

**NAVAL STATION EVERETT
EVERETT, WASHINGTON**



INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN



2016

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Acknowledgements

This document was prepared by James Thompson, Natural Resources Manager, NAVSTA Everett with assistance from Jackie Queen, Installation Environmental Program Director; Steve Murphy, Environmental Engineer; Jennifer Sullivan, Cultural Resources Manager; Linda Wagoner, Natural Resources Manager/EMS Coordinator all of NAVSTA Everett. Assistance was also provided by Cindi Kunz, Senior Natural Resources Specialist, Walter Briggs/Terri Jones, Foresters, of NAVFAC NW, Silverdale, WA.

Technical review was provided by Mr. Jim Muck, Fish & Wildlife Biologist, US Fish and Wildlife Service; Ms. Ruth Milner, District Wildlife Biologist, Washington Department of Fish and Wildlife; and Mr. Sean Callahan, Natural Resource Management Specialist, NOAA – National Marine Fisheries Service.

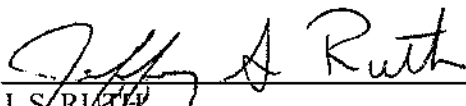
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Commander, Navy Region Northwest

Signature Page

This Integrated Natural Resources Management Plan meets the requirements of the Sikes Act, as amended, 16 United States Code §670(a) et seq.; Department of Defense Instruction 4715.03, Natural Resources Conservation Program; and OPNAV M-5090.1, Environmental Readiness Program Manual.

Approved by:



J. S. RUTH
Rear Admiral, U.S. Navy
Commander, Navy Region Northwest

19 JAN 16
Date

Commanding Officer

Signature Page

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Approved by:



M. A. LAKAMP
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3 FEB 16

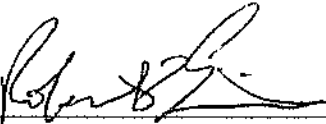
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Washington Department of Fish and Wildlife (WDFW)

Signature Page

This Integrated Natural Resources Management Plan meets the requirements of the Sikes Act, as amended, 16 United States Code §670(a) et seq. and supports Washington Department of Fish and Wildlife policies, management goals, and objectives.

Approved by:



ROBERT EVERITT
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U.S. Fish and Wildlife Service (USFWS)

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This Integrated Natural Resources Management Plan meets the requirements of the Sikes Act, as amended, 16 United States Code §670(a) et seq. and supports U.S. Fish and Wildlife Service policies, management goals, and objectives.

Approved by:



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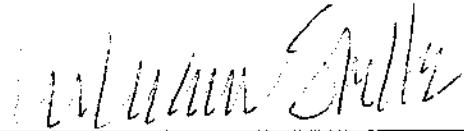
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National Oceanic and Atmospheric Association (NOAA) / National Marine Fisheries Service (NMFS)

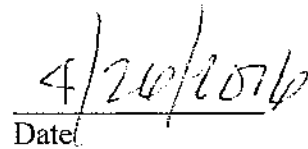
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Approved by:



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Date:

Natural Resources Staff

Signature Page


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Approved by:



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3/14/2016
Date



LINDA WAGONER
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Naval Station Everett

5/3/2016
Date

This Integrated Natural Resources Management Plan will be reviewed annually and updated as needed. A review for operation and effect will be conducted in cooperation with USFWS, NMFS and WDFW at least once every five years. The review for operation and effect will be conducted during the annual INRMP metrics review. Mutual agreement on operation and effect must be documented in writing by the cooperating parties in the form of a new signature page for the INRMP. The new signature page shall be appended to the INRMP and uploaded to the Navy Conservation Web. Reviews and updates are a necessary part of maintaining a proactive management plan. The section below should be used to document reviews and changes to the plan that will improve natural resources management. It is not intended to replace the review for operation and effect.

DATE	SECTION/PAGE	COMMENT	REVIEWER

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Executive Summary

This Integrated Natural Resources Management Plan (INRMP) is a revision of the Naval Station (NAVSTA) Everett INRMP implemented in 2009. This INRMP addresses NAVSTA Everett, a 117 acre site with 74 structures listed in the internet Navy Facilities Asset Data Store (iNFADS) located within the city of Everett, WA. It also considered the Smokey Point Family Support Complex (FSC), a 52-acre site with 14 iNFADS-listed structures located within the City of Marysville, WA (Figure ES-1). This INRMP includes information and management of threatened and endangered species, as well as other species, that may be found on NAVSTA Everett or in the marine waters of Port Gardner Bay and the Snohomish River adjacent to the facility. This INRMP also includes descriptions and management criteria for the Smokey Point FSC. An Environmental Assessment (EA) will be completed under the National Environmental Policy Act (NEPA) to assess the effects to the human environment of implementing this INRMP.

This INRMP is part long term document; part reference document and part implementation plan. It is intended to guide the management of natural resources in support of the military mission while protecting and enhancing natural resources for multiple uses and biological integrity on a daily basis. This INRMP emphasizes ecosystem management rather than management of individual species or arbitrary geographic areas. To the extent practicable, this INRMP is integrated with public ecosystem goals outside the installation's boundaries including Washington's Comprehensive Wildlife Conservation Strategy (WDFW, 2005) .

The purpose of the INRMP is to ensure natural resources conservation measures and military operations on the installation are integrated and consistent with stewardship and legal requirements. This INRMP was developed in partnership with the U.S. Fish and Wildlife Service (USFWS) and the Washington Department of Fish and Wildlife (WDFW), as required and authorized by the Sikes Act, as amended, 16 United States Code (USC) §670(a) et seq. The INRMP must be reviewed for operation and effect at least every five years, but generally will be reviewed on an annual basis and modified as needed to ensure its relevance and continued integration with other management plans or changes in military mission. Updates, in the form of annual increments, will be appended to this document as needed. This INRMP was prepared and will be maintained at Naval Station Everett.

This INRMP is organized per Department of the Navy guidance issued in April 2006 and strives to fully integrate and coordinate the natural resources program with other NAVSTA Everett plans and activities. It establishes goals that represent a long-term vision for the health and quality of the installation's natural resources. The goals and objectives may be updated over time to reflect changing missions and/or environmental conditions. Future changes in mission, training activity, or technology will be analyzed to assess their impact on natural resources. As new installation plans and Department of the Navy guidance and regulations are developed, they will be integrated with the goals, objectives and management actions of this INRMP.

All actions contemplated in this INRMP are subject to the availability of funds properly authorized and appropriated under Federal law. Nothing in this INRMP is intended to be nor may be construed to be a violation of the Anti-Deficiency Act (31 USC 1341 et seq.)

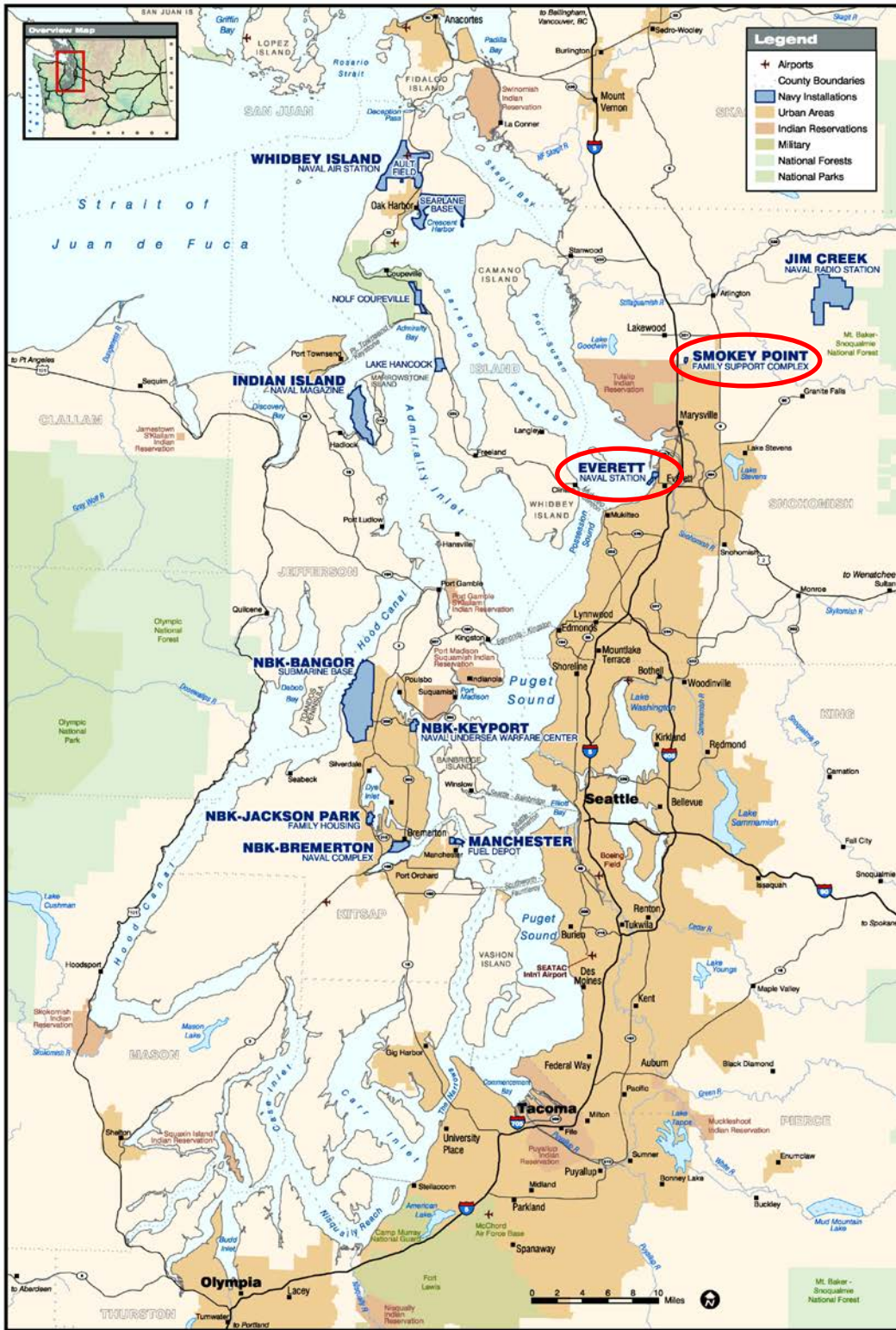


Figure ES-1. Location of Naval Station Everett and the Smokey Point FSC

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NAVSTA Everett INRMP Crosswalk to the Department of Defense Template

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Executive Summary	Executive Summary
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1.b – Scope	1.2 Scope
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2.a.4 – Military Mission	1.7 Military Mission
2.a.5 – Operations and Activities	2.1.4 Operations and Activities
2.a.6 – Constraints Map	2.1.2 Natural Resources Constraints
2.a.7 – Opportunities Map	2.1.3 Natural Resources Opportunities
2.b – General Physical Environment and Ecosystems	2.3 Climate 2.4 Ecoregion 2.7 Ecosystems

2.c – General Biotic Environment	2.2 General Biotic Environment
2.c.1 – Threatened and Endangered Species and Species of Concern	2.5 Threatened and Endangered Species (TES) and Species of Concern
2.c.2 – Wetlands and Deep Water Habitats	2.6 Wetlands
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Chapter 3 – Environmental Management Strategy and Mission Sustainability	3 ENVIRONMENTAL MANAGEMENT STRATEGY AND MISSION SUSTAINABILITY
3.a – Supporting Sustainability of the Military Mission and the Natural Environment	3.5 Supporting Sustainability of the Military Mission and the Natural Environment
3.a.1 – Integrate Military Mission and Sustainability Land Use	3.5.1 Military Mission and Sustainable Land Use
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3.b – Natural Resources Consultation Requirements (Section 7, EFH)	3.6 Natural Resources Consultation Requirements
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Chapter 4 – Program Elements	4 INTEGRATION OF PROGRAM ELEMENTS
4.a. – Threatened and Endangered Species and Species Benefit, Critical Habitat, Species of Concern Management	4.1 Threatened and Endangered Species (TES), Critical Habitat, & Species of Concern
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4.g – Migratory Birds	4.23 Management and Protection Plan for Migratory Birds

4.h – Invasive Species	4.10 Management Plan for the Control of Invasive Species
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4.q – Coastal/Marine	4.9 Management and Protection Plan for the Coastal/Marine environment
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Chapter 5 – Implementation	5 IMPLEMENTATION
5.a – Summary of Project Prescription Development Process	N/A
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5.d – Funding Process	5.3 Funding
Appendix 1. Acronyms	Appendix E: List of Acronyms
Appendix 2. Detailed Natural Resource Prescriptions	N/A; none proposed
Appendix 3. List of Projects	Appendix A: List of Projects
Appendix 4. Surveys; Results of Planning Level Surveys	To be added as they are available
Appendix 5. Research Requirements	N/A
Appendix 6. Migratory Bird Management	4.23 Management and Protection Plan for Migratory Birds
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1 OVERVIEW

1.1 Purpose

The purpose of this Integrated Natural Resources Management Plan (INRMP) is to provide for long term planning that informs and guides Naval Station (NAVSTA) Everett in the management of natural resources in support of the military mission, while protecting and enhancing natural resources for multiple uses, sustainable yield, and biological integrity. The intent of the INRMP is to ensure natural resources conservation measures and military operations on the installation are integrated and consistent with stewardship and legal requirements. This INRMP and the use of the natural resources comply with the legal mandates and are integrated with public ecosystem goals outside the installation's boundaries. The specific intent of this INRMP is to ensure current operations and effects are accounted for, information, goals, objectives and plans are up to date and adequate for the protection of the resources present. Accordingly, this document is a revision based on a review for operation and effect.

OPNAV M-5090.1, Chapter 12-3.3 explicitly requires INRMP development to follow the following principles:

- A shift from single species to multiple species conservation.
- Formation of partnerships necessary to consider and manage ecosystems that cross installation boundaries.
- Use of the best available scientific information and scientifically sound strategies for adaptive management (Figure 1-1).

1.2 Scope

This INRMP addresses NAVSTA Everett, a 117 acre site with 74 structures identified in the Navy's internet Navy Facilities Asset Data Store (iNFADS) located within the city of Everett, WA, and the Smokey Point Family Support Complex (Smokey Point FSC), a 52-acre site with 14 iNFADS-listed structures located in Marysville, WA. Detailed descriptions of the sites, upland and aquatic lands are in Section 2.1.1.

This INRMP guides uses and activities of Tenant Commands and Supported Activities where such uses and activities occur at NAVSTA Everett and the Smokey Point FSC. Activities occurring elsewhere are subject to requirements described in separate INRMPS and/or operational instructions, including Fleet and Afloat guidance.

Naval Radio Station (Transmitting) Jim Creek, Acoustic Research Detachment Bayview (Idaho) and the Pacific Beach Annex are also within the area of responsibility of the Naval Station Everett Commanding Officer. Separate INRMPS have been developed for each of these properties.

Thirteen Navy Operational Support Centers (NOSC), component facilities of the Navy Reserve Component Command, are also under the area of responsibility of the Naval Station Everett Commanding Officer. A draft INRMP Needs Assessment (NAVFAC 2015) determined that INRMPs were not warranted for any of these thirteen NOSC sites.

Another property, Naval Radio Transmission Facility LaMoure (North Dakota) was determined to need an INRMP (NAVFAC Atlantic 2015). The INRMP for this property will be developed as a separate document.

1.3 Goals, Objectives and Plans

This INRMP is structured so that Goals are supported by Objectives, which in turn are supported by Plans. Goals and objectives are generally stated below; however specific species objectives or ecosystem objectives and plans are identified, beginning at Section 4.1.5 under “Management Program Elements”, as well as Section 5 “Implementation” and Section 6, Appendix A, “Project List.”

1.3.1 Goals

A successfully implemented installation natural resources program will meet the following five closely related, but not mutually exclusive goals.

1. Protect, conserve, and manage the watersheds, wetlands, natural landscapes, soils, forests, fish and wildlife, and other natural resources, as vital elements of a natural resources program.
2. Manage natural resources to provide outdoor recreation opportunities.
3. Use and care for natural resources in the combination best serving the present and future needs of the U.S. and its people, with specific attention to long term effects of climate change on the installation.
4. Provide for the optimum use of land and water areas and access thereto while maintaining ecological integrity and insuring no net loss in the capability of military installation lands to support the military mission of the installation.
5. Interact with the surrounding community to develop positive and productive community involvement, participation and educational opportunities (US Navy, 2010).

1.3.2 Objectives

Naval Station Everett’s objectives are to accomplish the following when managing natural resources on Navy lands:

1. Assign specific responsibility, provide centralized supervision and assign professionally trained personnel to this program; and provide natural resource personnel the opportunity to participate in Natural Resources Management (NRM) job-training activities and professional meetings.

2. Develop approaches and plans to protect, conserve, and manage the watersheds, wetlands, natural landscapes, fish and wildlife and other natural resources, as vital elements of a natural resources program.
3. Develop staff expertise in climate change and scope a Climate Change Vulnerability Assessment for the installation.
4. Ensure installation land-use planning is synchronized with ecosystem and species management plans, accommodate findings of on-going surveys and assessment and institutionalize these through development of the installation Encroachment Management Plan (EMP) and land-use/activity siting criteria.
5. Maximize the benefits of the annual increment review process with the Agencies in order to maintain concurrency of the INRMP over time, thereby avoiding extensive re-writing processes and environmental reviews.

INRMP objectives will be evaluated via the annual INRMP evaluation and documented in the Navy's Environmental and Conservation website. This process is discussed further in Section 1.9.

Other Conservation or Natural Resource Plans

Management actions on the installation may contribute to successful management and/or recovery of a species at a broader level. Resource-specific management plans where Navy natural resource management contributes a benefit are acknowledged by reference. Where appropriate, certain elements of these species management plans are adopted by reference, restated within this INRMP and reflected in project requests. Section 5, "Implementation" as well as Section 6, Appendix A, "Project List" capture these elements.

1.4 Responsibilities

1.4.1 Installation Commanding Officer

The NAVSTA Everett Installation Commanding Officer (CO) of shore activities holding Class 1 plant accounts shall:

- a) Act as stewards of natural resources under their jurisdiction.
- b) Integrate natural resources requirements into the day-to-day decision-making process.
- c) Ensure the preparation and implementation of an INRMP and systematically apply the conservation practices set forth in plan.
- d) Appoint, by letter, an installation Natural Resources Manager whose duties include ensuring that the CO is informed regarding: natural resources issues, conditions of natural resources, objectives of the INRMP, and potential or actual conflicts between mission requirements and natural resources mandates.
- e) Implement programs to reduce the potential for collisions between aircraft and birds or other animals if the installation supports a flying mission.
- f) Ensure that current and planned mission activities are effectively coordinated in a timely manner with appropriate natural resource managers.

- g) Ensure incorporation of soil and water conservation measures and landscaping in the preliminary engineering, design, and construction of facilities involving ground disturbance.
- h) Review all non-excess land to identify areas that may be suitable and available for agricultural outleasing or commercial forestry.
- i) Enter into fish and wildlife and outdoor recreation cooperative agreements developed on behalf of the Secretary of Defense as required by the Sikes Act.
- j) Sign the final version of the installation INRMP and new signature pages subsequent to each review for operation and effect.

The NAVSTA Everett CO holds the highest-ranking position at the installation and ultimately is responsible for all aspects of the installation and its many functions. This includes ensuring that the INRMP is developed, implemented, and fully supported. The CO can facilitate the implementation of the INRMP by encouraging support down the chain of command. The CO has to ensure that a process is established for early coordination between the Natural Resources Manager (NRM) and key installation staff. The CO must also ensure that natural resources management is integrated with other installation management activities, as well as with military training and testing activities.

1.4.2 Regional Commanders

Regional Commanders shall:

- a) Ensure that installations comply with DoD, DON, and CNO policy on INRMP and associated NEPA document preparation, revision, and implementation.
- b) Ensure that installations under their control undergo annual informal reviews as well as formal five-year evaluations.
- c) Ensure the programming of resources necessary to maintain and implement INRMPs, which involves:
 - 1) The evaluation and validation of EPR-web project proposals.
 - 2) The funding of installation natural resources management staff.
- d) Participate in the development and revision of INRMPs, which involves:
 - 1) Maintenance of a close liaison with the local/regional USFWS and appropriate state fish and wildlife Agency and other INRMP stakeholders.
 - 2) Endorsement of the INRMP by Regional Commander signature.

1.4.3 Commander, Naval Facilities Engineering Command

NAVFAC shall serve as the technical and contracting support command to N45, CNIC, regions, and installations. NAVFAC and their field offices shall, as requested by the above commands:

- a) Provide technical and contractual support to Regional and Installation Commanders for the preparation, development and implementation of INRMPs and associated NEPA documents.
- b) Facilitate and coordinate the issuance of INRMP related NEPA documentation.
- c) Represent and/or assist N45 with the Sikes Act Coordination Group.

- d) Evaluate and disseminate information concerning new technology, methods, policies, and procedures for use in the development and implementation of INRMPs.
- e) Assist with the development of the INRMP Project Implementation Table, EPR and Legacy project proposals.
- f) Provide technical and administrative guidance for the development and execution of contracts and cooperative agreements to develop and implement INRMPs.
- g) Facilitate the acquisition of INRMP mutual or cooperating agreements between the Navy, USFWS, and state fish and wildlife agencies.
- h) Facilitate resolution of conflicts between the Navy, USFWS, and state fish and wildlife agencies and other stakeholders if necessary.

Independent of command requests, NAVFAC shall:

- a) Provide technical oversight and resources for forest management and agricultural outlease projects.
- b) Provide technical oversight and budget approval of installation fish and wildlife/hunting and fishing fee and permit projects.
- c) Compile, track, and maintain INRMP metrics on the Natural Resources Data Call Station.
- d) Review and sign INRMPs via FAC/FEC Natural Resources Managers to ensure technical sufficiency.

Commander, NAVFAC Northwest shall:

- a) Provide professional natural resources management staffing to the installation via the installation's Public Works Department (PWD).
- b) Provide regional coordination for:
 - 1) NRM requirements with other Federal, State or local professional authorities, including section 7 consultations under the ESA.
 - 2) Provide technical assistance to regional commanders and installations in carrying out their responsibilities.
 - 3) Provide the technical and administrative guidance for the development of cooperative agreements to implement natural resources plans and execute cooperative agreements on behalf of installation commanders upon request.
- c) Develop, manage and execute agricultural out-leasing programs, provide appropriate technical expertise and conservation planning, prepare reports, documents and contracts.
- d) Provide regional coordination of natural resources program funding.

1.4.4 Commander, Navy Installations Command

CNIC shall ensure that installations under their command develop, revise, and implement INRMPs as required, and shall:

- a) Ensure that appropriate Department of Defense (DoD)/Department of the Navy (DON) and CNO policy guidance is utilized by installations to develop, revise, and implement INRMPs.

- b) Ensure the programming of resources necessary to maintain and implement INRMPs, which involves:
 - 1) The review and endorsement of projects recommended for INRMP implementation prior to submittal for signature.
 - 2) The evaluation and validation of EPR-web project proposals.

1.4.5 Chief of Naval Operations, Environmental Readiness Division

Chief of Naval Operations (CNO) shall serve as the principal leader and overall Navy program manager for the development, update, and implementation of INRMPs and shall:

- a) Provide policy, guidance, and resources for the development, update, and implementation of INRMPs and associated NEPA documents.
- b) Represent the Navy on issues regarding development and implementation of INRMPs and delegate responsibility in writing.
- c) Resolve high-level conflicts associated with development and implementation of INRMPs.
- d) Approve all INRMP projects before INRMPs are submitted to regulatory agencies for signature.

1.4.6 Natural Resources Manager

The NAVSTA Everett Natural Resources Manager (NRM) is a NAVFAC NW employee and is designated this duty by the installation Commanding Officer (Appendix G). The NRM is primarily responsible for implementing this INRMP and coordinating natural resources management with other personnel on the installation. Some of the implementation responsibilities include identifying personnel, internal or external to the installation, with expertise to perform the work identified; identifying the appropriate funding source to accomplish the projects; and ensuring installation personnel are familiar with the contents of this INRMP. The Natural Resources Manager is also responsible for ensuring this plan is reviewed in coordination with the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service/National Oceanic and Atmospheric Administration (NMFS), and the Washington Department of Fish and Wildlife (WDFW).

1.4.7 Public Affairs Officer

Naval Station Everett's Public Affairs Officer (PAO) provides a significant link between the INRMP and the on- and off-installation communities. The PAO will facilitate communication between offices across the installation and nearby communities regarding environmental management initiatives. Any proposed communications outside the installation should be discussed with the PAO.

1.4.8 Other Internal Stakeholders - NAVFAC

Other internal stakeholders include **NAVFAC NW Everett Facility Planning** and **NAVFAC NW Everett Facilities Engineering and Acquisition Division**. These divisions will provide early awareness to the NRM of proposed activities and projects at NAVSTA Everett and Smokey Point FSC. They will work with the NRM during project development to ensure proposed projects are consistent with this INRMP, ensure that appropriate environmental analyses are conducted, and see that protective measures are included in project designs prior to on-the-ground activities taking place.

1.5 External INRMP Stakeholders

1.5.1 Other Federal Agencies

The Sikes Act directs DoD to partner with the USFWS in the management of natural resources on DoD installations. The USFWS, along with the Navy and the WDFW, is a signatory to this INRMP and USFWS biologists may be called upon to provide assistance and support to the Natural Resources Manager, if necessary.

The NMFS shares responsibility for implementing the Endangered Species Act (ESA); with USFWS managing land and freshwater species and NMFS managing marine and anadromous species. Though not specifically identified as a required participant in by the Sikes Act, as a practical matter NMFS is included as a signatory to this INRMP.

1.5.2 Tribal Coordination

NAVSTA Everett will seek natural resources project input from tribes whose Usual and Accustomed (U&A) fishing grounds and stations are co-located with waters owned or used by the installation. The tribes listed below were provided an earlier draft (August, 2014) of this INRMP revision for review and comment. No input was received from any tribe.

Usual and Accustomed areas are based on treaties signed by the United States (U.S.) government in which Tribes ceded tracts of land to the U.S. These treaties remain in effect today and often allow the taking of fish or other rights at usual and accustomed fishing grounds and stations. Usual and Accustomed areas vary by Tribe. The following tribes have Usual and Accustomed areas nearby NAVSTA Everett and/or Smokey Point FSC properties covered by this INRMP:

- The Lummi Tribe
- The Stillaguamish Tribe
- The Suquamish Tribe
- The Tulalip Tribes, and
- The Swinomish Tribe

1.5.3 State Agencies

The Sikes Act also directs DoD to partner with the appropriate state fish and game office in the management of natural resources on DoD installations. The WDFW, along with the Navy and USFWS, is a signatory to this INRMP. WDFW biologists may be called upon to provide assistance and support to the Natural Resources Manager, if necessary.

1.6 Authority

1.6.1 Planning Authority

This INRMP is authorized under the Sikes Act, as amended, 16 USC §670(a) et seq. which requires military installations to prepare and implement INRMPs to provide for:

1. Fish and wildlife management, land management, forest management, and fish and wildlife-oriented recreation.
2. Fish and wildlife habitat enhancement or modifications.
3. Wetlands 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 resources management goals and objectives and timeframes for proposed actions.
6. Sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of the fish and wildlife resources.
7. Public access to the military installation that is necessary and appropriate for the use, subject to requirements necessary to ensure safety and military security.
8. Enforcement of applicable natural resources laws and regulations.
9. No net loss in the capability of military installation lands to support the military mission of the installation.
10. Such other activities as the Secretary of the Navy determines appropriate.

The Sikes Act also sets guidelines for the collection of fees for the use of natural resources such as hunting and fishing.

1.6.2 Instructions and Memorandum

The purpose of this document is to meet statutory requirements under the Sikes Act Improvement Act (SAIA), Public Law 105-85, Div. B. Title XXIX, Nov. 18, 1997, 111 Stat 2017-2019, 2020-2022. In November 1997, the Sikes Act, 16 USC §670(a) 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. Over the last several years various guidance documents have been prepared on the interpretation of the Sikes Act Improvement Amendment (SAIA) and on INRMP preparation. Below are listed key DoD and Department of Navy (Navy) Instructions and Memorandum relevant to natural resource management.

