sound Levels for Growler Aircraft in Level Flight,” on page 3-6, does not show sound exposure levels for Growlers flying at either 1,000 feet or 1,500 feet AGL. Why? When Navy representatives reassured the public throughout 2014, 2015 and 2016 that these jets always fly very high, usually at 25,000 feet but at a minimum altitude of 6,000 feet above sea level, they did not disclose that jets could fly within “500 feet of any person, vessel, vehicle or structure.” This would cause catastrophic effects to humans, wildlife, and habitat.

**If guidance directs aircraft to fly at such altitudes, why did the Navy not disclose this in previous NEPA documents? The public needs to know how much actual noise exposure there will be, and the threats to public health as a result of this new disclosure must be evaluated in a public process. The current DNL noise modeling method and data in no way reflect exposure accuracy, given this new information. Therefore, such analyses must be**

**included in a revised EIS with an adequate public comment period. Further, the Navy must revise its guidance to significantly increase the distances that Growler jets are currently allowed to fly from towns, airports, individual people, vessels, vehicles and structures, because no alternatives are provided to the public that reduce noise.**

According to the Navy's calculations for areas directly under flight tracks and within a mile of them, sound exposure levels can reach 116 and 77 decibels, respectively, with Growlers using an 84.5% engine power setting. This does not take into account afterburners or multiple aircraft, both of which significantly increase the noise exposure (and also occur frequently). For every 3 dB sound pressure over 85 dB, the permissible exposure time is cut in half before damage to hearing will occur. The CDC and NIOSH permissible exposure time for 115 dB before damage occurs is 28.1 seconds. The Navy will far exceed that exposure time limit for people in affected areas, and their hearing will be damaged because their ears will not have time to recover from the strain and fatigue of repeated exposures to high noise levels. Hearing, especially in children, will be damaged, and non-auditory health impacts, which are already being felt on Whidbey Island, are likely to increase throughout the region. For example, in children, chronic aircraft noise exposure impairs reading comprehension and long-term memory and may be associated with raised blood pressure.<sup>18</sup> Effects on wildlife from such noise is discussed below.

The Navy's claims that no scientific evidence supports the fact that noise at these levels causes harm via auditory or non-auditory impacts because most people spend more than 80 percent of their time indoors, is inaccurate and ignores those who must work outdoors, including people who work at jobs that do not give them a choice of being indoors, or Tribal members who depend upon resources harvested and gathered outdoors in traditional ways. It raises unaddressed environmental justice issues.

With all of the concerns about low flights, inaccurate computer modeling software, no actual noise measurements at NASWI or anywhere else, and no modeling or measuring of noise in areas away from NASWI, the Navy's claim that there will be no significant impacts is not defensible. In fact, independent sound professionals near the airfield at OLF Coupeville measured A-weight noise levels at 119.2 dBA, with the unweighted peak level at 134.2 dB. The former number cuts in half the permissible exposure time of the maximum noise levels provided by the Navy, and the latter is well past the pain threshold, causing instantaneous hearing loss and other physiological and psychological damage. Reports of animal deaths and humans feeling internal organs vibrating have not been uncommon. Sonic booms are becoming more frequent on the west end of the Olympic Peninsula. During one 40-minute flight operation where actual measurements were taken, there were 35 jet flyovers at OLF Coupeville, which produced an average sound exposure level of 113.1 dBA, in a densely populated residential area. Permissible exposure time for 113 dBA is less than a minute. 35,500 potential low-altitude flights per year over these residential areas will make an already unbearable level of noise dangerous to the health of residential and commercial property owners, workers, domestic animals, and wildlife.

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<sup>18</sup> Stansfield, Stephen, and Matheson, Mark P. Noise pollution: non-auditory effects on health. Department of Psychiatry, Medical Sciences Building, Queen Mary, University of London, London, UK. View at: [http://www.kensingtonassociation.org.au/wp-content/uploads/2013/10/Noise+Pollution\\_non-auditory+effects+on+health.pdf](http://www.kensingtonassociation.org.au/wp-content/uploads/2013/10/Noise+Pollution_non-auditory+effects+on+health.pdf)

A Navy “Key Point” on page 3-7 admits, “aircraft can be several miles to the left or right of the flight track depicted on maps.” This means that noise exposures depicted in Figure 3.1-3 on page 3-8 will be far less predictable and therefore potentially greater in scope than the narrow pink and blue lines that show flight tracks on these maps. Not included on these maps are flight paths for Fleet Carrier Landing Practice at OLF Coupeville; that is a separate map. Finally, no comprehensive map of flight paths beyond the immediate environs of the runways has been provided to the public, despite a request the Navy denied. The limited map provided in the DEIS is a maze of flight tracks that are almost impossible to count; aircraft that stray “several miles” from these published flight tracks will have the effect of filling in all the blank space on the map with intense and unpredictable noise.

According to Table 3.1-1, which shows the amount of usage of these flight tracks in and out of NASWI, the annual total for these training routes is “2,310 operations.” However, the number of “operations” does not remotely match the 73,900 Growler flights listed in Table 3.1-3, nor does it match the projected 47 percent increase in airfield operations to 130,000 flights per year, unless perhaps 2,310 operations means dozens of flights per operation, or possibly is meant as a per-flight track estimate. This is left to the reader to interpret. Regardless, with 79,000 Growler flights and some potentially at low altitudes of 200-300 feet above the ground, the DEIS grossly underestimates direct and cumulative effects of noise. **We recommend that the Navy revise its low-altitude flight permissions to more respectful levels for residential areas and wildlife habitat. We further ask the Navy to provide maps of the flight tracks outside the immediate environs of NASWI, to please conduct accurate measurements and modeling of noise for these areas, and include the information in a revised EIS, with corresponding adequate comment periods.**

**9. Climate change and air quality analysis piecemealed, inadequate:** This DEIS purports to assess “...Growler operations at the NAS Whidbey Island complex, and analyzes aircraft operations conducted in the vicinity of Ault Field and OLF Coupeville.” Among the items analyzed that fall within this impermissibly narrow scope are climate change and greenhouse gas. Unfortunately, effects from emissions measured only within the narrow area defined by the DEIS don’t stay there. They affect not only surrounding areas, but contribute to greenhouse gases and climate change worldwide.

The DEIS lists what appear to be Growler emissions for each individual type of greenhouse gas, for NASWI/OLF vicinity only, in nine separate tables, but incredibly, the totals are not added up. Readers are left to add up the numbers themselves to get the total emissions for each scenario, but then there is no interpretation provided for these numbers.

Section 3.16.2 states that NASWI total greenhouse gas emissions from stationary sources, meaning construction and facilities, are 89,849 metric tons of CO<sub>2</sub> per year, and greenhouse gas emissions from Growler aircraft personnel who, one assumes, are servicing the planes, are 9,091 metric tons per year. Emissions in Table 4.4-16 are for scenarios that cover takeoffs and landings only, yet significant emissions are expected to occur from flight operations. Why are these not included? For example, the October 2015 Northwest Training and Testing EIS says that air combat (dogfighting) operations, which employ heavy use of afterburners, will increase to 550

hours. This is a 244 percent increase. Yet emissions from 550 hours of dogfighting are not analyzed for Growlers in any document, including the October 2015 EIS, which oddly enough, listed the no-longer-flown Prowler as the dogfighting aircraft in its air quality emissions Table D-3. Since Prowlers were retired by the Navy several years ago and never had afterburners, and since they could only fly at about half the speed of a Growler, then listing Prowler emissions instead of Growlers makes no sense. A rule of thumb for bypass turbofan engines is that an afterburner nets about a 50 percent increase in thrust with at least a 500 percent increase in fuel consumption. So, eliminating afterburner use from air emissions calculations by analyzing an aircraft that doesn't have afterburners hides a significant amount of exhaust emissions.

It is not possible to separate the contributions to climate change and greenhouse gases resulting from takeoffs, landings, and local operations, from the emissions of flight operations that occur beyond a 10 to 15-mile radius of NASWI runways. To state the obvious, flight operations are functionally connected to takeoffs and landings. Their impacts cannot be separated or ignored in a NEPA analysis. Even if the Navy separates functionally related activities on the ground into different public processes, it is a fundamental fact that neither the air that swirls around the planet nor the CO2 load it carries can be segmented. The idea that civilians have to point this out to the United States Navy is Kafka-esque. **We therefore ask that emissions from Growler activities that include flight operations beyond takeoffs and landings at NASWI be included in a manner that the public can understand, in a revised EIS, with adequate comment period.**

The Navy admits several times, from pages 4-129 through 4-136, that increases in mobile emissions, meaning flight operations, "...are not covered by the NAS Whidbey Island AOP (Air Observation Post); however, these emissions contribute to regional emission totals and can affect compliance with NAAQS" (National Ambient Air Quality Standards).

This is new information; the public was not aware that air quality in this region could potentially be downgraded to EPA non-attainment status. Post-combustion exhaust from jet engines also contains carcinogenic pollutants of air, water and soil that are capable of acute and chronic toxicity to animals as well as plant and aquatic life. In a region known for its clean air, it is reasonable to assume that the probability of harm from the breathing of these hugely increased emissions may constitute a threat to public health. EPA-designated non-attainment areas for air quality include nine large cities: Atlanta, Boston, Chicago, Houston, Philadelphia, Phoenix, New York, Los Angeles, and Washington, DC. If this region also becomes a non-attainment area due to the contribution of Navy emissions, and these emissions have not been wholly evaluated for direct, indirect and cumulative impacts from all aspects of flight operations, as it appears they have not, then those who are harmed from breathing this large increase in air pollution should rightfully have legal standing to pursue remedies in court. **The Navy must address this extraordinary shortcoming in a revised EIS that includes all relevant emissions information that does not try to segment the air, avoid cumulative impacts analysis, or ignore the contribution of such emissions to climate change. Further, it must take immediate steps to prevent further significant degradation of air, water and soil by reconsidering alternate homeporting locations for the Growler fleet.**

Based on data in the “Selected Acquisition Report for the EA-18G,”<sup>19</sup> **one** Growler flying for **one** hour:

- uses 1,304 gallons of jet fuel (and 500 percent to ten times that much with afterburners);
- produces 12.5 metric tons of CO<sub>2</sub> (not counting afterburner use).

The per capita annual emissions in Washington State in 2011 were 10.8 metric tons per person (including all residential, commercial and industrial activities.) Therefore, **one hour** of Growler flight produces:

- 23% more than the CO<sub>2</sub> emissions that a typical Washington state citizen in residential, commercial and industrial activities emits in **one year**.

Put another way, **one hour** of Growler flying without afterburners produces:

- as much CO<sub>2</sub> as a typical car produces driving 29,500 miles;
- as much CO<sub>2</sub> as 656 cars driving 45 miles per hour;
- more CO<sub>2</sub> than 12.7 round trips from Anacortes to New York in a Toyota Prius;
- more CO<sub>2</sub> than an hour of operation by the entire ferry fleet of four vessels serving the San Juan Islands;
- more CO<sub>2</sub> than that emitted by the generation of electricity sufficient for 7 average hours of electricity consumption to meet the needs of all of San Juan County.

