

DRAFT
ENVIRONMENTAL ASSESSMENT
For
Revised Integrated Natural Resources Management Plan
At
Pacific Bach Annex of Naval Station Everett
Pacific Beach, Washington

March 2016



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Abstract

Designation: Environmental Assessment

Title of Proposed Action: Integrated Natural Resources Management Plan for Pacific Beach Annex

Project Location: Pacific Beach, Washington

Lead Agency for the EA: Department of the Navy

Affected Region: Grays Harbor County, Washington

Action Proponent: Commanding Officer, Naval Station Everett

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Date: March 2016

The Department of the Navy has prepared this Environmental Assessment in accordance with the National Environmental Policy Act as implemented by the Council on Environmental Quality Regulations and Navy regulations for implementing the National Environmental Policy Act. The Proposed Action would implement a revised Integrated Natural Resources Management Plan for the Pacific Beach Annex of Naval Station Everett that is consistent with the military use of the property to ensure no net loss of military capabilities while providing for sustainable multipurpose uses and conservation of natural resources per the Sikes Act Improvement Act. This environmental assessment evaluates the potential impacts to geological and biological resources resulting from the Preferred Alternative and the No Action Alternative.



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EXECUTIVE SUMMARY

Proposed Action

The proposed action is to adopt and implement a revised Integrated Natural Resources Management Plan (INRMP) consistent with the military use of the property and the goals and objectives established in the Sikes Act (as amended). The goal of the INRMP is to implement an ecosystem based conservation program that provides for conservation and rehabilitation of natural resources in a manner that is consistent with the military mission; integrates and coordinates all natural resources management activities; provides for sustainable multipurpose uses of natural resources; and provides for public access for use of natural resources subject to safety and military security considerations. The management objectives are to integrate forestry management, fish and wildlife management, land management, and management for outdoor recreational opportunities, as practicable and consistent with the military mission and established land uses.

Purpose of and Need for the Proposed Action

The purpose of and need for the Proposed Action is to comply with the Sikes Act and meet the requirements of Department of Defense Instruction 4715.3 *Environmental Conservation Program* and the Office of the Chief of Naval Operations (OPNAV) M-5090.1 *Environmental Readiness Program Manual*. The Sikes Act directs the Secretary of Defense to “carry out a program to provide for the conservation and rehabilitation of natural resources on military installations.” Military installations having significant natural resources must prepare and implement an INRMP. The Sikes Act states the primary purposes of a military conservation program are conservation and rehabilitation of natural resources, sustainable multipurpose use of those resources, and public access to military lands subject to safety requirements and military security (16 USC § 670a, et seq.). The conservation program must be consistent with the mission-essential use of the installation and its lands and not cause a net loss of military land use. The Sikes Act requires the preparation of an INRMP to facilitate the conservation program and states the INRMP shall be prepared cooperatively with the appropriate federal and state agencies, which are U.S. Fish and Wildlife (USFWS) and Washington State Department of Fish and Wildlife (WDFW). Section 101(b)(2) of the Sikes Act (16 USC § 670a(b)(2)) states each INRMP “must be reviewed as to operation and effect by the parties thereto on a regular basis, but not less often than every 5 years.” The 2016 revised INRMP was prepared cooperatively with USFWS and WDFW resulting from review of the Pacific Beach Annex’s existing natural resources management plan prepared in 1991.

Alternatives Considered

The Navy is considering one action alternative (Preferred Alternative) that meets the purpose of and need for the Preferred Alternative and a No Action Alternative. The Preferred Alternative would adopt and implement the revised INRMP. The No Action Alternative would not adopt and implement the revised INRMP and natural resources at the installation would continue to be managed in accordance with the Pacific Beach Annex’s existing natural resources management plan. Projects proposed in the revised INRMP consist of:

- stormwater and erosion control,
- native and non-native vegetation management,
- managing lands for habitat,

- incorporating native vegetation into landscaping,
- creating and maintaining environmental education and interpretive signs or brochures describing natural resources at the Pacific Beach shoreline,
- continuing a region-wide commitment to marbled murrelet population density surveys,
- annually reviewing and updating the INRMP, and
- developing global information system documentation and data in support of the INRMP.

The revised INRMP also identifies objectives and potential future plans to manage storm water runoff and reduce erosion but does not propose these specific projects at this time.

Summary of Environmental Resources Evaluated in the EA

Council on Environmental Quality defines an INRMP as a “major Federal action,” and as such an Environmental Assessment (EA) must be prepared prior to an INRMP’s adoption and implementation. Council on Environmental Quality regulations, the National Environmental Policy Act, and Navy instructions for implementing the National Environmental Policy Act, specify that an EA should address those resource areas potentially subject to impacts. In addition, the level of analysis should be commensurate with the anticipated level of environmental impact. This EA analyzes potential environmental impacts to geological resources and biological resources. No significant adverse effects to geological and biological resources would result from the Preferred Alternative; the Preferred Alternative would result in potential beneficial effects to geological resources and biological resources. Because potential adverse impacts resulting from the Proposed Action were considered and determined to be negligible or nonexistent, no additional resource areas are analyzed in detail in this EA. No mitigation is proposed in this EA.

Summary of Potential Environmental Consequences of the Action Alternatives

Geological Resources. Storm water management objectives and projects identified in the revised INRMP would be anticipated to result in a beneficial effect to geological resources by diverting surface and groundwater flows from the bluffs at and adjacent to the Pacific Beach Annex, thereby slowing erosion of the bluffs. Under the No Action Alternative, the Navy would continue to implement the existing natural resources management plan, which recommends measures to control erosion and surface runoff from structures. The Preferred Alternative and No Action Alternative would not result in a significant adverse impact to geological resources.

Biological Resources. The Preferred Alternative would result in an improvement to biological resources resulting from establishment of native plant species and controlling non-native species, increasing and improving wildlife habitats, enhanced data collection from surveys and management of biological resources, increased public awareness of local biological resources with the establishment of informational signage, and increased use of native plant species for landscaping at the Pacific Beach Annex. No species listed as threatened and endangered nor their critical habitat is located at the Pacific Beach Annex; no adverse effects to threatened and endangered species would occur. The Preferred Alternative involves no activities that would affect bird species protected under the Migratory Bird Treaty Act. Under the No Action Alternative, the Navy would continue to implement the existing natural resources management plan, which includes recommendations to protect, improve, or expand habitats. The Preferred Alternative and No Action Alternative would not result in a significant adverse impact to biological resources.