- a) *Department of Defense Manual 4715.03, Integrated Natural Resources Management Plan Implementation Manual (November 25, 2013)* - This Manual pertains to both natural resources management on DoD lands. It includes budgeting classifications for funding priorities and detailed information on the intent of INRMPs. Exhibit 1-1 lists the specific contents required in an INRMP document.
- b) *Memorandum on Implementation of Sikes Act Improvement Amendment: Updated Guidance*. This Memorandum of the Under Secretary of Defense, issued on 10 October 2002, provides guidance for implementing the requirements of the Sikes Act in a consistent manner throughout DoD and replaces the 21 September 1998 guidance *Implementation of the Sikes Act Improvement Amendments*. The October 2002 memorandum and its supplement issued in November 2004 emphasize implementing and improving the overall INRMP coordination process and focus on coordinating with stakeholders, reporting requirements and metrics, budgeting for INRMP projects, using the INRMP as a substitute for critical habitat designation, supporting military training and testing needs, and the INRMP review process.
- c) *The Implementation of Sikes Act Improvement Amendment: Supplemental Guidance Concerning Leased Lands*, (May 17, 2005). This document provides supplemental guidance for implementing SAIA requirements consistently throughout the Department of Defense. The guidance covers lands occupied by tenants or lessees or being used by others pursuant to a permit, license, right of way, or any other form of permission. INRMPs must address the resource management of all lands for which the subject installation has real property accountability, including leased lands. Installation Commanding Officers may require tenants to accept responsibility for performing appropriate natural resource management actions as a condition of their occupancy or use, but this does not preclude the requirement to address the natural resource management needs of these lands in the installation INRMP.
- d) *Memorandum of Understanding (MOU) between the U.S. Department of Defense, U.S. Fish and Wildlife Service and the Association of Fish and Wildlife Agencies*. (July 29 2013). This Tripartite MOU furthers a cooperative integrated natural resource management program on military installations and furthers cooperative relationships between the U.S. Department of Defense, U.S. Department of the Interior Fish and Wildlife Service, and state fish and wildlife agencies acting through the Association of Fish and Wildlife Agencies in preparing, reviewing, revising, updating and implementing Integrated Natural Resource Management Plans for military installations.
- e) *OPNAV M-5090.1, Environmental Readiness Program Manual* - Establishes broad policy and assigns responsibilities for the Naval Natural Resources Program. Naval Facilities Engineering Command (NAVFAC) is assigned overall program management responsibility with authority to establish, coordinate, and promulgate the program; to issue appropriate instructions to the Navy installations for implementation of the various natural resources programs; and to provide

professional natural resources services and technical assistance, through Engineering Field Activities, to Navy and Marine Corps Installations. It also directs major claimants and intermediate commands to ensure that subordinate commands support natural resources programs on installations under their control.

- f) *Guidelines for Preparing Integrated Natural Resources Management Plans for Navy Installations (April 2006)*. This guidance provides natural resources managers at Navy installations with an interpretation of what processes are needed to prepare INRMPs, including the INRMP template. This document is divided into three sections. The first section suggests a process to develop an INRMP. The second section addresses traditional technical areas to be included in the INRMP. The third section includes a discussion on implementing the INRMP. Of particular value within this guidance is a comprehensive list of Laws, Regulations, Executive Orders, templates and instructions applicable to this INRMP, listed in Appendix E.

1.7 Military Mission

1.7.1 NAVSTA Everett

The mission of NAVSTA Everett is to maintain and operate facilities and provide essential maintenance, quality of life services and operational and material support to tenant activities and U. S. Navy operating forces. Naval Station Everett is one of four major naval shore activities in the Puget Sound region (Figure ES-1), along with Naval Air Station Whidbey Island, Naval Base Kitsap-Bangor and Naval Base Kitsap-Bremerton.

1.7.2 Smokey Point FSC

The main Exchange and Commissary, as well as the Navy Lodge, Education Center and financial and support services, are located on the Smokey Point FSC.

NAVSTA Everett and the Smokey Point FSC host the following Tenant Commands & Supported Activities:

Tenant Commands

1. Afloat Training Group Pacific Northwest
2. Branch Medical Clinic, Everett
3. Center for Information Dominance
4. Center for Surface Combat Systems
5. Commander, Carrier Strike Group NINE
6. Commander, Destroyer Squadron NINE
7. Commander, U.S. Naval Air Force Representative
8. Defense Commissary Agency, Smokey Point
9. Defense Logistics Agency Distribution Puget Sound
10. Fleet and Industrial Supply Center Detachment, Everett
11. 13. Military Sealift Command Representative

12. Naval Computer and Telecommunications Area Master Station Pacific
13. Naval Criminal Investigative Service, Everett
14. Navy College Office, Everett
15. Navy Exchange
16. Navy/Marine Corps Intranet, Everett
17. Navy Operational Support Center, Everett
18. Naval Legal Service Office, Everett
19. Navy Public Affairs Support Element, Everett
20. Navy Region Northwest, Reserve Component Command
21. Office of Personnel Management, Everett
22. Port Security Unit 313
23. Puget Sound Naval Shipyard and Intermediate Maintenance Facility, Everett
24. Regional Legal Service Office, Everett
25. Regional Services Office Pacific Northwest
26. Space and Naval Warfare Systems Command, Everett
27. Transient Personnel Unit

Supported Activities

Supported Activities are subject to the requirements of this INRMP while in-port. Once any of the listed Supported Activities puts to sea they operate under Fleet or Afloat guidance.

1. USS NIMITZ (CVN 68)
2. USS SHOUP (DDG 86)
3. USS MOMSEN (DDG 92)
4. USCG HENRY BLAKE (WLM 563)
5. USCG BLUE SHARK (WBP 87360)

1.8 Stewardship and Compliance

Introduction:

The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land... In short, a land ethic changes the role of Homo sapiens from conqueror of the land-community to plain member and citizen of it. It implies respect for his fellow-members, and also respect for the community as such.

– Aldo Leopold, *A Sand County Almanac*

Stewardship of natural resources, the approach acknowledged in OPNAV M-5090.1, Chapter 12, reflects a “Land Ethic” that was first described coherently in 1949 in a book written by Professor Aldo Leopold. Aldo Leopold (1887–1948) joined the US Forest Service in 1909 and later authored the first know comprehensive management plan for the Grand Canyon in 1924. In that

same year he became the associate director for the US Forest Products Laboratory and in 1933 he was appointed Professor of Game Management in the Agriculture Department of the University of Wisconsin, the first post of this type in the country. Though he died in 1948 while fighting a forest fire near his home in rural Wisconsin, his writing was published posthumously and he remains a significant figure within wildlife and natural resource management field.

He is considered to be a father-like figure in the field of environmental sciences, the development of ecological/environmental ethics, and the development of concepts that continue to guide US environmental policy; the integration of hunting laws, wildlife refuges & habitat management plans, the preservation and restoration of ecological diversity, and the development of policy based upon a land ethic which places humanity as a citizen within a biological community, rather than as its conqueror. He described the role of humanity as nature's steward and Leopold was among the first to grasp the comprehensive, landscape scale of the ecosystem management challenges he faced. We face the same challenge today, and this INRMP represents the Navy's contribution to meet this on-going challenge.

As acknowledged in OPNAV M-5090.1, Chapter 12, as a steward of military lands, the Navy recognizes that diverse and functioning ecosystems are critical not only to sustaining species that might be harvested, but also to perpetuation of the many varieties of life forms of which we know little or nothing, as well as to the military mission at NAVSTA Everett. Conservation biology fully recognizes and embraces the many contributions that need to be made by non-biologists to the conservation of biodiversity. In many cases, social values, economics, and political factors have more of an impact on natural resources management than do biological sciences. The Commanding Officer, operational personnel, and other installation personnel, have an influence on environmental conditions. At NAVSTA Everett, they become part of the solution by working with the Natural Resources Manager and integrating their perspectives within the management process of the installation and implementation of this INRMP.

As NAVSTA Everett faces pressures of increasing demands and fewer resources to meet them, stewardship of the environment becomes a very practical issue. Biodiversity, which refers to the variety of life and the ecological processes that sustain it, is critical to the integrity and sustainability of ecosystems. The concepts of biodiversity and biological integrity are central to ecosystem management, and are the basis for NAVSTA Everett's natural resources management. Sustainability within the context of this INRMP is the concept of systemically preserving biodiversity and ensuring the integrity of natural ecosystems over time, while sustaining the military mission. This concept of conservation and sustainability exceeds the definition of compliance, which is simply meeting the minimum requirements of laws and regulations that pertain to the environment. NAVSTA Everett personnel will take an active approach to managing the natural resources of the installation, to integrating all plans and operations into the concepts of conservation, biodiversity, and sustainability of these resources.

Accordingly, no single section or element of this INRMP should be considered in isolation. This INRMP may provide its greatest value when consulted and considered in the broadest possible ecological context and when interpreted liberally to give great weight to the preservation of the aquatic, benthic and avian species, marine, wetland and upland environments and natural resources which the installation encompasses. This INRMP, as a whole, outlines a strategy to

sustain biodiversity and the ecosystem as well as plans for complying with applicable regulations, while sustaining the military mission.

1.9 Review and Update Process

OPNAV M-5090.1, Chapter 12 describes the Navy's direction for implementation of the Sikes Act. One specific requirement is that the NRM conduct an annual review with the cooperating agencies in order to evaluate the efficacy of the installation's INRMP. This evaluation utilizes seven focus areas identified in the Navy's Conservation website (requires CAC and login): <https://eprweb.cnic.navy.mil/eprwebnet/logon.aspx>.

The evaluation includes the following seven focus areas:

- a. Ecosystem Integrity
- b. Listed Species and Critical Habitat
- c. Recreational Use and Access
- d. Sikes Act Cooperation (Partnership Effectiveness)
- e. Team Adequacy
- f. INRMP Implementation
- g. INRMP Support of the Installation Mission

Per Department of Defense (DoD) and Navy policy, natural resources managers shall review the Natural Resources Conservation (NRC) program and INRMPs annually (references (d), (e), and (i), or most current guidance) and complete the NRC Metrics (formerly known as INRMP Conservation Metrics, Annual Reviews or INRMP Metrics) using the Navy Conservation website. The INRMP Annual Reviews will generate Navy conservation program metrics to measure effects of the conservation program on the installation mission and the status of our relationship with cooperating agencies.

The annual evaluation must be completed in cooperation with the appropriate field-level offices of the USFWS, NMFS and WDFW. The cooperating partners will work together to measure both the successes and issues resulting from INRMP implementation. During these reviews, it may be determined that an installation's current INRMP is effective and is not in need of update. With agreement from the cooperating agencies, thorough written documentation of the annual informal evaluations, may be used to substitute for the five-year formal review, and may be documented as a Review for Operation and Effect, thereby reducing the demands on the installation. If an increment is intended to serve as a Review for Operation and Effect, this will be proposed concurrently with the annual INRMP Metrics Review and annual increment.

Minor changes can be made to the INRMP following annual reviews. These minor updates to the INRMP will be captured as an annual Increment and appended to the base INRMP (Annexes E-I of this document). A further benefit of this process is on-going updates may obviate the need for costly and time-consuming updates every five-years. Therefore, it is NAVSTA Everett NRM's

intent to document annual reviews and work with USFWS, NMFS, and WDFW to utilize the annual review process to meet the five-year formal review requirement to the maximum extent feasible.

1.10 Commitment of the U.S. Fish & Wildlife Service and the State of Washington.

No element of the Sikes Act or Sikes Act Improvement Act (SAIA) is intended to either enlarge or diminish the existing responsibility and authority of the USFWS or WDFW concerning fish and wildlife responsibilities on military lands. The Sikes Act requires the INRMPS to be prepared in cooperation with the USFWS and appropriate state fish and wildlife agency (in this case WDFW). An INRMP represents a mutual agreement of the parties concerning the conservation, protection, and management of fish and wildlife resources. Additionally, USFWS and WDFW will review the INRMP for operation and effect at least once every five years in cooperation with NAVSTA Everett. While once every five years is required, an annual review is expected.

The NMFS shares some responsibility for implementing portions of the ESA. Therefore, as a practical necessity, this cooperative management regime is extended to include NMFS and NMFS is included as a signatory to this INRMP, as well as a participant in all subsequent annual and five year reviews.

1.11 Management Strategy

Ecosystem management in DoD draws on a long-term vision of desired future ecological conditions, integrating ecological, economic and social factors. The goal of ecosystem management is to maintain and improve the sustainability and native biological diversity of ecosystems while supporting human needs, including the military mission.

Ecosystem management is an iterative, goal-driven approach to environmental management that is at a scale compatible with natural processes; is cognizant of nature's time frames; recognizes social and economic viability within functioning ecosystems; and is realized through effective partnerships among private, local, state, tribal, and federal interests.

Ecosystem management is a process that considers the environment as a complex system functioning as a whole, not as a collection of parts, and recognizes that people and their social and economic needs are a part of the whole. The ecosystem management approach has the overarching goal of protecting the properties and functions of natural ecosystems. Over the long term, this approach will maintain and improve the sustainability and biological diversity of terrestrial and aquatic ecosystems while supporting sustainable economies and communities. Maintenance of healthy ecosystems supports realistic military training and testing, which in turn promotes mission readiness. A diagram of this process is shown below.

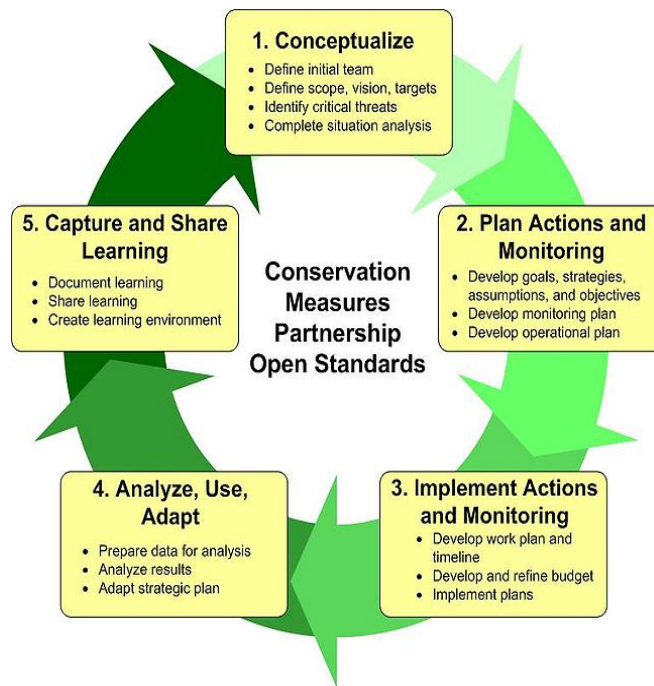


Figure 1-1. Adaptive Management Cycle

1.12 Natural Resources Management Strategy

The natural resources management strategy at NAVSTA Everett consists of:

- Recognizing that the NAVSTA ecosystem is made up of many parts that are inter-dependent.
- Knowledge of *what* resources are present, *where* they are, and *when* they are there.
- Early review of planned actions, assessment of risk, and the development of alternatives.
- Effective communication between the action proponents and the Environmental Division to develop ways to minimize or eliminate the risks.
- Identifying restoration or enhancement opportunities, prioritizing the opportunities, and seeking the funding to carry out these opportunities, within the constraints of the military mission of the installation. Monitoring for success or failure should be a key component of restoration activities.

1.13 Integration with Other Plans, Project Environmental Review & Project Approval

1.13.1 Installation Restoration Programs (IRPs)

Adverse impacts to natural resources addressed in this INRMP may result from the release of hazardous substances, pollutants, and contaminants into the environment. The DON IRP is responsible for identifying CERCLA releases, RCRA releases, and releases under related provisions; considering risks and assessing impacts to human health and the environment,

including impacts to endangered species, migratory birds, and biotic communities; and developing and selecting response actions when a release may result in an unacceptable risk to human health and the environment.

Presently there are no restoration sites on NAVSTA Everett or the Smokey Point FCS, and no active cleanup programs. When appropriate, the regional or installation's natural resources management staff will help the Installation Restoration Program Remedial Project Manager (RPM) identify potential impacts to natural resources caused by the release of contaminants.

Regional or installation natural resources staff will also participate, as appropriate, in the IRP decision-making process by communicating natural resource issues on the installation to the RPM, attending Restoration Advisory Board (RAB) meetings, reviewing and commenting on IRP documents (e.g., Remedial Investigation, Ecological Risk Assessment), and ensuring that response actions, to the maximum extent practicable, are undertaken in a manner that minimizes impacts to natural resources on the installation.

When appropriate, the regional or installation natural resources staff will make recommendations to the RPM regarding cleanup strategies and site restoration. During initial monitoring protocols, the natural resources manager may suggest sampling and testing be accomplished so as to not impact sensitive or critical areas. Also during site restoration, the natural resources manager has the opportunity to recommend site restoration practices that are outlined within the INRMP. Examples include, landfill caps restored to grasslands, excavation areas restore to wetland/pond areas, and treated water located to enhance a pond area.

1.13.2 Integrated Cultural Resources Management Plan (ICRMP)

An ICRMP was completed in 2014 which includes cultural resources management for NAVSTA Everett and the Smokey Point FSC. The ICRMP notes that awareness specifically of paleontological resources is a joint responsibility of both cultural and natural resources programs. The ICRMP also recognizes the need for integration with applicable INRMPs, in part because one important facet of cultural resources management concerns Native American resources and values. These are often associated with natural resources (e.g., salmon, certain plants). The NRM will coordinate plans and actions in this INRMP with the Cultural Resources Manager (CRM) to ensure such plans and actions are in compliance with laws protecting cultural resources, especially paleontological resources and Native American natural resources of value.

1.13.3 Integrated Pest Management Plan

An integrated pest management plan guides pest management at NAVSTA Everett and the Smokey Point FSC (NAVFAC Atlantic 2014). The plan is reviewed by the NRM and approved via signature by the IEPD, providing a mechanism for maintaining awareness of the pest management program. The integrated approach to pest management is a planned program incorporating education, continuous surveillance, record keeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property,

materiel, or the environment. This approach uses targeted, sustainable methods (i.e., effective, economical, and environmentally sound).

The Navy requires the use of State-certified applicators for applying herbicides. Pest problems (e.g., mice, rats) are referred to the Navy's Base Operating Services Contract (BOSC) for resolution. The BOSC must follow the Integrated Pest Management Plan.

Commander, NRNW has established an interagency agreement with USDA Animal & Plant Health Inspection Service, Wildlife Services (APHIS-WS) for wildlife damage management activities across the Region, including NAVSTA Everett. The intent is to control gulls, Canada geese and other birds and animals in order to protect human health and safety and minimize damage to structures. The APHIS program (<http://www.aphis.usda.gov>) is the primary contractor responsible for maintaining required depredation permits. The installation's current Predation Permit is MB692908-4.

1.13.4 Encroachment Action Plan

An encroachment action plan (EAP) was completed in 2008 that includes NAVSTA Everett and the Smokey Point FSC. It provides a methodical approach for working within and outside of the installation's fenceline to prevent encroachment. The plan recommends continued monitoring of the listing of endangered species, and maintaining working relationships with agencies in charge of regulatory issues. The EAP also recognizes the ongoing environmental cleanup initiatives in Port Gardner Bay, and recommends continued monitoring of Department of Ecology's activities and exploration of creative partnerships regarding the nearby cleanup initiatives.

1.13.5 Project Environmental Review and Project Approval

All actions and undertakings undergo environmental project review. Actions and undertakings are routed to NAVFAC NW Environmental Division from the Facilities Engineering Acquisition Division (FEAD), Asset Management (AM) or tenants either directly or through the Work Induction Board (WIB). The WIB generally meets weekly in order to review proposals and implement proposals. It is within the environmental review process that the Environmental Division assures that necessary Cultural Resources reviews and approvals are obtained, necessary Government to Government actions are completed, and all required Clean Water Act (CWA), Rivers and Harbors Act (RHA), Endangered Species Act (ESA) and National Environmental Policy Act (NEPA) approvals are obtained. National Environmental Policy Act assessments are purposefully scheduled as the final environmental review, serve as the final environmental approval and records all stipulations, conditions and required Best Management Practices (BMPs) for the project.

Proposals and requirements/conditions for project or plan approval are prepared and documented on a case by case basis, referring to relevant media BMPs and prudent limitations. Environmental Management Plans are generally required for all projects and reviewed comprehensively to ensure responsibility and standards are clearly articulated and maintained.

As needed, staff consults with agencies in order to obtain necessary approvals, permits and concurrences, and adopts conditions and limitations imposed by agencies by reference as required prescriptions.

2 CURRENT CONDITIONS & USES

2.1 Installation Information

This INRMP addresses natural resources management at the waterfront site referred to as NAVSTA Everett (Figure 2-1) and the Family Support Complex at Smokey Point referred to as Smokey Point FSC (Figure 2-3).

2.1.1 NAVSTA Everett

The Everett waterfront site is a Class I property, meaning a property (including both land and water) that is suitable for the conservation and management of natural resources. The NAVSTA Everett waterfront site is located on Port Gardner Bay, within the City of Everett. This site is the homeport's ship berthing, industrial support, and administrative center and is located on a 117-acre site along the central Everett waterfront (Figure 2-1).

NAVSTA Everett has approximately 1.9 miles of shoreline, which is entirely armored with rip-rap, thus there is no significant inter-tidal area. The site has been entirely built up with fill material, therefore no legacy streams or other enduring natural features exist along the shoreline. The Navy controls a total of 299 acres of water/submerged lands comprised of fee simple ownership of 210 acres, and control over an additional 89 acres for safety and security purposes, per 33 CFR 334.1215 (red shaded area in Figure 2-2).

There are several overwater structures on NAVSTA Everett. The North Wharf is located along the Snohomish River and serves as a storage, parking and lay down area. Pursuant to an Inter-Service Support Agreement (ISSA), the US Coast Guard vessels Blue Shark and Henry Blake regularly dock at the North Wharf, using the small gangway and floating dock section on the southern end of the North Wharf. Piers A, B are oriented toward Port Gardner Bay and support the bulk of installation fleet support operations. Within the East Waterway, Piers D, E, and a small boat launch facilitate both security and port operations. A marina is also located in the East Waterway and is operated by Morale, Welfare and Recreation (MWR) to support recreational users of private watercraft. In total there are approximately 11.5 acres of overwater structures on NAVSTA Everett.

Movable assets on the water include the port security barriers system, compensating-water storage barges, floating boat house structures and a number of security, tug and utility boats.

In terms of upland structures, the internet Navy Facilities Asset Database System (iNFADS) shows 74 buildings on NAVSTA Everett, with a total square footage of 960,468 square of floor space. Development of the installation is guided by the NAVSTA Everett Master Plan (US Navy, 1994b), the Naval Station Everett & Navy Support Complex Installation Appearance Plan (US Navy, 2007) and Naval Station Activities Overview Plan (US Navy, 2009a). These are discussed further in Chapter 3, specifically section 3.4.1.

2.1.2 Smokey Point FSC

The Smokey Point FSC is located approximately 12 miles north of the Everett waterfront site and encompasses 52 acres (Figure 2-3). The Smokey Point FSC is also under the command of NAVSTA Everett and houses the commissary, exchange, Navy Lodge, and MWR. This location provides education and other services to active duty & retired Navy personnel, members of other uniformed services, their families, and other authorized users.

In terms of structures, iNFADS shows 14 buildings, with a total square footage of 281,708 ft² of floor area. The Smokey Point FSC has no over-water structures.

2.1.3 Natural Resources Management Considerations

Within the boundaries of the installation and areas used by the Navy there are significant natural resources. The public considers certain natural resources to be unique, scarce, valuable or vulnerable. Partly in response to these public interest factors, but also in the interest of public safety, health and welfare, selected resources are the subject of legislation which obligates the Navy to plan for and to manage natural resources in the public's interest. Legislation establishes limits, requirements & prohibitions, requires that the Navy assess these natural resources, conduct planning in an interagency setting, and develop implementing instructions, plans and guidelines as a necessary product or deliverable. These implementation programs, plans and interagency agreements dictate how the Navy will manage the significant natural resources and limit actions and options available to the Navy.

2.1.3.1 NAVSTA Everett

Broadly, natural resources include flora, fauna and environments that are of particular value. The natural resources constraints affecting NAVSTA Everett are most significantly coincidental with the marine environment in Port Gardner Bay and the Snohomish River and the fact that facilities are built-out.

Development and management actions on NAVSTA Everett are subject to established instructions, guidance, principles and practices governing responsible stewardship of natural resources. Currently there are no undeveloped or reserved areas on the upland areas of NAVSTA Everett. Therefore significant future development and land uses are likely to require renovation or redevelopment of existing facilities and structures to enable new activities or uses, or to accommodate an increased density or operational tempo. While this affects upland areas of the installation, the shoreline and over water areas of the installation are less constrained.

Shoreline and overwater areas of the installation are not entirely built-out, and opportunities exist to mitigate for or off-set impacts from future shoreline developments and uses. Therefore development or use of the shoreline and over water areas will not necessarily result in an irretrievable conversion of submerged land.

The Endangered Species Act (ESA) listed species' habitats directly affecting NAVSTA Everett are all aquatic. Restrictions based upon species' ESA status, as well as the Marine Mammal

Protection Act (MMPA), the Magnuson-Stevens Fishery and Conservation & Management Act limit uses and development on the installation. Affected areas are identified in Figure 2-2, and shaded red. To a lesser extent the installation is affected by the presence of birds afforded protection under the Bald & Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). These species may be found in any environment.

Areas on NAVSTA Everett subject to the Washington State Shoreline Management Act/ Federal Coastal Zone Management Act (SMA/CZMA) include all areas landward, within 200-feet of the Ordinary High Water Mark (OHWM) of Port Gardner Bay and the Snohomish River (Figure 2-2, shaded green). Activities and development within this area must be reviewed for consistency with the CZMA. This is discussed in greater detail later in this chapter, specifically under Regional Land Use, section 2.1.6.

Other laws and guidance relevant to managing the natural resources at NAVSTA Everett and the Smokey Point FSC include:

- National Environmental Policy Act (NEPA) (42 USC. §4321 et seq.); CEQ NEPA implementing regulations (40 CFR 1500-1508; Navy procedures for Implementing NEPA (32 CFR Part 775 and OPNAV M-5090.1, Chapter 10).
- Clean Air Act (42 USC. §7401 et seq.).
- Clean Water Act (Sections 401 and 404, 33 USC. 1251 et seq.).
- National Historic Preservation Act (Section 106, 54 USC. 306108 et seq.).
- Native American Graves Protection and Repatriation Act (Public Law 101-601; 25 USC 3001-3013).
- Executive Order 11990, Protection of Wetlands.
- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments.

2.1.3.2 Smokey Point FSC

As is the case with NAVSTA Everett, there are no undeveloped or reserved upland areas on the Smokey Point FSC. Therefore future development and land uses are likely to require renovation or redevelopment of existing facilities and structures to enable new activities or uses, or to accommodate an increased density or operational tempo.

Toward the northern end of the property there is a wetland, oriented east-west, that bisects the property. This wetland is protected by a 25-foot wide buffer area on either side. The second reserved area encompasses Hayho Creek and runs southward along the western property boundary. This area is protected by a 50-foot wide Native Vegetation Protection Area. This creek provides habitat for coho, chum and resident cutthroat trout. Additionally, a portion of the northern property line and the entire length of the eastern property boundaries are subject to a 30-foot wide drainage and landscape easement. Finally, there are two sizable stormwater detention ponds also located along the eastern property boundary that are associated with the drainage and landscaping easement (Figure 2-3).

The wetland, its associated buffer and the Native Vegetation Protection Area appear to be the only legacy natural features on the site. The remainder of the site is the product of engineered grading. The Smokey Point FSC may also be impacted by the presence of birds afforded protection under the BGEPA and the MBTA.



Figure 2-1. Property boundary/ownership at Naval Station Everett





NAVAL STATION EVERETT

Naval Station Everett INRMP (2014)



Natural Resources
Constraints & Opportunities Map

Legend

-  Existing Structure
-  Installation Boundary
-  SMP Upland (200' OHWM)
-  Overwater Area

1 inch equals 750 feet
950 475 0 950 Feet

Source:
RSIMS_DATA\GRC_Database\rsims_050329_etc.mdb
Projected Coordinate System: NAD_1983_StatePlane_Washington_North_FIPS_4601_Feet

Figure 2-2. NAVSTA Everett Natural Resources Constraints & Opportunities
(Source: NAVFAC)

Smokey Point FSC

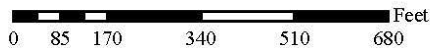
Naval Station Everett INRMP (2014)



Legend

- Installation_Line
- Drainage & Landscape Easement
- Wetland Buffer
- Native Growth Protection Area
- Stormwater Detention
- USAR Property Area

Natural Resources Constraints & Opportunities Map



Source:
RSIMS_DATA\geodb/rsims_050329_ctc.mdb
Projected Coordinate System: NAD_1983_StatePlane_Washington_North_FIPS_4601_Feet

Figure 2-3. Smokey Point FSC Constraints & Opportunities
(Source: NAVFAC)

2.1.4 Natural Resources Opportunities

Within the boundaries of the installation and areas used by the Navy there are significant natural resources. Certain natural resources are unique, scarce, valuable or vulnerable, are often regulated and obligate the Navy to protect or otherwise manage these resources, as stated in section 2.1.2 above. Conversely, the presence these unique, scarce, valuable and vulnerable resources are also often viewed as attractive and desirable. Access to these resources often represents a unique, rare or valuable opportunity, whether for training, operations, scientific observation, conservation or recreational enjoyment. These beneficial qualities represent Natural Resources Opportunities within this context.

2.1.4.1 NAVSTA Everett

There are very few natural resource opportunities at NAVSTA Everett. By design, the shoreline is heavily modified and used intensively for necessary mission functions. Being a wholly built environment, there are no legacy naturally formed ecological features on site.

Within the aquatic environment (Figure 2-2, areas shaded red), there may be opportunities to:

- Manage operations in a manner that ensures no additional negative impacts to the ecosystem or directly to the species that reside in or use the environment.
- Execute effective monitoring and wildlife surveys to improve overall understanding of species using the environment, to include the Audubon Society's Christmas Bird Count (CBC) and International Migratory Bird Day (IMBD).
- Abate any unused or derelict structures within this environment in a timely manner.

Within the terrestrial environment (Figure 2-2, areas shaded yellow and all upland areas), there may be opportunities to:

- Execute effective monitoring and wildlife surveys to improve overall understanding of species using the environment, to include the Audubon Christmas Bird Count, (CBC) and International Migratory Bird Day (IMBD), and
- To the extent possible, direct uses and developments that do not require shoreline location to areas further upland, preserving the shoreline for shore dependent or shoreline related uses.