Therefore, at 1,304 gallons per hour, and assuming 500 percent to ten times more on afterburners, it is conceivable that Growlers could annually use more than 7 million gallons of fuel for dogfighting alone. An estimate by IHS Jane’s puts the cost of flying the F-18 airframe at \$24,000 per hour. This trivializes the \$4.5 million dollars in fuel savings that the 2014 Electronic Warfare EA claimed to be a reason for choosing the Olympic Peninsula in the first place. 550 annual hours of dogfighting would equal 6,875 metric tons of carbon dioxide per year, or the equivalent emissions of around 360,000 average-sized cars driving 45 miles per hour. In other words, with the projected frequency and duration of flight times, the Navy could produce each year as much as 51,000 times the average annual per capita emissions in Washington State.

On page 2-2 the DEIS states: “Maximum transit distance from the home field is 50 nautical miles, which is the distance a Growler can travel on a fuel load in order to conduct eight to 10 FCLP passes with sufficient fuel to return to its home field.” 8 to 10 touch-and-go passes per plane requires a lot of afterburner use. But the DEIS revises significantly downward its estimates of afterburner use, from 30 minutes to 20 seconds. This is an enormous revision, and it is also new information. On page 4-131 it states: “The Aircraft Environmental Support Office estimates a 30-minute maximum setting (with afterburner) time-in-mode for Growler take off; however,

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<sup>19</sup> Selected Acquisition Report for the EA-18G. View data compilation at: [https://docs.google.com/spreadsheets/d/1wsLDJmTWqAHLkS9L5F3D-Y\\_Abx2INNDkw4sjpmwpC2Y/edit#gid=0](https://docs.google.com/spreadsheets/d/1wsLDJmTWqAHLkS9L5F3D-Y_Abx2INNDkw4sjpmwpC2Y/edit#gid=0) View reports at: [http://www.dod.mil/pubs/foi/Reading\\_Room/Selected\\_Acquisition\\_Reports/15-F-0540\\_EA-18G\\_SAR\\_Dec\\_2014.PDF](http://www.dod.mil/pubs/foi/Reading_Room/Selected_Acquisition_Reports/15-F-0540_EA-18G_SAR_Dec_2014.PDF) and [http://www.dod.mil/pubs/foi/Reading\\_Room/Selected\\_Acquisition\\_Reports/EA-18G-SAR\\_31\\_DEC\\_2011.pdf](http://www.dod.mil/pubs/foi/Reading_Room/Selected_Acquisition_Reports/EA-18G-SAR_31_DEC_2011.pdf)

emission factors have been adjusted to account for a more accurate estimate at NAS Whidbey Island of 20 seconds at this setting (NAS Whidbey Island Operations Command, 2016)." If this is not a typographical error, please explain the rationale for such a drastic reduction. It also appears to conflict with a statement on page 4-112, which says afterburner maintenance events will last for 5 minutes per day. And during touch-and-go operations, afterburners are used heavily and intermittently, for hours at a time. So, which use level is it? Such afterburner use is not overtly stated in any tables or calculations. Regardless, revising afterburner use time downward from 30 minutes to 20 seconds is significant in the calculation of emissions, because fuel use is so much greater with afterburners than without; therefore, **please explain in a revised EIS how Growlers are projected to use only 20 seconds of afterburner, when 30 minutes of afterburner was quoted in the DEIS as the guidance issued by the Aircraft Environmental Support Office.**

There will be 157-160 Growlers at NASWI within a few years. They can fly for at least 260 days per year, 8 to 16 hours per day, and, as we have recently learned, on weekends. If each Growler has a planned service life of 10,000 hours,<sup>20</sup> then we are looking at a conservative cumulative estimate over the life of 160 aircraft, of about 21 billion metric tons of CO<sub>2</sub>, not counting afterburner use. This does not count emissions from any other aircraft at NASWI, such as P-8A Poseidons, for which "full transition to NAS Whidbey will occur by 2020." They are considered a "separate, ongoing action" and are not adequately analyzed for noise, either. In fact, emissions are not addressed for the squadrons of P-8A, H-60, C-40, and transient aircraft. The Navy is one of the largest air polluters, not just on the Olympic Peninsula, but in the Pacific Northwest. Over 20 years we are looking at a grim picture of chronic air and noise pollution, habitat and public health degradation, and major contributions to climate change, from an area that is globally renowned for its World Heritage, Biosphere Reserve, Marine Sanctuary and wilderness values, and its vibrant culture and tourism economy.

**10. Water and soil contamination from Growler-related activities not addressed:** Despite claiming to evaluate all potential direct, indirect, and cumulative environmental impacts under its three action alternatives, the DEIS does not do this. For example, the practice of fuel dumping, which an active-duty Navy pilot said happens about once a month,<sup>21</sup> is dismissed in the DEIS with this statement that plays down public concerns raised during the scoping process: "The issue of fuel dumping (the release of aviation fuel during flight operations) was raised by some commenters during scoping. Fuel release procedures are governed by the Federal Aviation Administration and Navy rules. Navy pilots are prohibited from dumping fuel at altitudes below 6,000 feet above ground level, except in an emergency situation." It further said this issue was dealt with in another section of the DEIS, but we did not find fuel dumping mentioned elsewhere in the document.

Reports from residents living well downwind of NASWI belie that raw fuel released into the air is not a problem; they say the smell of jet fuel when FCLP touch-and-go practice occurs is

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<sup>20</sup> Congressional Research Service. Navy F/A-18E/F and EA-18G Aircraft Procurement and Strike Fighter Shortfall: Background and Issues for Congress. Viewed at: [www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521226](http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA521226)

<sup>21</sup> Personal communication, US Navy.

sometimes overpowering. There have been eyewitness reports of fuel dumping from observers in boats near Smith and Minor Islands, a national wildlife refuge in the eastern Strait of Juan de Fuca. Common sense says if you can see fuel being dumped or the smell is strong, and there are Navy jets flying overhead, it's probably at altitudes lower than 6,000 feet. Jets doing touch-and-go practice are not flying at this altitude.

The jet propellant that is used by the Growlers is refined kerosene that contains a mixture of volatile organic compounds (VOCs), some of which are known carcinogens as well as being liver, kidney and immune system toxins. The DEIS glosses over jet fuel spills, yet a quick Google search reveals that a storage tank in Hawaii recently spilled 27,000 gallons, a ship in Bremerton spilled 500 gallons, a helicopter spilled 100 gallons into a public reservoir, and a leaky tank spilled 112,000 gallons into a mangrove forest in Puerto Rico, which flowed into a harbor. Plus, as previously mentioned, fuel dumping occurs with great frequency, approximately once a month, as provided anecdotally by an active-duty pilot. Biodegradation of jet fuel in seawater is very slow without significant nutrients, and is considerably slowed by cold temperatures such as what we have in local waters.<sup>22</sup> The post-combustion exhaust from jet engines contains equally carcinogenic pollutants of air, water and soil that are capable of acute and chronic toxicity to animals as well as plant and aquatic life. The cumulative impacts discussion does not address this in any way and constitutes a major deficiency in the DEIS.

The DEIS confines its discussion of groundwater contamination to soil compression and compaction effects from new construction, and concludes there will be no impacts to groundwater from operations.

Recently the contamination of residential and commercial drinking water from the use of aqueous fire fighting foam on runways to protect Growlers and their pilots has come to the public's attention. This situation is severe, requiring 2,000 people on Whidbey Island to switch to bottled water and avoid using tap water. Many are wondering how long they've been drinking this PFC and PFOA-contaminated well water, but the Navy is not testing most residential wells unless asked to. PFCs and PFOAs are among the most carcinogenic substances known. This situation has many people whose wells have not been tested wondering if their water is safe to drink, given what is known about the movement of toxic plumes through soils and groundwater from similar situations in other areas. For example, earlier this year, the Port of San Diego sued the Navy over a toxic plume that is contaminating San Diego Bay; in 3 counties in Pennsylvania, drinking water for 70,000 people has been contaminated with the same toxic chemicals as on Whidbey, and people are falling ill. In the latter, the Navy has refused to pay for blood tests, which besides being un-neighborly, implies, at least to the public, an uncaring attitude and/or a defensive position on legal culpability. Coupeville is not an isolated example; dozens of areas nationwide where drinking water has become contaminated by PFCs and PFOAs from military firefighting foam, are being revealed in recent news stories. In March 2016 the DOD announced that it was going to examine 664 sites nationwide to determine whether toxic chemicals from firefighting foam have contaminated groundwater and spread to drinking water. The list of sites

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<sup>22</sup> Kerosene/Jet Fuel Category Assessment Document, American Petroleum Institute, submitted to USEPA, 2010.

being investigated include burn pits, active and old fire training areas, fuel spill areas, research sites, and crash sites. It is sobering to read, and horrifying for people who live near them.<sup>23</sup>

Although the Navy only recently (in June 2016) labeled PFC contamination an “emerging” problem, this does not justify the exclusion of such contamination from a Draft EIS published six months later. It is clear that at the November 10 publication date, the Navy was well aware of potential problems with contamination of residential drinking water, due to what it calls “historic” use of “legacy” fire suppressants for flight operations.

In May 2016, the USEPA had issued drinking water health advisories for two types of PFCs, and the Navy announced in June that it was in the process of “identifying and for removal and destruction all legacy perfluorooctane sulfonate (and PFOA) containing AFFF [aqueous film forming foam].” Yet on page 3-62, the DEIS dismisses all concerns with an incredible statement about actions that took place nearly 20 years ago: “Remediation construction was completed in September 1997, human exposure and contaminated groundwater exposures are under control, and the OUs at Ault Field and the Seaplane Base are ready for anticipated use (USEPA, 2016e).” This easily misinterpreted statement is outdated at best, but given the weight of the other deficiencies in this DEIS and the Navy’s foreknowledge of the problem before publication, it looks more like a deliberate obfuscation. Why would the Navy print such a claim knowing that its interpretation in light of more recent contamination events would likely mislead the public?

Three days before the DEIS was published, on November 7, 2016, the Navy sent a letter to more than 100 private and public drinking water well owners expressing concern that perfluoroalkyl substances (PFAS) found beneath the OLF had spread beyond Navy property. The word “perfluoroalkyl” or “PFAS” is not mentioned in the entire 1400-page Growler DEIS. Hazardous materials discussion in both the 2005 and 2012 EAs on Growlers was perfunctory and brief, and perfluoroalkyl substances were not mentioned in either of those documents. Therefore, no evaluation of this significant impact in a public process related to a federal action at NASWI has ever occurred. **We request that a revised EIS be prepared that addresses this gross deficiency, including proposed actions to remediate the contaminate drinking water or connect these residents to a permanent, uncontaminated source, and to address the health of affected residents, as well as compensation to business owners affected by contaminated water, such as the many organic farming businesses on Whidbey Island.**

According to the DEIS, NASWI does not use groundwater for drinking. This should not in any way affect the urgency of obtaining a steady source of uncontaminated drinking and irrigation water for non-Navy residents.