Public Involvement

The revised Draft INRMP and Draft EA are being made available for public review and comment. Public comments will be considered in the preparation of the Final revised INRMP and Final EA.

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Preliminary Draft Environmental Assessment
Revised Integrated Natural Resources Management Plan
Pacific Beach, Washington

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Abbreviations and Acronyms

Acronym	Definition
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
DoD	United States Department of Defense
DoN	United States Department of the Navy
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
NEPA	National Environmental Policy Act
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife

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1 Purpose of and Need for the Proposed Action

1.1 Introduction

The Navy proposes to adopt and implement a revised Integrated Natural Resources Management Plan (INRMP) for the Pacific Beach Annex of Naval Station Everett. Council on Environmental Quality (CEQ) defines an INRMP as a “major Federal action,” and as such an Environmental Assessment (EA) must be prepared prior to an INRMP’s adoption and implementation. The United States (U.S.) Department of the Navy (Navy) has prepared this Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA), as implemented by the Council on Environmental Quality (CEQ) Regulations and Navy regulations for implementing NEPA.

1.2 Location

The Pacific Beach Annex is located on the Pacific coast of Washington State. The property covers approximately 52 acres within the unincorporated town of Pacific Beach, in Grays Harbor County. The Pacific Beach Annex property sits on an exposed coastal bluff, and consists of three separate parcels of Navy-owned land (Figure 1).

Presently, the military mission at Pacific Beach consists of establishing and operating a fixed emitter integral to an electronic warfare tactical training range used by Pacific Fleet assets for training. Non-mission related recreational activities also occur at Pacific Beach, consisting of rental houses, RV parking, and a hotel for vacationing service members and their families.

The three fenced parcels of the Pacific Beach property are developed; characterized by buildings and houses, paved single-lane roads and parking areas, and large expanses of lawn. The largest fenced parcel is 32 acres bounded to the east by 1st Street, to the west by the installation boundary on the bluff above the ocean, and to the south by an old Northern Pacific Railroad cut, which is privately owned. Ten rental houses, a hotel, RV parking, Navy administrative buildings, and maintenance facilities are on this parcel. The second fenced parcel consists of 5 acres south of the first parcel and south of the old Northern Pacific Railroad cut. There are six rental houses on this parcel. The third fenced parcel consists of 5 acres on the east side of 1st Street along Chandler Avenue with fourteen rental houses.

Along the western side of the installation, the property boundary extends partway down the bluff face, beyond the existing perimeter fence. This area is steep and heavily vegetated, with bare patches where the ground has eroded and sloughed off. This undeveloped land encompasses approximately 10 acres in total in two separate parcels north and south of the railroad cut.

Lands adjacent to the installation are developed residential properties containing private homes. The Navy does not own or have easements on the beach or on the submerged lands immediately west of the installation; the Pacific Beach installation is entirely an upland property.



Figure 1-1 Pacific Beach Annex - Location Map

1.3 Purpose of and Need for the Proposed Action

The purpose of the proposed action is to meet statutory requirements under the Sikes Act, provide management requirements for species listed under the Endangered Species Act (ESA), and meet the requirements of the Department of Defense (DOD) and Department of the Navy instructions and regulations.

In November 1997, the Sikes Act (16 U.S.C. § 670a et seq.) was amended to require the Secretary of Defense to carry out a program to provide for the conservation and rehabilitation of natural resources on military installations. To facilitate this program, the amendments require the secretaries of the military departments to prepare and implement integrated natural resource management plans for each military installation in the United States unless the absence of significant natural resources on a particular installation makes preparation of the plan for that installation inappropriate.

The principal use of military installations is to ensure the preparedness of the Armed Forces. The Sikes Act requires each installation to prepare an INRMP that provides for the following management activities to the extent that such activities are consistent with the use of the installation for military preparedness.

1. The conservation and rehabilitation of natural resources on the installation
2. The sustainable multipurpose use of the resources, to include hunting, fishing, trapping, and non-consumer uses
3. The public access to installations to facilitate such uses subject to safety requirements and military security.

As required by the Sikes Act, to the extent appropriate and applicable, the plan must provide for:

1. Fish and wildlife management, land management, forest management, and fish- and wildlife-oriented recreation,
2. Fish and wildlife habitat enhancement or modification,
3. Wetland protection, enhancement, and restoration, where necessary for support of fish, wildlife, or plants,
4. Integration of, and consistency among, the various activities conducted under the plan,
5. Establishment of specific, natural resource management goals, objectives, and time frames for the Proposed Action,
6. Sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources,
7. Public access to the military installation that is necessary or appropriate for the sustainable use of natural resources, subject to requirements necessary to ensure safety and military security,
8. Enforcement of applicable natural resource laws (including regulations),
9. No net loss in the capability of the installation's lands to support the military mission of the installation,
10. Such other activities as the Navy has determined are appropriate.

The 2016 revised INRMP was prepared cooperatively with U.S. Fish and Wildlife Service (USFWS) and Washington Department of Fish and Wildlife (WDFW) resulting from review of the Pacific Beach Annex's existing natural resources management plan prepared in 1991 (Navy, 1991).

1.4 Scope of Environmental Analysis

This EA includes an analysis of potential environmental impacts associated with the Preferred Alternative and the No Action Alternative. Effects to the following resources are considered in this EA: geological resources and biological resources.

1.5 Relevant Laws and Regulations

The Navy has prepared this EA based upon federal and state laws, statutes, regulations, and policies that are pertinent to the implementation of the Proposed Action, including the following:

- NEPA (42 U.S.C. sections 4321-4370h), which requires an environmental analysis for major federal actions that have the potential to significantly impact the quality of the human environment
- CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] parts 1500-1508)
- Navy regulations for implementing NEPA (32 CFR part 775), which provides Navy policy for implementing CEQ regulations and NEPA
- Clean Air Act (CAA) (42 U.S.C. section 7401 et seq.)
- Clean Water Act (CWA) (33 U.S.C. section 1251 et seq.)
- Coastal Zone Management Act (CZMA) (16 U.S.C. section 1451 et seq.)
- National Historic Preservation Act (NHPA) (54 U.S.C. section 306108 et seq.)
- Endangered Species Act (ESA) (16 U.S.C. section 1531 et seq.)
- Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (16 U.S.C. section 1801 et seq.)
- Marine Mammal Protection Act (MMPA) (16 U.S.C. section 1361 et seq.)
- Migratory Bird Treaty Act (MBTA) (16 U.S.C. section 703-712)
- Bald and Golden Eagle Protection Act (16 U.S.C. section 668-668d)
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risks
- EO 13175, Consultation and Coordination with Indian Tribal Governments

A description of the Proposed Action's consistency with these laws, policies and regulations, as well as the names of regulatory agencies responsible for their implementation, is presented in Chapter 5 (Table 5-1).