2.1.4.2 Smokey Point FSC

There are very few natural resource opportunities at the Smokey Point FSC; one opportunity would be to execute effective monitoring and wildlife surveys to improve overall understanding of species using the environment, to include the Audubon Christmas Bird Count, (CBC) and International Migratory Bird Day (IMBD).

Additionally, there is one potential partnership opportunity:

In cooperation with the US Army Reserve Center located on the opposite (west) bank of Hayho Creek, explore developing a cooperative riparian/stream improvement and management plan in order to improve the fish passage and habitat value of the Native Growth Protection Area, waterway and riparian corridor (Figure 2-3, area shaded brown), for the benefit of coho, chum and resident cutthroat trout utilizing the stream. The nature of this project would involve maintenance of the vegetated buffer area, vegetation management/forest succession and physical cleanup.

2.1.5 Operations and Activities

The NAVSTA Everett and Smokey Point FSC mission statement and listing of key tenants and supported activities was previously described in Section 1.7. The general effects of these missions and actions necessary to support them involve mostly pier-side operations to maintain, refit and supply the ships, process compensating water discharge and hazardous material, as well as administrative, personnel activities to support, train, house and sustain health and welfare of sailors assigned to the ships and installation.

Pierside and upland activities include many identified risks for negative impacts to natural resources. Some of the most significant environmental risks are accidental discharge of fuels, regulated and unregulated medical wastes, impacts from SONAR testing, direct impacts from on-going ship and facilities maintenance within the aquatic environment such as noise, light utility boat operations as well as habitat modification that has affected habitat availability and/or alter predator-to-prey balances.

The Environmental Management System program categorizes activities on Navy's installation as having low, medium or high potential for Environmental Effects (EE) upon Natural Resources. On NAVSTSA Everett there are 103 Low, 68 Medium and 63 High potential EE activities listed. On the Smokey Point FSC there are 14 Low, 3 Medium and 1 High potential EE activities listed. All these activities are subject to audit, reporting requirements and, as necessary, procedures have been developed and are in place in order to protect natural resources from unnecessary impacts.

2.1.6 Abbreviated History and Pre-Military Land Use

2.1.6.1 NAVSTA Everett

The Native Americans who occupied the Snohomish County area are considered by anthropologists to be part of the Puget Sound Salish culture. Characteristics of the Salish culture included an economy based on salmon as a staple, a seasonal settlement pattern that utilized permanent winter villages composed of large plank houses and short-term campsites located at prominent resource sites. The nearest Native American communities, the Tulalip Tribes are federally-recognized and are located on the Tulalip Reservation. The reservation is located west of Marysville, bordered on the east by Interstate 5 and the city of Marysville, Washington; on the

south by the Snohomish River; on the north by the Fire Trail Road (146th); and on the west by the waters of Puget Sound. The Tulalip Reservation was established by the Point Elliott Treaty of January 22, 1855 and enlarged by Executive Order of December 23, 1873. It was established to provide a permanent home for the Snohomish, Snoqualmie, Skagit, Sauk-Suiattle, Samish and Stillaguamish Tribes and allied bands living in the region.

Spanish explorers first visited the Northwest Coast in 1774 and claimed the territory for Spain. Subsequently, the British explorer James Cook charted the coastline in 1778, however the Spanish were first to establish a European settlement in 1792, at Neah Bay on the northwest tip of the Olympic Peninsula. Also in 1792, Royal Navy Captain George Vancouver and Lieutenant Peter Puget explored the Puget Sound area. By 1833, the Hudson's Bay Company (HBC) established an agricultural settlement, Fort Nisqually, near the mouth of the Nisqually River. Charles Wilkes led an American exploration party farther into the surrounding areas in 1841. The HBC stimulated development in the region that attracted explorers, fur traders, and their associates, but it wasn't until the late 1840s when the shift from British to American jurisdiction and the passage of the Donation Land Act of 1850 provided the first real stimulus to Euro American settlement. Historically, the land was heavily timbered, with agricultural land limited to the river valleys (Schwantes, 1996).

Everett's development was similar to that of other communities in the Pacific Northwest. Movement by water was significantly easier than overland movement, so communities developed along sheltered areas of shoreline, where resources could be easily located and exploited to the benefit of the settlers.

From the late 1800s into the 1960s, the Everett waterfront was an active industrial area and this continues to be its use today though at a greatly reduced level. The dredging, filling, shoreline modifications, jetty construction, manufacturing, in-water log storage, ship building and other activities which were concentrated in the area near NAVSTA Everett have greatly influenced the present upland, nearshore, and marine environmental conditions in the area.

The waterfront received goods via Puget Sound steamers at a commercial scale and shipped out lumber and other products as early as 1891. In 1893, waterfront industries included three shingle mills, two lumber mills, and a nail manufacturing company. By 1911, the industrial use of the waterfront had expanded to support 15 various industries. There was a rail line paralleling the waterfront and extensive dredging and filling began as early as the 1930s, permanently altering the natural shoreline and creating the present day East Waterway, a breakwater jetty, and the lands where Naval Station Everett presently sits. Ship building also occurred and a dry dock was established in the 1940s that repaired government and commercial ships.

The Clough-Hartley Mill (Figure 2-4) was located at the intersection of 18th Street and Bayside (now West Marine View Drive) prior to the construction of the uplands using fill in the 1930s. Currently the NAVSTA Everett North Gate aligns with 18th Street at approximately this location. Immediately south of the Clough-Hartley Mill was Robinson Manufacturing (Figure 2-5). The Great Northern Railroad tracks and Bayside street (now West Marine View Drive) are visible in the foreground, while the Clough-Hartley Mill and Seaside Shingle Mill are visible in

the background, to the right in the photograph. Currently the NAVSTA Everett Reserve Center aligns with 21st Street at approximately this location.



Figure 2-4. Clough-Hartley Mill, 18th Street, ca. 1915
(Source: Everett Public Library)



Figure 2-5. Robinson Manufacturing, 21st Street, ca. 1915
(Source: Everett Public Library)

The East Waterway portion of the harbor was constructed in the 1930s, when the Port of Everett used dredge material from the Snohomish River to construct a very large offshore fill area in Port Gardner Bay which eventually became present day Jetty Island. The resulting dredged area produced a well-protected, deep draft harbor.

In 1942, on what is now the southern edge of NAVSTA Everett, a shipbuilding and dry dock company was established to construct ships for the Navy's WWII effort. This facility grew to 20 major buildings, several shipways and four piers and the company constructed more than 80 barges, patrol boats, lighters, tugs, and other vessels for the Navy. Piers D and E were constructed at this time, as pile and plank piers (Figure 2-6). In 1944 the shipbuilding/drydock company became the Pacific Car and Foundry and in 1945 the company began using the facility to repair government and commercial ships. The Navy negotiated with owners of various parcels of property in this general area throughout 1943 and the Navy acquired much of the shipyard area in 1944 (internal documents prepared by R. Sackett NAVFAC NW).

Following WWII, portions of the shipyard were transferred to other companies or sold. One portion was transferred to the Navy and ultimately became the Everett Naval Reserve Center. Another portion of the shipyard was sold to the Pacific Tow Boat Company. In 1954 the Navy's Military Sea Transportation Service (MSTS) Command leased Piers D and E from Pacific Car and Foundry and used them for docking and shipbuilding. Portions of the shipyard became the MSTS Reserve Fleet Nest and Pacific Car and Foundry continued providing shore support to the MSTS into the 1950s. The reserve fleet moved from the Everett waterfront in 1958. In 1960 as a result of a sale of the Government's shipyard property, three companies established their operations at the site: Scott Paper, Pacific Tow Boat Company and Western Gear (internal documents prepared by R. Sackett NAVFAC NW)..

Present day NAVSTA Everett is an irregularly shaped, man-made land parcel constructed by numerous individual landfills over the past several decades. Most recently, the Port of Everett created the current shoreline with a large landfill project in 1978.

In the early 1980s Congress approved the strategic home porting initiative to build additional bases and disperse the fleet from the main concentration areas. The strategic homeport program was the best method for implementing the militarily sound principles of dispersal, battle group integrity, and increasing the naval presence in the geographic flanks. Everett was selected in 1984 as the location for a strategic homeport to support an Aircraft Carrier Battle Group (CVBG). Construction on the new naval facility began in November 1987, and Initial Operating Capability (IOC) was achieved in 1994. The first ships to be home ported at NAVSTA Everett arrived September 3, 1994 (O'Donnell, 2010).

The Kimberly Clark Mill Site opposite Naval Station Everett, along the east side of the East Waterway, (54.4 acres of upland area and 12.6 acres of submerged area), was vacated and the buildings demolished in April 2012.



Figure 2-6. NAVSTA Everett, Piers D & E, June 1957
(Source: US Navy, Military Sealift Command collection)

2.1.6.2 Smokey Point FSC

The town of Marysville was platted in 1885. At first it experienced slow growth, but in 1891 the town incorporated and the first bridge was constructed across Quilceda Creek when the Great Northern railroad arrived. These events established Marysville firmly and the community has seen continued growth since that time.

Initially, logging and lumber mills were the first drivers of the regional economy. At its peak in 1906 there were as many as 10 mills in operation. But by 1910 timber supplies decreased and area farmers began to dike rivers and streams, and drain marshes. Agriculture, especially strawberries crops, represented the rising importance of agriculture in the regional economy (Dougherty, 2007).

Due to the lack of available land at the NAVSTA Everett waterfront site, the Navy constructed the Smokey Point FSC near Marysville. Historically, the property occupied by the Smokey Point FSC was used for agricultural purposes.

2.1.7 Regional Land Uses

2.1.7.1 NAVSTA Everett

As the Snohomish County seat, the City of Everett is the center of economic development with an expanding high-technology industrial base, a deep-water port accessing the Pacific Ocean, an established, world-renowned aircraft manufacturing industry, and an increasing retail core. Everett is home to more than 95,990 citizens on 25,000 acres of land and 9,600 acres of water. Along with its strong economy, the area boasts a wide range of entertainment, cultural, recreational and educational opportunities.

Everett Comprehensive Plan:

NAVSTA Everett lies within a Heavy Industrial areas; Designation 5.1 in Figure 2-7.

Everett Zoning Classification:

NAVSTA Everett is located in an area zoned Heavy Manufacturing, Designation M-2 in Figure 2-8.

The area/boundary of both the Comprehensive Plan and Zoning classification are coincidental, running along the northern property boundary of NAVSTA Everett on the north side, landward to the marine bluff on the east, then south, encompassing portions of the Burlington Northern Railroad Right of Way and the historic industrial waterfront of the Everett down-town area, ending just north of Pigeon Creek Road along the shoreline (Figures 2-7 and 2-8).

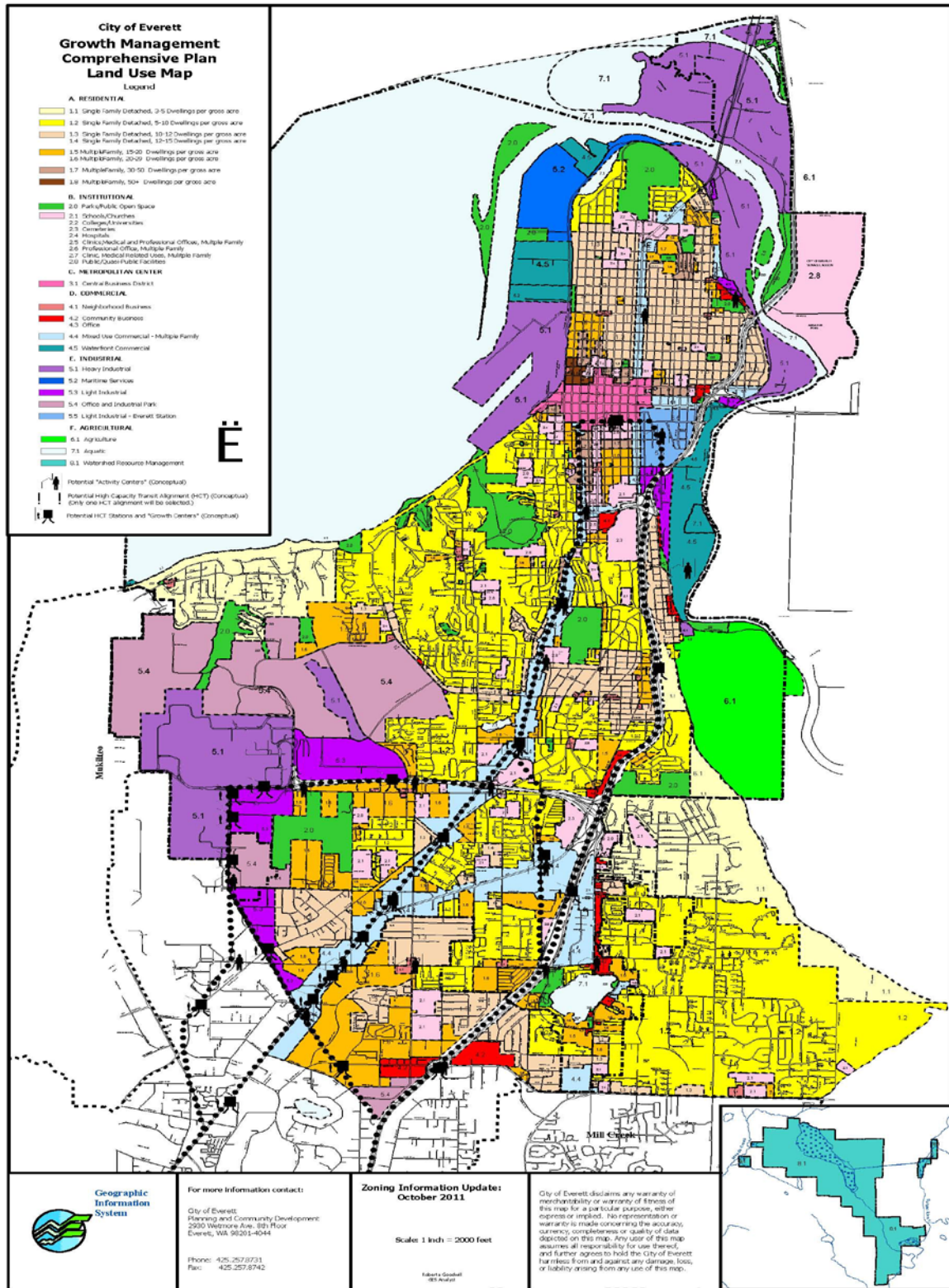


Figure 2-7. City of Everett Comprehensive Plan Map
 (Source: City of Everett)

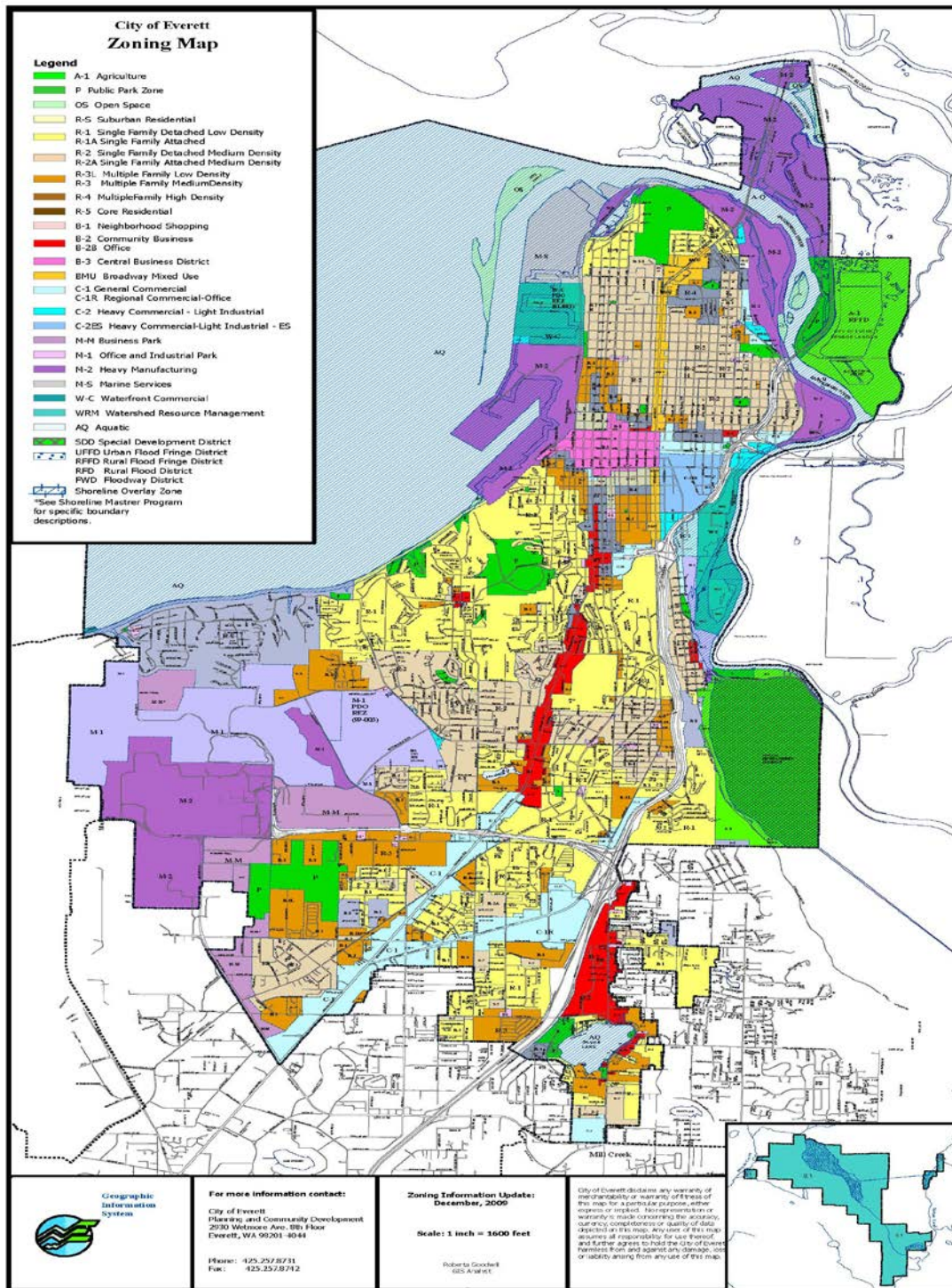


Figure 2-8. City of Everett Comprehensive Zoning Designation Map
 (Source: City of Everett)

Coastal Zone Management Act (CZMA):

Congress passed the federal Coastal Zone Management Act (CZMA) in 1972 to encourage the appropriate development and protection of the nation's coastal and shoreline resources. The CZMA gives states the lead role in managing these areas. To assume this role, the state prepares a Coastal Zone Management Program that describes the State's coastal resources and how these resources are managed. The Washington State Department of Ecology (WSDOE) Shorelands & Environmental Assistance Program is responsible for implementing Washington's program (WSDOE, 2012).

OPNAV M-5090.1, Chapter 14 describes how the Navy will operate in areas subject to the CZMA. The Navy is required by the CZMA to ensure activities affecting any coastal use or resource are fully consistent with the enforceable policies of the Washington State Shoreline Management Program, unless Navy compliance is prohibited by law.

Washington Department of Ecology approves and oversees implementation of Shoreline Management Act (SMA) requirements through locally developed Shoreline Master Programs/Plans (SMP), but reserves for itself the authority to determine overall consistency with the SMA. Under this regime those areas subject to the jurisdiction of the CZMA and SMA are subject to policies and regulations at multiple levels of government. As a result, NAVSTA Everett is classified in two ways; first by the State of Washington (SMA) and second by the City of Everett (SMP).

Under RCW 90.58.030, Washington State Department of Ecology has classified a six mile portion of the Snohomish River and particular areas of Port Gardner Bay waterward of the extreme low tide line as areas of Aquatic Conservancy (Figure 2-9).

Land uses and developments on shorelines of Aquatic Conservancy are reviewed and permitted under the Everett SMP, but must pass an additional consistency determination by WSDOE prior to implementation. The intent of this requirement is to ensure uses or development meet the required higher standard of furthering regional and state-wide interest and objectives above local interest and objective in situations where the objectives and interests may conflict.

Everett Shoreline Master Plan (SMP):

NAVSTA Everett is classified as Urban Deep Water Port by the Everett SMP (Figure 2-9). The SMP articulates a separate body of goals, policies and regulations applicable to the development and use of NAVSTA Everett, for areas lying within the jurisdiction of the SMP. With the stated intent of providing opportunities for “water dependent marine commerce and heavy industry, military use, and supporting activities”, it is clear use and development of the NAVSTA Everett facilities was determined entirely consistent with the intent of this classification.

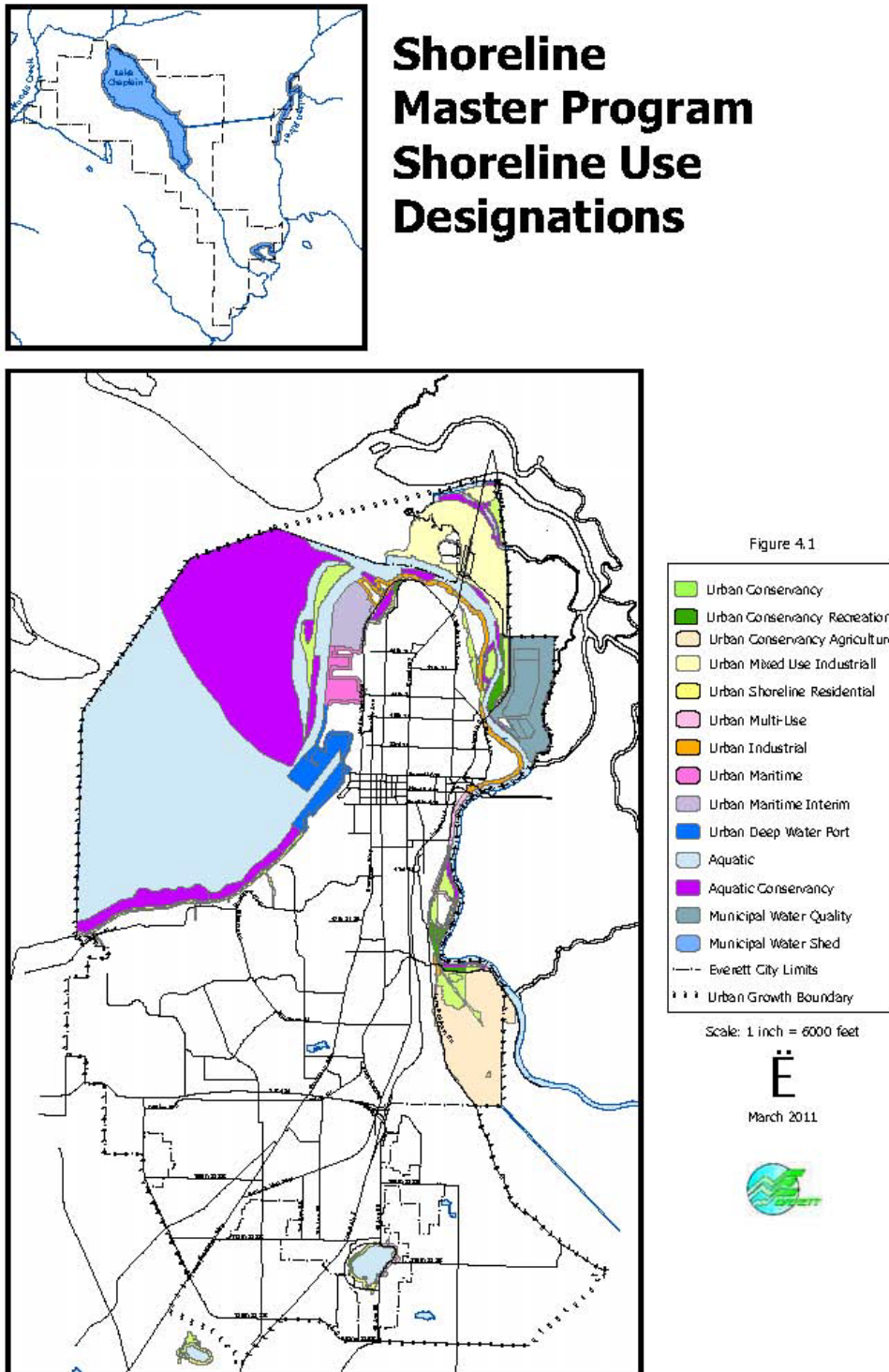


Figure 2-9. City of Everett SMP Use Designations
(Source: City of Everett)

An excerpt of the City of Everett SMP including relevant purpose, classification criteria, designated area, vision statement and management policies are included in Annex D of this INRMP.

Adjacent Land Uses and Developments:

Being built entirely upon fill material, NAVSTA Everett is a well graded and nearly flat topographically with the entire installation at less than 50-feet in elevation; the average site elevation is 18-feet (US Navy, 1994b). There is a coastal bluff immediately to the east, which rises to slightly more than 100 feet in elevation (City of Everett, 2011). The 100 foot contour line is shown running roughly parallel with Grand Avenue (Figure 2-10).

Adjacent Property Zoning:

The property immediately surrounding NAVSTA Everett is zoned heavy manufacturing. East of NAVSTA Everett, atop a marine bluff, is a residential district, and north of NAVSTA Everett is a commercial waterfront district.

The site is adjacent to the mouth of the Snohomish River channel in a historically industrialized area of highly modified shorelines and dredged waterways. The former Kimberly-Clark and the Port of Everett's log export facility are located along the shore to the south of the installation, while some commercial, offices buildings and the Port of Everett Marina are located to the north.

The property located along the Snohomish River shoreline to the north of NAVSTA Everett is identified as Waterfront Commercial, (Designation 4.5) by the Everett Comprehensive Plan and identified as Waterfront Commercial (Classification WC) by the Everett Zoning Regulation. Current uses include public access areas, office and professional services, medical services, restaurants, retail marine supply, parking & open storage, marina/dock access, boat launch and marine oriented service & repair.

Properties located along the East Waterway shoreline to the south are classified identically to NAVSTA Everett; Heavy Industrial (Designation 5.1) per the Comprehensive Plan and Heavy Manufacturing (Classification M-2) per the Zoning Regulation. Current uses include an industrial wood & paper processing complex, accessory dock and log handling areas, and ship loading/trans-shipment facilities.



Figure 2-10. NAVSTA Everett Topographic Map, Contour Interval: 50-feet.
 (Source: US Navy GRX)

2.1.7.2 Smokey Point FSC

The Smokey Point FSC is in a unique situation regarding Comprehensive Plan Designation and Zoning Classification. At the time the Smokey Point FSC was established it was subject to Snohomish County Comprehensive Plan and Zoning Regulations. However, as the City of Marysville has grown, its Urban Growth Area (UGA); a pre-designated area for future annexation has expanded to the north and currently meets the boundary of the City of Arlington at approximately 162nd Street (Figure 2-11). Smokey Point FSC appears to be an irregular enclave, located within the City of Marysville's UG), but zoned only by Snohomish County.

While it is common for all properties within a UGA to be annexed into the city, this is not the case for the Smokey Point FSC. While it lies well within the Marysville UGA, the Navy-owned property will not be annexed, and will continue to be zoned by Snohomish County, though surrounded entirely by City of Marysville.

The City of Marysville Comprehensive Plan (April 2005) has classified properties surrounding the Smokey Point FSC within the City of Marysville as Light Industrial. Meanwhile, the Snohomish County Zoning Regulation has designated the Smokey Point FSC Industrial Park. Land surrounding the Smokey Point FSC is zoned as a mix of light industry, retail, agriculture, residential developments (Figure 2-12). Based on the City's zoning, properties surrounding the Smokey Point FSC will trend toward Light Industrial and Commercial development over time.

Given the scope of the Smokey Point FSC mission, there are no obvious incompatibilities or use conflicts between the Smoke Point FSC, Snohomish County and City of Marysville.

Adjacent Land Uses and Developments:

Topographically, the immediate vicinity is low lying and flat, ranging between 95 and 100 feet in elevation, sloping only slightly toward the south-west. Hayho Creek, a tributary of Quilceda Creek, runs along the western property boundary of the Smokey Point FSC and conducts water toward the south (Figure 2-13).

Currently, land uses on nearby properties include light industrial, commercial, agricultural and residential uses. There are large open spaces currently being cultivated for silage with limited grazing. There are buffer trees surrounding some properties, but there are no significant tree stands nearby.

As visible in Figure 2-14, to the north and north-east are residential subdivisions. To the northeast there are agriculture properties and to the southeast is a light industrial park area. To the south is a small commercial development and to the west, across Hayho Creek is a US Army Reserve Center. Properties to the northwest are agricultural.