The runway at OLF is used for Growler training, and has been in use by Growlers since 2005. The DEIS refers to use of fire fighting foam as “historic” and “legacy.” Webster’s defines the word historic as “significant and consequential; having great and lasting importance,” and “known or established in the past.” The DOD does not define the word historic except in the context of cultural resources management and conserving and restoring historic properties. It also does not define the word legacy except in the context of the Legacy Resource Management Program, which focuses on “stewardship, leadership and partnership” in “safeguarding

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<sup>23</sup> <https://www.documentcloud.org/documents/2755131-List-of-military-fire-and-crash-training-sites.html>



irreplaceable natural and cultural resources.” Use of those words to help justify excluding this direct impact from analysis is unwarranted. Besides, the Navy selectively includes “historic” facts and figures elsewhere in the DEIS to track noise complaint data, (page 4-114) to study aircraft accidents (page 3-43) and to project runway usage in the year 2021, (page 2-4). So it does not make sense for the DEIS to completely ignore the use of toxic contaminants associated with the Growler jets whose impacts it purports to evaluate and who use the runway at OLF.

Since the Navy did not publicly recognize the danger associated with these contaminants until 2016, it is reasonable to assume that these hazardous materials have been in use at least between 2005, when the Growlers first arrived, and the present time. The firefighting foam is for protecting the Growlers, as well as other aircraft that came before them, so use of the adjective “legacy” to imply that application of these firefighting chemicals to runways in previous decades was their only application, is misleading. It is impossible to either disassociate this impact from Growler operations, or to separate out how much PFC contamination occurred prior to 2005, and what has occurred since 2005. **The honest thing to do would be fully disclose the use of these chemicals in amount and time, admit culpability, and find ways to help these people beyond a simple delivery of bottled water. The Navy has been testing some wells only upon request. What if some affected residents are not aware they need to make such a request in order to have their wells tested? If it means testing every well and hooking these homes to safer public water supplies, then that is what must be done, the polluter pays in our system - because the Navy caused the problem and the Navy must fix it.**

The Precautionary Principle applies not only to climate change but also to public health, especially when unintended negative consequences like this occur. The 1989 Rio Declaration (#12) said: “Nations shall use the precautionary approach to protect the environment. Where there are threats of serious or irreversible damage, scientific uncertainty shall not be used to postpone cost-effective measures to prevent environmental degradation.”

It is surprising and disappointing, therefore, to hear a Navy spokesman reassure the public that the Navy will remove the contamination, when in fact the Navy knows full well that this cannot be done. A statement in a recent news interview by NASWI Public Affairs Officer Mike Welding sought to reassure the public: “The Navy is going to provide those people with safe drinking water until we can figure out how to remove the contaminant from the water well, filter it out or something like that. It’s something that still needs to be worked out.”<sup>24</sup> Unfortunately, a statement from the Department of Defense’s own “MERIT” program that is easily found on the internet contradicts Mr. Welding: “Currently, there are no in situ technologies and very limited ex situ options to treat soil or groundwater contaminated with PFCs.” This comes from a bulletin that has long been published and distributed to federal and state agencies.<sup>25</sup> So why would the Navy mislead people into thinking their water can be decontaminated?

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<sup>24</sup> <http://www.kiro7.com/news/local/navy-finds-toxic-contaminants-in-whidbey-island-water/476220156>

<sup>25</sup> Department of Defense Materials of Evolving Regulatory Interest Team. Chemical & Material Emerging Alert: Aqueous Film Forming Foam (AFFF). View at: <https://dec.alaska.gov/spar/ppr/hazmat/Chemical-&-Material-Emerging-Risk-Alert-for-AFFF.pdf>

If records indicate your facility may have experienced AFFF leaks, spills or releases to the environment, refer to DoD Instruction 4517.18 for principles to follow in determining what site specific characterization, assessment, and risk management actions you should take.<sup>7</sup>

Currently, there are no *in situ* technologies and very limited *ex situ* options to treat soil or groundwater contaminated with PFCs. Thermal treatment is typically used for contaminated solids while granular activated carbon is the most effective water treatment method.<sup>8</sup> The DoD Strategic Environmental Research and Development Program is funding research to develop innovative treatment technologies for PFCs.<sup>9</sup>

*Screen shot from <https://dec.alaska.gov/spar/ppr/hazmat/Chemical-&-Material-Emerging-Risk-Alert-for-AFFF.pdf>*

If Mr. Welding unintentionally gave false information, then the Navy should immediately issue a retraction in those media and directly to affected victims, and explain what it knows, including the implications to public health and of finding other sources of permanent water supply. If Mr. Welding's statement intentionally misled the public into hoping that the Navy will decontaminate their drinking water, the Navy would be in grave violation not only of the public trust, but also its own Ethics Code. To have a Public Affairs Officer give an uninformed and erroneous statement to the press that victims will then interpret as something positive demonstrates an apparent willingness to say anything however baseless, to allay public outcry and potential culpability. Further, if the Navy is willing to pay farmers for easements to keep their land near runways in agricultural use, it should be equally willing to pay the costs of finding a permanent water source for people whose drinking water it has permanently poisoned.

Extensive evaluations for a variety of hazardous materials were included in the Northwest Training and Testing EIS, so it does not make sense that the Navy would leave contaminants such as fire fighting foam out of the Growler DEIS. These are functionally related activities; without the Growlers to worry about, you don't need firefighting foam. Notification of this well water contamination is new information to the public. Therefore, a revised EIS is called for which must include the new firefighting measures the Navy will take, and the potential impacts from those measures. Presumably, the risk of fire does not go away.

The DEIS concludes, "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." With flights at OLF Coupeville alone increasing from 3,200 in 2010 to as many as 35,500, nobody can claim that such an increase over 7 years for which no groundwater or soil

contaminant analyses have ever been conducted and presented to the public in a NEPA process would be considered not significant. **Please explain why this contamination is not a direct, indirect or cumulative environmental impact that should have been considered in the Growler EIS in a revised EIS.**

**11. Impacts to domestic animals and wildlife, including threatened and endangered species:**

The DEIS concludes there will be no significant or population-level impacts to threatened or endangered species or other wildlife, yet acknowledges in section A.3.12, “The relationships between potential auditory/physiological effects and species interactions with their environments are not well understood. Mancini et al. (1988), assert that the consequences that physiological effects may have on behavioral patterns are vital to understanding the long-term effects of noise on wildlife. Questions regarding the effects (if any) on predator-prey interactions, reproductive success, and intra-inter specific behavior patterns remain.”

The Navy’s presumption that federally-listed species such as the marbled murrelet are habituated to the high noise levels caused by Growler takeoffs and landings, and thus will not be significantly impacted by the addition of 36 Growlers (not to mention the additional 40) ignores a series of significant problems:

The DEIS considers only chronic noise in areas near the runways, and fails to consider intermittent noise disturbance events in areas where murrelets may not be habituated; for example, these birds range from coastal marine waters, where they forage for food, to forested areas up to 55 miles inland. To consider only one occupied foraging area near the runways out of many throughout Puget Sound and the Strait of Juan de Fuca, (Raphael et al. 2015) and to not consider effects of flight operations on the terrestrial mature forest habitat that these birds return to each night, renders the analysis grossly incomplete.

A 2009 study concluded that the probability of nest site usage was greater with increasing distance from roads that produced man-made noise.<sup>26</sup> Implication is that the alteration of habitat by noise renders it less usable.

It ignores nearly three decades of more recent research, and thus does not use the Best Available Science.

It fails to acknowledge the segmentation resulting in omission of the cumulative impacts of up to 160 Growlers, which are being analyzed separately in smaller batches. Adverse impacts from an increase this large would be significant if they were evaluated together.

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<sup>26</sup>Golightly, Richard, et al. Characteristics of Marbled Murrelet (*Brachyramphus marmoratus*) Habitat in Northern California, Humboldt State University, February 2009. <http://humboldt-dspace.calstate.edu/bitstream/handle/2148/823/Characteristics%20of%20Marbled%20Murrelet%20habitat%20in%20Northern%20California%20Feb%202009%20locked.pdf?sequence=1>

The cumulative impacts from an increase to 130,000 flights that includes 79,000 Growler flights and lots of low-altitude flying, have not been considered. This many flights could easily impact large numbers of migratory birds along the coast each spring and fall.

The Precautionary Principle has been widely incorporated, in various forms, in international environmental and public health agreements and declarations, and further developed in a number of national laws. An element common to the various formulations of the Precautionary Principle is the recognition that lack of certainty regarding the threat of environmental harm should not be used as an excuse for not taking action to avert that threat. It recognizes that delaying action until there is compelling evidence of harm will often mean that it is then too costly or impossible to avert the threat—in this case, of functional extirpation of a federally-listed species (marbled murrelet) whose Washington population has been declining at rates between 4.4 and 7 percent per year and is now 44% smaller than it was in 2001 (Lance and Pearson 2016). Use of the Precautionary Principle promotes action to avert risks of serious or irreversible harm in such cases. The Principle is based on the recognition that a false prediction that a human activity *will not* result in significant environmental harm will typically be more harmful to society than a false prediction that it *will* result in significant environmental harm. It therefore provides a fundamental policy basis to anticipate, avoid and mitigate threats to the environment.

Integral to decision-making that incorporates elements of the Precautionary Principle is the use of Best Available Science. While the term “Best Available Science” is a moving target in time, the Navy has used a 28 year-old literature review (Manci et al. 1988) that is widely quoted in numerous DOD documents, to support the claim that enough questions remain about effects of jet noise on wildlife to warrant doing nothing about it. Besides promoting a baseless claim, the Navy failed to disclose that this review discussed many studies that actually concluded the opposite: for example, one study concluded that wild ungulates appear to be much more sensitive to aircraft noise disturbance than domestic livestock, yet the latter, while more adaptable to it, were still documented to have primary and secondary effects that included reduced milk production, increased glucose concentrations, decreased hemoglobin levels, increased heart rate, and reduction in thyroid activity. Further, a 1983 study suggested that 2 of 10 cows in late pregnancy aborted after showing rising estrogen and falling progesterone levels. These increased hormonal levels were reported as being linked to 59 aircraft overflights. A similar study reported abortions occurred in three out of five pregnant cattle after exposing them to flyovers by six different aircraft (U.S. Air Force 1994b). Another study suggested that feedlot cattle could stampede and injure themselves when exposed to low-level overflights (U.S. Air Force 1994b). Studies of terrestrial mammals have shown that noise levels of 120 dBA can damage mammals’ ears, and levels at 95 dBA can cause temporary loss of hearing.