1.6 Public and Agency Participation and Intergovernmental Coordination

Regulations from the Council on Environmental Quality (40 CFR part 1506.6) direct agencies to involve the public in preparing and implementing their NEPA procedures. The Navy has prepared the revised

INRMP in cooperation with USFWS and WDFW. The revised Draft INRMP and Draft EA are being made available for public review and comment. Public comments will be considered in the preparation of the revised Final INRMP and Final EA.

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2 Proposed Action and Alternatives

2.1 Proposed Action

The Proposed Action would adopt and implement the revised Pacific Beach Annex INRMP prepared in 2016. The revised INRMP would implement an ecosystem-based conservation program that would ensure the sustainability of ecosystems that encompass the installation and ensure no net loss in the capability of installation lands to support the military mission at Pacific Beach.

2.2 Alternatives Carried Forward for Analysis

This EA analyzes adopting and implementing a revised INRMP (Preferred Alternative) and the No Action Alternative.

2.2.1 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. Natural resources would continue to be managed at the Pacific Beach Annex in accordance with the existing natural resources management plan (Navy, 1991). The plan provides an inventory of natural resources at the location and provides recommendations for managing the resources, including land management, fish and wildlife management, and outdoor recreation management. As required by NEPA, the No Action Alternative is carried forward for analysis in this EA and provides a baseline for measuring the environmental consequences of the action alternatives.

2.2.2 Adopt and Implement a Revised INRMP (Preferred Alternative)

The Pacific Beach Annex revised INRMP would implement an ecosystem-based conservation program that would ensure the sustainability of ecosystems that encompass the installation and ensure no net loss in the capability of installation lands to support the military mission at Pacific Beach Annex. Projects identified in the revised INRMP consist of:

- *Stormwater and Erosion Control.* Evaluation of erosion problems and implementation of projects to address stormwater runoff and bluff erosion periodically through facilities maintenance actions.
- *Native and Non-Native Vegetation Management.* Establishment of native species and developing growing conditions that deter invasive species to rehabilitate natural diverse habitat and establish native plant species while controlling invasive species.
- *Managing Lands for Habitat.* Reducing fragmentation, increasing habitat diversity, and maintaining wildlife travel corridors to decrease or mitigate habitat damaging agents to reduce habitat degradation (e.g. reduce the spread of disease, mitigate susceptibility to windthrow, etc.) and contribute to developing quality habitat for a variety of species.
- *Landscaping.* When possible and as opportunities arise, incorporation of native vegetation into landscaping.
- *Natural Resources Interpretative Signs.* Creation and maintenance of environmental education/interpretive signs or brochures describing the natural resources existing off the Pacific Beach Annex shorelines.

- *Navy Region Northwest Marbled Murrelet Density Surveys*. Continuation of region-wide commitment to collect winter density data to contribute to at-sea winter population estimates and population trends.
- *Pacific Beach Annex INRMP*. Annual review and update of the INRMP including review for operation and effect at least every five years.
- *Pacific Beach Annex INRMP Mapping*. Development of GIS documentation and data in support of the INRMP.

2.2.3 Comparison of Alternatives

The revised INRMP prepared in 2016 differs from the 1991 natural resources management plan in that the revised INRMP identifies specific projects for implementation, in addition to recommendations, and entails the utilization of current GIS and internet-based technologies for natural resources management that were not available at the time the existing natural resources management plan was prepared. Whereas the existing natural resources management plan provides recommendations for stormwater and erosion control, the revised INRMP identifies these as projects to be implemented. The revised INRMP also identifies habitat improvement and expansion for wildlife as a project for implementation. Administratively, the revised INRMP also differs from the existing management plan in that it provides for annual review and updates of the INRMP for operation and effect a minimum of every five years and identifies responsibilities of stakeholders within the Navy and additional stakeholders, including USFWS, WDFW, and Native American Tribes. The revised INRMP is also guided by and current with the requirements of policies and procedures that were not in existence in 1991, including the 1994 *Memorandum on Ecosystem Management in DoD*, the 2013 *DODINST 4715.03 Department of Defense Manual*, the 2002 *Memorandum on Implementation of Sikes Act Improvement Amendment: Updated Guidance* and its supplement of 2004, the 2014 *OPNAV M-5090.1 Environmental Readiness Manual*, and the 2006 *Guidelines for Preparing Integrated Natural Resources Management Plans for Navy Installations*. These policies and guidance documents define review and revision processes for the INRMP and the integration of the INRMP with other management plans, including the following plans of Naval Station Everett, which include the *Pacific Beach Annex: Installation Integrated Cultural Resources Management Plan*, *Integrated Pest Management Plan*, and *Encroachment Action Plan*.

3 Affected Environment and Environmental Consequences

This chapter presents a description of the environmental resources and baseline conditions that could be affected from implementing the alternatives and an analysis of the potential direct and indirect effects of each alternative.

All potentially relevant environmental resource areas were initially considered for analysis in this EA. In compliance with NEPA, CEQ, and 32 CFR part 775 guidelines, the discussion of the affected environment (i.e., existing conditions) focuses only on those resource areas potentially subject to impacts. Additionally, the level of detail used in describing a resource is commensurate with the anticipated level of potential environmental impact. This EA analyzes potential environmental impacts to geological resources and biological resources. The potential impacts to the following resource areas are considered to be negligible or non-existent under the Preferred Alternative or No Action Alternative so they are not analyzed in detail in this EA:

Air Quality: Effects on air quality from implementation of the Preferred Alternative and No Action Alternative would be limited to mobile sources. As described in 40 CFR Part 51, Determining Conformity of General Federal Actions to State or Federal Implementation Plans (the "General Conformity Rule"), all federal actions occurring in air basins designated in nonattainment or in a maintenance area must conform to an applicable implementation plan. Grays Harbor County is designated an attainment area for all criteria pollutants and the General Conformity Rule does not apply.