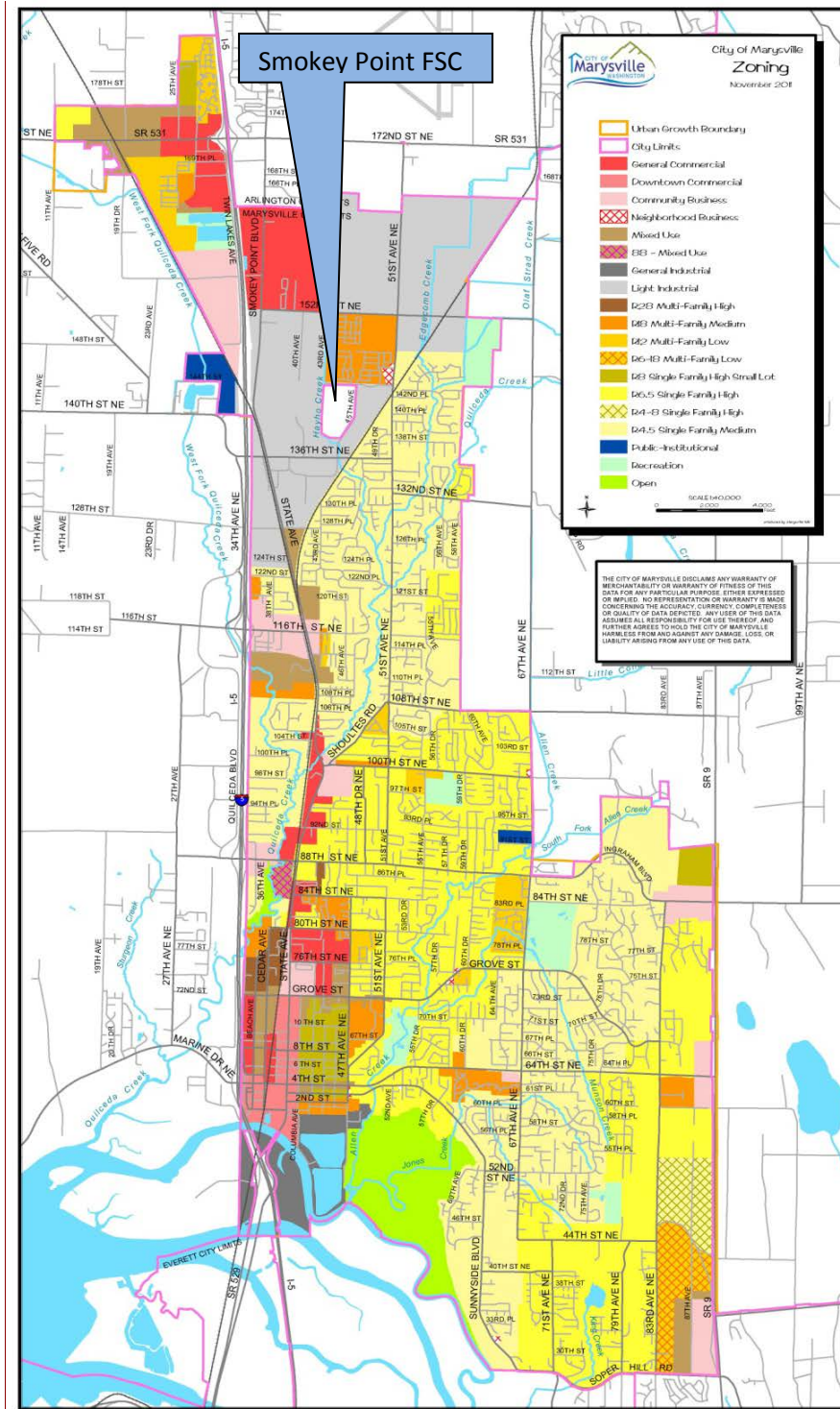


Figure 2-12. City of Marysville Zoning Designation Map
 (Source: City of Marysville)

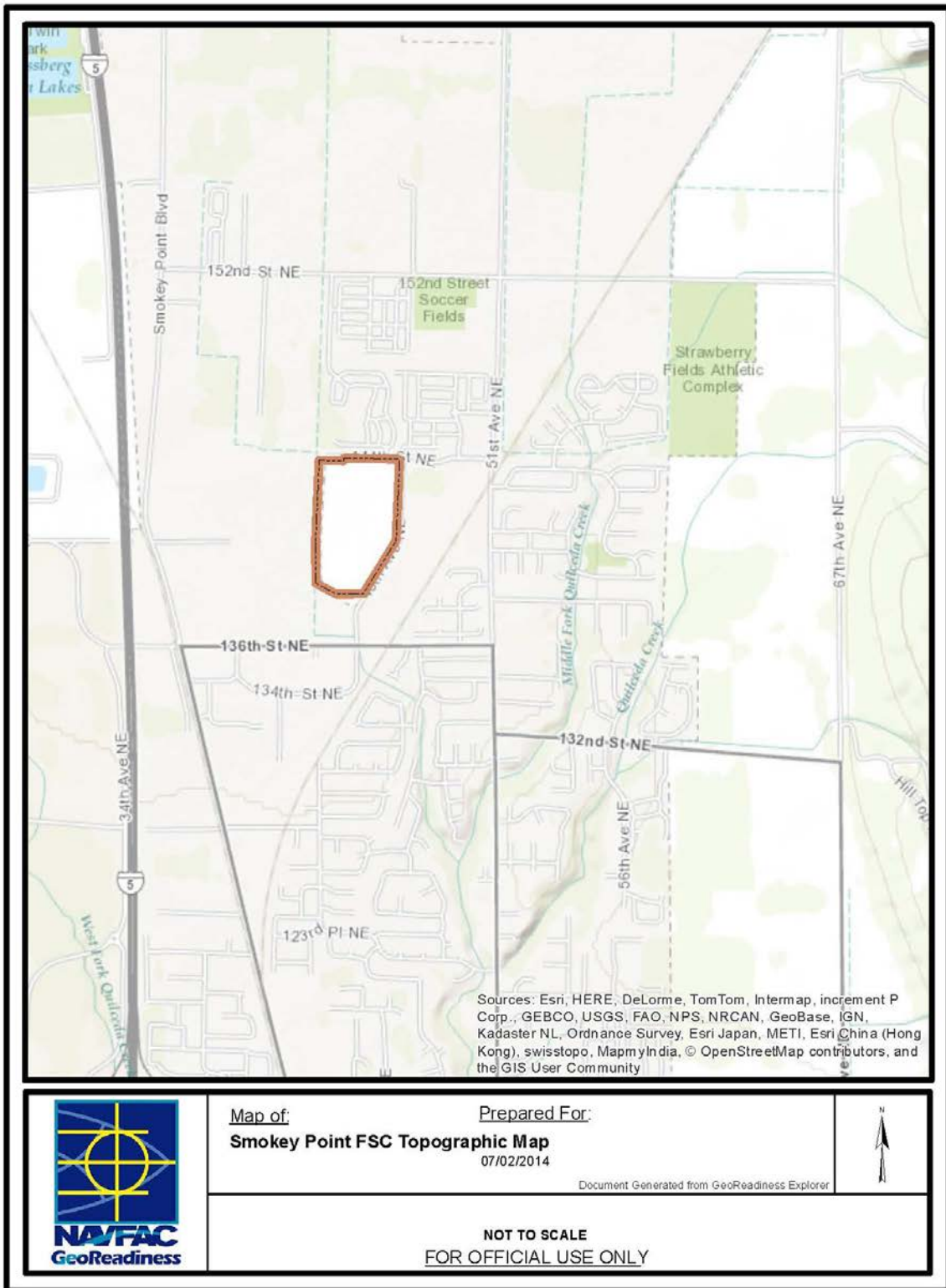


Figure 2-13. Smokey Point FSC Topographic Map. Contour Interval: 50-feet
 (Source: US Navy GRX)



Figure 2-14. Smokey Point FSC Orthographic Photograph
(Source: USGS)

2.2 General Biotic Environment

2.2.1 NAVSTA Everett

NAVSTA Everett is located in the Puget Lowland Physiographic Province of Puget Sound. This geographic region is bounded on the east by the Cascade Range, on the west by the Olympic Mountains, on the north by the U.S.-Canadian border (although the physiography continues into British Columbia), and on the south by the low Willapa Hills of the Coast Range south and west of Olympia. Landforms in this area developed as a result of glaciations that occurred during the last 15,000 years (Kruckeberg, 1991). Topography associated with this portion of the Puget Lowland varies from flat to moderately steep.

NAVSTA Everett is adjacent to the mouth of the Snohomish River channel in a historically industrialized area of highly modified shorelines and dredged waterways that form a protected harbor within Port Gardner. There are no surface streams, wetlands or waterbodies on NAVSTA Everett.

The entire 117 acres of the NAVSTA Everett were built up through the placement of fill and are therefore entirely man made. There are no legacy landforms on the site, and all land cover has been the result of planned actions executed by the Navy. There are grass covered, tree lined green spaces and concourses, and vegetated islands and landscape features in the parking areas.

2.2.2 Smokey Point FSC

The Smokey Point FSC is location on land formerly used for agricultural purposes that was subsequently developed to contain a Navy Exchange (NEX), Navy Lodge, Commissary, MWR and administrative facilities, parking, as well as storm water drainage and retention ponds.

With a single exception, the entire 52 acres constituting the Smokey Point FSC have been built up through the placement of fill or graded material. There is one narrow wetland area to the north of the NEX within a fenced, confined area, immediately adjacent to a narrow stormwater detention trench. This wetland area (Figure 2-3) appears to be a legacy drainage feature pre-dating construction of the Smokey Point FSC, and remains unmodified in order to maintain drainage patterns within the local area.

Overall the Smokey Point FSC parcel is flat with very little change in grade. In order to manage stormwater on the site a fairly extensive storm-drainage and detention plan was implemented, with large detention ponds located along the “front” or eastern side of the property. These detention ponds can easily be observed when entering the site from the public street. The ponds support a healthy population of various trees, shrubs, reeds and grasses. Throughout the site there are vegetated parking islands and landscape features in the parking areas.

To the “rear”, along the western property boundary of the property is Hayho Creek. This creek benefited from a buffer planting project in the past, and currently there is a well-established tree buffer between Smokey Point FSC and the US Army Reserve center, located immediately to the west of the site.

2.3 Climate

Climate and weather patterns of the Puget Sound Lowlands region are influenced by the Pacific Ocean, the Olympic Mountains, and the Cascade Mountains. The region's climate has mild temperatures throughout the year and rainy, cloudy winters. The overall marine influence of the Pacific Ocean results in a more temperate climate than that of inland areas at the same latitude. The topographic barrier of the Cascade Mountains also influences the region's climate by blocking colder continental air from the interior. Occasional climatic extremes do occur, with short periods of hot temperatures in summer or cold, dry weather in winter. Whereas winters are dependably damp, summers can be quite dry. The mean annual temperature in the Everett area (as measured at Paine Field) is 50.6°F, with a mean low of 33°F in January and a mean high of 74°F in July.

Everett is located in an area that is often affected by the Puget Sound Convergence Zone (Figure 2-15). Frequent showers characterize weather in the convergence zone area. The splitting of low level, westerly airflow around the Olympic Mountains west of Puget Sound and subsequent convergence as the airflow merges east of the Olympics causes the convergence zone. It is most active following the passage of a cold front when the synoptic weather pattern brings generally westerly flow to the Puget Sound region, but can occur anytime westerly flow is present, including the summer. Other than convergence zone impacts, the Olympic Mountains to the west provide an effective barrier to Pacific storm systems. For example, the Seattle-Tacoma lowland area averages less than 40 inches of precipitation annually, while Aberdeen on the coast averages more than 80 inches.

Annual precipitation measured at Everett Community College averages nearly 36 inches, with the greatest precipitation occurring October through March (Table 2-1).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	44.9	48.8	52.8	58.1	63.6	68.3	72.7	72.7	67.7	59.5	50.9	45.7	58.8
Average Min. Temperature (F)	33.1	34.4	36.7	40.4	45.3	50.2	52.9	52.8	48.3	43.0	37.6	34.3	42.4
Average Total Precipitation (in.)	4.49	3.23	3.50	2.66	2.31	2.08	1.02	1.22	2.02	3.40	4.63	5.00	35.56
Average Total Snow Fall (in.)	3.3	1.2	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.4	7.3

Table 2-1. Weather Data
Period of Record 8/24/1984 - 12/31/2010

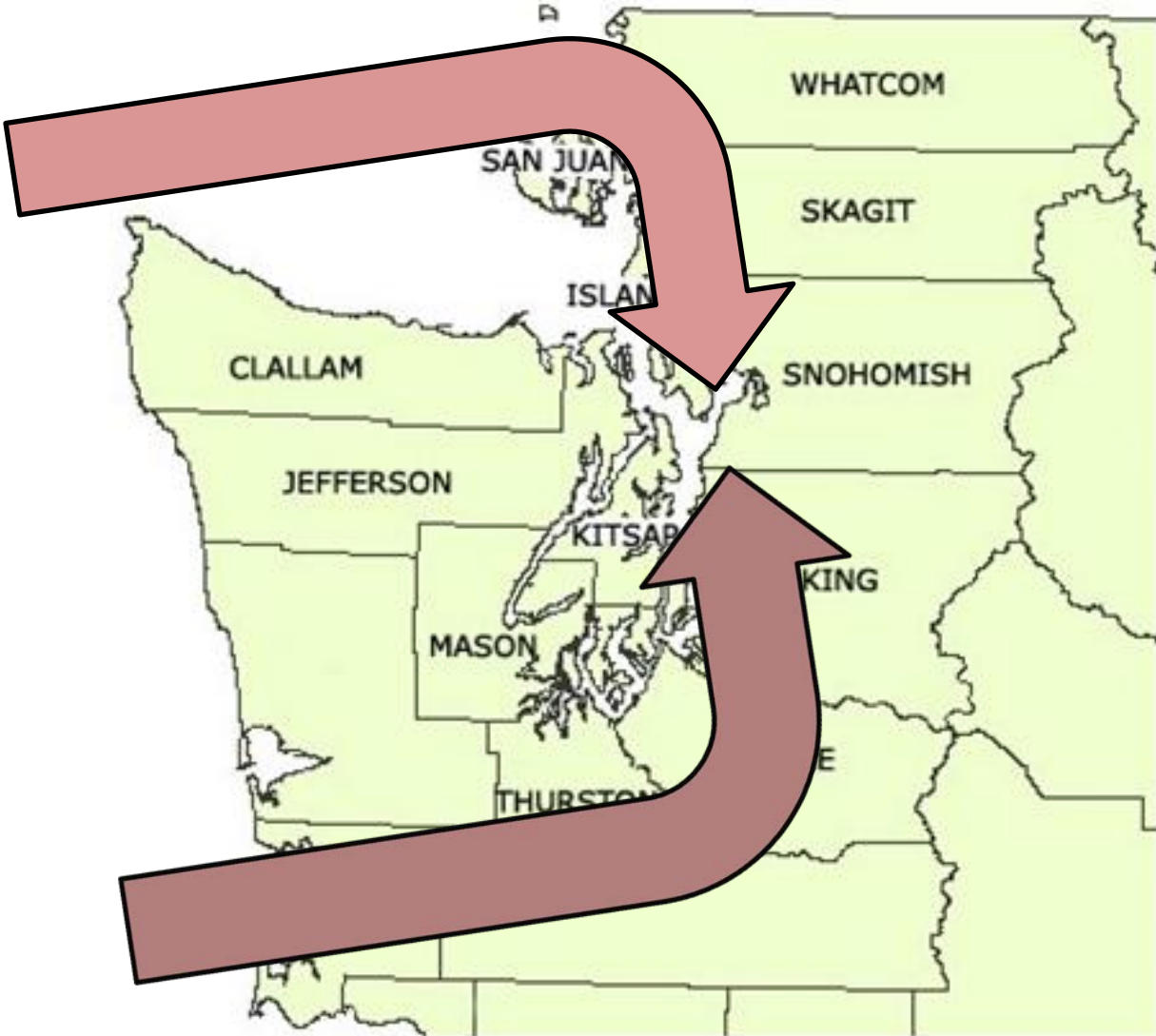


Figure 2-15. Puget Sound Convergence Zone

Seasonal winds in the region are predictable. During the winter, cool winds carrying moist air from the Pacific Ocean are southerly to southwesterly, though occasionally cold, high pressure weather systems break through from the Fraser River Valley to the north, often bringing colder temperatures and snow. In the summer, winds are less extreme and from the north and northwest. This creates a microclimate of winter storm winds coming from the south and summer breezes coming from the north (Figure 2-16).

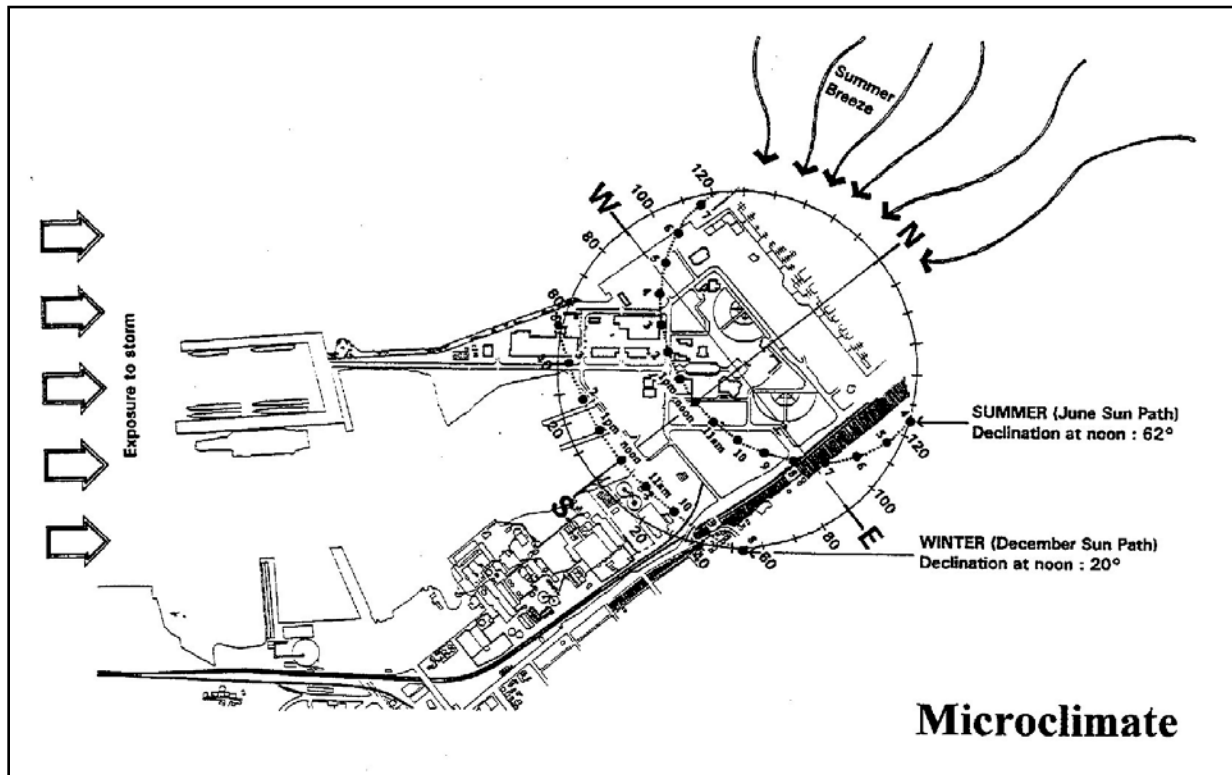


Figure 2-16. Microclimate of NAVSTA Everett
(Source: NAVSTA Everett Master Plan-1994)

2.4 Ecoregion

NAVSTA Everett and the Smokey Point FSC are located within the Puget Trough Ecoregion (Figure 2-17). This ecoregion runs the length of Washington, ranging from Mean Sea Level through approximately 2400 feet elevation. This ecoregion is bordered by the Cascade Mountains on the east, the Olympic Mountains on the west and Willapa Hills to the south. Interstate Highway 5 connects most of the Puget Trough's urban centers: Vancouver, Centralia, Olympia, Tacoma, Seattle, Everett, Mt. Vernon and Bellingham.

Encompassing about 8% of Washington State's area, the Puget Trough Ecoregion is densely populated, containing over 75% of Washington's population. On the larger scale, the Puget Trough Ecoregion is part of the larger Willamette Valley-Puget Trough-Georgia Basin ecoregion that extends south into Oregon and north into British Columbia (Vander Schaaf, 2006).



Figure 2-17. Puget Trough Ecoregion
(Source: WDFW)

For purposes of conservation assessment and planning several agencies and Non-governmental organizations, such as WDFW, the Washington Natural Heritage Program, and The Nature Conservancy have adopted ecoregions for landscape-level planning. The benefit of using ecoregions as the basic planning unit is they provide a rational ecological basis for partitioning the state into units that circumscribe common habitat types, wildlife species, stakeholders, land uses, and various conservation issues across geopolitical boundaries. Local decisions with regard to preserving biodiversity will be most effective when made within the context of a broader, ecoregional-scale conservation strategy. Ecoregion mapping is based upon USDA Forest Service ECOMAP framework.

Subsequent to adoption of this standard planning unit in 2005, several other scientific and planning entities have utilized this ecoregion unit as the basis for assessment and study, most significantly the non-governmental organization NatureServe, whose work is primary in plant associations and habitat descriptions and categorizations. The Navy has adopted the NatureServe classification standard for use in annual Natural Resource metrics and reporting.

2.5 Threatened and Endangered Species and Species of Concern

Twelve species listed under the Endangered Species Act can potentially be found near NAVSTA Everett. These species inhabit marine waters during all or part of their lifecycle (Table 2-2). The Smokey Point FSC does not provide habitat for any ESA-listed species.

<i>Threatened and Endangered Species</i>			
<i>Common Name (Scientific Name)</i>	<i>Status/Federal Status/State</i>	<i>Critical Habitat</i>	<i>Habitat</i>
FISH			
Chinook salmon – Puget Sound ESU (<i>Oncorhynchus tshawytscha</i>)	FT/NMFS C/WA	EXEMPT 70 FR 52685	Marine waters, estuaries, salt marshes.
Steelhead – Puget Sound DPS (<i>Oncorhynchus mykiss</i>)	FT/NMFS C/WA	Not proposed in marine waters 78 FR 2725 (proposed rule)	Marine waters, estuaries, salt marshes.
Bull Trout – Coastal Puget Sound DPS (<i>Salvelinus confluentus</i>)	FT/USFWS C/WA	EXEMPT 75 FR 56212	Marine waters, estuaries, salt marshes.
Bocaccio Rockfish (<i>Sebastes paucispinis</i>)	FE/NMFS C/WA	EXEMPT; also lack of habitat features near installation 79 FR 68041	Marine waters
Canary Rockfish (<i>Sebastes pinniger</i>)	FT/NMFS C/WA	EXEMPT; also lack of habitat features near installation 79 FR 68041	Marine waters
Yelloweye Rockfish (<i>Sebastes ruberrimus</i>)	FT/NMFS C/WA	EXEMPT; also lack of habitat features near installation 79 FR 68041	Marine waters
Pacific Eulachon - Southern DPS (<i>Thaleichthys pacificus</i>)	FT/NMFS SC/WA	No overlap with installation waters 76 FR 65324	Marine waters, estuaries, salt marshes
Green Sturgeon - Southern DPS (<i>Acipenser medirostris</i>)	FT/NMFS	Puget Sound excluded 74 FR 52300	Marine waters
BIRDS			
Marbled Murrelet (<i>Brachyramphus marmoratus</i>)	FT/USFWS T/WA	Not designated in marine waters 57 FR 45328	Marine waters, mature forest near coastal areas
MARINE MAMMALS			
Killer Whale – Southern Resident DPS (<i>Orcinus orca</i>)	FE/NMFS E/WA	NDE: 71 FR 69054	Marine waters
Humpback Whale (<i>Megaptera novaeangliae</i>)	FE/NMFS E/WA	None designated	Marine waters

REPTILE			
Leatherback Sea Turtle (<i>Dermochelys coriacea</i>)	FE/NMFS & USFWS E/WA	No overlap with installation waters 77 FR 4170	Marine waters

Table 2-2. TES Species & Habitat Potentially Occurring at NAVSTA Everett

FE – Federal Endangered,

FT – Federally Threatened

NDE - National Defense Exclusion

EXEMPT – INRMP provides adequate protection and conservation benefit.

E/WA – Endangered Washington,

T/WA– Threatened Washington,

C/WA – Candidate Washington,

SC –Species of Concern Washington.

2.5.1 Endangered Fish Populations

Six fish species protected under the Endangered Species Act may be present in the waters surrounding NAVSTA Everett.

2.5.1.1 Puget Sound Chinook salmon

Chinook salmon (Federal threatened, State candidate) are an anadromous fish species, and possesses the largest body size of any salmon species. In the United States, Chinook salmon occur from the Bering Strait area off Alaska south to southern California. Chinook salmon near NAVSTA Everett are part of the Puget Sound Evolutionarily Significant Unit (ESU), which was designated threatened by NMFS in 1999 (NMFS, 1999). This ESU includes all naturally spawned populations of Chinook salmon from rivers and streams flowing into Puget Sound.

The Snohomish River is one of the main Chinook salmon producers in Puget Sound. The Snohomish River estuary, just north of NAVSTA Everett, is an important and highly utilized nursery area for juveniles. Adult spring and summer/fall Chinook are expected to be in this estuary from May through June with juveniles present June through August (Wydoski, 2003) (NMFS, 2005a). Adults could be present in the waters surrounding NAVSTA Everett and juveniles move along nearshore areas. Due to a lack of habitat (foraging, rearing, and staging) for juveniles and adults, Chinook presence in the East Waterway should be minimal.

Critical habitat has been designated for the Puget Sound ESU of Chinook salmon (NMFS, 2005). In Puget Sound, the designation includes all nearshore marine areas from extreme high tide out to a depth of 30 meters (98.4 feet). However, the designation excludes Department of Defense Lands subject to an approved Integrated Natural Resources Management Plan. Naval Station Everett has an approved INRMP, so the nearshore marine waters within the installation property boundary are not designated critical habitat for Chinook salmon (See Figure 2-1).

2.5.1.2 Puget Sound Steelhead

Steelhead (Federal threatened, State candidate) are an anadromous form of rainbow trout, and difficult to distinguish from rainbow trout living exclusively in fresh water streams. Steelhead are distributed along the entire Pacific coast and their populations are split into distinctive groups known as Distinct Population Segments (DPSs). The DPS known to occur near NAVSTA Everett is the Puget Sound DPS, which was listed as threatened by NMFS in 2007 (NMFS, 2007a). The Puget Sound Steelhead DPS is large and includes all naturally spawned anadromous winter-run and summer-run steelhead populations in streams located within the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington. In Washington, spawning for winter-run steelhead occurs from January to mid-June, with peak spawning observed April through May. Juveniles generally remain in fresh water for two years before moving into seawater habitats. General habitat types where this species is known to reside include nearshore marine, estuarine, and cool, shallow streams (NMFS, 2005d).

Stream-maturing steelhead, also called summer-run steelhead, enter fresh water at an early stage of maturation, usually from May to October. These summer-run fish migrate to headwater areas and hold for several months before spawning in the spring. Ocean-maturing steelhead, also called winter-run steelhead, enter fresh water from December to April at an advanced stage of maturation and spawn from March through June. While there is some temporal overlap in spawning times between these forms, in basins where both winter- and summer-run steelhead are present, summer-run steelhead spawn farther upstream, often above a partially impassable barrier. In many cases it appears that the summer migration timing evolved to access areas above falls or cascades that present velocity barriers to migration during high winter flow months, but are passable during low summer flows. Winter-run steelhead are predominant in Puget Sound, in part because there are relatively few basins in the Puget Sound DPS with the geomorphological and hydrological characteristics necessary to establish the summer-run life history. Summer-run steelhead stocks within this DPS are all small and occupy limited habitat (NMFS, 2013).

Critical habitat has been proposed, however the proposed areas do not include nearshore or offshore marine waters. Waters adjacent to NAVSTA Everett are not being proposed as critical habitat. Occurrence on NAVSTA Everett is doubtful because of the lack of habitat (foraging, rearing, staging,) for adults or juveniles. NMFS considered marine areas in Puget Sound for steelhead as potential critical habitat, but concluded that at this time the best available information suggests there are no marine areas that meet the definition of critical habitat per the ESA. Steelhead move rapidly out of freshwater and into offshore marine areas, making it difficult to identify specific foraging areas where the essential features are found. NMFS proposed rule indicates it is not possible to identify specific critical habitat in the nearshore zone in Puget Sound for Puget Sound steelhead (NMFS, 2013).

2.5.1.3 Coastal-Puget Sound Bull Trout

Bull trout (Federal threatened, State candidate) are found in Washington, Oregon and Canada, and east into Idaho, Montana and Nevada. This species is thought to have the most particular habitat requirements of all the Pacific Northwest salmonids, with a need for cold and clean water, complex habitats, and a connection between rivers, lakes or ocean habitats to headwater

streams for migratory activities. As a result, bull trout are more sensitive to habitat degradation or destruction, and the health of this species can serve as a good indicator of water quality. The species was listed as threatened throughout their range in the United States in 1999 (USFWS, 1999) (USFWS, 2005).

Bull trout habitat requirements vary by life stage and form. The Coastal-Puget Sound population is an amphidromous form, spawning in rivers and streams and rearing young in coastal ocean waters. Bull trout live to spawn during consecutive years. Requirements for spawning habitat are variable, but generally include streams with deep pools, riffles, undercut banks and numerous large logs. All life stages of bull trout require some type of cover, such as vegetative cover or undercut banks that form ledges (USFWS, 2004).

Bull trout are known to inhabit the Snohomish River, use the Snohomish estuary for rearing, and may be present near NAVSTA Everett. They are opportunistic feeders and have been observed foraging on juvenile salmon and forage fish during the spring months along the northern end of Jetty Island (Snohomish Basin Salmon Recovery Forum, 2005). Occurrence in areas immediately surrounding the installation is doubtful, however, due to a lack of habitat (foraging, rearing, staging,) for adults or juveniles in the East Waterway.