High-noise events (like a low-altitude aircraft overflight) may cause birds to engage in escape or avoidance behaviors, such as flushing from perches or nests (Ellis, et al. 1991). These activities impose an energy cost on the birds that, over the long term, may affect survival or population growth. In addition, the birds may spend less time engaged in necessary activities like feeding, preening, or caring for their young because they spend time in noise-avoidance activities, resulting in lower reproductive success and population fecundity. So, even if one or more of the studies in that literature review concluded that physiological/auditory effects were not well understood, the Navy should not be implying that they are just as poorly understood 28 years

later. A synthesis of two decades of scientific literature on noise effects on wildlife was published in 2016, before the DEIS was released. If not availing itself of the individual studies produced over the last 28 years, then why did the Navy at least not acknowledge that more recent research existed? When a federal agency cites the absence of evidence while failing to seek out the large volume of it that actually exists, it is being disingenuous. It is also objectively wrong and unethical for a federal agency to cherry-pick a single statement of doubt from an obsolete review in which not all of the studies it referenced reached that conclusion.<sup>27</sup> The DEIS therefore fails to justify why it did not use the Best Available Science.

Science is a process. It is not a product or the outcome of deliberations. In that light, the Best Available Science directive rightfully references not science, but “scientific data,” meaning an element or product of the scientific process or a synthesis of the most reliable knowledge at a point in time. While the 1988 literature review marked an appropriate point in time on which to base data-driven decisions, there has been much research since then, on physiological effects of noise on animals, that would help to mitigate the DEIS’s failure to use the Best Available Science. For example, the 2016 synthesis of two decades of research on effects of noise on wildlife concludes that while “taxonomic groups vary in auditory capabilities,” the “...majority of studies documented effects from noise, including altered vocal behaviour to mitigate masking, reduced abundance in noisy habitats, changes in vigilance and foraging behaviour, and impacts on individual fitness and the structure of ecological communities.” Also, “This literature survey shows that terrestrial wildlife responses begin at noise levels of approximately 40 dBA, and 20% of papers documented impacts below 50 dBA.”<sup>28</sup>

The Fish and Wildlife Service’s July 2016 Biological Opinion said, “The decline in murrelet populations from 2001 to 2013 is weakly correlated with the decline in nesting habitat, with the greatest declines in Washington, and the smallest declines in California, indicating that when nesting habitat decreases, murrelet abundance in adjacent marine waters may also decrease.” The BiOp acknowledges that current estimates for reproductive success are well below the levels needed “...to maintain or increase the murrelet population” in all areas of the Pacific Northwest where the murrelet is found. The list of threats to its survival and recovery includes habitat destruction and modification of the terrestrial environment from timber harvest and human development, but among other threats the BiOp does not list military jet noise or sonar. Yet while the highest conservation priority is reestablishment of abundant supply of high-quality nesting habitat, and while it acknowledges that murrelet populations in the areas where the Navy will most frequently be operating have “lost resistance to deleterious population-level effects and are at risk of continual declines,” it all but admits outright that the marbled murrelet population in these areas is headed toward eventual extirpation, because “activities which degrade the existing conditions of occupied nest habitat or reduce adult survivorship and/or nest success will be of greatest consequence to the species, reinforcing the current marbled murrelet population decline throughout the coterminous United States.” To have such omissions and conflicting statements in a document that allegedly supports the Navy’s proposed activities is disturbing, especially when one considers the Navy’s influence on the Fish and Wildlife Service’s actions.

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<sup>27</sup> <http://www.noisequest.psu.edu/noiseeffects-domesticanimals.html>

<sup>28</sup> Shannon, Graeme et al. A synthesis of two decades of research documenting the effects of noise on wildlife. *Biol. Rev.* (2016), 91, pp. 982–1005. doi: 10.1111/brv.12207

For example: the Navy has drawn a clear line between permanent and temporary threshold shift (TTS), which is a term for hearing loss. The Navy's long-held position is that temporary threshold shift does not result in tissue damage including hair cell loss, and is therefore temporary and non-injurious; the Navy considers TTS to be "auditory fatigue."<sup>29</sup> During negotiations with the Navy on the Biological Opinion, the Fish and Wildlife Service maintained that TTS does result in hair cell loss, and is thus an injury. The Navy also expressed concern that the Fish and Wildlife Service was not separating harassment from harm. "We [Navy] explained that the Navy's proposed criteria would allow for them [FWS] to separate harassment from harm. This is biologically significant from an animal's perspective, as well as significant from a public perception stand point (behavioral harassments should not be quantified as harm)."<sup>30</sup> The law does not agree with that assessment. The definition of harm under the Endangered Species Act does not accommodate separation of temporary from permanent threshold shift, nor does it allow "auditory fatigue" or harassment to be excluded from its definition of harm.

During these negotiations, the Navy also said:

"There is a physics constant called "impedance" and they [FWS] disagree with that value. If they change to the actual physics constant (as Navy suggests) then their criteria change from phase I to phase II jumps up almost 30 dB. This causes them concern that it's too great a change and that the Navy is "not being conservative enough" in our proposal. However, criteria does not "conserve a species" it only allows for an evaluation of effects."<sup>31</sup>

The last sentence in the above paragraph is the crux of the matter: of two federal agencies in consultation under Section 7 of the Endangered Species Act, only one, the Fish and Wildlife Service, was pursuing the conservation of the species. The Fish and Wildlife Service was seriously hampered in its duty to protect species and the environment. However, the Navy has a duty to uphold the law – including the Endangered Species Act and NEPA. The Navy has failed in its duty to carry out its mission within existing legal parameters.

Because of the Navy's failure to provide the FWS with information it needed, the FWS had to make assumptions. To wit, the BiOp said: "For scenarios pertaining to marbled murrelets, we also had to make assumptions about where and when the Navy would conduct the proposed activities. For example, hypothetically, if the Navy stated that a given activity would occur year-round at distances greater than three nm [nautical miles] from shore in the W-237 area, we would need to form assumptions about how much of the activity would be done during the summer and how much during the winter, as well as how much of the activity would be carried out between three and 12 nm [nautical miles] from shore, and how much of the activity would be carried out less than 50 nm from shore."

In other words, the FWS was not given enough information about when and where the bulk of Navy training and testing activities would be occurring in the seasonal presence or absence of

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<sup>29</sup>Personal communication, US Navy.

<sup>30</sup>Personal communication, US Navy.

<sup>31</sup>Personal communication, US Navy.

listed species at different times of the year, to be specific rather than generic about impacts to these species.

Table 4 in the BiOp reveals that FWS had to make such assumptions for torpedo testing, underwater unmanned vessel testing events, and gunnery, bombing, and missile exercises (both surface to air and air to surface) plus maritime patrol aircraft exercises. The total number of Navy operational “events” that FWS had to make assumptions about exceeded 450.

The Navy said, “They [FWS] asked if we could limit our actions to 5 years and we said no.” The normal duration of a Biological Opinion’s validity before it expires has traditionally been 5 years. Despite acknowledging that vital population trend information for the marbled murrelet population was missing, the FWS made the duration of its Biological Opinion good for 20 years.

As previously documented, noise degrades habitat as well as a species’ ability to carry out its daily activities. In the marbled murrelet Long Term Conservation Strategy, daily timing restrictions on forest practice activities apply only during the birds’ daily peak activity periods (one hour before official sunrise to two hours after official sunrise and from one hour before official sunset to one hour after official sunset) during the nesting season. Unfortunately, after the chick hatches, adults must make visits to and from the nest throughout the day and are subject to disturbances throughout the day (USFWS 2012). Murrelets spend 0.3 to 3.5 hours per day (mean  $1.2 \pm 0.7$  hours per day) commuting to nests during the breeding season (Hull et al. 2001). USFWS (2012) reports “Based on a compilation of radio-telemetry data (Golightly, R., in litt. 2010), we estimate that up to 10 feedings could occur during the mid-day portion of the nestling phase (Livezey, K., in litt. 2012).”

There are no restrictions on military activities regarding low flights over the Washington coast, where the murrelet’s decline is most serious. Noise and visual disturbances throughout the day can cause an adult murrelet to abort one or more prey deliveries to the nestling, which increases the energy cost per food delivery attempt and increases the risk of predation of the adult (Hull et al. 2001, Kuletz 2005). Such disturbances are considered significant because they have the potential to reduce hatching success, fitness, or survival of juveniles and adults (Hébert and Golightly 2006, USFWS 2012). The above are mostly from the Fish and Wildlife Service’s own research, yet effects from low-flying Navy jets were not adequately considered. We have discussed in # 3, 7 and 8 the lack of accuracy with regard to measuring or modeling real noise levels produced by Growlers.

In a November 2015 letter to the Superintendent of the Olympic Coast National Marine Sanctuary,<sup>32</sup> the Navy stated that, “...permanent threshold shifts (Level A harassment) involve some tissue damage and a permanent reduction in hearing sensitivity and [Navy] agrees that these effects should be considered injurious to an individual marine mammal. However, the Navy’s position remains that Level B harassment takes should not be characterized as an injury to sanctuary resources as they do not constitute physical injury to the species.” The argument simply does not apply to marbled murrelets and northern spotted owls, in part because the unnamed surrogate species that were used to quantify the amount or extent of anticipated take do not appear to have been adequately analyzed, and because injuries and behavioral disturbances

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<sup>32</sup>[http://www.nmfs.noaa.gov/pr/permits/incidental/military/navynwtt\\_2015loa\\_ocnms\\_letter.pdf](http://www.nmfs.noaa.gov/pr/permits/incidental/military/navynwtt_2015loa_ocnms_letter.pdf)

were being considered by the Navy in the context of the Marine Mammal Protection Act, not the Endangered Species Act under which these birds are protected. As previously stated, the ESA definition of harm does not allow for segmentation of impacts.

How do you know what damage is permanent and what's temporary, in a rare, tiny and secretive marbled murrelet? More fundamentally, where do you draw the line on hearing loss for species that depend on hearing for survival? What do the species that depend upon hearing do for protection from predators while recovering from not being able to hear properly? Recovery can take hours, days or weeks, and may or may not be a full recovery. How is it possible to say *with any degree of certainty* that recovery from a temporary threshold shift has taken place in a wild bird, when the surrogate species being tested is a parakeet?

What is the contribution of Growler jet noise to habitat loss in formerly quiet areas? Why is this not addressed in the Biological Opinion? And what about repeated noise or explosive events as opposed to one or two? In the case of marbled murrelets, which spend 90% of their lives on or in the water from along the coast to 50 and even 250 miles offshore, it's not so easy to establish what is temporary and what is permanent harm, when it comes to exposure to undersea and in-air explosions, plus sonar, plus jet overflights. How is it also possible to document or establish accurate thresholds of temporary versus permanent tissue injury by relying on a 1974 military study on domestic chickens, ducks and geese to calculate "probabilities"?<sup>33</sup> Weight differences alone, never mind the wildness factor, would render such measures wild guesses at best. Because the Navy failed to supply the Fish and Wildlife Service with sufficient information to make such a judgment, the FWS was forced to improvise in its Biological Opinion. How is it possible for this to be valid for the next 20 years?