Cultural Resources: Thirty existing "Capehart Era" family housing structures on the installation are eligible for listing on the National Register of Historic Places. In 2004, the Advisory Council on Historic Preservation issued a Program Comment (Advisory Council on Historic Preservation 2004) that addresses this type of housing structure on Air Force and Navy bases. No further consultation with the Advisory Council on Historic Preservation or State Historic Preservation Officer is required for these structures. No archaeological sites have been found on the surface of Pacific Beach because of previous, extensive ground disturbance associated with development of the site. Subsurface archaeological sites may exist in undisturbed pockets of soil (Navy, 2013). The revised INRMP indicates that future storm water control activities would be pursued to reduce erosion, particularly at the bluff. Such activities would include grading and could potentially encounter subsurface soils where archaeological sites may be present. Under the Preferred Alternative and No Action Alternative the Navy would continue to consult under Section 106 of the NHPA when appropriate on individual actions related to natural resource management that could have an adverse effect on cultural resources.

Water Resources: Storm water management projects and objectives identified in the revised INRMP are anticipated to result in a beneficial effect to water resources by diverting surface and groundwater flows from the bluffs along the western boundary of the Pacific Beach Annex, thereby slowing erosion of the bluffs and associated surface water effects.

Land Use: The Preferred Alternative and No Action Alternative would result in no change to or inconsistencies with existing land use designations.

Visual Resources: The Preferred Alternative would have a negligible impact on visual resources resulting from the establishment of environmental educational and interpretive signs at the Pacific Beach Annex. However, these signs would be non-intrusive and consistent with the recreational aesthetic of the location. The signs would be maintained to prevent deterioration.

Hazardous Materials and Wastes: The Preferred Alternative and No Action Alternative involve no hazardous materials usage, handling, transport, or disposal of hazardous materials and wastes.

Airspace: The Preferred Alternative and No Action Alternative would have no impact on airspace.

Noise: The Preferred Alternative and No Action Alternative would result in no noise impacts.

Storm Water Management: Storm water management objectives and projects identified in the revised INRMP are anticipated to result in improvements to storm water management infrastructure. These activities may include repairing storm drain pipes; installing new sections of storm drain pipe; cleaning the storm drain system; installing catch basins; cleaning and flushing catch basins; creating swales along the top of the bluff to capture runoff; and planting native vegetation where ground disturbance occurred. Additional work includes site grading and drainage elevation adjustments to achieve long-term drainage solutions for problem areas, addressing surface water ponding by draining water towards catch basins, establishing additional French drains, and investigating and addressing subsurface flow that exits on the bluff face.

Transportation: The Preferred Alternative and No Action Alternative involve no activities that would affect traffic patterns or alter or create new transportation routes in the air, land, or sea.

Public Health and Safety: The Preferred Alternative and No Action Alternative involve no activities or operations that have the potential to affect the safety, well-being, or health of members of the public.

Socioeconomics: The Preferred Alternative and No Action Alternative involve no activities that could affect population, income, or housing of populations.

Environmental Justice: The Preferred Alternative and No-Action Alternative would have no adverse human health or environmental effects and therefore would have no disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

3.1 Geological Resources

This discussion of geological resources includes topography, geology, and soils of a given area. Topography is typically described with respect to the elevation, slope, and surface features found within a given area. The geology of an area may include bedrock materials, mineral deposits, and fossil remains. The principal geological factors influencing the stability of structures are soil stability and seismic properties. Soil refers to unconsolidated earthen materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility determine the ability for the ground to support structures and facilities. Soils are typically described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use.

3.1.1 Affected Environment

The following discussions provide a description of the existing conditions for each of the categories under geological resources at Pacific Beach Annex.

3.1.1.1 Topography

There are erosion hazards in terms of public safety and loss of installation land, because the bluff on which the installation was constructed is susceptible to natural erosion processes which may be exacerbated by surface runoff from the installation. Slope failures have occurred along the western edge

of the property. On the steep portions of the cliff, shallow earth masses occasionally detach and slough off due to the constant weathering forces of wind and rain. On the relatively flat installation surface, downward percolation of rain is arrested by a thick layer of clay with slow permeability. This causes soil saturation and subsequent weakening of the overlying soil structure. Erosion occurs when the top soil layers become oversaturated and fail. Over the years, studies have been undertaken and projects have occurred to improve surface drainage and address bluff erosion (e.g., NAVFAC, 1976; Twelker and Associates 1978; Soil Conservation Service, 1982). Most recently, in 2010, work was performed (described below in Section 4.3.1) to collect surface runoff and convey it downslope in a manner that reduces erosion of the bluff face.

3.1.1.2 Geology

Pacific Beach is located within an active earthquake and tsunami zone and is within an area considered to be at moderate risk for earthquakes. A modeled tsunami inundation map created by Washington Department of Natural Resources (Walsh et al., 2000) indicates that the beach below the bluff and lower elevation areas south of the installation would be inundated with water in a tsunami but the bluff where the installation sits would not.

3.1.1.3 Soils

The Soil Conservation Service published a "Soil Survey of Grays Harbor County Area, Pacific County, and Wahkiakum County Washington" in 1986 (Pringle, 1986). Only the soil series Halbert muck, is found within the Pacific Beach property. This soil series is characterized as shallow and poorly drained. Typically, in undisturbed conditions, the surface is covered with a mat of needles and twigs about 5 inches thick. The upper layer is black muck about 11 inches thick. The next layer is silty clay loam about 15 inches thick over a indurated, continuous iron pan about 1 inch thick. The next layer is silty clay loam about 7 inches thick. Below this to a depth of 60 inches or more is extremely gravelly sandy loam. Depth to the iron pan ranges from 20 to 40 inches below the surface of the muck. Permeability of this soil series is moderately slow above the iron pan and very slow through it. Available water capacity is high. Runoff is slow or ponded. The majority of the mat of needles and twigs and black muck of Halbert muck soil was removed during the original construction of the installation, leaving infertile subsoil as the topsoil.

3.1.2 Environmental Consequences

This analysis focuses on effects to geological resources from the alternatives, with an emphasis on bluff erosion as the primary geological concern at the project site.