Critical habitat has been designated for the Coastal-Puget Sound DPS of Bull Trout. In Puget Sound, critical habitat includes marine nearshore areas from the mean higher high-water line out to a depth of 33 feet relative to the mean lower low-water line. However, the designation excludes Department of Defense Lands subject to an approved Integrated Natural Resources Management Plan. Naval Station Everett has an approved INRMP, so the nearshore marine waters within the installation property boundary are not designated critical habitat for bull trout (see Figure 2-1).

2.5.1.4 Bocaccio, Canary, and Yelloweye Rockfish

Three species of rockfish – Bocaccio (Federal endangered, State candidate), canary (Federal threatened, State candidate), and yelloweye (Federal threatened, State candidate) – have distinct population segments (DPSs) in the Georgia Basin/Puget Sound region that are listed as threatened or endangered by NMFS (NMFS, 2010a). Bocaccio occur on a variety of substrates and were historically most common in south Puget Sound. Canary rockfish are broadly distributed in Puget Sound on coarse or rocky substrates. Yelloweye rockfish are most abundant in rocky areas of north Puget Sound. All occur in relatively deep water, especially on rocky reefs.

Figure 2-18 shows the distribution of nearshore rocky habitats in Puget Sound which may be attractive to rockfish (Palsson, 2009). This distribution map agrees with NOAA Multi-beam Bathymetry Surveys showing areas of deeper water with steep relief, particularly those areas south of Gedney Island (NOAA, 2012c). Water depths around the installation are less than 50 ft mean lower low water (MLLW); much shallower than depths at which adult rockfish would occur (around 120 ft). The nearest deep water environment with rocky substrate near NAVSTA Everett is located southwest of the mouth of the Snohomish River toward the center of Port Gardner Bay, is apparent on NOAA Multi-beam Bathymetry Surveys and (though not shown in

the map legend) is also shown generally in Figure 2-19. There are no impairments prohibiting adult rockfish from occupying waters near the installation, but little suitable habitat exists.

Because rockfish larvae are passively distributed by prevailing currents and because adult rockfish are not expected to occur near the installation, it would be unlikely that larvae would be carried from where they originated into waters around NAVSTA Everett. This is reinforced by the significant flow from the Snohomish River adjacent to the installation which creates strong surface currents and would act as a persistent counter to tidal currents and flows within Port Gardner Bay. However, because there is no absolute barrier to preclude the movement of larvae, they could be passively transported to waters near the installation. .

Juvenile rockfish use shallower water areas, however they rely on kelp beds/forests and eelgrass beds for refuge and quickly (days-weeks) move to (preferably contiguous) deeper water settings. Eelgrass beds are present along the southern shoreline of Port Gardner Bay, near the mouth of Pigeon Creek and on the southern end of Jetty Island (Figure 2-19), but there are no kelp or eelgrass beds on NAVSTA Everett (Figures 2-19 and 2-20). There are no impairments preventing juveniles from occupying waters near the installation however suitable habitat such as adequate water depth, steep/rocky shorelines, boulder-cobble substrate and contiguous protective environments do not occur in the vicinity of the installation (Palsson, 2009).

Trawl studies conducted 1987-2007 indicate yelloweye and canary rockfish are rarely captured within the central Puget Sound waters (Palsson, 2009). The same report indicates that, while earlier recreational fisheries studies indicate Bocaccio rockfish were caught in Port Gardner Bay and Port Susan in the 1970s and were once considered abundant, Bocaccio rockfish were not detected in the central Puget Sound area during later trawls.

The NMFS designated critical habitat in Puget Sound for the listed rockfish species in 2014. The area designated includes nearshore and deep water habitats. They noted however that the nearshore at NAVSTA Everett did not overlap with essential features for the listed rockfishes and did not designate the area as critical habitat.

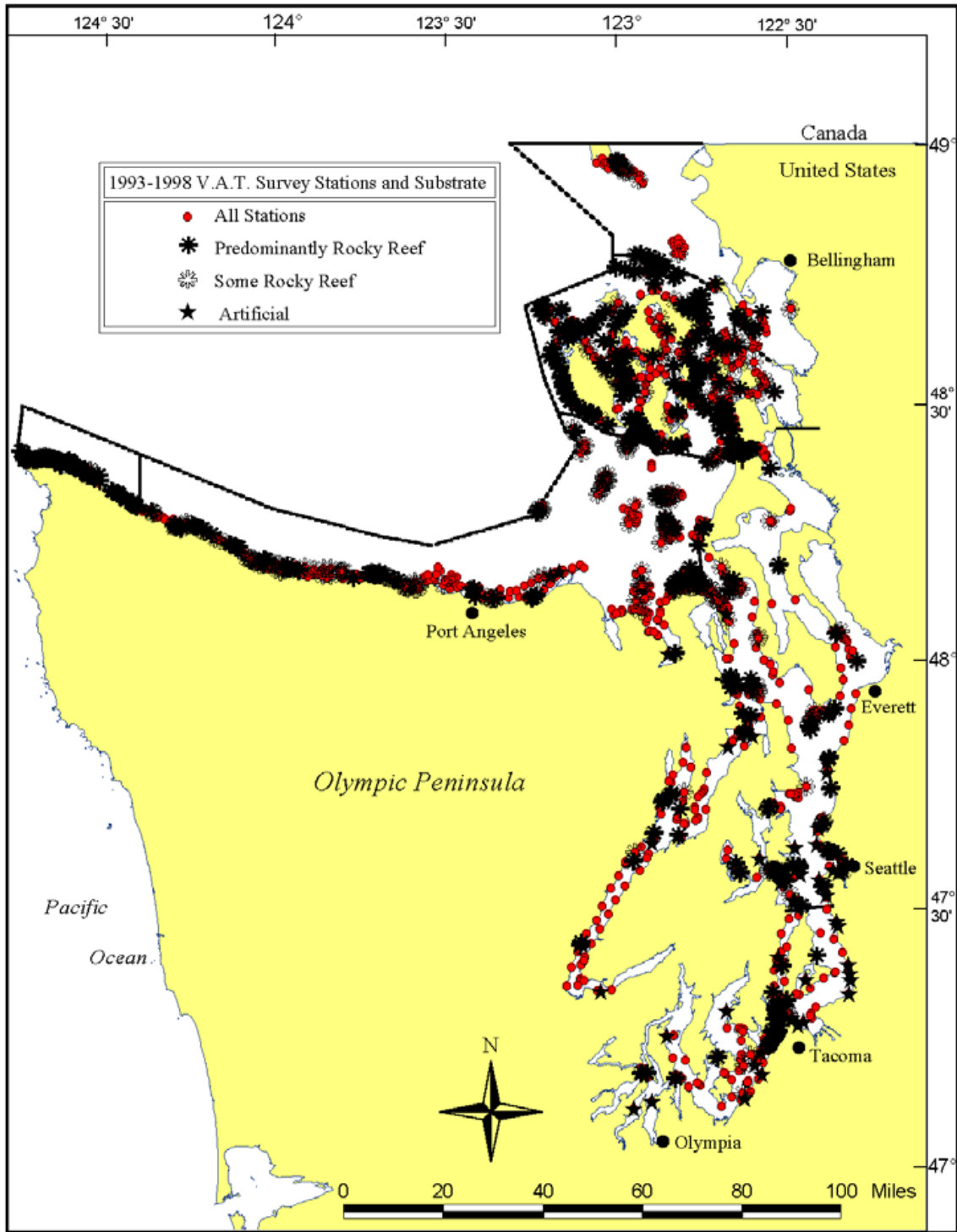


Figure 2-18. Distribution of Nearshore Rocky Habitats in Puget Sound
(Source: WDFW)



Figure 2-19. Eelgrass & Spartina
 (Source: Snohomish County)

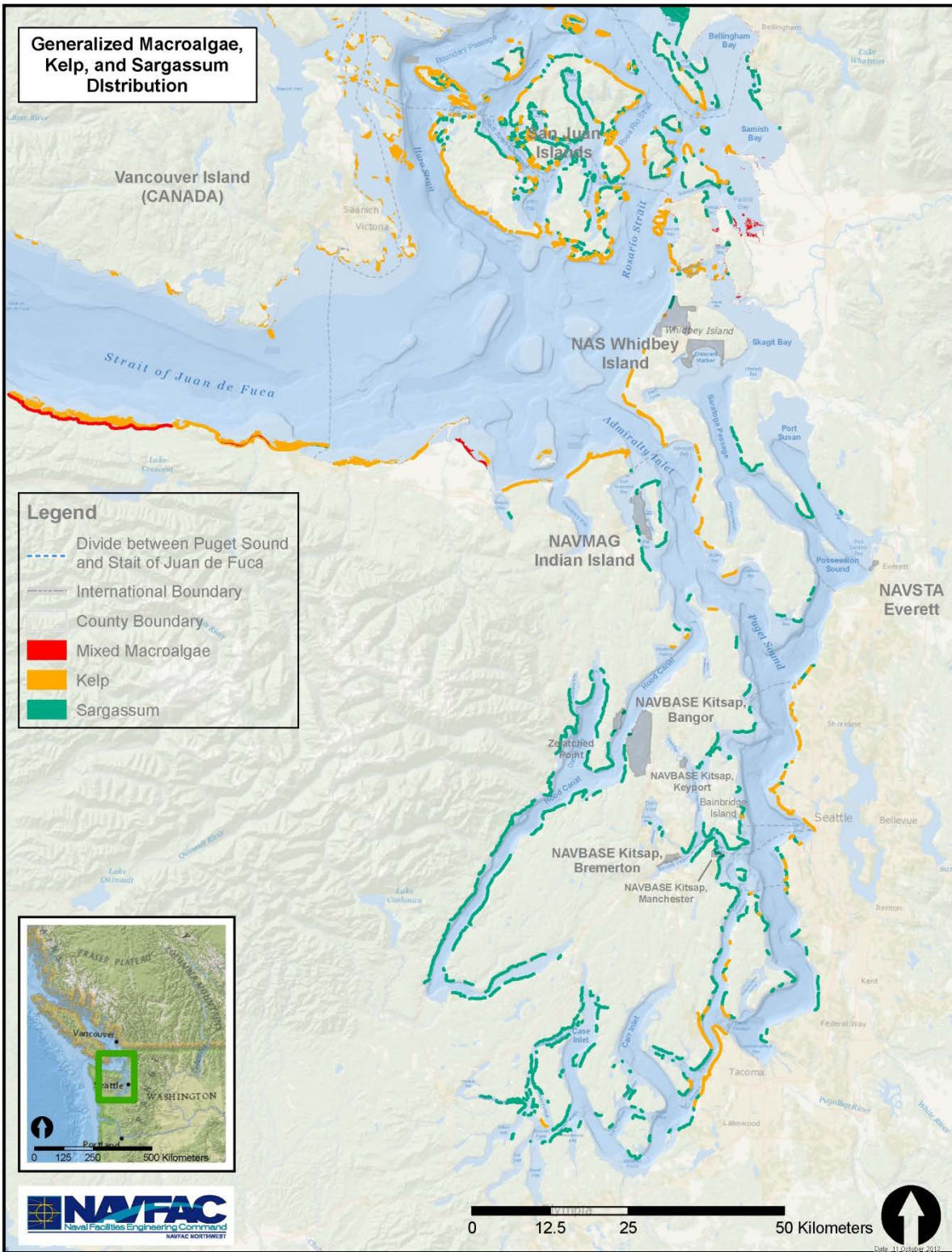


Figure 2-20. Generalized Macroalgae, Kelp & Sargassum Distribution
 (Source: NAVFAC)

2.5.1.5 Green Sturgeon

Sturgeon is a family of large (up to approximately 2.5 m), primitive, bottom dwelling, and extremely long-lived (up to 70 years) anadromous fish. They spawn in rivers, remaining in this environment as juveniles, and migrate to coastal marine areas and estuarine habitats, occupying waters up to 360 feet deep (NMFS, 2012).

The southern DPS of green sturgeon is listed as threatened (NMFS, 2006b). This DPS is now limited to a single population that spawns in the Sacramento River but disperses widely along the Pacific coast.

A few green sturgeon are recovered in Puget Sound as incidental harvest (mostly in trawl fisheries), but the origin of these is unknown and is most likely the unlisted northern DPS. The closest known green sturgeon spawning area is for the northern DPS in the Rogue River in southern Oregon (Adams, P.B.; Grimes, C.B.; Hightower, J.E.; Lindley, S.T.; Moser, M.L., 2002).

Critical habitat has been designated for the southern DPS of green sturgeon. The designation includes estuarine and coastal marine habitat in Washington, but excludes Puget Sound.

2.5.1.6 Pacific Eulachon

The southern DPS of Pacific eulachon is listed as threatened (NMFS, 2010b) (NMFS, 2012h) (NMFS, 2012f). The species is identified as a species of concern by Washington State. Eulachon spend most of their adult lives in the Pacific Ocean and range from Northern California to coastal British Columbia. Adults return to large rivers to spawn in the winter usually starting in December and continuing until spring. The larvae incubate in the gravel until they hatch and drift downstream to the ocean. Very little is known regarding their marine life history.

There is no evidence of eulachon spawning within Puget Sound. However, there have been occurrences of spawning in the Quinault River and associated watershed, and for several consecutive years in the Elwha River on the Olympic Peninsula (NMFS, 2011). Based on information compiled by the Eulachon Biological Review Team (BRT) and emails between the Navy and NMFS, eulachon are not expected to occupy waters near NAVSTA Everett (Longenbaugh, 2011).

2.5.2 Threatened and Endangered Birds

2.5.2.1 Marbled Murrelet

The marbled murrelet population occurring in California, Oregon, and Washington was listed as threatened by the USFWS in 1992 (USFWS, 1992) and identified as threatened by Washington state. All other populations of marbled murrelets warranted a Species of Concern designation.

Nesting habitat for the marbled murrelet includes old-growth forests or mature forests with some component of old-growth forest. A criterion for nesting includes trees with large branches or other features suitable for sturdy nest placement. Nesting takes place from March to late

September and they feed primarily on fish and aquatic invertebrates. Threats to the marbled murrelet include loss of nesting habitat, pollution impacts to the quality of food for this species, and predation by non-native mammalian predators (USFWS, 1997).

Foraging habitat for marbled murrelet includes areas of open water, and they are regularly observed foraging in the waters of Possession Sound to the west of NAVSTA Everett (Figure 2-21). The west and southwest side of Jetty Island and near the Port of Everett Piers located north of the project area are where marbled murrelets have been observed in the past (US Navy, 2009b).

Critical habitat was designated for this species in 1996 (USFWS, 1996). The nesting habitat designation includes upland forest areas (Figure 2-22).

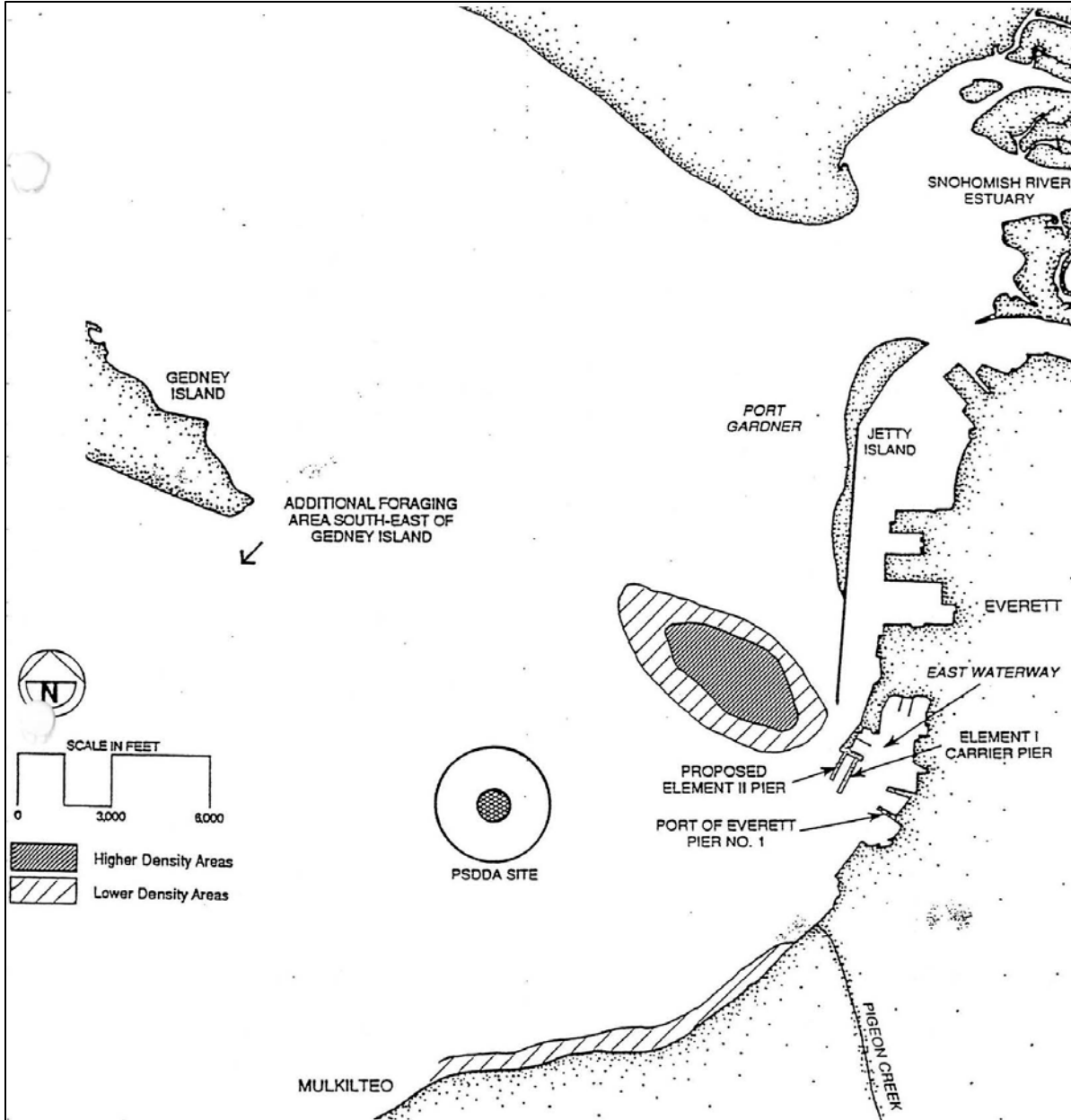


Figure 2-21. Marbled Murrelet Density Map
(Parametrix, 1992)

NAVAL STATION EVERETT

Naval Station Everett INRMP (2014)

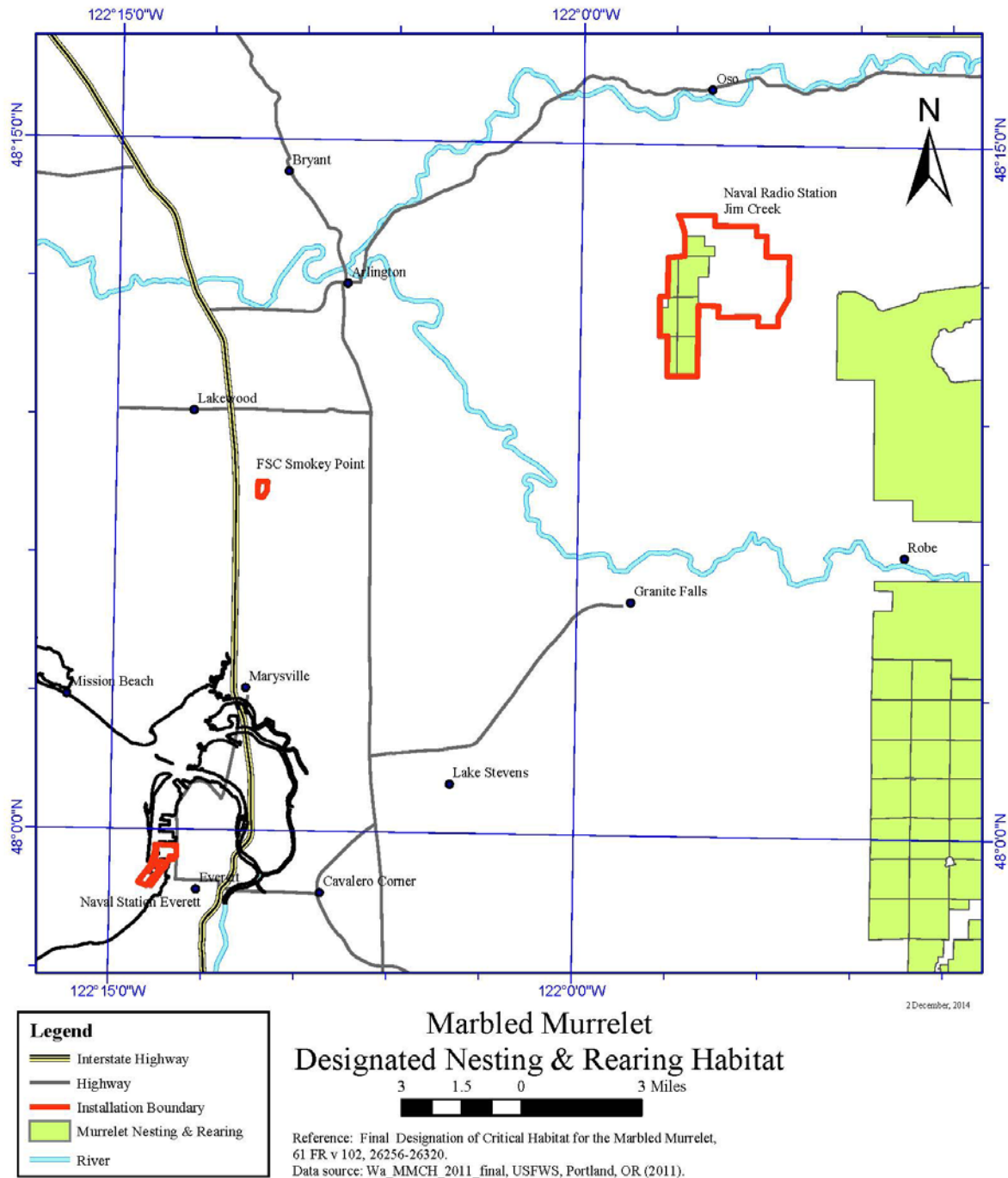


Figure 2-22. Marbled Murrelet Designated Critical Habitat near NAVSTA Everett & FSC
 (Metadata Source: USFWS)

2.5.3 Endangered Whales

Southern Resident Killer Whale (SRKW) and humpback whale are periodically seen in Puget Sound. These whales are frequently found in the Juan de Fuca Strait & western Puget Sound, but are seldom found in Possession Sound and Saratoga Passage, and are very rarely reported in Port Gardner Bay.

2.5.3.1 Killer Whale - Southern Resident DPS

Southern Resident Killer Whale (SRKW) populations are listed as State & Federally Endangered and Pods J & K have been observed in Possession Sound in recent years.

The SRKW population was listed as endangered by NMFS in 2005 (NMFS, 2005b). Killer Whales use various habitats in association with different life stages and activities, but the main activity that determines location is prey availability. They can be found in a wide range of depths, salinities and water temperatures; there have even been some reports of Killer Whales in both brackish and fresh water. A major distinction exists for habitat use by resident versus transient populations, with transients using habitats with greater variability than residents. Mating is thought to occur from April to October, although births have been reported year-round, indicating that mating is not restricted to a particular season. Calves remain in close proximity to their mothers for the first year of life (NMFS, 2008a). Current threats to Killer Whales include deliberate or accidental killings or injuries associated with fishery interactions, collisions with vessels, and exposure to environmental contaminants (e.g. oil spills).

In Puget Sound, SRKW are occasional visitors, with sighting mostly in the late summer or early fall months (Kriete, 2007). Based upon Orca Network data (<http://orcanetwork.org/>) there have been 24 southern resident killer whale sightings in Possession Sound and Saratoga Passage (2007-2011). There have also been numerous sightings in Admiralty Inlet and the Straits of Juan de Fuca located within approximately 30 nautical miles from the NAVSTA Everett.

Critical habitat for the SRKW was designated by the NMFS in 2006 (NMFS, 2006a). The designation includes marine habitat in Puget Sound, excluding areas less than 20 feet deep relative to extreme high water. The designation excludes NAVSTA Everett for national security reasons.

2.5.3.2 Humpback Whale

The humpback whale is listed as State and Federally endangered, however they appear to favor western Puget Sound, the Strait of Juan de Fuca and have not been observed as far east as Possession Sound or Everett.

The humpback whale has a worldwide distribution, with three major distinct populations: the North Atlantic, North Pacific, and southern oceans. This species inhabits waters over continental shelves, along edges, and around some oceanic islands. During winter individuals are usually found in tropical or temperate waters (10-23° latitude). During the summer, most migrate considerable distances to waters with higher biological productivity, typically at high latitudes

(35 - 65°). In the North Pacific, there are three distinct population groups: a western north Pacific population, a central population that migrates between Hawaii and Alaska, and a Mexico-California-Alaska population that seasonally migrates past Washington State between breeding areas and feeding areas. During the summer, humpback whales in the North Pacific migrate and feed over the continental shelf and along the coasts of the Pacific Rim, from Point Conception, California to the Gulf of Alaska, Prince William Sound, and Kodiak Island. Humpback whales spend the winter in three separate wintering grounds: the coastal waters along Baja California and the mainland of Mexico, the main islands of Hawaii, and the islands south of Japan. (NOAA, 2012)

In recent years humpback whales have been intermittently sighted in Puget Sound. An analysis of data compiled by the Orca Network, a community based marine mammal monitoring effort, shows humpbacks are regular visitors to the Straits of Juan De Fuca (although in low numbers), but are infrequent visitors to Puget Sound (Orca Network data 2007-2011).

Critical habitat for the humpback whale has not been designated, therefore the species is only protected “where found”.

2.5.4 Leatherback Sea Turtle

The leatherback sea turtle was listed as endangered by NMFS and USFWS in 1970 (USFWS, 1970). This turtle is also identified as endangered by Washington state. Leatherback sea turtles are pelagic, most often sighted from 5 to 100 nautical miles offshore, predominantly over the deep outer continental shelf. The interior waters of Puget Sound do not provide forage or other habitat for leatherback sea turtles; therefore they are not likely to be found in the waters adjacent to NAVSTA Everett.

Critical habitat for the leatherback sea turtle includes areas of coastal Washington. However, this designation does not extend into Puget Sound (NOAA, 2012a).

Because of their rarity in Puget Sound, there is no Management Plan for Leatherback Sea Turtles in this INRMP.

2.6 Wetlands

According to Executive Order (EO) 11990 (1977), the term "wetlands" includes areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. EO 11990 requires Federal agencies to minimize the loss or degradation of wetlands and to enhance their natural values. Section 404 of the Clean Water Act prohibits discharges of dredged or fill material into waters of the U.S., including wetlands, without first obtaining a permit from the U.S. Army Corps of Engineers. OPNAV M-

5090.1 refers to 33 CFR 320-330, Clean Water Act (CWA) Section 404, and requires that the Navy comply with the national goal of no net loss of wetlands, and to avoid loss of size, function and value of wetlands.

2.6.1 NAVSTA Everett

There are no lands at NAVSTA Everett that contain wetland characteristics.

2.6.2 Smokey Point FSC

There is one wetland area at Smokey Point, at the northern end of the property, between the NEX and the fleet parking areas, oriented east-west (Figure 2-23). This small 1.6 acre wetland/buffer area drains toward the west, where it joins Hayho Creek. This wetland appears to be the remains of a legacy drainage ditch that predates the construction of the Smokey Point FSC.

The stormwater management system for the site locates a detention feature immediately adjacent to the wetland area, into which stormwater gradually discharges. Gradual release of stormwater into the wetland has the benefit of improving surface water quality, enabling infiltration into groundwater and aquifer recharge.

Hayho Creek runs along the western property boundary, or “rear” of the Smokey Point FSC. Deed/title records indicate a 30-foot drainage easement is associated with Hayho Creek, overlapped with a 50-foot native planting buffer. This buffer area was augmented with a buffer planting project as part of mitigation for an off-site violation in the 2002. The buffer is currently matured and provides beneficial shading for Hayho Creek.

Stormwater detention facilities lie along the eastern side of the facility (Figure 2-23). The detention facilities currently support wetland obligate vegetation. Management Plans for Wetlands are included in Section 4.4. Future assessments and inventory of wetland vegetation and projects to develop quality habitat could be conducted under the scope of EPR # 68742NWTJ1 (Appendix A).




Smokey Point FSC

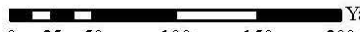
Naval Station Everett INRMP (2014)



Stormwater Detention/Infiltration & Wetland Locations

Legend

-  Installation Boundary
-  Wetland & Buffer
-  Stormwater Detention & Infiltration

 Yards
0 25 50 100 150 200

Metadata Sources:
RSIMS_DATA\geodb\rsims_050329_etc.mdb
RSIMS_DATA\geodb\FSC Smokey Point\Wetland Buffer.shp
RSIMS_DATA\GRC_Database\wetland_area.shp
mary_snoh.sid

Figure 2-23. Smokey Point FSC Wetland & Storm Drainage/Detention
(Source: NAVFAC)

2.7 Ecosystems

2.7.1 NAVSTA Everett

NAVSTA Everett is built up entirely on fill material imported to the site. There are no native, legacy surface water channels, wetlands or beneficial vegetation.

On the upland areas of NAVSTA Everett the site is a highly developed industrial center focused upon services and maintenance structures necessary to maintain ships. The landscape is generally flat, includes large impervious parking lots and lay-down & maintenance areas, vegetation is principally ornamental trees and fescue grassy areas with only incidental habitat values.