With regard to the Navy's influence over the FWS on mitigation, the Navy said, "USFWS discussed with the Navy a couple of mitigation proposals during this [September 3, 2015] meeting. They requested that the Navy consider adding the following two mitigation items to our proposed action to help reduce effects which they claim will help expedite their analysis. The mitigation items were as follows: 1) Carry into NWTT [Northwest Training and Testing EIS] the marbled murrelet monitoring the Navy currently does in the inland waters for UNDETS [Undersecretary of Defense] under NWTRC [Northwest Training Range Complex, from a 2010 EIS]. However, add the requirement that instead of generic observers and shutting down in the presence of any bird that we use certified marbled murrelet observers that have taken USFWS's training class. We indicated that we didn't think it would be feasible to have certified observers. We also asked for clarification on how it would expedite the analysis if we added this mitigation measure. They wouldn't have to do as much analysis on the overlap since the monitoring would help preclude most take. They weren't willing to say that adding this mitigation measure would put us in a no jeopardy situation. They felt it was too pre-decisional since they don't know have the criteria or zones of effect. We indicated that we would consider this but that we preferred to the analysis without any mitigation, make their determination of take, and then show (quantitatively) how any mitigation measure they propose actually reduces this take. We felt it was more transparent to the public and would show a clear nexus between any mitigation and

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<sup>33</sup> Damon, Edward G, et al. The Tolerance of Birds to Airblast. Lovelace Foundation for Medical Education Research. Prepared for the Defense Nuclear Agency, 23 July 1974. <http://www.dtic.mil/dtic/tr/fulltext/u2/785259.pdf>



reduction of impacts. 2) In the offshore area, any activities that we use marine mammal observers to ensure a mitigation zone is clear to also have them look for an ensure the zone is clear of albatross. We clarified that we don't use MMOs but our Navy personnel that are lookouts receive training in sighting/identifying marine mammals. We told them that not all activities have marine mammal observers because some activities are events in which an object is fired several 10s of km away from a ship and it isn't practical for them to observe that far. We indicated for some activities that have air support that the pilots sometimes serve as lookouts to clear a target area, but that clearing an area for marine mammals would be different than albatross because the much smaller size of albatross.”<sup>34</sup>

So, if the Navy won't accept mitigation measures such as using certified observers trained by the FWS, without demanding quantification of reductions in take or a no-jeopardy assurance, for which they refuse to provide accurate operational information, and if they fire into an area without clearing it first, then the Navy's ability to document actual takes will remain suspect.

As early as August 2015, the Navy was pressuring the FWS and attempting to steer the process. A Navy official said, “I would like to explore the possibility of getting ASN [Assistant Secretary of the Navy] (EI&E) approval to release the Final [Northwest Training and Testing] EIS even without having a Draft Biological Opinion from FWS. We did not discuss it with FWS today, but maybe we could request assurances from FWS that we would not have any jeopardy conclusions in advance of a Draft BO to support this COA [course of action] (there certainly have not been any indications that we might be anywhere close to a jeopardy call)?”<sup>35</sup>

The Navy released its NWTT Final EIS in October 2015 without a public comment period and without completing any of the required federal and state consultations. It abruptly terminated consultation with the State of Washington a month later, over the State's objections, and it did not receive the Biological Opinions from NOAA and the Fish and Wildlife Service until November 6, 2015, and July 21, 2016, respectively. The Biological Opinion is good for 20 years, and the Navy recently announced another EIS for/and another increase in activity in the Northwest Training and Testing Range for summer 2017. This segmentation and avoidance of legal requirements is unacceptable; the cumulative impacts on endangered and other species will likely be significant.

With only 7500 marbled murrelets currently remaining in Washington, a population viability analysis shows it is more likely than not that the state population will only be between a quarter to half of its current size after 50 years, between 2,077 and 2,182 birds. Given that the Navy observes guidance from the Aircraft Environmental Support Office, which directs Navy aircraft to fly “over sparsely populated areas, [where] aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure,” then the levels of noise are likely to degrade or render more marbled murrelet habitat uninhabitable, especially along the Washington coast where murrelet declines are most severe.

In its letter to the Olympic Coast National Marine Sanctuary staff the Navy wrote, “There is no science to support Navy activities have been detrimental to any Sanctuary resources.” It went on

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<sup>34</sup> Personal communication, US Navy.

<sup>35</sup> Personal communication, US Navy.

to caution Sanctuary staff about drawing conclusions of some areas being biodiversity “hot spots” and making “assumptions of importance,” because such studies were “limited and focused” without “review of best available science.” The Navy added that it was familiar with these studies used by Sanctuary staff, because most were conducted under Navy funding. If the Navy wishes to caution agencies about the use of Best Available Science, then it is entirely appropriate for agencies and the public to question whether the Navy’s use of a single isolated statement from a 28 year-old literature review meets its own standards for Best Available Science. It certainly does not meet the public’s.

A 2011 study on acute and chronic impacts of long-term vehicle noise exposure to the reproductive success of northern spotted owls concludes, “...populations can compensate for perturbations up to a threshold, beyond which disturbance impacts may be greatly magnified—and even cause system collapse.”<sup>36</sup> It also concluded that northern spotted owls (NSO) “...close to noisy roads fledged significantly fewer young than NSO near quiet roads, indicating that routine traffic exposure may decrease NSO reproductive success over time.” And this was vehicle noise - there are likely to be far more strong negative results from jet noise, especially in quiet areas that this DEIS dismisses.

The marbled murrelet has been experiencing drastic declines in Washington and has lost 44% in population size since 2001 (Lance and Pearson 2016). So significant is this decline that the State of Washington up-listed them from state-threatened to state-endangered in December 2016, stating “it is likely the Marbled Murrelet could become functionally extirpated in Washington within the next several decades” (Desimone 2016). Noise alters habitat and can make good habitat unusable.

Neither the Navy nor the Fish and Wildlife Service fully considered the significant physiological effect that noise-related elevated stress levels have to immune response or other essential life functions; rather, the agencies claimed there is insufficient evidence to show that noise-induced stress threatens survival and reproductive success. The maintenance of existing murrelet habitat is considered integral to stabilizing the population, especially on non-federal lands in the near-term.<sup>37</sup> We note the irony of the fact that while the Navy expressed concern about a potential jeopardy call by the Fish and Wildlife Service, military jet noise is not listed as a threat in the Service’s July 21, 2016 Biological Opinion.

This again violates the Precautionary Principle. In the 2016 Biological Opinion, the study cited (Busch and Hayward, 2009) actually contradicts this claim. There the researchers state that suppression of the immune system, severe protein loss, deposition of fat and atherosclerotic plaques, hypertension and other effects were possible, especially when noise is sporadic and the species could not acclimate to it. It is irresponsible and scientifically invalid to conclude without corroborating scientific evidence that adverse impacts to all birds, including state endangered marbled murrelets, and spotted owls, and in fact all wildlife in the study area, can be dismissed because they are “presumably habituated to the very high level of noise and visual disturbances at NAS Whidbey Island.”

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<sup>36</sup> Hayward, Lisa et al. Impacts of acute and long-term vehicle exposure on physiology and reproductive success of the northern spotted owl. *Ecosphere* 2(6):art65. doi:10.1890/ES10-00199.1

<sup>37</sup> (Falxa et al. 2016, Lorenz et al. 2016, Raphael et al. 2016, Raphael et al. In Press).

The Strait of Juan de Fuca has recently been identified as one of three regional “hotspots” with an exceptionally high murrelet abundance (the upper 20th percentile with low annual variation), nesting habitat abundance, and nesting habitat cohesion across the species listed range (Raphael et al. 2015). Compared with marine variables, nesting habitat attributes explained more of the variation in murrelet abundance, underscoring its greater importance to murrelet recovery. According to the Fish and Wildlife Service’s Recovery Plan, the risk of chance events wiping out the species is "exacerbated for the murrelet because populations that have negative long-term growth rates, as does the listed population of the murrelet ...have little or no capacity to overcome catastrophic population losses."

The Endangered Species Act prohibits harm to a listed species. § 1538(a)(1)(B). The Recovery Plan, created under § 4(f) when a species is listed by the FWS serves as a guidance document in determining what actions are likely to impede recovery. Using the Best Available Science, three biological goals for the marbled murrelet were adopted in 2008:

1. a stable or increasing population,
2. an increasing geographic distribution, and
3. a population that is resilient to disturbances. (USFWS 2011, Raphael and others 2008.)

In order to fully replace the biological value that is taken and to satisfy the jeopardy requirements, an alternative must at a minimum not impair pursuit of any of these three objectives. The consulting agency must use "the best scientific and commercial data available."<sup>38</sup> While an agency typically has leeway to identify the Best Available Science, it must address all available scientific information, even if it decides that some of those data are not to be incorporated into the jeopardy analysis. Failure to consider available data undermines the agency's assertion that it met the Best Available Science standard. The Navy offered to help write portions of the Biological Opinion.<sup>39</sup> The Growler DEIS cites a 28 year-old literature review and ignores more recent research.

The State’s Long Term Conservation Strategy DEIS appears to indicate the likelihood of increased extinction risk, and, barring actual extinction, it indicates precipitously low population sizes over many decades under all alternatives described in that document—from activities that do not include any analysis of impacts from jet noise.

Besides making an unproven presumption about habituation of murrelets to noise and visual disturbance, the Navy presents alternatives that are inadequate in that no reduction in noise is offered, and no information exists on impacts from flight operations that could, when added to the impacts presented in the State’s DEIS, risk jeopardy to the species by impeding its recovery. Cumulative impacts include those effects by other actors that are “reasonably certain to occur” and that include past, present and future events and actions.

In a 2014 Biological Opinion issued by the National Marine Fisheries Service on the Federal Columbia River Power System, the agency concluded that a slight increase in abundance over

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<sup>38</sup> 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(g); *San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 995 (9th Cir. 2014).

<sup>39</sup> Personal communication, US Navy.

time in the wake of a proposed action indicates that such action will not inhibit recovery; however, the courts rejected this “trending toward recovery” argument because it failed to consider that populations had already been seriously reduced in size. In the case of marbled murrelets, the population has not only been seriously reduced in size, it is trending toward extinction. The volatility of the situation requires a greater margin of error than has been shown, to ensure that the species is not in jeopardy. Neither the DEIS nor the Biological Opinion have allowed for such a margin of error.