3.1.2.1 No Action Alternative

Under the No Action Alternative, the Preferred Alternative would not occur and the Navy would continue to implement the existing natural resources management plan. The existing natural resources management plan includes no specific projects to address storm water and bluff erosion but makes a series of recommendations, including, but not limited to, identifying erosion control standards in construction contracts, timing any construction activities to occur during the dry season, planting vegetation cover at exposed soils, and capturing and properly channeling greater quantities of surface runoff from structures. Therefore, no significant impacts to geological resources would occur with implementation of the No Action Alternative.

3.1.2.2 Preferred Alternative

Storm water management objectives and projects identified in the revised INRMP would be anticipated to result in a beneficial effect to geological resources by diverting surface and groundwater flows from the bluffs at and adjacent to the Pacific Beach Annex, thereby slowing erosion of the bluffs. These activities may include repairing storm drain pipes; installing new sections of storm drain pipe; cleaning the storm drain system; installing catch basins; cleaning and flushing catch basins; creating swales along the top of the bluff to capture runoff; and planting native vegetation where ground disturbance occurred. Additional work may include site grading and drainage elevation adjustments to achieve long-term drainage solutions for problem areas, addressing surface water ponding by draining water towards catch basins, establishing additional French drains, and investigating and addressing subsurface flow that exits on the bluff face. The establishment of interpretive signage would result in negligible soil disturbances from the installation of sign posts. Therefore, the Preferred Alternative would not result in a significant adverse impact to geological resources.

3.2 Biological Resources

Biological resources include living, native, or naturalized plant and animal species and the habitats within which they occur. Plant associations are referred to generally as vegetation, and animal species are referred to generally as wildlife. Habitat can be defined as the resources and conditions present in an area that support a plant or animal. This section addresses terrestrial vegetation and wildlife.

3.2.1 Regulatory Setting

Special-status species, for the purposes of this EA, are those species listed as threatened or endangered under the Endangered Species Act (ESA) and species afforded federal protection under the Migratory Bird Treaty Act (MBTA).

The purpose of the ESA is to conserve the ecosystems upon which threatened and endangered species depend and to conserve and recover listed species. Section 7 of the ESA requires action proponents to consult with the U.S. Fish and Wildlife Service (USFWS) or National Oceanic and Atmospheric Administration (NOAA) Fisheries to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species, or result in the destruction or adverse modification of designated critical habitat. Critical habitat cannot be designated on any areas owned, controlled, or designated for use by the DoD where an INRMP has been developed that, as determined by the Department of Interior or Department of Commerce Secretary, provides a benefit to the species subject to critical habitat designation.

Birds, both migratory and most native-resident bird species, are protected under the MBTA, and their conservation by federal agencies is mandated by EO 13186 (Migratory Bird Conservation). Under the MBTA it is unlawful by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, kill, or possess migratory birds or their nests or eggs at any time, unless permitted by regulation.

3.2.2 Affected Environment

The following discussions provide a description of the existing conditions for each of the categories under biological resources at the Pacific Beach Annex.

3.2.2.1 Terrestrial Vegetation

Vegetation on the installation presently consists mostly of lawn grass. Ornamental trees, shrubs, and grasses have been planted. Shore pines separate the individual RV sites in the RV camping area. At the north end of the installation there are a few tall spruce and pine trees. Within the main resort compound and housing areas there are no trees. There are ornamental plants (e.g, pampas grass) and evergreen shrubs near the buildings. A heavy growth of blackberries, fern species, salal, small pine and spruce trees, and other vegetation occurs outside the fence line on the bluff bordering the coastal edge of the installation, in the ravines, and on adjacent lands. In 2010, sitka spruce trees, salal, Pacific wax myrtle and evergreen huckleberry were planted in a work area along the top of the bluff outside the fence, where excavation occurred to address surface runoff and erosion. The regular lawn mowing, maintenance of landscape plants, and perimeter brush cutting likely prevent invasive plants from becoming established within the installation fenceline.

3.2.2.2 Terrestrial Wildlife

Because the installation is developed, there are not habitat conditions suitable for supporting populations of wildlife. Staff working at the Pacific Beach Resort report seeing deer, raccoons, mountain beaver, Canada geese, gulls, herons, bald eagles, hawk species, American crows, robins, Stellar jays, and barn swallows on the property.

Pacific Beach is within the Pacific flyway; a north-south route for many migrating bird species traveling between northern breeding grounds and southern wintering areas. Pacific Beach lies to the south of the Olympic Peninsula, which is dominated by 60–100-year-old Douglas fir forests with some trees well over 150 years old. A number of neotropical migratory birds breed primarily in these conifer forests and may be occasional visitors to Pacific Beach as they migrate between this breeding habitat and southern wintering areas. These species include olive-sided flycatchers, Cassin's vireo, Townsend's warbler, and the western tanager. Black-headed grosbeak, rufous hummingbirds, Pacific-slope flycatchers, Swainson's thrush, house wrens and other species could also potentially be transient visitors to the installation because of nearby habitat. Birds that have been observed on the installation are listed above.

The most recent Birds of Conservation Concern (BCC) list, published by USFWS (2008) identifies 32 bird species in the Northern Pacific Forest Region, which includes Pacific Beach. Some of these species may fly over or be occasional visitors to the installation.

There is little suitable cover or perching vegetation for birds at Pacific Beach. The trees and vegetation along the western and northern perimeter of the installation are likely used to some extent by migrating birds. The vegetation outside the fence may provide nesting habitat for songbirds. Migrating shorebirds such as Western sandpiper, Dunlin, short-billed and long-billed dowitchers and plover species use the ocean beaches adjacent to the installation during their migrations.

Marbled murrelets, which are Federal and State threatened, could fly over the installation during nesting season when the birds are traveling between inland nesting sites and nearshore waters to forage for fish to feed their young. The nesting period is defined as extending from April 1 to September 23 (USFWS, 2012). During the winter non-nesting period, the birds are at sea and feed generally on fish and invertebrates in nearshore marine waters (USFWS, 1997).

3.2.3 Environmental Consequences

This analysis focuses on wildlife or vegetation types that are important to the function of the ecosystem or are protected under federal or state law or statute.

3.2.3.1 No Action Alternative

Under the No Action Alternative, the Preferred Alternative would not occur and the Navy would continue to implement the existing natural resources management plan. The existing natural resources management plan includes recommendations beneficial to biological resources, including the Navy entering into agreements with USFWS and applicable state agencies for the management of terrestrial wildlife and their habitats. Other recommendations included in the existing natural resources management plan would protect, improve, or expand beneficial habitats. Therefore, no significant adverse impacts to biological resources would occur with implementation of the No Action Alternative.