Along the shoreline is the marine environment. The shoreline land/water interface is principally armored and highly intruded, including piers, docks, seawalls, debris deflectors and boomed areas. Habitat along the shoreline areas of NAVSTA Everett is low quality. The nearshore area of the installation does not include any beaches, sediment sources or accretion shore forms. The East Waterway is classified as an impaired, impacted waterway due to the presence of contaminated sediments (SAIC, 2010). A Remedial Investigation/Feasibility Study (RI/FS), led by Washington Department of Ecology is underway and a Natural Resources Damage Assessment is ongoing, concurrent with the RI/FS for the East Waterway.

2.7.2 Smokey Point FSC

The Smokey Point FSC was formally agricultural land that was subsequently developed to contain a Navy Exchange, Commissary, MWR and administrative facilities, parking, as well as storm water drainage and retention ponds. The 52 acres constituting the Smokey Point FSC have been built up through the placement of fill or graded material. Throughout the site there are vegetated parking islands and landscape features in the parking areas.

The site is configured and appears most similar to a common commercial and retail center. Dominant features of the site are the NEX building, NEX fuel station, support building and large parking areas. The most significant green spaces on site are the sports fields to the south of the main center, the stormwater detention structures to the east and the vegetated streambed of Hayho creek located to the western side, or “rear” side of the property.

2.8 Fish & Wildlife

2.8.1 Marine Fish & Invertebrates

Below are key definitions applicable within this section and apply to both invertebrates and fish:

Pelagic: Invertebrates and fish living and feeding in the open sea; associated with the surface or middle depths of a body of water; free swimming in the seas, oceans or open waters; not in association with the bottom. Many pelagic fish feed on plankton. Generally refers to surface or mid water from 0 to 200 m depth.

- Demersal: Invertebrates and fish that sink to or lie on the bottom; living on the bottom (benthic) or near the bottom (epibenthic) and feeding on benthic organisms.
- Anadromous: Invertebrates and fish that ascend rivers to spawn, having both saltwater and freshwater life stages.

2.8.1.1 NAVSTA Everett

Benthic Invertebrates

Benthic invertebrates include highly dense invertebrates that utilize or live in or on a lake or sea floor for at least some life stages.

Benthic infaunal organisms live in or are associated with sub-tidal marine sediments. The health of the benthic and epibenthic infauna community can be an important measure of sediment quality in an area when compared to the benthic community in uncontaminated sediments. The health or status of the benthic community is measured by the relative abundance of benthic organisms per unit area and/or the degree of species diversity of the community, or how many species are found at a location. In addition, high densities of pollution tolerant "indicator" species and the exclusion of other species can indicate degraded sediment quality.

A benthic infauna study performed for the initial planning of the Naval Station concluded that the East Waterway benthic communities were environmentally stressed, as measured by indicators, as mentioned above (US Navy, 1985a). The authors concluded this was most likely due to: 1) the effects of wood waste derived from log storage in the East Waterway, 2) organic enrichment from a pulp mill outfall and a combined sewer overflow, and 3) toxic substances from other sources. At all of the East Waterway stations, the dominant organisms were found to be the polychaete worm (*Capitella capitata*) and nematodes. Both *Capitella capitata* and nematodes are considered indicator species for organic enrichment and/or pollution. (Smithsonian Institution, 2008)

In May 1993, as part of baseline sampling for the NAVSTA Everett waterfront site water and sediment quality certification monitoring effort, ten sediment quality stations and one reference station inside the East Waterway and in the near vicinity were sampled for benthic infauna as well as for sediment quality. More recently, in 2010 SAIC published a sediment characterization study for the purpose of guiding future WSDOE remediation actions. The results of the 2010 study generally confirm the results and conclusions of earlier studies, in particular finding that: 1) the inner East Waterway stations had lower abundance of benthic infauna than found in the outer waterway stations; 2) the inner waterway stations had proportionately more polychaetes and crustaceans than the outer waterway stations, and fewer bivalves, indicating greater disturbance; and 3) the inner waterway stations showed a decrease in species richness and diversity compared to those found in the outer waterway stations (Dames & Moore, 1994) (SAIC, 2010).

The nearshore areas of the East Waterway and other areas of the Everett harbor are utilized as habitat by epibenthic invertebrates that live immediately above the bottom. These organisms are preyed upon by juvenile salmon during their outward migration from the Snohomish River, in the spring and early summer of each year. While resident in the Snohomish River estuary before going out to deeper water and the Pacific Ocean, juvenile salmon feed upon the epibenthic invertebrates in the nearshore areas of the estuary. These prey organisms undergo a distinct population increase just prior to the juvenile salmonid out-migration and estuary residence time. This period of time, during which the fish undergo physiological adaptation to saltwater, is considered a critical phase in the life history success of the Snohomish River salmon runs. (EDAW, 1994b).

Epibenthic Invertebrates

Epibenthic invertebrates describe those who occupy areas within the water column immediately above a lake or sea floor. These animals are less dense than benthic invertebrates.

In July 1984, as part of the original environmental impact analyses for the Everett Homeport, nine stations in the East Waterway were sampled for epibenthic invertebrates (US Navy, 1985d). The results of the epibenthic study concluded that the populations of epibenthic prey organisms in the East Waterway were healthy and abundant as compared to other stations in Puget Sound. In addition, they found that the juvenile salmon caught in the East Waterway in parallel studies were feeding on the epibenthic organisms present in the East Waterway (US Navy, 1985b) (US Navy, 1985c). The study also found that in the stations at the north end of the East Waterway, certain indicator species for the presence of organic enrichment or chronic toxicity were present at higher numbers than in the other stations. The presence of these species indicates that the sediments in those areas were contaminated and/or organically enriched. Testing in 1997-1999 indicated the north end of the East Waterway was impacted by past industrial sources of pollution (Long, 2003). Though there was no specific comment about these specific sources, the area of the east waterway is characterized similarly in the most recent study (SAIC, 2010). Since Long's 2003 report the Kimberly-Clark log processing facility has ceased operation and the site is in the process of redevelopment.

No significant populations of commercial or recreational species of mollusks are found in the East Waterway except for low numbers of the soft-shell clam, the littleneck clam, and the butter clam (US Navy, 1984) (WDF, 1992). Recent trawl records indicate Dungeness crab, varnish clam, Eastern soft-shell clam and ghost shrimp are present (SAIC, 2010). The Everett Harbor area is unclassified and therefore considered a prohibited zone for the harvest of shellfish.

Many species of small non-commercial crustaceans were documented at sub-tidal stations in the East Waterway (US Navy, 1984). The one significant commercial and recreational species found in the East Waterway is the Dungeness crab (PSWQAT, 1994) (WDFW, 1994). In the past the shoreline along the western side of the East Waterway was found to support large numbers of juvenile Dungeness crab, which utilize the muddy/sandy areas at the base of the rip-rap slope (US Navy, 1985a). Zero age juvenile Dungeness crab were found in densities of 0.0 to 8.0 crabs

per square meter in a location at the northeast corner of the East Waterway. Dungeness crab instars were found to be most abundant in mid-June through July (Weitkamp, 1986). The most recent Port Gardner Sediment Characterization Study included trawl capture and tissue sampling of Dungeness crab from the East Waterway. Tissues were analyzed for metals, Aroclor PCBs, and dioxin/furan congeners. Results were used to indicate current sediment quality, and did not include assessment of habitat or species abundance (SAIC, 2010). Harvesting Dungeness crab is not allowed in the East Waterway, and limited to Howarth Park, on the south shore of Port Gardner Bay (WDFW, 2012b).

Pelagic, Demersal and Anadromous Fish

The Snohomish River is the second largest drainage basin in Puget Sound and supports a substantial salmon and trout fishery. It has numerous tributaries, including the Snoqualmie and Skykomish Rivers. The lower river estuary and adjacent marine areas provide vital transit habitat for adults migrating up-river to spawn and for their offspring migrating through to their marine phase of life. The timing of each species' presence in the river varies from species to species. The four species of salmon found in this system are coho, chum, Chinook (spring and summer/fall runs), and pink. Pink salmon return to spawn only in odd-numbered years (Hard, 1996) These naturally reproducing species are augmented with hatchery fish (winter and summer steelhead) released from the Washington Department of Fish and Wildlife and the Tulalip Tribal hatcheries (EDAW, 1994).

The estuarine area at the mouth of the Snohomish River is utilized by juvenile anadromous fish during a period of adjustment to the marine environment. Both native bull trout/Dolly Varden and sea-run cutthroat use the Snohomish estuary for summer rearing. The first and most abundant juvenile salmon to enter the area are pink salmon (US Navy, 1985b) (Beauchamps, 1986). They appear in early April and peak in numbers mid-April through mid-May, spending a short time in the nearshore area and moving into deeper surrounding waters around mid-June. Arriving about two weeks after the pinks, chum salmon juveniles peak from mid-April until mid-June, but are present through July. Chinook salmon juveniles arrive in the project area in early June and peak from mid-June to early July. Numerous factors, including habitat loss and over-fishing, have resulted in reduced runs of coho salmon. Consequently, low numbers of coho salmon juveniles emigrate through the area for a short period of time in late May through early June (Table 2-3).

Stomach content analysis of the juvenile salmon caught indicates that all of the species mentioned above feed in the nearshore areas near NAVSTA Everett (US Navy, 1985c). Juveniles captured in the nearshore area had predominantly epibenthic species in their stomachs while those from deeper waters had eaten primarily pelagic prey.

Other anadromous game fish are found in lower numbers than the salmon and are caught primarily in nearshore locations (US Navy, 1985b). The sea-run cutthroat trout spends a greater portion of its life in the estuarine habitats and juveniles have been caught in greater numbers than

steelhead and bull trout/Dolly Varden. Dolly Varden are the least numerous of the anadromous game fish in the vicinity of the waterfront site.

Species (Run)	Time of Adult Return	Spawning Season	Time in Freshwater	Estuarine Residence Time
Summer Chinook	June-July	Late Sept-Nov	90-180 days	April-July
Fall Chinook	Aug-Sept	Fall	90-180 days	April-July
	Aug-Nov	Oct-Dec	1 year	March-May
Chum	Sept-March	Sept-March	0-30 days	April-June
Pink	Aug-Sept	Sept-Oct	0-7 days	April-June
Winter Steelhead	Nov-April	Jan-June	2-3 years	March-May
Summer Steelhead	May-Oct	Jan-June	2 years	March-May
Sea-run Cutthroat	Dec-June	Dec-June	1-4 years	Jan-Oct
Bull Trout/Dolly Varden	April-Aug	Sept-Oct	2-3 years	March-May

Table 2-3. Seasonal Use of Snohomish River by Anadromous Fish
(Source: Washington State Conservation Commission, 2002)

A mitigation plan developed in consultation with WDFW, describes in detail the impacts of the construction of the Breakwater Pier, the Spruance Boulevard expansion, and the repair of Pier D on the intertidal and shallow sub-tidal habitat areas of NAVSTA Everett (Beak, 1994). As mitigation for these impacts, which include impairment of fish passage due to the construction of wave attenuation baffles on Pier B (Figure 2-24), the plan provided for the protection of intertidal and shallow sub-tidal areas by the placement of dolphins and pilings at regular intervals along the shoreline of the south cove area.






Figure 2-24. Pier B Wave Attenuation Baffles
(Source: NAVFAC)

NAVAL STATION EVERETT

Naval Station Everett INRMP (2014)



Legend

-  Fish Passage Area
-  Debris Deflector
-  Attenuation Baffles

Fish Passage - Pier B and Nearshore

520 260 0 520 Feet



Reference:

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Figure 2-25. Baffle Mitigation - Fish Passage through Pier B
(Source: NAVFAC)

This prevents log rafts stored in the area by the Port of Everett from grounding out at low tides onto the intertidal and shallow sub-tidal areas. These areas are inhabited by epibenthic invertebrates preyed upon by juvenile salmon during their estuarine residence, and are considered a critical food resource for salmonid survival and success (EDAW, 1994b). These same areas are habitat for some invertebrates, crustaceans, and mollusks; thus, the mitigation plan also serves to protect the habitat of these other species as well.

As shown above, Pier B was designed with wave attenuation baffles that create a wall forcing migrating fish out into deeper water away from the shore. To mitigate this, the Navy designed a fish passage opening between Pier B and the South Wharf that allows fish in the Snohomish River to stay inshore as they move to & from the East Waterway and the river. The fish passage is located on the northwest corner of the South Wharf and steel piles have been placed on the riverside to prevent unauthorized boat access under Pier B (Figure 2-25).

Pelagic or off-bottom species of fish have been noted in the vicinity of NAVSTA Everett. The most common are Pacific hake, walleye pollock, Pacific cod, Pacific herring, Pacific tomcod, and spiny dogfish.

Demersal or bottom-dwelling fish have been reported to be less diverse and numerous than pelagic species in the project area. The most abundant is the Pacific staghorn sculpin followed by English sole, sand sole, and Pacific sanddab.

Beach seining of the Port Gardner area revealed that juvenile or larval forms of both pelagic and demersal species utilize the shallower areas as well, while purse seining revealed that Pacific herring, Pacific sandlance, and three-spined stickleback were the most prevalent in the pier and log raft areas. The timing of the presence of species was similar to that found in the shallower areas, with the abundance of fish appearing in April through May, and Pacific sandlance, three-spined stickleback, and Pacific herring being caught through July (US Navy, 1985a).

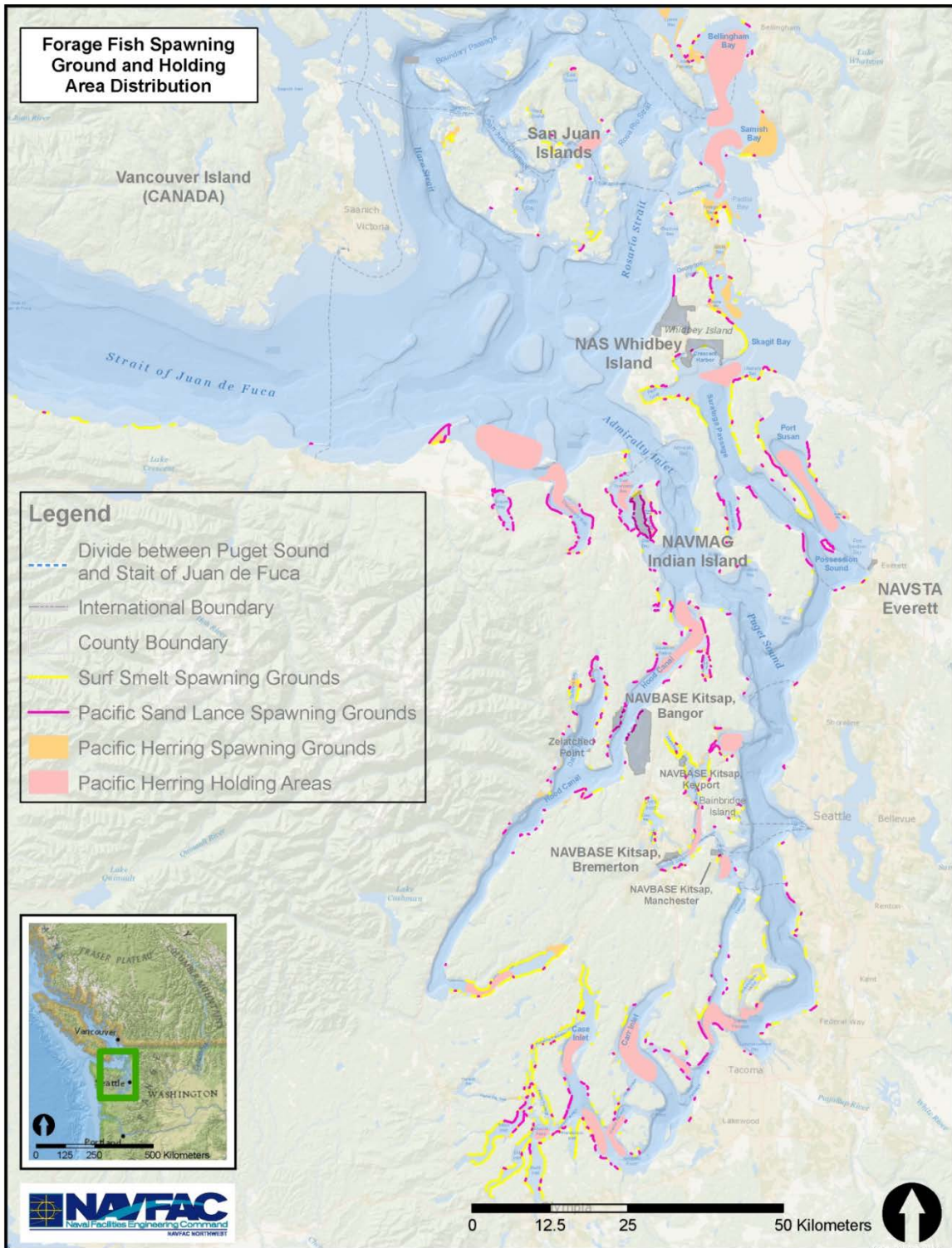


Figure 2-26. Forage Fish Spawning Ground & Holding Area Distribution
 (Source: NAVFAC)

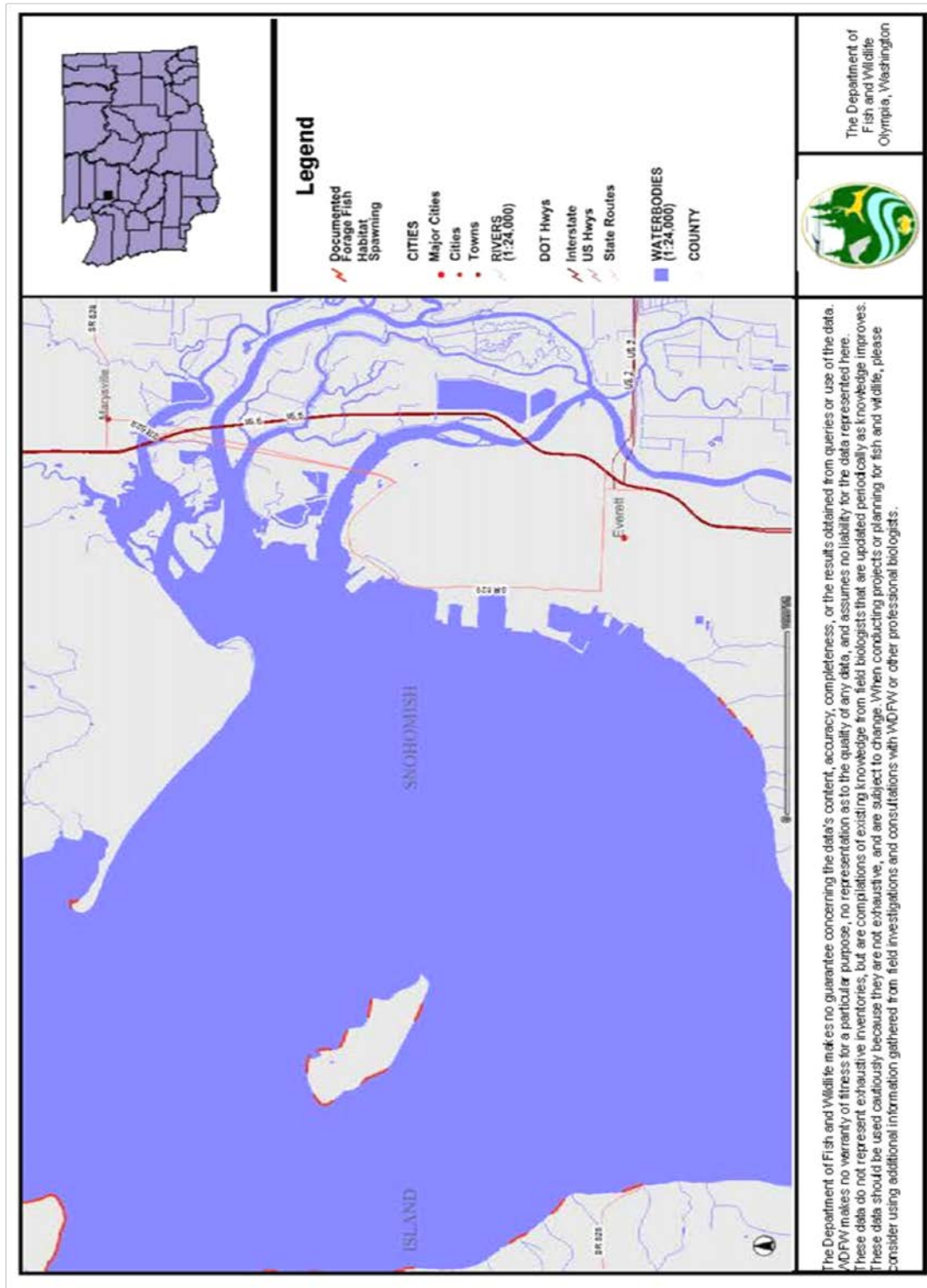


Figure 2-27. Documented Intertidal Forage Fish Spawning Areas
 (Sand Lance and Surf Smelt)

There are documented surf smelt and sand lance spawning areas located within Port Gardner Bay (Figures 2-26 and 2-27). Surf smelt spawning habitat has been documented to the south, near the mouth of Pigeon Creek, while sand lance spawning habitat has been documented north near the mouth of Tulalip Bay, south near Howarth Park as well as on some areas on Gedney Island. WDFW mapping does not identify any known Pacific herring spawning sites within Port Gardner Bay. Given the intervening distance between NAVSTA Everett and known sites, actions on the installation are not expected to affect forage fish spawning.

In spring 2015, WDFW conducted surveys of the bottom substrate near NAVSTA Everett using a Remotely Operated Vehicle (ROV), primarily to search for rockfish and to assess benthic physical characteristics. They did not detect any of the ESA-listed rockfish species during this survey. Also, through the spring and summer 2015, and into 2016, WDFW will be assessing fish presence and composition within the installation's nearshore areas via seining. Initial seining efforts have captured juvenile salmonid species (Chinook, chum, coho) and other fishes. Results of this work will be incorporated into updates of this INRMP. This work will continue across the Navy Region Northwest through proposed project EPR#68742CN002 (Appendix A).

2.8.1.2 Smokey Point FSC

Freshwater and Anadromous Fish

Quilceda Creek and its tributaries support coho, Chinook, and chum salmon. Based on Washington Department of Fisheries (WDF) spawning survey data, the main spawning migration appears to utilize the mainstem of Quilceda Creek and its major forks. Adult coho salmon enter streams in the Snohomish River Basin from July to December, spawning from late October to January, and the juvenile salmon out-migrate to Puget Sound from mid-April to mid-June (Williams, 1975). A WDF 1981 spawning survey was conducted for coho salmon in Hayho Creek, which runs along the western side of the Navy Support Complex from the Navy Support Complex to the Middle Fork of Quilceda Creek. Hayho Creek is located outside of Navy property. No fish were found during that spawning survey.

Subsequent to the 1981 survey, Washington State Department of Fish and Wildlife surveys have found Hayho Creek provides passage for populations of coho, chum and resident cutthroat trout. In addition, winter steelhead utilize segments of Quilceda Creek downstream from the Smokey Point FSC.

The WDFW Priority Habitat and Species map for the area indicates anadromous fish utilize Hayho Creek along the western side of the Smokey Point FSC up to the northwest corner of the site (WDFW, 1994). The map also indicates the Type 4 watercourse and the Type 5 watercourse entering it at the northwest corner of the Smokey Point FSC represent "critical spawning habitat for resident species." In addition, the watercourse may be utilized as rearing habitat for juvenile coho salmon (WDF et al., 1993). Snohomish River coho salmon runs utilize the tributaries of the lower Snohomish main stem, including Quilceda Creek, however "[t]his population is described as depressed due to a short-term, severe decline in escapement" (EDAW, 1994b).

WDFW indicates this Type 4 watercourse is now accessible to spawning anadromous fish following changes in the channel downstream from the Smokey Point FSC conducted by Snohomish County in 1993. The watercourse, which had previously supported only resident cutthroat trout, subsequently supports chum salmon and some coho salmon. Even though dry in the summer, the creek is compatible with the life cycle of chum and coho salmon as they do not have year-round rearing. Prior to purchase by the Navy, the wetland/stream enhancement of the site included the placement of 18 inches of gravel on a half-mile long stretch of the rechanneled watercourse that runs diagonally along the southern edge of the site. Downstream of this enhanced spawning habitat, the watercourse continues south and crosses a road through a culvert where it becomes deeper. Spawning chum salmon did not use the sections of the watercourse above the enhanced portion as extensively since these areas provide a less suitable spawning environment. A spawning ground count conducted in late December 1993/early January 1994 by the WDFW showed 450 fish in the enhanced watercourse, mostly dead. Consequently, the peak spawning period appears to be in late November/early December.

In 2001 and 2002 small numbers of spawning coho salmon were observed in beaver ponds and in the large culvert on the south edge of the Smokey Point FSC property, but were not observed north of the bend along the west side of the property. The streambed along the west side of the Smokey Point FSC property consists of mud/silt and does not provide good spawning habitat, so this may be the reason for the absence of coho from this portion of the stream. In 2003 unknown persons removed the beaver dam and the pond was lowered considerably. The beaver dam was later rebuilt but the City of Marysville, in conjunction with Snohomish County, installed a beaver-proof water-level by-pass pipe, “beaver deceiver” to maintain the level of the pond at a height lower than in the past. It is not likely that salmon can get through the pipe, therefore jumping the dam is likely the only feasible way for salmon to get above the dam and into the pond and from there upstream. In 2005, as part of an effort by the Snohomish County Surface Water Management program, the City of Marysville conducted two culvert replacement projects in order to improve fish passage through Hayho Creek (Snohomish County, 2012).

Recent Local/Community Actions

In 2009, under a grant from the Washington State Department of Ecology (WSDOE), the Adopt A Stream Foundation (AASF) executed a door to door public outreach effort to make contact with streamside landowners. Their objective was to improve stream shading, in-stream fish habitat and to reduce pollution inputs. As a result of the outreach, 88 percent of neighborhood landowners contacted agreed to a site visit and as a result 9 of the 33 streamside property owners in the neighborhood participated in tree planting, stream restoration, or pollution reduction activities. Seven others expressed interest, but projects for these properties were determined to be either unnecessary or not feasible. The AASF and its volunteers planted 43 percent of the Hayho Creek stream-bank in the neighborhood that needed improvement (WSDOE, 2009). NAVSTA Everett was invited and supported the event.

Also in 2009 the Allen-Quilceda Watershed Action Team published the “Compensation Planning Framework Quil Ceda Watershed” which identified the upper portions of the Hayho Creek sub-watershed as having priority wetland areas for preservation (Quil Ceda Village Engineering Department, 2009) . An area just south of the Smokey Point FSC may be a location that would contribute as an enhancement site for this effort (Figure 2-28).

Current data from WSDFW’s Priority Habitat and Species (PHS) mapping indicates chum salmon (*Oncorhynchus keta*), resident cutthroat trout (*Oncorhynchus clarki*) and coho salmon (*Oncorhynchus kisutch*) use or are present in Hayho Creek.



Figure 2-28. Enhancement Project Site
(Source: GRX)

2.8.2 Mammals

2.8.2.1 NAVSTA Everett

The waterfront site offers minimal habitat for terrestrial mammals. The site could be visited by river otters and raccoons, and probably also numerous small mammals including deer mice, meadow mice, shrews, Norway rats, brown rats, and bats of the genus *Myotis*. Individual coyotes have been observed on the installation.

Marine Mammals

Documented observations from NAVSTA Everett and WDFW Primary Habitat maps indicate that Pacific harbor seal (*Phoca vitulina*), Steller sea lion (*Eumetopias jubatus*) and California sea lion (*Zalophus californianus*) occur at NAVSTA Everett.

These species of marine mammals are protected under the Marine Mammal Protection Action (MMPA). The MMPA, subject to limited exceptions, prohibits any person, including Federal agencies or vessels subject to the jurisdiction of the United States from “taking” marine mammals on the high seas, in U.S. waters or on land under the jurisdiction of the U.S. Under the MMPA a “taking” includes “harassment” of a marine mammal.

The presence of these marine mammals does not significantly impact NAVSTA Everett operations or training, except in the instance of pierside and on-water training exercises, sonar tests, in-water construction, and maintenance actions. The marine mammals occupying and using nearby waters remain generally unaffected by operations at NAVSTA Everett, except in instances where they react to elevated sound levels. Accordingly, there are protocols in place to avoid sonar test impacts to marine mammals within the installation’s Operations Standard Operating Procedures (SOP). Additionally, agency consultation is undertaken on a case-by-case basis to incorporate practices and processes to avoid noise impacts to marine mammals as the result of construction and maintenance activities. NAVSTA Everett is included in a Region-wide marine mammal density survey effort (EPR# 68742MMS01, Appendix A).

Steller sea lion and California sea lion may be present in the vicinity of NAVSTA Everett. Both species are protected under the Marine Mammal Protection Act (MMPA).

Steller Sea Lion

The Steller sea lion is the largest eared seal species. The average male is over 9 feet long and weighs 1250 lbs. Females are quite a bit smaller with an average length and weight of 7 feet and 580 lbs respectively. Adult coloration is pale yellow to light tan on the dorsal side with dark, reddish brown shading on the flippers and underside of the body.

Foraging habitat is primarily shallow, nearshore and continental shelf waters; some Steller sea lions will feed in freshwater rivers. Steller sea lions are also known to feed in deep waters past

the shelf break. Steller sea lions are widely-distributed throughout Washington State inland waters and are frequently observed over deep water in the Strait of Georgia. An area of primary occurrence extends into the Strait of Juan de Fuca, around San Juan and Whidbey islands, and through the Strait of Georgia. The southern area of Puget Sound is an area of secondary occurrence.