Thus, given the serious deficiencies of this DEIS, which include the following:

1. failure to evaluate all of the incoming new Growlers together, instead segmenting their impacts,
2. failure to analyze indirect and cumulative impacts to the species from takeoffs, landings and flight operations of 157-160 Growlers, not just the 36 discussed in this DEIS,
3. failure to consider noise beyond the immediate vicinity of naval facilities on Whidbey Island,
4. failure to use the new software recommended by a DOD committee, which would have accounted for noise characteristics of newer aircraft such as Growlers and provided more accurate noise level estimates,
5. failure to back up the presumption with Best Available Science, that marbled murrelets near runways are habituated to jet noise and visual disturbance,
6. failure to provide the Fish and Wildlife Service with more specific information on the seasonality and timing of training and testing,

*and*, given the continued steep population decline in marbled murrelets, added to the fact that Growler noise is not listed as a threat to this species in the Fish and Wildlife Service’s July 21, 2016 Biological Opinion, nor is it mentioned as a threat in the State of Washington’s Long Term Conservation Strategy DEIS, plus the fact that climate change has not been factored into population projections in the State’s DEIS, making them appear too optimistic, we believe that, combined with all this, the Navy’s DEIS presents a scenario that grossly underestimates Growler noise impacts and thus cumulative effects on a listed species whose Washington population is expected to be cut in half in a few decades if there are no changes in current externalities. Those externalities are of course changing rapidly, and the combination of impacts to the marbled murrelet promises to accelerate its decline. The ESA does not provide that an agency is only responsible for remediating its share of the harm. Rather, the ESA mandate is simple and clear -- agencies may not undertake any action that results in jeopardy to the threatened species.<sup>40</sup>

**We further believe that unless the Navy presents a revised DEIS and provides better information to agencies in order to *accurately* evaluate noise impacts to listed species, that the likelihood of jeopardy is far higher than has been portrayed. The proposed actions must be delayed and modified in order to reduce further declines.**

We therefore implore the Navy to take the following actions immediately:

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<sup>40</sup> See, e.g., *Pac. Coast Fedn. of Fishermen's Ass'ns v. United States Bureau of Reclamation*, No. C02-2006 SBA, 2006 U.S. Dist. LEXIS 24893 (N.D. Cal. Mar. 27, 2006); *PCFFA v. U.S. Bureau of Reclamation*, 2003 U.S. Dist. LEXIS 13745, No. 02-2006 SBA, slip op. at 16 (N.D. Cal. July 15, 2003)

- 1.) Stop the practice of segmenting large projects into numerous smaller ones, and conduct cumulative impacts analyses for the full scope of functionally and geographically related activities;
- 2.) Provide any and all information and materials requested by state and federal agencies to undertake the reviews and consultations required of them;
- 3.) Hold public meetings and hearings in addition to or in lieu of Open Houses. In most cases at the latter, questioners are sent from table to table without getting answers to their questions, and their concerns and comments are not adequately documented. A proper public Q&A where everyone can hear the Navy's responses would greatly improve the public's understanding of proposed activities and provide information upon which the public may evaluate and propose alternatives that would meet the Navy's needs, as well as the public's. Further, the Navy must advertise in media of record in affected communities, and not assume that a small ad in the Seattle Times will be read by people living three to four hour's drive away.
- 4.) Incorporate and grant mitigation requests and proposals by wildlife, historic preservation, and public health agencies; so far, mitigation proposals have been reasonable. Yet the Navy as a matter of course refused to grant some of the most basic of mitigation requests. For example, refusing to allow Fish and Wildlife Service experts to train Navy personnel on spotting marbled murrelets is unwarranted, unreasonable and unjustified.
- 5.) Respond to requests from local governments for consultation under Section 106 of the National Historic Preservation Act; expand the Area of Potential Effect and initiate these requested consultations in order to assess impacts to these areas, including those requested by the State Historic Preservation Officer in her letter of January 9, 2017.
- 6.) Reinstate public comment periods and suspend "30 day wait periods" on Final Navy EISs, especially when new information has come available.
- 7.) Ensure that the scientific inaccuracies contained in the 2014 Pacific Northwest Electronic Warfare EA are corrected to standards that Forest Service and Fish and Wildlife Service biologists can support, and allow the public to read and comment.
- 8.) Employ more rigorous cumulative impacts analyses in general, including evaluations of effects on climate change and air, soil and water quality. The military is the world's largest single user of fossil fuels, and exhaust emissions beyond the narrowly defined 65 dB DNL-affected areas near runways are not being analyzed.
- 9.) Clarify basic terms such as "event." It should be defined in each context, so that the public can understand their durations and significance. Some events last for seconds and involve one or two aircraft; others last for hours and involve multiple aircraft, and still others last for days and involve multiple aircraft, ships and submarines; the Navy must clarify the term "event" each time it is used.

10.) Fulfill the DOD-USDA 1988 Master Agreement requirements to fully substantiate the need for Defense Department use of non-military lands for electronic warfare training and military operations, by proving in a report to the public that DOD-owned lands are either unsuitable or unavailable.

11.) Provide a detailed, specific answer on whether and how the additional Navy stressors on Endangered Species Act (ESA) listed species as described in the Growler DEIS, particularly to marbled murrelets, comports with ESA Section 4F recovery, given that the acknowledged lack of scientific information on noise impacts to this species affects the ability to determine harm and cumulative effects, and also in light of precipitous declines and the December 2016 up-listing of this species by the State of Washington, from threatened to endangered.

12.) Revise the DEIS to address the 40 additional Growlers to be stationed at Naval Air Station Whidbey Island, as well as additional flying on weekends, and allow further opportunity for public comment before the Final EIS is prepared.

13.) Comply with the spirit and letter of NEPA requirements by proposing alternatives that reduce the noise, by properly and accurately evaluating noise and other impacts in all affected areas, by making actual noise measurements as well as computer modeling, and by using scientifically valid standards that measure the more realistic aspects of noise that current models don't address, as previously requested by local governments in surrounding communities.

Thank you for the opportunity to comment on this Draft EIS.


Sincerely yours,



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**cc:**

The Honorable Patty Murray  
The Honorable Maria Cantwell  
The Honorable Bernie Sanders  
The Honorable Derek Kilmer  
The Honorable Rick Larsen  
The Honorable Jay Inslee, Governor of the State of Washington  
The Honorable Elizabeth May, Member of Parliament, Saanich-Gulf Islands, British Columbia, Canada  
Mayor Deborah Stinson, Port Townsend, Washington  
Mayor Candace Pratt, Sequim, Washington  
Mayor Patrick Downie, Port Angeles, Washington  
Mayor Erik Larson, Aberdeen, Washington  
Board of County Commissioners, Jefferson County, Washington  
Board of County Commissioners, Clallam County, Washington  
Board of County Commissioners, Grays Harbor, Washington  
Advisory Council on Historic Preservation  
Washington State Historic Preservation Officer  
Sarah Creachbaum, Superintendent, Olympic National Park  
Reta Laford, Supervisor, Olympic National Forest  
Michael R. Gordon, The New York Times  
Craig Whitlock, The Washington Post  
Hal Bernton, Seattle Times  
Dahr Jamail, Truthout  
National Parks Conservation Association  
Earthjustice  
Natural Resources Defense Council  
Earthrise Law Center  
Western Forest Law Center

**Attachments:**

1. Footnote #13: US Navy Region Northwest. *NRNW In Water Construction Projects. XL spreadsheet*, View file at: <http://westcoastactionalliance.org/wp-content/uploads/2015/09/1in9w2atr3con8stru4ct5ion6pr7oj.xlsx>
2. Footnote #14: U.S. Navy, NW-NEPA-Report-12-15-2015. View at: <http://westcoastactionalliance.org/wp-content/uploads/2016/11/NW-NEPA-Report-12.15.15-4.xlsx>
3. Footnote #15: Example of intent to segment NEPA: US Navy – Goodman, Layna. Proposed NEPA Approach for Planned Waterfront Projects Which May Require Environmental Impact Statements, Naval Base Kitsap Bangor. <http://westcoastactionalliance.org/wp-content/uploads/2015/09/re1ci2pe34ne5pa6.docx>

1	<b>NRNW In Water Construction Projects</b>					
2						
3	*Does not include in-water construction projects for which applicability of a CATEX is anticipated					
4	**Does not include potential proposed actions (if any) of which action proponents have not informed NAVFAC NW					
5	***In situations where the total number of piles was not specified in the 1391, it was then estimated 1 pile is built every 10 LF					
6	****Project descriptions, construction timeframes, and the approximate # of piles can change during the design and environmental planning process					
7						
8	<b>Project</b>	<b>Project # or Name</b>	<b>Project Description</b>	<b>approximate # of piles</b>	<b>Timeframe of Construction (actual if programmed or best guess)</b>	<b>NEPA funded (yes or no)</b>
9						
10	<b>NBK-Bangor</b>					
12	<b>Included in Pile Repair &amp; Replacement EA</b>					
13	1	Bangor Contingency Piles	15 piles per year for a total of 75 piles between FY13 and FY18; repairs to be conducted on an "as needed/iff needed" basis in response to annually conducted pier inspections for structural integrity	75	Contingency FY 13- FY18	yes
14	2	EHW-1 Repair Project	Replace critical structure piles	104	FY13-FY18	yes
15	3	K/B Dock Repair	Replace deteriorated creosote-timber piles on a WWII vintage pier with new treated timber piles, which will maintain the usability of the pier. Six timber piles will be removed with a vibratory hammer. Five fender pile, guide piles 2013, 2014 Ten Fender piles for 2015, Ten Fender piles for 2016, 15 Fender piles for 2017, 15 fender piles for 2018	80	Unprogrammed FY13-FY18	yes
16	4	Zelatched Point Dock Repair	Five Fender piles 2015, Five Fender piles for 2016, Five Fender piles for 2017, Five Fender piles for 2018; note that Zelatched Point is in Dabob Bay section of Hood Canal approx 9-11 miles by boat from Bangor waterfront.	30	Unprogrammed FY15-FY18	yes
17	<b>Stand Alone Environmental Assessment</b>					
18	Service Pier (Barge) Mooring Dolphins	RDT&E project	Install two mooring dolphins and two guide piles to provide a permanent mooring for a RDT&E barge.	20	FY13	yes
19						
20	<b>Environmental Impact Statements</b>					
21	EHW-2	P-990	Construct a second explosive handling wharf to meet Trident mission requirements at Bangor.	1250	FY12-FY16	yes
22	Land Water Interface	P-983	Construct two piers across intertidal zone with steel mesh (10x10 inch grid) extending to the seafloor and north and south abutments.	136	FY14-FY15	yes
23	Electro Magnetic Measurement Range Installation	EMMR	Project involves installation of a 21-sensor array on the seafloor. The magnetic range is needed to degauss submarines when they return from deployment to reduce their electronic signatures. Horizontal directional drilling, jet plow, and cable armoring would be used for cable installation from array to existing MSF building on NBK-Bangor. The project would also involve construction of a camera platform with cable junction. The 15 ft x 15 ft offshore platform would require installation of five 24-inch square batter pre-cast concrete piles (one for each corner and one in the center of the platform). Sponsor is evaluating performance and design characteristics in an effort to reduce significance of both impacts and potential public interest.	5	FY14-FY15	proponent willing to fund