3.2.3.2 Preferred Alternative

The Preferred Alternative would result in an improvement to biological resources resulting from establishment of native plant species and controlling non-native species, increasing and improving wildlife habitats, enhanced data collection from surveys and management of biological resources, increased public awareness of local biological resources with the establishment of informational signage, and increased use of native plant species for landscaping at the Pacific Beach Annex. Although marbled murrelets may fly over the Pacific Beach Annex, they are unlikely to perch on any of the installation's structures or vegetation. No species listed as threatened and endangered nor their critical habitat is located at the Pacific Beach Annex; no adverse effects to ESA listed species would occur. The Preferred Alternative involves no activities that would affect bird species protected under MBTA. Therefore, the Preferred Alternative would not result in a significant adverse impact to biological resources.

3.3 Impact Avoidance and Minimization

The Preferred Alternative would not adversely affect environmental resources. Therefore, there would be no mitigation or impact avoidance and minimization measures under the Preferred Alternative.

4 Cumulative Impacts

This section 1) defines cumulative impacts, 2) describes past, present, and reasonably foreseeable future actions relevant to cumulative impacts, 3) analyzes the incremental interaction the proposed action may have with other actions, and 4) evaluates cumulative impacts potentially resulting from these interactions.

4.1 Definition of Cumulative Impacts

The approach taken in the analysis of cumulative impacts follows the objectives of NEPA, CEQ regulations, and CEQ guidance. Cumulative impacts are defined in 40 CFR Section 1508.7 as the impact on the environment that results from the incremental impact of the action when added to the other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

CEQ and U.S. Environmental Protection Agency (USEPA) have published guidance addressing implementation of cumulative impact analyses: *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis* (CEQ 2005) and *Consideration of Cumulative Impacts in EPA Review of NEPA Documents* (USEPA 1999). CEQ guidance entitled *Considering Cumulative Impacts Under NEPA* (1997) states that cumulative impact analyses should

“...determine the magnitude and significance of the environmental consequences of the proposed action in the context of the cumulative impacts of other past, present, and future actions...identify significant cumulative impacts...[and]...focus on truly meaningful impacts.”

Cumulative impacts are most likely to arise when a relationship or synergism exists between a proposed action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with or in close proximity to the proposed action would be expected to have more potential for a relationship than those more geographically separated. Similarly, relatively concurrent actions would tend to offer a higher potential for cumulative impacts. To identify cumulative impacts, the analysis needs to address the following three fundamental questions.

- Does a relationship exist such that affected resource areas of the proposed action might interact with the affected resource areas of past, present, or reasonably foreseeable actions?
- If one or more of the affected resource areas of the proposed action and another action could be expected to interact, would the proposed action affect or be affected by impacts of the other action?
- If such a relationship exists, then does an assessment reveal any potentially significant impacts not identified when the proposed action is considered alone?

4.2 Scope of Cumulative Impacts Analysis

The scope of the cumulative impacts analysis involves both the geographic extent of the effects and the time frame in which the effects could be expected to occur. For this EA, the study area delimits the geographic extent of the cumulative impacts analysis. The study area includes the Pacific Beach Annex property and immediately adjacent properties as described in Section 1.2. The time frame for cumulative impacts centers on the timing of the Preferred Alternative.

Another factor influencing the scope of cumulative impacts analysis involves identifying other actions to consider. Beyond determining that the geographic scope and time frame for the actions interrelate to the proposed action, the analysis employs the measure of “reasonably foreseeable” to include or exclude other actions. For the purposes of this analysis, public documents prepared by federal, state, and local government agencies form the primary sources of information regarding reasonably foreseeable actions. Documents used to identify other actions include notices of intent for EISs and EAs, management plans, land use plans, and other planning related studies.

4.3 Past, Present, and Reasonably Foreseeable Actions

This section considers past, present, and reasonably foreseeable future projects at and near the Pacific Beach Annex. In determining which projects to include in the cumulative impacts analysis, a preliminary determination was made regarding the past, present, or reasonably foreseeable action. Specifically, using the first fundamental question included in Section 4.1, it was determined if a relationship exists such that the resource areas considered in this EA might interact with the affected resource area of a past, present, or reasonably foreseeable action. If no such potential relationship exists, the project was not carried forward into the cumulative impacts analysis. In accordance with CEQ guidance (CEQ 2005), these actions considered but excluded from further cumulative effects analysis are not catalogued here as the intent is to focus the analysis on the meaningful actions relevant to inform decision-making. This cumulative impacts analysis considers activities that have occurred or are reasonably foreseeable to occur within 10 years of present.

4.3.1 Past Actions

Storm Water Management Activities. The Navy conducted activities to improve storm water management at the Pacific Beach Annex in 2010. The activities were undertaken to reduce surface runoff down the face of the bluff, which contributes to erosion, and consisted of repairs to storm drain pipes; installation of new sections of storm drain pipe; visual inspection and cleaning of the entire storm drain system; installation of catch basins and piping to route runoff downslope to the flat area at the railroad grade; creation of a swale along the top of the bluff to capture runoff; installation of erosion control fabric; and planting of native vegetation where ground disturbance occurred.

4.3.2 Present and Reasonably Foreseeable Actions

Keyport Range Complex. The NAVSEA Naval Undersea Warfare Center (NUWC) Keyport Division is extending the Keyport Range Complex. The full scope of Keyport Range Complex activities, including the extension of the Range Complex were included in the Keyport Range Complex EIS and the Northwest Training and Testing EIS (Navy 2010a, b and 2016). Keyport Range training activities include establishing a 10 mi² surf zone on the beach below the Pacific Beach Annex as part of operations conducted in the adjacent Quinault Underwater Tracking Range. Approximately one mile of shoreline, and a surf zone from 0 to 100 ft. water depth are used in support of training exercises. Activities in the surf zone can include shore deployment system testing, remote operation and surveillance of Unmanned Undersea Vehicles, shallow water bathymetry sensing, sub-bottom profiling, Unmanned Aerial Systems testing, and testing a bottom-crawling robotic vehicle in the surf-zone area. A small boat and divers are potentially used as a backup for launch and retrieval of the robotic crawler vehicle. The target shapes, crawler vehicle, and associated support hardware may be transported overland from NUWC Keyport to the surf-zone test area, deployed from a truck, and recovered during low tide.