Haulouts and rookery sites are located on isolated islands, rocky shorelines, and jetties throughout their range. Steller sea lions also haul out on buoys, rafts, floats, and on Navy submarines at Naval Base Kitsap-Bangor. Steller sea lions occur in Puget Sound year-round. Peak abundance occurs on land during the spring breeding season and at sea during the fall.

In Washington State, Steller sea lions primarily haul out along the coast from the Columbia River to Cape Flattery and on the southern coast of Vancouver Island near the Strait of Juan de Fuca (US Navy, 2006). However, Steller sea lions are known to utilize a few areas of Puget Sound and Hood Canal. While Steller sea lions can occur in Washington waters throughout the year, there are no breeding rookeries in Washington. Haul-out locations exist in coastal and inland waters, but no consistently used haul-outs, where large groups of the sea lions congregate are known in Puget Sound in the vicinity of NAVSTA Everett. Individuals of this species have been seen on the floating portion of the security barrier at NAVSTA Everett.

Surveys conducted between over the winter of 1984-1985 recorded no instances of Steller sea lion (Parametrix, 1985). A 1994 Environmental Assessment indicated two Steller sea lions were observed hauled out on the south side of Jetty Island. This same assessment cites a 1992 survey which indicated between 1-6 Steller sea lions frequent the East Waterway and Port Gardner (US Navy, 1994a). Subsequently, a Biological Assessment document indicates small groups (3-5) Steller sea lions were observed near NAVSTA Everett during a winter/early spring survey in 2000 (SAIC, 2001).

The closest known haul-outs used by Steller sea lions are the navigation buoys between Point Wilson (Port Townsend) and Point No Point, on the NE corner of the Kitsap Peninsula, approximately 20 miles (direct distance) to the west of Naval Station Everett (NOAA, 2012b). Steller sea lions are also reported at Marrowstone Island south of Port Townsend. The closest other potential haul-out locations would be the Everett Harbor Buoys, about $\frac{3}{4}$ mile west of NAVSTA Everett; however, Jeffries et al. did not note this location as being used by Steller sea lions. (Jeffries, 2000) .

Figure 2-29 shows documented occurrences of Steller sea lion in Puget Sound and the Strait of Georgia. Figure 2-32 shows documented seal and sea lion haulouts in Puget Sound.

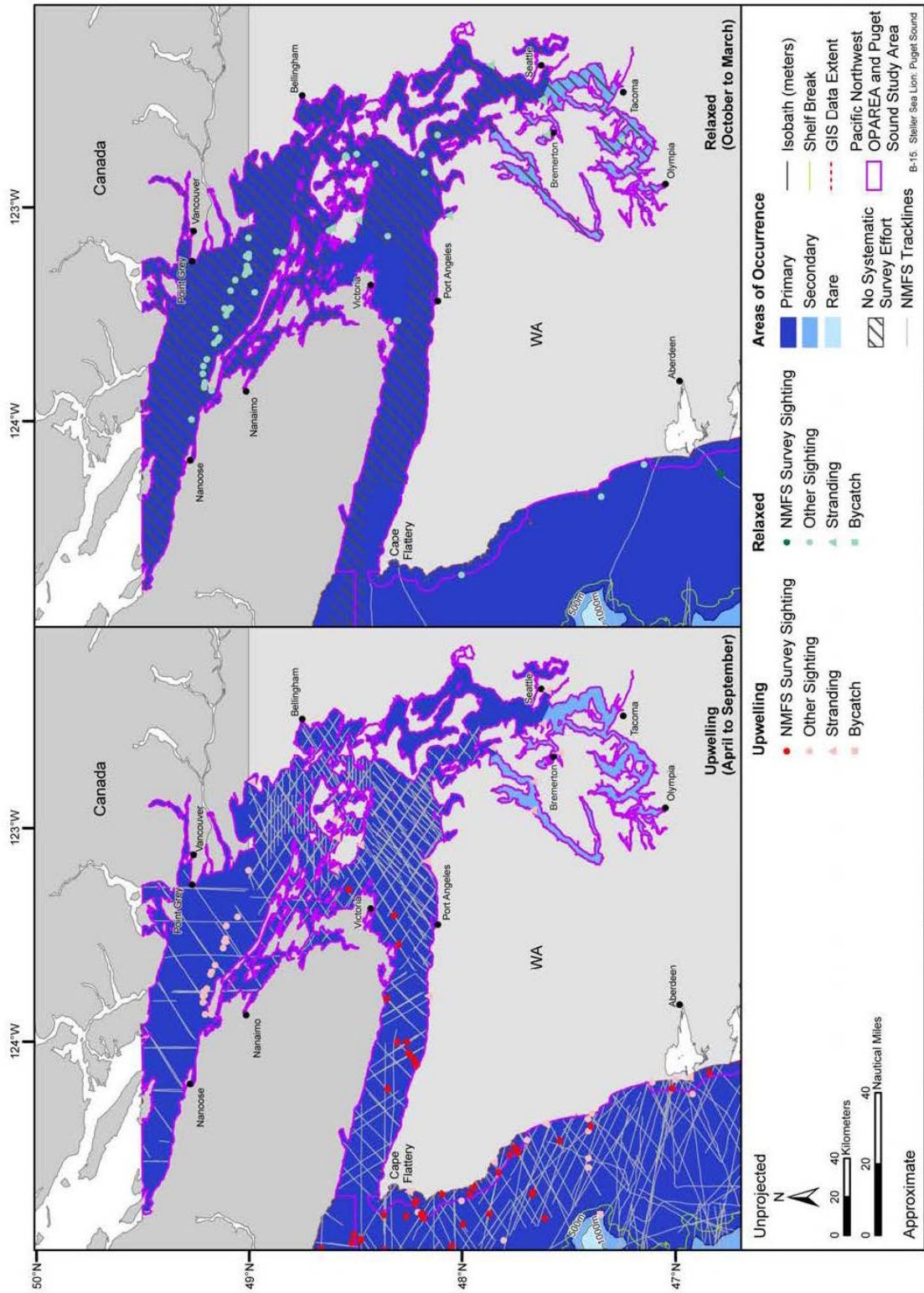


Figure 2-29. Steller Sea Lion, Sighting, Stranding & Incidental Bycatch, by Season
 (Source: US Navy, 2006)



Figure 2-30. California Sea Lions on the Log Rafts
(East Waterway, NAVSTA Everett)

California Sea Lion

California sea lions feed in waters at NAVSTA Everett and use log rafts near the installation and the floats of the installation's security barrier as haulouts (Figure 2-30). They are found near the installation in fall, winter and spring but are mostly absent during summer. California sea lions were heavily hunted from the mid 1800s through the mid 1930s for oil, pelts, and hides, and there was a bounty paid for them in Oregon and Washington. Commercial exploitation decreased due to fewer numbers of sea lions remaining, termination of bounties in the 1960s, and hunting prohibition via the Marine Mammal Protection Act of 1972. Due to existing protection, the California sea lion population growth rates have been healthy (US Navy, 1984).

The west coast California sea lion population breeds on the Channel Islands off southern California and has grown from just a few thousand in the 1920s to about 122,000 in 1990s. Their distribution shifts to the northwest in fall and to the southeast during winter and spring, probably in response to changes in prey availability. In the nonbreeding season, adult and sub-adult males migrate northward along the coast to central and northern California, Oregon, Washington State, and Vancouver Island and return south the following spring. Females and juveniles disperse somewhat during the non-breeding season but tend to stay near the rookeries (US Navy, 2006).



Figure 2-31. Harbor Seals on Log Rafts
(East Waterway, NAVSTA Everett)

As the population has grown, California sea lions have expanded their range to include Puget Sound" (Fraker, 1994). They prey on hake, herring dogfish, salmon, codfish, pollock, and cod (NOAA, 1996).

Most of the sea lions at NAVSTA Everett are males. Counts performed by NAVFAC NW Environmental Division staff from 2012-1-2014 sometimes found over 100 animals hauled out on the security barrier.

This INRMP includes a project which calls for the replacement of existing interpretive signs on NAVSTA Everett with new signs and placards addressing Marine Mammals identification and protection (EPR #68967NR005, Appendix A).

Pacific Harbor Seal

Pacific harbor seal (*Phoca vitulina richardsi*) a small, stocky seal, is found throughout the temperate and arctic waters of the northern hemisphere, and has the widest distribution of any pinniped (fin footed mammal). It is considered a non-migratory species, breeding and feeding in the same area throughout the year. The harbor seal is the most common, widely distributed pinniped found in Washington waters, and is frequently sighted by recreational boaters, ferry passengers and other users of the marine environment. Harbor seals use hundreds of sites to rest or haulout along the coast and inland waters, including intertidal sand bars and mudflats in estuaries, intertidal rocks and reefs, sandy, cobble, and rocky beaches, islands, log booms, docks, and floats in all marine areas of the state. Group sizes typically range from small numbers of animals on some intertidal rocks to several thousand animals found seasonally in coastal estuaries. Pupping seasons vary by geographic region, with pups born in eastern bays of Puget Sound from June through August. Harbor seal population appears to be relatively stable, with east sound populations varying between 1800-2500. Numbers for the State of Washington seem to indicate harbor seal population is at or near optimum sustainable population (OSP), and is not subject to existential risk.

Seals occupy and haul out at various sites near NAVSTA Everett, including log rafts secured in the East Waterway (Figure 2-31), Everett harbor buoys and the security barrier surrounding the piers. From time to time the carcass of a dead seal washes up or becomes lodged on NAVSTA Everett shoreline areas. There is a protocol in place under which the NRM will contact the NMFS and report occurrence. Depending upon the circumstances, NMFS may investigate the cause of death or may request that the NRM record particulars and submit a report. Harbor seals do not breed in the area. Summer numbers are low, but winter numbers (October-January) peak at 100-300 animals.

This INRMP includes a project which calls for the replacement of existing interpretive signs on NAVSTA Everett with new signs and placards addressing Marine Mammals identification and protection (EPR# 68967NR005) (Appendix A).

Whale Populations

A search of the <http://www.orcanetwork.org/> indicates that for the period of five years (2007 - 2011) there have been 130 reported whale sightings within Port Gardner Bay, Everett or Possession Sound. Of this total, 96 were gray whales (73.8%), 24 were killer whales (18.5%), 5 were humpback whales (3.8%), 4 were porpoises (3.1%) and 1 was a Minke whale (0.8%). Southern resident killer whale and humpback whales are protected species under the ESA and represent roughly 30% of all sightings. (Orca Network, 2012)

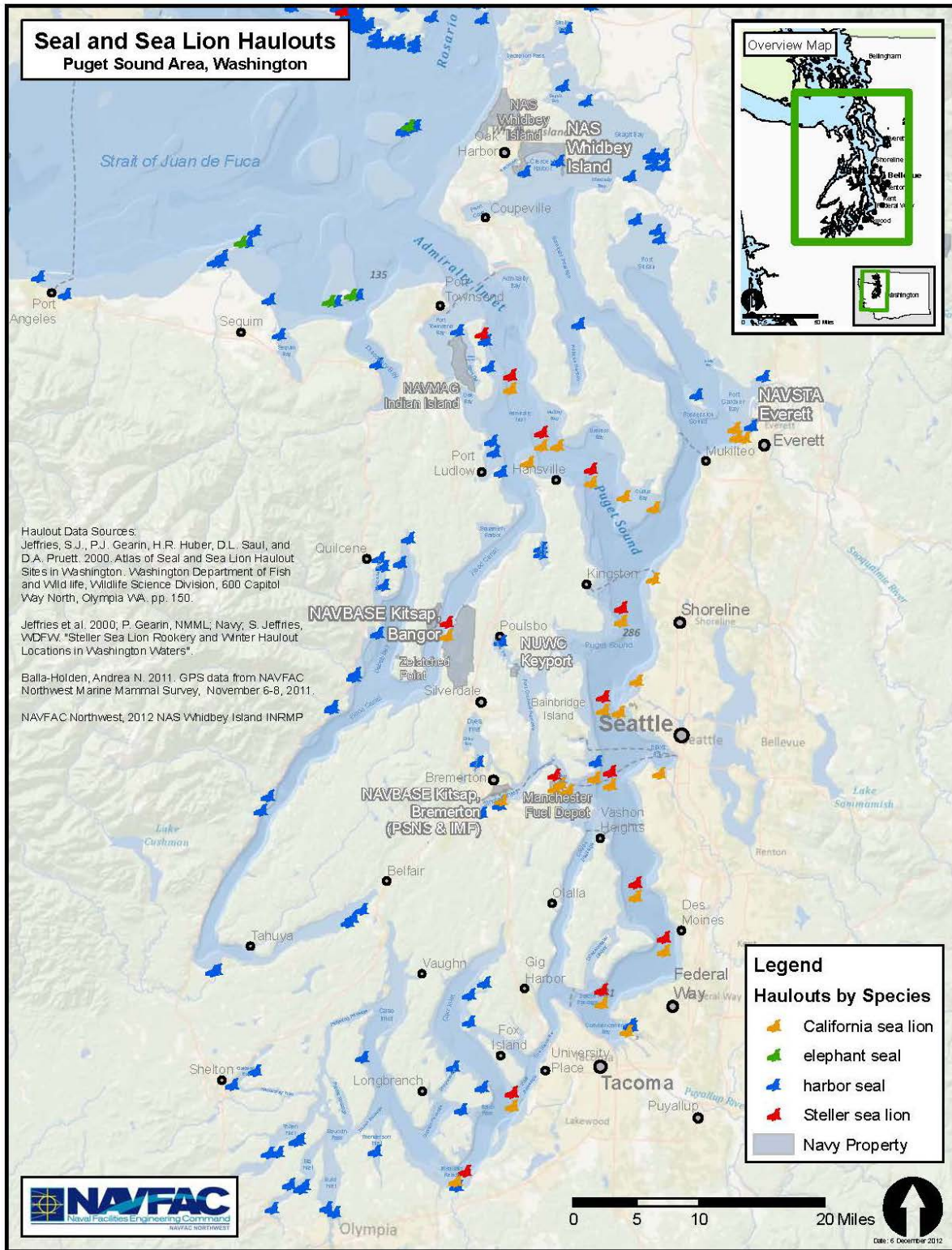


Figure 2-32. Seal & Sea Lion Haulout Sites (Puget Sound)
 (Source: NAVFAC, 2012)

Annual sightings range from a low of 13 in 2007 to a high of 41 in 2010, with an average of 26 sightings per year. The greatest number of sightings occurred from March through July, with the highest monthly sightings in April.

As a species, gray whales constitute the greatest number of sightings, and this is due in part to a repeated return of a number of gray whales to Puget Sound, Possession Sound, and northward through Saratoga Strait to Whidbey Island. Individually, the most often identified resident gray whales are CRC ID#53 and ID#49 (named “Patch”); both were first seen in 1991. The oldest resident gray whales, #21 and #22, were first documented in 1990, so #49 and #53 rank among the oldest whales within this population segment. Of the younger whales documented in the vicinity of NAVSTA Everett, CRC ID# 531 was first documented in 2000 and has returned to the Possession Sound area 7 of the last 10 years and ID# 723 first seen in 2004, and has returned 5 of the last 7 years. (Calambokidis, 2011)

Given the relative ages of the gray whale population, it seems possible the older whales have been instructing the younger members with regards to foraging within their range. So long as adequate quantities of forage exist within this range it is likely the presence and observed habits of the whales will continue. Possession Sound, Everett and Port Gardner Bay see an average of roughly 7 whale sightings per quarter over the long term, and as a planning factor it seems safe to assume that this trend will continue, even in the event of a generational change in population.

2.8.2.2 Smokey Point FSC

The site has supported beavers and raccoons. The site is probably also populated by numerous small mammals including deer mice, shrews, house mice, brown rats, and bats of the genus *Myotis*. Coyotes have been observed in the fields directly across from the east side of the Smokey Point FSC (J. Miller, Natural Resources Manager, personal observation 2004), and may hunt on the property at night.

2.8.3 Birds

2.8.3.1 NAVSTA Everett

Due to the lack of natural vegetation and to the large areas covered by asphalt and buildings, the few bird species on the land of the waterfront site are habituated to human presence, activities and resources: glaucous-winged gull, Canada goose, killdeer, European starling, rock dove, house sparrow, American robin, white-crowned sparrow and American crow.

All migratory bird species are protected by the Migratory Bird Treaty Act. This Act provides regulations prohibiting the taking, selling, transporting, and importing migratory birds, nests, parts, or products, and provides enforcement and penalties for violations. This protection extends to all species of waterfowl, shorebirds, raptors, woodpeckers, etc. and nearly all songbirds. In North America, only the European starling, rock dove, and the house sparrow are not protected under this Act.

Weekly surveys of water birds in the East Waterway from September 1984 to April 1985 found that the most numerous water birds in the East Waterway were western grebe (most numerous in December), red-necked grebe (April), double-crested cormorant (March), great blue heron (September, October, and January), Barrow's goldeneye (January), and mallard (January). In addition, the following species use the East Waterway: red-throated loon, horned grebe, eared grebe, American widgeon, greater scaup, Canada goose, bufflehead, American coot, western sandpiper, least sandpiper, dunlin, black turnstone, pigeon guillemot (Figure 2-33), rhinoceros auklet, glaucous-winged gull, Bonaparte's gull, Caspian tern, and belted kingfisher. In 2003 two kingfishers were spotted along the North Wharf on the Snohomish River. A kingfisher was later found dead with a broken neck below a window of Building 2132 but the circumstances of the death are unknown. A peregrine falcon hunted from some pilings near the helipad during November 1997, bald eagles fish in the waters directly off base, and federally threatened marbled murrelets are known to fish in the nearby waters of Possession Sound (US Navy, 1985e) (Rideout, 1998).



Figure 2-33. Pigeon Guillemot

In the course of the 2011 Audubon Christmas Bird Count a total of 860 birds, representing 19 different species, were identified (Appendix D), including the following:

- House Finch
- American Robin
- Western Gull
- Glaucous Wing Gull
- Hybrid: Glaucous/Western Gull
- Ring Bill Gull
- Great Blue Heron
- Double-crested Cormorant
- Red-breasted Merganser
- Common Goldeneye
- Bufflehead
- Northern Pintail

- Mew Gull
- Bonaparte's Gull
- Dunlin
- Black-bellied Plover
- American Wigeon
- Eurasian Wigeon
- Canada Goose

Nuisance birds using the waterfront site in different seasons include Canada goose, Rock dove, Eurasian starling, and House sparrow. During construction of the waterfront site facilities, when large areas were cleared and leveled, glaucous-winged gulls, western gulls, and Caspian terns nested by the thousands on this property. These nesting birds were a nuisance due to the large amounts of feces they dropped, and could have posed a hazard to helicopters using the helipad. Because the Migratory Bird Treaty Act prohibited Navy personnel from harassing all birds except rock dove, European starling, and house sparrow without special permits, in 1996 the Navy contracted with USDA Animal Damage Control, now USDA Animal & Plant Health Inspection Service (APHIS) Wildlife Services (WS), to control these problem birds. In 1995, approximately 2,000 Caspian Terns and 2 pairs of Arctic terns nested on base, and in 1996, about 3,000 glaucous-winged (90%) and western gulls (10%) and about 100-200 ring-billed gulls nested or tried to nest on base. Also in 1996, scores of Canada geese tried to nest on base. Physical harassment (by whistling, hand-waving, pyrotechnics) of the terns by APHIS-WS personnel eliminated all successful tern nesting by 1997. Hundreds of glaucous-winged gulls, western gulls, and Canada geese successfully nest on nearby Jetty Island.

To prohibit birds, specifically, Western gulls, Rock doves, and European starlings, from nesting on buildings, NAVFAC Public Works installed wires, "nixolite", and "Rid-a-Bird" (two brands of rooftop wire "criss-crosses") on roofs and rooftops. This has significantly decreased the use of rooftops by birds, but some buildings (e.g., buildings 1985, 2134, 2503, 2601, 2800) still need installation of nixolite or some wire structures. To prohibit birds from roosting/nesting under eaves, mesh has been installed.

The MBTA protects most migratory birds and their nests and eggs from being hunted, captured, purchased, or traded. Specific species protected by the MBTA that have been observed on NAVSTA Everett and may otherwise be considered nuisance animals include western gull (*Larus occidentalis*) and its subspecies Olympic gull, Glaucous winged gull (*Larus glaucescens*), ring bill gull (*Larus delawarensis*), herring gull (*Larus argentatus*) & common gull (*Larus canus*).

All those listed are considered nuisance birds and the Navy's Integrated Pest Management Program (IPMP) includes a service contract with USDA to harass these birds using various methods so they do not constitute a continued nuisance.

Crows have occasionally built nests within the maple trees in the vicinity of the Child Development Center, and during the summer of 2011 began to aggressively defend their nesting areas. This caused a conflict and in the intervening period WS has taken to removing nests from these trees in order to discourage their use by crows. This effort is ongoing and continues to be a focus area for WS, when they are on site.

The APHIS-WS program (<http://www.aphis.usda.gov>) is the primary contractor and responsible for and maintaining required depredation permits. The installation's current Predation Permit is MB692908-4.

2.8.3.2 Smokey Point FSC

The water features and riparian areas in the vicinity of the Smokey Point FSC support a more varied group of birds than the waterfront site, including palustrines (marshland birds) and passerines (perching songbirds). These species include: violet-green swallow, tree swallow, barn swallow, mallard, shoveler, gadwall, cinnamon teal, blue-winged teal, European starling, American crow, marsh wren, American robin, northern yellowthroat, bushtit, house sparrow, red-winged blackbird, song sparrow, savannah sparrow, and American goldfinch (observations by K. Livezey, 1998-1999). At least one red-tailed hawk has been observed hunting in the nearby fields year-round and hawks probably nest nearby (J. Miller, Natural Resources Manager, personal observation, 2001-2004).

2.8.3.3 Bird/Animal Aircraft Strike Hazard (BASH)

NAVSTA Everett

There is a helipad at NAVSTA Everett, but it is rarely used. Gulls and Canada geese could potentially pose a risk to a safe landing. The engine and rotor noise from helicopters would be effective in moving birds away from the landing pad.

Smokey Point FSC

The Smokey Point FSC has no aircraft facilities or landing areas.

2.8.4 Reptiles and Amphibians

Chytridiomycosis at Smokey Point FSC

Chytridiomycosis is a disease found in amphibians and is caused by high levels of the chytrid fungus *Batrachochytrium dendrobatidis* (Bd). *Batrachochytrium dendrobatidis* can potentially devastate amphibian populations on a global scale. The distribution of amphibians with Bd infections is widespread but the distribution of amphibian population declines caused by lethal outbreaks of Bd is restricted to several areas including the western United States.

The Department of Defense conducted surveys in 2009, 2011 and 2013 for the presence of Bd on U.S. military lands. Samples were taken from amphibians at Smokey Point FSC in 2013 as part of this study (Lannoo et al. 2014).

Of twenty amphibian samples taken at Smokey Point FSC, three tested positive for Bd. Although present, the Bd fungus does not appear to be having a negative impact on amphibian species at a population level at Smokey Point FSC. For a Bd infection to be considered the disease chytridiomycosis, zoospore levels must be greater than 10,000. The average zoospore equivalent for positive samples in Lannoo's 2013 study, which included Smokey Point FSC, was 11.

There have been no comprehensive surveys of reptiles or amphibians on NAVSTA Everett or Smokey Point FSC. A herpetological survey has been proposed (Appendix A, EPR # 68967NR019).

2.8.5 Vegetation

2.8.5.1 NAVSTA Everett

There are no intact native vegetative communities within the boundaries of the site. The site's flora and vegetation are generally fescue and turf grass along paths, walkways and sports fields, with landscaped areas of ornamental shrubs. Street shading is provided predominantly by ornamental maple trees. Recommended plant types are listed and described in detail in the installation's "Base Exterior Architecture Plan", Chapter 3, dated December, 1994.

There are no known rare or endangered plant types on NAVSTA Everett.

2.8.5.2 Smokey Point FSC

Having previously been a cleared pasture-like area, when the site was redeveloped no legacy vegetative communities were retained.

Given the low elevation of the site, fairly extensive storm-drainage and detention features were developed along the "front" or eastern side of the property, which can easily be observed when entering the site from the public street. These detention ponds support a healthy population of various trees, including some native cultivars, shrubs, reeds and grasses. To the "rear" of the property is Hayho Creek. This creek was the beneficiary of a cooperative buffer planting project in the past, and currently there is a well-established tree buffer between Smokey Point FSC and the US Army Reserve center, located immediately to the west of the site.

There are no known rare or endangered plant types at the Smokey Point FSC.

3 ENVIRONMENTAL MANAGEMENT STRATEGY AND MISSION SUSTAINABILITY

3.1 Cooperative Management

The Sikes Act directs DoD to enter into cooperative agreements with the USFWS for the management of natural resources on DoD installations. The USFWS, the Navy and the WDFW each have signature approval authority for this INRMP. However, Federal ESA authority is divided; USFWS manages land and freshwater species and all birds, while NMFS manages marine and anadromous species. Therefore, as a practical necessity this cooperative management regime is extended to include NMFS who is an additional approving agency for this INRMP.

At the installation level, cooperative management is enabled via the annual INRMP review process, through the incorporation of technical information, integration of methods and goals from specific resource management and recovery plans. At the field level, cooperative management is facilitated through consultation on a project-by-project basis and through mitigation and monitoring agreements.

3.2 Adaptive Management

Adaptive management closely related to Ecosystem management described below. Adaptive management is a structured, iterative process of optimal decision making in the face of uncertainty, with an aim to reducing uncertainty over time via systems monitoring. In this way, decision making simultaneously maximizes one or more objectives and accrues information needed to improve future management. Adaptive management is a tool which should be used not only to change a system, but also to learn about the system. Because adaptive management is based on a learning process, it improves long - run management outcomes.

Adaptive management is useful with regards to natural resource planning because knowledge of natural resources and natural systems is certainly imperfect. We cannot predict the actions and responses of animals to our actions with great accuracy, nor can we accurately predict how anthropogenic changes to the environment may affect animals directly in terms of vigor and mortality, adaptations or breeding/rearing. Adaptive management seeks to understand the conditions under which certain conservation strategies were most effective and to identify lessons learned across conservation projects. Refer back to Figure 1-1 for a diagram of the Adaptive Management Cycle.

3.3 Ecosystem Management

It is Navy policy to incorporate ecosystem management as the basis for planning and management of Navy installations. This approach shall take a long-term view of human

activities, including military uses, and biological resources as part of the same environment. The goal is to preserve and enhance ecosystem integrity, and to sustain both biological diversity and continued availability of those resources for military readiness and sustainability and other human uses. Ecosystem based management shall include:

- A shift from single species to multiple species conservation.
- Formation of partnerships necessary to consider and manage ecosystems that cross boundaries.
- Use of the best available scientific information and adaptive management techniques.

3.4 Achieving No Net Loss to the Military Mission

OPNAV M-5090.1, Chapter 12 describes Navy Natural Resources Management Program goals. These goals specifically include “productive community involvement, participation and educational opportunities.” It is important to recognize these goals serve not only to protect the Navy’s valuable natural resource, but also preserve the ability to sustain important mission capabilities, as well as relationships with neighboring communities and interests.

The Final Environmental Impact Statement (FEIS) Carrier Battle Group Home porting Plan, describing NAVSTA Everett as it currently operates, was published in 1985. Supplemental EIS (SEIS) documents were published thereafter. Considering the level of public notice and participation, comment and public & agency review in the course of these NEPA documents on record, the scope and extent of uses supported by NAVSTA Everett and the Smokey Point FSC have been widely known and understood by the residents of the City of Everett and greater Snohomish County.

Given the development of NAVSTA Everett has occurred relatively recently, the level of transparency in the NEPA Scoping and EIS process, the nature of the development and conspicuous use of NAVSTA Everett, it is clear reasonably anticipated uses were articulated and reviewed in detail. All uses on site were scoped, and there have been no lingering “legacy” or “mission creep” issues or conflicts so common with enduring sites that result when development and uses encroach incrementally, sometimes over decades. Accordingly, there have been no unanticipated issues with the public at large.

As discussed in Section 2.1.6, land use designations, zoning and classifications all appropriately allow and permit NAVSTA Everett’s ongoing operations, and within the body of regulations exists language requiring other and adjacent uses to be managed in a manner to avoid use conflict in both the terrestrial and aquatic environments.

3.4.1 Integrated Land Use and Natural Resource Decisions

Land use in general is guided by the NAVSTA Everett Master Plan, developed in 1994. Siting priorities are articulated in the Master Plan, and Land Use Zones are identified as shown in Figure 3-1, below. This provides some very general rationale for placement and co-location of

compatible uses. However, there appears to be no siting criteria within the Master Plan. Siting criteria may serve to describe and articulate natural resource values within this context, but do not appear to have been incorporated. Accordingly, siting and land use management is accomplished via the site approval process. Natural resource reviews are also coordinated on a case by case basis via the site approval process.

3.5 Supporting Sustainability of the Military Mission and the Natural Environment

3.5.1 Military Mission and Sustainable Land Use

OPNAV M-5090.1 clearly articulates the requirement that mission and natural resource management are not mutually exclusive. Both expectations may be met successfully with proper planning and management. The manual stresses the requirement for early and effective communications in order to identify requirements and limitations, to enable required consultations and effective mitigation of unavoidable impacts.