(Continued next page)



24	Transit Protection System	P-925	A berthing pier for the Transit Protection System and Port Operations craft assigned to NBK Bangor. The berthing pier will consist of a pile-supported reinforced concrete structure. The pier will be provided with full hotel service capability including power, potable water, fire protection, sewage connections, Ship Overboard Drainage (SOD) collection, fuel, telephone, cable, and Local Area Network (LAN) service. This pier will be located at the site of the existing Magnetic Silencing Facility (MSF). The pier and berths will have lighting. The pier will support 25-ton capacity mobile crane operations. The pier and berthing slips will be provided with necessary mooring, fendering, and corrosion protection systems. The project will prove a berth to accommodate a fuel barge moored permanently to the pier. A study is underway to determine if there are more cost effective solutions than the originally envisioned project.	21-27	FY16-FY17	proponent willing to fund
25	Service Pier Extension	P-834	Construct 28,000 SF general purpose berthing pier. Construct 2153 SF permanent standby generator building with four new 2 MW 900 RPM emergency generators. Construct 19,500 SF Ships Service Support Building. 320 piles for the pier extension and 11 piles for the wave attenuation component.	320	Unprogrammed. FY14 or later	partially funded; additional funding promised
27	<b>Estimated Pile Total at NBK Bangor</b>			<b>2000</b>		
28	<b>NBK-Keport</b>					
31	<b>Included in Pile Repair &amp; Replacement EA</b>					
32	1	Keport Contingency Piles	Up to 16 piles from FY13 - FY18; repairs to be conducted on an "as needed/if needed" basis in response to annually conducted pier inspections for structural integrity	16	Contingency FY 13-FY18	yes
33	<b>Estimated Pile Total at Keport</b>			<b>16</b>		
34	<b>NAVSTA Everett</b>					
37	<b>Included in Pile Repair &amp; Replacement EA</b>					
38	1	Contingency Piles	15 piles per year for a total of 75 piles between FY13 and FY18; repairs to be conducted on an "as needed/if needed" basis in response to annually conducted pier inspections for structural integrity	75	Contingency FY 13-FY18	yes
39	2	Major Waterfront Repairs		5	Unprogrammed FY13-FY18	yes
40	<b>NEPA Strategy Unknown/Early Project Planning Still Underway</b>					
41	Piers D&E Replacement	P-165		1671	Unprogrammed. FY15 or later	no
42	<b>Estimated Pile Total at Everett</b>			<b>1751</b>		
43	<b>NAS Whidbey Island</b>					
44	<b>Included in Pile Repair &amp; Replacement EA</b>					
45	1	Contingency Piles	12 piles per year for a total of 60 piles between FY13 and FY18; repairs to be conducted on an "as needed/if needed" basis in response to annually conducted pier inspections for structural integrity	60	Contingency FY 13-FY18	yes
46	<b>Stand Alone Environmental Assessment</b>					
47	Fuel Pier Breakwater	P-191	There are 43, W14x120 steel plumb piling plus 43, 24 inch diameter steel pipe batter piling with 8 ft wide x 3 ft deep concrete pile cap and concrete wall panels for the new breakwater. There would also be a sheet pile wall consisting of 16" sheet piles for the length of the 270 ft wall resulting in ~203 sheet piles. The breakwater and sheet pile wall are needed to replace a pier that is collapsing and must be demolished due to storm inflicted major damage on it ~9 years ago. The failing/disintegrating pier currently provides the breakwater protection that the proposed new pier would replace.	289	FY14-FY15	yes
48	<b>Estimated Pile Total at NASWI</b>			<b>349</b>		
49	<b>NBK Bremerton - PSNS</b>					
50	<b>Included in Pile Repair &amp; Replacement EA</b>					
51	1	Contingency Piles	10 piles per year for a total of 50 piles between FY13 and FY18; repairs to be conducted on an "as needed/if needed" basis in response to annually conducted pier inspections for structural integrity	50	Contingency FY 13-FY18	yes
52	2	Replace Fendering System Pier 6	Up to 415 concrete piles would be used	415	FY14-FY15	yes
53	3	Replace Fendering System Pier 5	Concrete Piles for Pier 5	380	FY16-FY17	yes
54	4	Pier 4 Repair Fendering System	Steel piles	43	Unprogrammed FY13-FY18	yes
55	<b>NEPA Strategy Unknown/Early Project Planning Still Underway</b>					
56	Ship Maintenance and Pier Replacement	P-411	Construct a permanent concrete ship maintenance pier 404 meters (1325 ft) by 38 meters (125 ft) to replace existing Pier 4 to be located at the site of the existing Pier 4. Structure consists of solid prestressed concrete piles and concrete pile caps supporting a concrete deck capable of supporting a 60-ton portal crane and a 140-ton mobile crane load. The pier will include portal crane rail, cleats, twelve 100-ton bollards and four 200-ton bollards, and a fendering/camel system capable of supporting SSBN and SSN hulls.	182	Unprogrammed. FY18 or later	no
58	<b>Estimated Pile Total at Bremerton</b>			<b>1070</b>		
59	<b>Manchester Fuel Department</b>					
60	<b>Covered under Pile Repair &amp; Replacement EA</b>					
61	1	Contingency Piles	8 piles per year for a total of 40 piles between FY13 and FY18; repairs to be conducted on an "as needed/if needed" basis in response to annually conducted pier inspections for structural integrity	40	Contingency FY 13-FY18	yes
62	2	Barge Mooring Pier Repairs		TBD	Unprogrammed FY13-FY18	yes
63	<b>Estimated Pile Total at Manchester</b>			<b>40</b>		
64	<b>Region (USCG Station Port Angeles, WA)</b>					
65	<b>Stand alone Environmental Assessment</b>					
66	Transit Protection System Operational Pier at USCG Station Port Angeles	P-854	Construct a permanent floating concrete pier structure, with 5- mooring dolphins and shore power delivery	30	Unprogrammed. FY13 or later	yes
67	<b>Estimated Pile Total in Region</b>			<b>30</b>		
68						
69						
70						

(end NRRW In-Water Construction Projects)

(Begin footnote #14)

NEPA Project Manager	Project Name	Description	Type	eProjects WON Clickable Link	Activity	NEPA Preparer	NEPA Notification Ltr signed by Action Proponent	NLU/ NOI from CNRRNW to CNIC	NLU/NOI from CNIC from CNO(N49)	Draft EA/DEIS	Draft EA Public Review	Final EA/FEIS	FONSI/ROD Signed	FONSI/ROD Signatory	Coop Age
<b>FY16 FONSI/ROD</b>															
Stevenson	P-603 Shore Power to Ammo Pier, NAVMAG Indian Island	Construct permanent electrical distribution system to provide power to Ammunition Pier. Demolish 1 storage shed, construct 1 building. Remove temporary generators. Consolidate pier side equipment storage.	EA	1367306	NAVMAG Indian Island	NAVFAC NW	6/24/14	7/22/14	8/6/14	7/6/15	8/12/2015 - 9/11/2015	10/19/15	11/25/15	CNRNW	None
Escota	INRMP, Everett	Implementation of the revised INRMP for NAVSTA Everett.	EA	1331172	NAVSTA Everett	NAVFAC LANT NAVFAC NW	2/3/14	2/18/14	3/24/14	8/1/14	1/9/2015 - 2/9/2015	10/9/15	12/31/15	CNRNW	None
Kier	Northwest Training and Testing (NWT)	Combined EIS for ranges covered by Northwest Training Range Complex and NAVIC Keyport, plus other Pacific Northwest RDT&E and pier side maintenance at PSNS, NSE, and Bangor.	EIS/OEIS	1131527	Fleet	SRS-Parsons	N/A	N/A	N/A	1/24/14	N/A	10/2/15	1/15/16	ASNE(EI&E)	Yes
Burt	NWSTF Boardman	Ongoing and proposed naval training activities at Naval Weapons Systems Training Facility (NWSTF) Boardman.	EIS	810307	Fleet	SRS-Parsons	N/A	N/A	N/A	09/07/2012	N/A	12/18/15	1/29/16	ASNE(EI&E)	Oregon National Guard, N Federal Aviation, F
Whalen	In-Water Activities, Acoustic Research Detachment (ARD), Bayview	EA to cover in-water RDT&E activities conducted by ARD Bayview.	EA	1292301	NSWC Carderock	SRS-Parsons	4/10/14	N/A	N/A	1/2/14	3/11/2015 to 4/9/2015	12/30/15	2/1/16	NAVSEA	None
Whalen	INRMP, NBK	Implementation of the revised INRMP for NBK.	EA	870067	NAVBASE Kitsap	NAVFAC NW	3/11/10	4/13/10	6/3/10	4/3/15	12/23/15	2/22/16	4/1/16	CNRNW	None
Burt	Gulf of Alaska	Supplemental EIS for Gulf of Alaska to renew MMPA permits by May 2016, will include new acoustic modeling and other updated data.	SEIS/OEIS	1172776	Fleet	SRS-Parsons	N/A	N/A	N/A	8/22/14	N/A	1/29/16	4/11/16	ASNE(EI&E)	Yes
Dliden/Senner	Land/Water Interface P-983 and Service Pier Extension P-834, NBK Bangor	Construction of two land/water interface barriers to connect both ends of Bangor's waterfront security enclave to the existing floating barriers and construction of an extension to the existing Bangor Service Pier.	EIS	862462	NAVBASE Kitsap	Leidos	N/A	8/21/12	N/A	2/13/15	N/A	2/12/16	4/20/16	ASNE(EI&E)	USACE N
Miksa	INRMP, Pacific Beach	Implementation of INRMP for Pacific Beach	EA	1370689	Pacific Beach	NAVFAC NW	3/17/15	4/6/15	4/28/15	1/19/16	2/29/16	4/18/16	5/31/16	CNRNW	TBD
Escota	INRMP, NAVMAG Indian Island	Implementation of the revised INRMP for NAVMAG Indian Island.	EA	862456	NAVMAG Indian Island	NAVMAG	6/7/13	7/18/13	8/18/13	2/15/16	2/29/16	5/9/16	6/28/16	CNRNW	None
Miksa	Airfield Obstruction Removal, NASJI	Identify and remove trees within airfield safety and approach/departure zones.	EA	1384020	NAS Whidbey Island	NAVFAC NW	10/28/15	12/8/15		3/15/16	4/16/16	5/3/16	6/30/16	CNRNW	TBD
Senner	P-993 Transit Protection System at Port Angeles	Install 144 piles to support a new fixed pier for forward staging of Transit Protection System (TPS) vessels at United States Coast Guard station Port Angeles.	EA	1172828	NAVBASE Kitsap	Cardno TEC-AECOM JV	3/28/14	4/4/14	5/20/14	7/23/15	DOPAA: 1/26/2015 - 2/25/2015 Draft EA: 11/30/2015 - 01/26/2016	6/24/16	8/8/16	CNRNW	USCI
Stevenson	INRMP, Manchester	Implementation of updated INRMP for Manchester	EA	1384015	NAVBASE Kitsap	NAVFAC NW				3/18/16	4/18/16	7/28/16	9/6/16	CNRNW	TBD
Whalen	SPECWAR NW Training	Naval Special Warfare in-water and on-land training in Western WA State. FONSI would be signed by CNO.	EA	1384219	SPECWAR	TBD				TBD	TBD	TBD	TBD	CNRNW	TBD
Escota	INRMP, Remote AK properties	Implementation of INRMP for Icy Cape, Point McIntire, and Barrow, Alaska	EA	1370808	CNRNW	NAVFAC NW				TBD	TBD	TBD	TBD	CNRNW	TBD
Whalen	INRMP, SEAFAC AK	Implementation of INRMP for SEAFAC property in Alaska	EA	1370812	NAVBASE Kitsap	NAVFAC NW				TBD	TBD	TBD	TBD	CNRNW	TBD