Electronic Warfare Range. Northwest Training Range Complex activities covered in the Keyport Range Complex EIS (Navy 2010) included a proposal to install and operate an Electronic Warfare (EW) Tactical Training range in Washington. The Northwest Training and Testing EIS (Navy 2010b and 2016) analyzed the concept of a fixed emitter placed on the Olympic Peninsula to enhance electronic combat training. Pacific Beach was chosen as the operational location for the fixed emitter, which will support the EA-18G “Growler” aircraft stationed at Naval Air Station Whidbey Island and other Fleet assets. The emitter will be about 66 feet tall (40-foot tower and 26-foot diameter emitter) and will be installed within the fenced perimeter of Building 104. An EA was prepared in 2014 to analyze the effects of previously unanalyzed components of operating the proposed EW Tactical Training range, including the installation and operation of the fixed emitter at the Pacific Beach Annex and corresponding renovations to Building 104.

Northwest Training and Testing. The Navy identified the need to support and conduct current, emerging, and future training and testing activities in the Northwest and has analyzed these activities in EISs (Navy 2010 and 2016). The proposed action includes mission-related support activities at the Pacific Beach Annex described above for the Keyport Range Complex and Electronic Warfare Range.

4.4 Cumulative Impact Analysis

The following section describes the cumulative impacts to geological and biological resources anticipated to result from the Preferred Alternative in combination with past, present, and reasonably foreseeable future actions.

4.4.1 Geological Resources

4.4.1.1 Description of Geographic Study Area

The ROI for geological resources consists of the Pacific Beach Annex property.

4.4.1.2 Relevant Past, Present, and Future Actions

Past actions that might interact with the affected resource areas of the Preferred Alternative consist of storm water management activities at the Pacific Beach Annex. No applicable present and reasonably foreseeable future actions were identified.

4.4.1.3 Cumulative Impact Analysis

Past storm water management activities have improved surface drainage and channeled and directed water downslope, lessening the saturation of topsoil layers that contribute to bluff erosion. Storm water management objectives and projects identified in the revised INRMP would be anticipated to result in a beneficial effect to geological resources by further diverting surface and groundwater flows from the bluffs, thereby further slowing erosion of the bluffs. Therefore, the Preferred Alternative would not contribute to a significant adverse cumulative impact to geological resources.

4.4.2 Biological Resources

4.4.2.1 Description of Geographic Study Area

The ROI for geological resources consists of the Pacific Beach Annex property and adjacent beach and marine waters.

4.4.2.2 Relevant Past, Present, and Future Actions

Present and reasonably foreseeable actions that might interact with the affected resource areas of the Preferred Alternative consist of the Keyport Range Complex, Electronic Warfare Range, and Northwest Training and Testing. No applicable past actions were identified.

4.4.2.3 Cumulative Impact Analysis

The Preferred Alternative, in combination with past, present, and future actions within the ROI is expected to result in a beneficial cumulative effect to biological resources. Present and reasonably foreseeable actions identified above have the potential to affect marbled murrelets foraging in marine waters offshore of the Pacific Beach Annex during training activities and individuals flying in front of the mobile emitter at Pacific Beach Annex. These activities may affect, but are unlikely to adversely affect marbled murrelets. The Preferred Alternative, by establishing interpretive signage for the public, would result in a beneficial effect to marbled murrelets by increasing public awareness of those who access the beach from the Pacific Beach Annex property. Additionally, data collection from marbled murrelet surveys would be expected to result in improved management capabilities for the species. No adverse effects from the Preferred Alternative would occur. Therefore, the Preferred Alternative would not contribute to a significant adverse cumulative impact to biological resources.

5 Other Considerations Required by NEPA

5.1 Consistency with Other Federal, State, and Local Laws, Plans, Policies, and Regulations

In accordance with 40 CFR section 1502.16(c), analysis of environmental consequences shall include discussion of possible conflicts between the Proposed Action and the objectives of federal, regional, state and local land use plans, policies, and controls. Table 5-1 identifies the principal federal and state laws and regulations that are applicable to the Proposed Action, and describes briefly how compliance with these laws and regulations would be accomplished.

Table 5-1 Principal Federal and State Laws Applicable to the Proposed Action

<i>Federal, State, Local, and Regional Land Use Plans, Policies, and Controls</i>	<i>Status of Compliance</i>
National Environmental Policy Act (NEPA) (42 U.S.C. section 4321 et seq.); CEQ NEPA implementing regulations (40 CFR parts 1500-1508; Navy procedures for Implementing NEPA [32 CFR part 775 and OPNAVINST 5090.1D])	Preparation of this EA has been conducted in compliance with NEPA and in accordance with CEQ regulations and the Navy's NEPA procedures.
Clean Air Act (42 U.S.C. section 7401 et seq.)	Grays Harbor County is in attainment for National Ambient Air Quality Standards. Adoption of the revised Pacific Beach Annex INRMP would not change air quality attainment status or conflict with attainment and maintenance goals established in the state implementation plan. Therefore, a CAA conformity determination is not required.
Clean Water Act (33 U.S.C. section 1251 et seq.)	Adopting the revised INRMP as a management tool under the Preferred Alternative would not require permits/authorizations under the CWA. If management actions may affect navigable waters and waters of the United States, the Navy would obtain any required CWA permits/authorizations.
Coastal Zone Management Act (16 U.S.C. section 1451 et seq.)	Adoption of the revised Pacific Beach INRMP would not result in actions requiring a Coastal Consistency Determination. A Coastal Consistency Determination would be prepared in compliance with the Coastal Zone Management Act, if required by individual management recommendations.
National Historic Preservation Act (Section 106, 16 U.S.C. section 470 et seq.)	Adoption of the revised Pacific Beach Annex INRMP would not constitute an undertaking under NHPA that would have an adverse effect on historic properties since it does not designate any specific activities at specific locations that can be evaluated or consulted for impacts. Thus, consultation with the State Historic Preservation Officer under the NHPA for the adoption of the INRMP is not required. As management decisions are made and project designs developed, the Navy would conduct any required consultations under the NHPA.
Endangered Species Act (16 U.S.C. section 1531 et seq.)	The Navy developed the revised Pacific Beach Annex INRMP cooperatively with USFWS and WDFW and determined its adoption would not adversely affect any federally threatened, sensitive, or endangered species. As management decisions are made and project designs developed, the Navy would conduct any required

Table 5-1 Principal Federal and State Laws Applicable to the Proposed Action

<i>Federal, State, Local, and Regional Land Use Plans, Policies, and Controls</i>	<i>Status of Compliance</i>
	consultations under the ESA.
Marine Mammal Protection Act (16 U.S.C. section 1361 et seq.)	Adoption of the revised Pacific Beach Annex INRMP would not affect marine mammals protected under the Marine Mammal Protection Act.
Migratory Bird Treaty Act (16 U.S.C. sections 703-712)	Adoption of the revised Pacific Beach Annex INRMP would not adversely affect birds under the Migratory Bird Treaty Act. Consultation with USFWS is not required.
Magnuson-Stevens Fishery Conservation and Management Reauthorization Act (16 U.S.C. section 1801 et seq.)	Adoption of the revised Pacific Beach Annex INRMP would not adversely affect marine fisheries management under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). As management decisions are made and project designs developed, the Navy would conduct any required consultations under the MSA.
Bald and Golden Eagle Protection Act (16 U.S.C. section 668-668d)	Adoption of the revised Pacific Beach Annex INRMP would not adversely affect bald and golden eagles under the Bald and Golden Eagle Protection Act. Consultation with USFWS is not required.
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations	Adoption of the revised Pacific Beach Annex INRMP would not result in disproportionately high and adverse impacts to minority and low-income populations.
Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks	Adoption of the revised Pacific Beach Annex INRMP would have no adverse effect on children’s health and safety. The specific projects included in the revised INRMP do not constitute health risks to children. Appropriate safety measures would be implemented during the implementation of management recommendations as required to ensure the health and safety of children who utilize and visit the Pacific Beach Annex, including the monitoring of any construction activities and the emplacement of physical barriers preventing access by children to construction sites and equipment.
Executive Order 13175, Consultation and Coordination with Indian Tribal Governments	Adoption of the revised Pacific Beach Annex INRMP would not affect treaty rights, sacred sites, burial sites, or other rights to natural resources. The Navy provided the revised INRMP for review and comment to the Hoh, Makah, Quinault, and Quileute tribes.

5.2 Irreversible or Irretrievable Commitments of Resources

Resources that are irreversibly or irretrievably committed to a project are those that are used on a long-term or permanent basis. This includes the use of non-renewable resources such as metal and fuel, and natural or cultural resources. These resources are irretrievable in that they would be used for this project when they could have been used for other purposes. Human labor is also considered an irretrievable resource. Another impact that falls under this category is the unavoidable destruction of natural resources that could limit the range of potential uses of that particular environment.

Implementation of the Proposed Action would involve human labor and an anticipated improvement to natural resources in the form of enhanced knowledge and greater public awareness of natural resources

and enhanced usage of native vegetation in landscaping. Implementation of the Proposed Action would not result in significant irreversible or irretrievable commitment of resources.

5.3 Unavoidable Adverse Impacts

This EA has determined that the Proposed Action would not result in any adverse environmental impacts.

5.4 Relationship between Short-Term Use of the Environment and Long-Term Productivity

NEPA requires an analysis of the relationship between a project's short-term impacts on the environment and the effects that these impacts may have on the maintenance and enhancement of the long-term productivity of the affected environment. Impacts that narrow the range of beneficial uses of the environment are of particular concern. This refers to the possibility that choosing one development site reduces future flexibility in pursuing other options, or that using a parcel of land or other resources often eliminates the possibility of other uses at that site. The Proposed Action would not result in impacts that would significantly reduce environmental productivity or permanently narrow the range of beneficial uses of the environment.

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6 References

- ACHP. (2004). Program Comment for Wherry and Capehart Era Family Housing at Air Force and Navy Bases. Washington, D.C.
- CEQ. (1997). Considering Cumulative Effects Under the National Environmental Policy Act. January.
- CEQ. (2005). Guidance on the Consideration of Past Actions in Cumulative Effects Analysis. June.
- Navy. (1976). Report on Inspection and Evaluation of Slope Erosion. Department of the Navy. Western Division. April, 1976.
- Navy. (1991). Natural Resources Management Plan, Naval Station Puget Sound, Pacific Beach Annex.
- Navy. (2006). Integrated Natural Resources Management Program Guidance for Navy Installations: How to Prepare, Implement, and Revise Integrated Natural Resources Management Plans (INRMPs). April.
- Navy. (2010a). NAVSEA NUWC Keyport Range Complex Extension Final Environmental Impact Statement/Overseas Environmental Impact Statement.
- Navy. (2010b). Final Northwest Training Range Complex Environmental Impact Statement.
- Navy. (2013). Integrated Cultural Resources Management Plan. Naval Station Everett and Special Areas. Volumes 1 and 2.
- Navy. (2014). Pacific Northwest Electronic Warfare Range. Final Environmental Assessment. September.
- Navy. (2016). Northwest Training and Testing. Final Environmental Impact Statement/ Overseas Environmental Impact Statement.
- Navy. (2016). Integrated Natural Resources Management Plan, Pacific Beach Annex, Naval Station Everett.
- Pringle, Russell F. 1986. Soil Survey of Grays Harbor County area, Pacific County, and Wahkiakum County, Washington. USDA, Soil Conservation Service.
- Twelker, Neil H. and Associates. 1978. Memo to Mr. Jan Kiaer, Architect, regarding cliff stability at U.S. Naval Oceanographic Base, Pacific Beach, Washington.
- USDA Soil Conservation Service. 1982. Shoreline Erosion Control Plan. August, 1982.
- USEPA. (1999). Consideration of Cumulative Impacts in EPA Review of NEPA Documents. May.
- USFWS. (1997). Recovery Plan for the Threatened Marbled Murrelet (*Brachyramphus marmoratus*) in Washington, Oregon, and California. Portland, Oregon. 203 pp.
- USFWS. (2012). Marbled Murrelet Nesting Season and Analytical Framework for Section 7 Consultation in Washington. June 20, 2012. U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office, Lacey, WA.
- Walsh, Timothy J., et.al. 2000. Tsunami Hazard Map of the southern Washington Coast: Modeled Tsunami Inundation from a Cascadia Subduction Zone Earthquake. Washington Department of Natural Resources, Division of Geology and Earth Resources Geologic Map GM-49 October 2000.

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