(end footnote #14)

(Begin footnote #15)

## Background and Analysis

### Environmental Impact Statement (EIS) for Waterfront Projects Naval Base Kitsap at Bangor

#### BACKGROUND

- → Per 15 CFR §1508.25, actions should be discussed in the same impact statement if they:
  - → are connected actions; or
  - → have cumulatively significant impacts when viewed with other proposed actions.
- → Similar actions such as common timing or geography may be discussed in the same impact statement, but this is not required.
- → The subject projects have different project sponsors and different design schedules. Notional project schedules have been developed; ASN approval for all schedules is required.
  - → LWI/P-983 has SSP as the project sponsor. 35% design is scheduled for February 2012. The project is programmed for FY14.
  - → EMMR has COMSUBPAC as project sponsor. 100% design is complete. The project is currently planned for FY14 construction. Project sponsor is currently evaluating design requirements to potentially reduce the NEPA and mitigation requirement.
  - → SPE/P-834 is not currently programmed in FY-14; but may be an OSD add; the project will be resubmitted for the FY15 MILCON program. CSDS-5 (COMSUBPAC) is project sponsor. 10% conceptual design is scheduled for February 2012. Navy analysis initially determined an EA was appropriate; subsequent analysis and regulatory requirements indicate an EIS is required.
  - → Shore facilities to support the Transit Protection System (TPS/P-925) are listed as a FY16 project in the FY13 POM submit. SSP is the project sponsor. Planning studies are underway, and conceptual design information is available. It is anticipated the project will require an EIS.
- → This paper uses the term “project sponsor” to refer to the command that is funding preparation of the NEPA documentation. The project sponsor is frequently, but not always, the same as the action proponent.

#### ANALYSIS OF POSSIBLE COAs

##### COA-1 → Combined Bangor Waterfront EIS (LWI/P-983, EMMR, SPE/P-834 EIS and TPS/P-925)

###### *Purpose and Need:*

The purpose is to provide security enhancements and to improve support, maintenance and homeporting capabilities for submarines at Naval Base Kitsap at Bangor. The proposed action is needed because critical assets along the Bangor waterfront must be protected from threats. Protection of strategic military assets is a vital national security concern. Aggressive security improvements within the Navy pre-date the USS Cole incident and the terrorist attacks of



September 11, 2001, and continue today. The Navy continues to improve security at the Bangor waterfront to protect its assets. Existing support, maintenance and homeporting facilities are not adequate to support the Department of Defense (DOD) and to alleviate deployment constraints imposed by current SSBN, SSGN and SEAWOLF homeport locations and maintenance operations. ¶

These actions have similar geography and may have cumulatively significant impacts and schedules that overlap to some extent. The EIS will describe a preferred alternative for each project/site as well as other project/site alternatives and the no action alternative. A combination of preferred alternatives will be selected in the ROD. ¶

• → **Pros:** ¶

- → Avoids or minimizes appearance of segmented environmental planning and reduces litigation risk. ¶
- → Streamlines review time for regulatory agencies, tribes, stakeholders and the public. ¶
- → Minimizes documents requiring regulatory and tribal consultations and chain-of-command reviews and endorsements. ¶
- → Minimizes public burden of reviewing multiple documents and attending multiple meetings/hearings. ¶
- → Minimizes technical and legal staff workload to review multiple documents for projects with similar impacts in the same geographic area. ¶
- → Cumulative impacts, tribal concerns, and mitigation could be considered comprehensively instead of project-by-project. ¶
- → Improves consistency across one large document with multiple project sponsors. ¶
- → Reduces overall costs as compared to individual EIS costs. ¶
- → Could utilize existing contract actions with some modifications. ¶

• → **Cons:** ¶

- → Delay in one project could affect all projects. More than one ROD may be required to support projects on different timelines. For projects that require additional consultation or action, supplemental NEPA documentation would be prepared for components not included in the earlier ROD. ¶
  - → This approach was used for Guam and CNMI Military Relocation EIS and Undersea Warfare Training Range EIS. ¶
  - → NUWC Keyport Range Complex Extension EIS/OEIS is example of combining multiple sites/projects into one EIS. EIS/OEIS describes each site/project alternative leading to a preferred alternative for each site. PDASN had option to select a combination of preferred alternatives for ROD. ¶
  - → Unknown if ASN(E,I&E) and OPNAV N45 would support this concept for a Bangor Waterfront EIS. ¶
- → Getting tribal consensus on all four projects may prove difficult, and could result in the most problematic project affecting other projects. ¶
- → Multiple funding sources, project sponsors, and contractors required. ¶
- → Modifications to existing Task Orders for SPE/P-834 and LW/P-983 will be needed. ¶
- → A combined EIS will not reduce the number of required Clean Water Act permits (Section 10, Section 401/404). ¶

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- o → If the design for TPS/P-925 is not sufficiently developed in time to support an FY14 ROD, a supplemental EIS would be required for this proposed action.
- o → Discussions with the Project Sponsors indicate this is not their preferred COA.

▪ **COA-2 → Two combined EISs; 1) SSP Focused (LWI/P-983 and TPS/P-925) and 2) COMSUBPAC Focused (EMMR and SPE/P-834)**

▪ **Purpose and Need:**

- 1) → SSP Focused: To maintain existing security posture and provide necessary security enhancements for Naval Base Kitsap at Bangor. The proposed action is needed to protect Strategic Weapons Systems from increased and evolving threats. Protection of strategic military assets is a vital national security concern. Aggressive security improvements within the Navy pre-date the USS Cole incident and the terrorist attacks of September 11, 2001, and continue today. The Navy continues to improve security at the Bangor waterfront to protect its submarines and critical support facilities.
- 2) → COMSUBPAC Focused: The purpose is to provide support and maintenance for *Seawolf* and *Ohio*-class submarines and to enhance homeporting capabilities at Naval Base Kitsap at Bangor to enable these assets to support the mission of COMSUBPAC. The proposed action is needed to provide enhanced and efficient operation and maintenance of these submarines and to alleviate deployment constraints imposed by current SSBN, SSGN and SEAWOLF homeport locations by improving submarine support and facilities.

The documents would be structured the same as COA-1; separate alternatives analyses conducted for each project contained within the overall SSP or COMSUBPAC focused EIS. A combination of preferred alternatives would be chosen in the ROD.

▪ **Pros:**

- o → Projects included in one EIS may not be directly affected by schedule delays in projects covered in the other EIS.
- o → Each project sponsor would have a focused document supporting their projects.
- o → Somewhat streamlines review time for regulatory agencies, tribes, stakeholders and the public.
- o → Reduces documents requiring regulatory and tribal consultations and chain-of-command reviews and endorsements.
- o → Reduces public burden of reviewing multiple documents and attending multiple meetings/hearings.
- o → Reduces technical and legal staff workload to review multiple documents for projects with similar impacts in the same geographic area.
- o → Consistency across two documents with different project sponsors somewhat easier compared to four separate documents.
- o → Reduces some costs as compared to individual EIS costs.
- o → Could utilize existing contract actions with some modifications.
- o → Discussions with SSP staff indicate they may support this COA if amenable to OPNAV N45 and ASN(E,I&E).

▪ **Cons:**



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- → Does not fully address NEPA segmentation issues (15 CFR § 1508.25); increased susceptibility to legal challenges as projects are occurring within same geographic area at same time.
- → Multiple consultation packages submitted to regulatory agencies during the same timeframe. Since Regulatory agencies have limited staff, they may require that all consultations be consolidated (precedent is NMFS consultation with Keyport and NWTRC EISs).
- → Multiple documents submitted for tribal consultation during same timeframe. Tribes may not agree on treaty mitigation for one project when impacts of the other projects are still under negotiation.
- → Delay in one project could affect other projects in the EIS. More than one ROD may be required to support projects on different timelines. For projects that require additional consultation or action, supplemental NEPA documentation would be prepared for components not included in the earlier ROD.
  - → For example, if the design for TPS/P-925 is not sufficiently developed in time to support an FY14 ROD, a supplemental EIS would be required for this proposed action.
- → Modifications to existing Task Orders for SPE/P-834 and LWI/P-983 will be needed.
- → A sponsor specific EIS will not reduce the number of required Clean Water Act permits (Section 10, Section 401/404).
- → Discussions with COMSUBPAC indicate this is not their preferred COA.
- **COA-3 → Individual EISs for LWI/P-983, EMMR, SPE/P-834 and TPS/P-925**
- Purpose and need statements would be developed to support the individual projects. Project focused alternatives analysis and project-specific RODs would be prepared.
- **Pros:**
  - → Individual projects may not be directly affected by schedule delays in another project.
  - → Current contract actions could continue as planned with project-specific modifications as needed.
  - → Each project sponsor would have a focused document supporting one project.
  - → A tribal objection to one project may not necessarily affect other projects.
  - → Project Sponsors support this COA.
- **Cons:**
  - → Does not fully address NEPA segmentation issues (15 CFR § 1508.25); increased susceptibility to legal challenges as projects are occurring within same geographic area with project schedules that overlap to some extent.
  - → Schedule changes in any of the projects may result in overlapping reviews, releases or submittals. Project priorities and business rules would be required, should one project schedule negatively impact another project.
  - → An independent review to ensure consistency among the four documents would be required under this COA adding time and cost to the schedule.

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¶

- → Multiple consultation packages submitted to regulatory agencies during the same timeframe. Since Regulatory agencies have limited staff, they may require that all consultations be consolidated (precedent is NMFS consultation with Keyport and NWTRC EISs). ¶
- → Multiple documents submitted for tribal consultation during same timeframe. Tribes may not agree on treaty mitigation for one project when impacts of the other projects are still under negotiation. ¶

*(end footnote #15)*