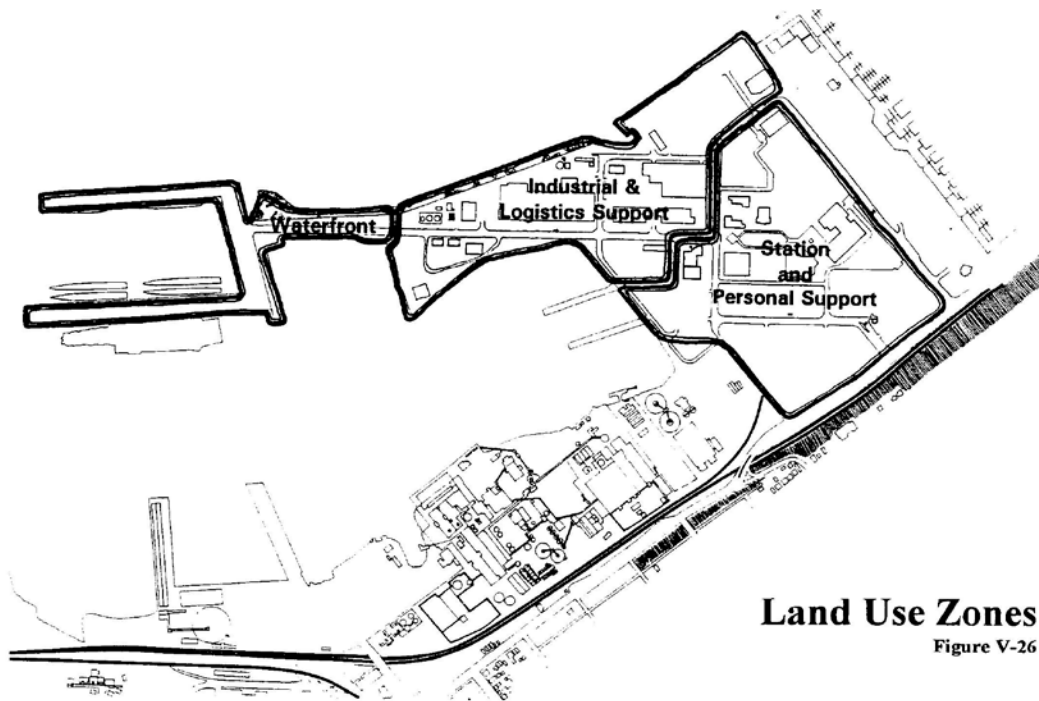


Figure 3-1. NAVSTA Everett Land Use Zones

3.6 Natural Resources Consultation Requirements

3.6.1 Threatened and Endangered Species (TES) Consultations

Federal agencies are required by the Endangered Species Act (ESA) to manage federally listed threatened and endangered species (TES) and their habitat in a manner promoting conservation consistent with plans for recovery of such species. Section 7 of the ESA requires all federal agencies to enter into consultation with the USFWS and NMFS whenever proposed actions “may effect” listed TES species of plants and animals. At NAVSTA Everett, proposed projects, operations, or other actions, are scrutinized for potential impacts to TES species through a formal review process. ESA Section 7 consultations will be initiated if warranted, otherwise, written documentation that there are no effects to TES species will be generated by the Natural Resources Manager and kept with the project files. The Natural Resources Manager will use this INRMP as a tool to identify the potential impacts of planned Navy actions on endangered or threatened species at an early stage and to provide a basis for altering the action to prevent or minimize those impacts.

Risk to military mission: USFWS or NMFS (or both) may require changes or mitigation that could result in delays and additional costs. Because of this, it is imperative that the Command initiate early environmental/natural resources review of proposed actions, in order to assess risks, develop alternatives, and correctly identify mitigation costs both in terms of time and dollars.

3.6.2 Essential Fish Habitat Consultation

The Magnuson-Stevens Fishery Conservation and Management Act, as amended in October 1996, requires that federal agencies consult with the U.S. Secretary of Commerce (currently delegated to NMFS) on any action proposed to be undertaken that may adversely affect essential fish habitat (EFH). The objective of this EFH assessment is to determine whether or not the proposed project may adversely affect designated EFH for relevant commercial, federally managed fish species within the proposed action area. It also describes conservation measures proposed to avoid, minimize, or otherwise offset potential adverse effects to designated EFH resulting from the proposed project. Subsection 50 CFR 600.920(f) specifies that EFH consultation should be consolidated with existing environmental review procedures required by other statutes, such as ESA, when appropriate. The NAVSTA Everett Natural Resources Manager will review all proposed projects, operations, and training plans for possible impacts to EFH. If impacts to EFH are identified, the NRM provides recommendations to the program/project managers so that changes or mitigation can be considered early in the planning process.

Risk to military mission: NMFS may require changes or mitigation that could result in delays and additional costs. Because of this, it is imperative that the Command initiate early environmental/natural resources review of proposed actions, in order to assess risks, develop cost-effective alternatives, and correctly identify mitigation costs both in terms of time and dollars.

3.7 Planning for National Environmental Policy Act (NEPA) Compliance

The National Environmental Policy Act (NEPA) of 1969 (42 USC section 4321 et seq.) requires federal agencies evaluate the impacts of proposed actions on the quality of the human environment. The Navy's policies regarding NEPA, OPNAV M-5090.1 Chapter 10, Environmental Planning under the National Environmental Policy Act and Executive Order 12114, SECNAVINST 5090.6A (SECNAV Instruction 5090.6A, Environmental Planning for Department of the Navy Actions, dated April 26, 2004) reinforce NEPA requirements and emphasize environmental planning at the earliest stages of projects. The Navy recognizes that the NEPA process includes the systematic examination of the likely environmental consequences of implementing a proposed action. To be an effective decision-making tool, the Navy integrates the process with other Navy project planning at the earliest possible time. This ensures planning and decision-making reflect environmental values, avoid delays, and avoid potential conflicts. The Navy is able to achieve its mission at home, at sea, and abroad more efficiently when environmental planning is properly integrated into Navy decision-making for those actions that have the potential for adverse environmental consequences.

Navy policy and NEPA require early review and coordination for environmental considerations. This is achieved at NAVSTA Everett through an environmental project review process, which requires all new projects, programs, and operations, or changes to existing projects, programs, and operations, be reviewed by the Natural Resources Manager for potential impacts to the environment, and specifically to natural resources. The Natural Resources Manager reviews planned actions, identifies risks to natural resources, and provides comments and/or alternatives to the action proponents that will minimize or eliminate the risks, if possible. The early review process also allows the Natural Resources Manager an opportunity to identify the appropriate NEPA documents that will be generated based on the proposed action and the alternatives.

3.7.1 NRM Sponsored Actions & Plans

Natural Resources Manager sponsored actions and management plans may also require NEPA review. For example, research and/or restoration projects, surveys, vegetation management and other project must be reviewed for environmental risks and impacts, in the same manner as any building project or new training operation.

Risk to military mission: Alternatives to proposed actions must be identified and investigated for projects that require an environmental assessment (EA) or an environmental impact statement (EIS). Each of these require time and resources, thus it is imperative the Command initiate early environmental/natural resources review of proposed actions, in order to assess risks, develop alternatives, and correctly identify mitigation costs both in terms of time and dollars.

3.7.2 Coordination and Planning for Construction and Facility Maintenance

3.7.2.1 Maintenance & Minor Construction, excluding MILCON

Planning actions with natural resource implications are reviewed on a case by case basis. Common facility maintenance actions are assessed during the development proposal review, if

possible. When maintenance is not reviewed upfront, as in the case of pier and wharf pile replacement, then maintenance actions are reviewed as a project, using environmental review checklists and routings. Required permits and consultations are identified during this project review and actions and mitigations are documented in this manner.

3.7.2.2 Major Construction, including MILCON

Coordinating MILCON funding cycles with NEPA requirements has been an area of persistent challenge. A benefit of the NEPA process is identifying environmental elements that may affect the scope, schedule and budget of their project early in project development. In cases where the proposal or development is common in nature and where sites are uncomplicated, the lack of full synchronization does not represent a significant risk. However, in instances where the use or development is unique or highly constrained, has unknown potential impacts or when sites characteristics may include unanticipated or unique species, resources or attributes, then a lack of full synchronization may represent a fundamental risk, especially if related to project scope. In all cases it is best if the NEPA Development of Preferred Action Alternatives (DOPAA) process is completed prior to refinement of the project, during the scoping phase, early in project development.

Additionally, NEPA actions cannot be funded with MILCON funds. Given that MILCON funds expire, typically after 5 years, and construction may not be initiated ahead of the completion of necessary NEPA actions, there is usually significant pressure to execute NEPA actions as quickly as possible in order to provide the project the best possible opportunity to meet its schedule and budget. Early communications between proponents and NEPA/NR staff is vital in order to ensure a thorough review of the project alternatives and to enable NAVFAC planners to secure funding for required NEPA actions as soon as possible. This early and effective coordination delivers maximum flexibility to the project proponent and will allow the best chance of project success.

3.7.3 Mitigation Planning

3.7.3.1 NAVSTA Everett

In the marine context, given the highly developed nature of the shoreline areas as well as the intensity of on-going mission requirements, opportunities for mitigation at NAVSTA Everett are limited. For in-water projects that require a permit from the US Army Corps of Engineers, compensatory mitigation may be required pursuant to the ESA/USACE Final Rule on Loss of Aquatic Resources. The Navy may participate in mitigation banks and/or in-lieu fee programs to provide mitigation. For permittee responsible mitigation, it may be advisable to engage with the Port of Everett, City of Everett, or Snohomish County Parks Department to develop mitigation options in concert with the greater community.

3.7.3.2 Smokey Point FSC

Mitigation opportunities at the Smokey Point FSC involve possible improvements to the existing wetland and the native planting buffer to Hayho Creek. These areas could be improved to be more attractive to various birds, and the riparian corridor could be managed to encourage succession and strong primary plant associations. While overall function of the stormwater detention facilities may not be impaired as a practical matter, it may be possible to manage these areas to provide higher value habitat for wetland obligate bird species.

3.8 Beneficial Partnerships and Collaborative Resource Planning

Specific fish species and habitat planning level surveys required for resource management might be shared with agencies and other organizations in order to further the general state of knowledge and status of species within Puget Sound.

The NRM will maintain contact with the DoD Partners in Flight (PIF) program, Partners in Amphibian and Reptile Conservation (PARC) program and other scientific and resource groups in order to stay situationally aware of project and program opportunities as they develop.

3.9 Public Access and Outreach

3.9.1 Public Access and Outdoor Recreation

3.9.1.1 NAVSTA Everett

There is no general public access permitted on NAVSTA Everett. Outdoor recreation includes activities associated with outdoor intramural sports utilizing the designated sports fields. There are no MWR programs oriented toward outdoor recreation aside from operating the marina in the East Waterway. Access and use of the marina is limited to military service members and retirees and their guests. No Sikes Act fees are collected for use of the marina.

Direct public benefits involving NAVSTA Everett are limited to viewshed access. Residents occupying houses on the bluff east of Marine View Drive may look over NAVSTA Everett and enjoy the view of Port Gardner Bay and Puget Sound from their vantage point atop the bluff.

3.9.1.2 Smokey Point FSC

Activities conducted at the Smokey Point FSC are generally commercial in scope and nature. Access and use of these facilities is limited to service members, retirees and civilian employees. Outdoor recreation includes activities usually associated with outdoor intramural sports utilizing the sports fields. There are no activities oriented toward enjoyment of the natural environment operated by MWR at the the Smokey Point FSC and no Sikes Act fees are collected.

3.9.2 Public Outreach

3.9.2.1 NAVSTA Everett

Natural Resource staff worked in coordination with the Audubon Society to support the annual Christmas Bird Count (Audubon CBC). Trained observers were escorted onto NAVSTA Everett and a count of birds of all type was completed. Results of the 2011 CBC are included in Appendix D.

The CBC is a popular event and has been completed in Snohomish County annually since 1968. Contributing to and drawing from this large body of data may be of value to the Navy in the future in understanding the trends in migratory bird populations which may see changed behaviors are the result of climate and habitat changes (Taylor, 2011).

Earth Day celebrations are routinely observed on NAVSTA Everett. These events provide an opportunity to engage service members, families, civilian employees, contractors and the public annually, in order to inform and solicit support for natural resource conservation, values and projects.

3.9.2.2 Smokey Point FSC

Expanding involvement with the Audubon CBC to include the Smokey Point FSC will be explored. This would require additional coordination with the Audubon Society and development of a second team of trained observers given Smokey Point is located in a different inventory area from NAVSTA Everett.

3.10 Encroachment Partnering

An Encroachment Action Plan (EAP), prepared for NAVSTA Everett in 2008, identified potential encroachment pressures and recommended strategies with an action plan to mitigate encroachment. Effective encroachment management requires a proactive approach, and to include consideration beyond the fencing, building community relationships and timely action where necessary. Encroachment issues are closely coordinated between installation Environmental and Facilities Planning personnel.

Issues identified included:

- Changes in adjacent property development as the industrial waterfront and surrounding neighborhoods transition into mixed use, commercial-residential developments.
- Increasingly strict resource protection requirements, i.e. environmental initiatives such as the Puget Sound Partnership which could lead to heightened regulations in Port Gardner Bay and the East Waterway.

- Increased use of Jetty Island places more watercraft in areas immediately adjacent to NAVSTA Everett, which may give rise to security concerns.

Issues (a) & (c) may be effectively addressed through on-going engagement with the local communities, as specified in the EAP. Regarding issue b., the Puget Sound Partnership (PSP), it is unlikely this organization, acting under its Clean Water Act Section 320 authority, would impact operations at NAVSTA Everett or Smokey Point FSC, given this authority is limited and applicable specifically to estuarine restoration. The PSP's Puget Sound Near-Shore Ecosystem Restoration Program and Federal Caucus are monitored by NAVFAC Region staff (N40) (Hart, 2011).

3.11 GIS Management, Data Integration, Access, and Reporting

The US Navy Geographic Readiness Exchange (GRX) currently provides general mapping resources for site planning purposes. Currently, data coverage of Natural Resource media is limited. It is currently necessary to "data mine" for datasets and coverage from other public sources in order to improve the utility of GIS for natural resource management purposes and as a tool to enable informed decision making. A spatial data standard has been developed to ensure contracts have consistent information regarding these tasks:

"The documents (plan, report) shall be provided by email as a single Adobe Acrobat format (pdf) file. Each appendix, regardless of size, shall be provided as an individual pdf file. All maps, figures, and pictures shall be provided at a useable resolution. All color maps, figures, and photographs shall be provided in color pdf format.

All files associated with final approved documents shall be provided to the Technical Representative in native file format (e.g. Word, Excel, Access, CADD), as well as CD copies. All findings/sightings/data points will be provided to the government in electronic format as finalized GIS data files (shapefiles with all components, geodatabases, etc.) and non-GIS files containing spatial data (Excel files, databases, etc.), including associated metadata. This includes all electronic files and base layers used to create any printed or electronic map, so that the Navy obtains the capability to open and manipulate any geospatial feature."

Data development, mining and integration will be an on-going effort. As the INRMP is expanded and adapted to accommodate information and objectives new data requirements will become apparent. Data and analysis developed will be archived and maintained by GRX.

Given the adaptive nature of natural resource management, there are sometimes several concurrent scientific efforts underway to evaluate, describe, classify, and manage, resources, processes and measures. Eventually, certain standards will become favored and may be either entirely new or replace & succeed a previous standard. This has GIS implications.

For example, there is a requirement to classify all installation habitats utilizing NatureServe standardized CES Codes, which uses primary plant associations and geophysical setting as

determining factors (Natureserve, 2012). Accordingly, it will be necessary to conduct preliminary field assessment and classification, interpretation of photo/imagery, final field validation and map production. This will be relatively straight forward on small, homogeneous installations, but may become very resource intensive for larger installations with a greater diversity of habitats. Moving into the future, adoption of specific standards will require reassessment and possible reinterpretation of existing or legacy datasets.

3.12 Training of Natural Resource Personnel.

OPNAV M-5090.1, Chapter 12, section 12-3 states, “Professionally trained natural resources managers shall be assigned the responsibility of implementing these requirements”, meaning natural resources conservation.

OPNAV M-5090.1, Chapter 12, section 12-3.15 states:

Personnel with NRC responsibilities shall receive the appropriate job-specific education and training to perform their assigned tasks.

a. Natural resources managers shall receive, at a minimum, the following education and training:

(1) Basic environmental law (completion of Naval Civil Engineer Corps Officers School (CECOS) Basic Environmental Law (A-4A-0058) will satisfy this requirement);

(2) Natural resources compliance (completion of CECOS Natural Resources Compliance (A-4A-0087) will satisfy this requirement);

(3) Environmental protection (completion of CECOS Environmental Protection (A-4A-0036) will satisfy this requirement);

(4) Introduction to NEPA (completion of CECOS National Environmental Protection Act (NEPA) Application (A-4A-0077) will satisfy this requirement);

(5) Environmental negotiation (completion of CECOS Environmental Negotiation Workshop (A-4A-0067) will satisfy this requirement); and

(6) Program funding (EPRWeb online training will satisfy this requirement).

In coordination with the Installation Environmental Program Director, assigned personnel submit and obtain training through their approved Individual Development Plan (IDP). Staff attends training sponsored by CECOS and other internal Navy sources.

Additionally, numerous training opportunities exist at a local level, including:

- The Adopt A Stream Foundation has numerous training sessions on various topics. Info available at www.streamkeeper.org.
- The Padilla Bay National Estuarine Research Reserve near Anacortes, WA hosts several training sessions annually in coordination with the Washington State Department of Ecology under the title of “Coastal Training Program Washington”. Info available at <http://www.coastaltraining-wa.org>

- The NRCS/Snohomish Conservation District conducts annual invasive/noxious weed plant identification and eradication training annually.
http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/Road_Maint/Noxious_Weeds

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4 INTEGRATION OF PROGRAM ELEMENTS

The term “integrated” in the context of the title Integrated Natural Resource Management Plan is intended to be applied nearly universally; within the INRMP as a combined strategic and implementation document, and integrated with natural resources management actions of partner agencies beyond the borders of the installation.

The following discussion of INRMP integration relies significantly upon the Wildlife Action Plan [SWAP] (formerly called the WDFW Comprehensive Wildlife Conservation Strategy), as well as upon numerous, detailed species and management and recovery plans and watershed management plans, authored by USFWS, NMFS, WDFW, innumerable federal, tribal, state and county entities and agencies, communities, NGOs, interest groups and coordinating committees, each sharing the common interest of protecting, preserving and restoring animals and/or their respective habitats. The WDFW SWAP is discussed separately due to its broad and overarching scope. Other more specific plans are described and discussed only within management plan subsections due to their highly specific nature.

NOTE: All actions contemplated in this INRMP are subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 USC. section 1341.

4.1 State Wildlife Action Plan

Washington’s Comprehensive Wildlife Conservation Strategy released in 2005 is being updated, and is now called the State Wildlife Action Plan (SWAP). A public review draft was made available in fall, 2015. Once final, this INRMP will be reviewed to ensure consistency with Washington’s wildlife management as described in the SWAP.

CWCS Greatest Conservation Challenges: (WDFW, 2005)

The following key challenges were identified in the document:

1. Reverse habitat loss due to conversion, fragmentation, and degradation.
2. Curb the spread of invasive alien plant and animal species.
3. Improve the diversion and allocation of surface water to leave more water for fish and wildlife.
4. Improve water quality.
5. Recover salmon populations.
6. Implement updated forest conservation and management practices.
7. Implement updated agricultural and livestock grazing practices.
8. Reverse the spread of plant and animal diseases and pathogens.
9. Improve our knowledge of wildlife species, populations and habitats.

CWCS Most Effective Conservation Actions:

The following actions were called for within the document:

1. Conserve and restore habitat on public, private and tribal lands.
2. Implement species conservation strategies and coordinated salmon recovery plans.
3. Ensure that local, state and federal laws are implemented to protect fish, wildlife and habitat.
4. Conduct biological assessments, research, surveys and monitoring of fish, wildlife and habitat.
5. Identify scientific information for local governments and planners.
6. Expand wildlife information and conservation education programs.

Integrated Response

INRMP integration involves the alignment of Goals, Objectives and Plans. Described in the following management plan are actions that will contribute to the preservation or restoration of various species and environments. Plans are subsequently supported with specific INRMP projects, described in Appendix A, Section 6.

Actions undertaken at NAVSTA Everett and Smokey Point FSC may address the following challenges:

1. Execute an effective Pest Management Program to curb the spread of invasive alien plant and animal species.
2. Reduce the use of pesticide, fertilizer and other human added contaminants.
3. Improve water quality through elimination/management of accidental discharge.
4. Improve water quality through effective management of stormwater discharge.
5. Improve our knowledge of wildlife species, populations and habitats through the execution of on-going survey and monitoring efforts.
6. Reduce pesticide, fertilizer and other human added contaminants to the waters.

Several actions undertaken at NAVSTA Everett and Smokey Point FSC may include the following conservation benefits:

1. Where opportunities exist, conserve habitat.
2. Implement species conservation strategies and coordinated salmon recovery plans to the extent these actions result in no net loss to the military mission.
3. Comply with permits and applicable local, state and federal laws intended to protect fish, wildlife and habitat.
4. Conduct biological assessments, research, surveys and monitoring with principal focus on fish and the aquatic/marine environment.
5. Expand wildlife information and conservation education programs.

4.2 Threatened and Endangered Species, Critical Habitat, & Species of Concern

Comment regarding ESA Listings:

Currently the rate of wildlife research and surveys is outpacing USFWS capacity to make determinations regarding the proper status of specific species. Historically the USFWS has reviewed 20-40 species per year. However, by November 2010 the back-log of official nominations had grown to 251 species formally awaiting determinations (USFWS, 2012c). This resulted in public frustration. Several citizen lawsuits have been filed seeking a remedy to this backlog. A stipulated agreement was reached in September 2011 between USFWS and combined group of plaintiffs under which USFWS agreed to expedite determinations of 61 candidate species and accelerate determinations on a backlog of 600 species between the date of agreement and the year 2017 (Washington Legal Foundation, 2011).

Based upon this agreement it seems possible or even likely the life cycle of this INRMP will coincide with a period of accelerated ESA reviews and determinations. It is unlikely either installation would support species or encompass required habitat for species anticipated for listing during the scope of this INRMP. Nonetheless, when faced with the pace of listings, completing resource surveys quickly in response to listings and on-going consultation with agencies may be necessary in order to secure exemptions, thus avoiding designation of NAVSTA Everett or Smokey Point FSC as Critical Habitat Areas.

4.2.1 NAVSTA Everett

The following species found in and around Naval Station Everett are protected under the Endangered Species Act (ESA):

Fishes

- Chinook salmon (*Oncorhynchus tshawytscha*),
- Steelhead (*Oncorhynchus mykiss*),
- Bull Trout (*Salvelinus confluentus*),
- Bocaccio Rockfish (*Sebastes paucispinis*),
- Canary Rockfish (*Sebastes pinniger*),
- Yelloweye Rockfish (*Sebastes ruberrimus*),
- Pacific Eulachon (*Thaleichthys pacificus*),
- Green Sturgeon (*Acipenser medirostris*)

Marine Mammals

- Southern resident Killer Whale (*Orcinus orca*),
- Humpback whale (*Megaptera novaeangliae*),

Birds

- Marbled Murrelet (*Brachyramphus marmoratus*)

Reptile

- Leatherback Sea Turtle (*Dermochelys coriacea*)

4.2.2 Smokey Point FSC

There are no species found at the Smokey Point FSC that are protected under the ESA.

4.2.3 General Discussion

Navy management & protection plans for TES species must demonstrate compliance with strict criteria, intended to ensure the adequacy of management for the benefit the species. The three criteria are:

- 1) Conservation Benefit: The plan must benefit the species.
- 2) Implementation of the Plan: Assurances must be in place to ensure implementation.
- 3) Management Effectiveness: Assurances the plan will be effective.

Most listed species near NAVSTA Everett reside in the aquatic environment. Given that both the setting and the environments are largely the same for each of the nine species, many management and protection measures apply equally to numerous species. It is demonstrating compliance with Criterion #3 where we see the greatest amount of variability.

The Endangered Species Act (ESA) requires federal agencies to manage federally listed threatened and endangered (TES) species and their habitats in a manner promoting conservation of TES species, consistent with recovery plans for such species. Section 7 of the ESA requires all federal agencies to enter into consultation with the USFWS and NMFS whenever actions are proposed that may affect listed and proposed TES species of plants and animals.

Special management and protection is a term originating in the definition of Occupied Critical Habitat in Section 3 of the Endangered Species Act. For Occupied Critical Habitat, it is necessary to determine if:

1. The area contains the physical and biological features essential to the conservation of the species, and
2. The area has or needs additional special management or protection.

Additional special management is not required if adequate management or protection is already in place.

This INRMP is meant to be used as a tool to identify the potential impacts of current or planned Navy actions on endangered or threatened species at an early stage and to provide a basis for analyzing and altering the course of action to prevent or minimize those impacts.

4.2.4 Special Management and Protection of TES Species

Adequate special management or protection is achieved by executing a legally operative plan. The DoD uses the term “Integrated Natural Resources Management Plan”, or INRMP. It

addresses the maintenance and improvement of the primary constituent habitat elements important to the species and management for the long-term conservation of the species. As previously stated, in all instances the Navy will use three criteria to determine if a plan provides adequate special management or protection. Further detail and discussion follows:

4.2.5 Criteria 1, Conservation Benefit

The plan must provide a conservation benefit to the species. The cumulative benefits of INRMP management activities for the duration of the plan must maintain or provide for an increase in species population or the enhancement or restoration of its habitat within the area covered by the plan, i.e., those areas deemed essential to the conservation of the species. A conservation benefit may result from reducing fragmentation of habitat, maintaining or increasing populations, insuring against catastrophic events, enhancing and restoring habitats, buffering protected areas or testing and implementing new conservation strategies.

4.2.5.1 Methods of Compliance, Criteria 1

Timing: The NAVSTA Everett Command will ensure that all proposed routine construction or repair activities are restricted to the approved work time for the species, i.e. in-work windows for fishes, nesting seasons for bird species.

Consultation: NAVSTA Everett will ensure that all proposed actions that potentially affect (including beneficially affect) ESA-listed species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with NMFS and USFWS. This includes emergency repairs to structures and other activities required by the installation's mission.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station's departments to minimize or eliminate undesirable releases. The Natural Resources Manager will, under the direction of the Installation Environmental Program Director (IEPD), assist in the development of spill prevention, control, and countermeasures and see that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The Natural Resources Manager or designated staff will regularly inspect any NAVSTA Everett structures that extend below the MHHW line (such as security booms around ships) and keep the structures free of debris or other materials that could hinder species movement along the shoreline.

4.2.6 Criteria 2, Implementation of the Plan

The plan provides assurances that the management plan will be implemented. Persons charged with plan implementation are capable of accomplishing the objectives of the management plan and have adequate funding for the management plan. They have the authority to implement the plan and have obtained all the necessary authorizations or approvals. The plan provides a conservation effort implementation schedule, including completion dates.

4.2.6.1 Methods of Compliances, Criteria 2

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a Natural Resources Manager (NRM) position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. Naval Station Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding to address natural resources management issues, including habitat enhancement projects and special projects to assist in the recovery of TES species, as circumstances require.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.2.7 Criteria 3, Management Effectiveness

The plan provides assurances that the conservation effort will be effective. The following criteria will be considered when determining the effectiveness of the conservation effort:

1. Biological goals (broad guiding principles for the program) and objectives (measurable targets for achieving the goals).
2. Quantifiable, scientifically valid parameters that will demonstrate achievement of objectives, and standards for these parameters by which progress will be measured.
3. Provisions for monitoring and, where appropriate, adaptive management.
4. Provisions for reporting progress on implementation based on compliance with the implementation schedule, and effectiveness based on evaluation of quantifiable parameters of the conservation effort. This goal will be accomplished at the annual INRMP review and update in coordination with the appropriate federal and state agencies.
5. Duration sufficient to implement the plan and achieve the benefits of its goals and objectives. The INRMPs are ongoing plans, reviewed and updated annually and reviewed at least once every 5 years for operation and effect. This INRMP will be reviewed and updated or rewritten, as necessary, to continue protection and enhancement for TES species and habitats.

4.2.7.1 Methods of Compliance, Criteria 3

Goals: Goals for each species are discussed in detail within the individual species sections below.

Parameters: Quantifiable, scientifically valid parameters that will demonstrate achievement of objectives, and standards for these parameters by which progress will be measured

Monitoring & Adaptive Management: Species surveys and monitoring are included as projects, in Appendix A. Final detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order monitor species habitat and abundance.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. Though subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW, USFWS and NMFS staff to identify necessary changes to the plan that would benefit the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

A detailed Management Plan or discussion of each resource follows.

4.2.8 Management and Protection Plan for Chinook Salmon



Chinook Salmon

(Source: US Forest Service)

Genus/Species	Oncorhynchus tshawytscha,
Status:	Threatened (NMFS, 2012e)
Citation:	Federal Register, Vol 70, p 37160.
Habitat Designated:	Federal Register, Vol 70, p 52630.

Habitat exemption:	Exempt (INRMP), NMFS.
In-Water work window:	Freshwater Environments: See Annex B Saltwater Environments: See Annex C

Listed as threatened on Mar. 24, 1999; threatened status reaffirmed on June 28, 2005. The National Marine Fisheries Service issued results of a five-year review on Aug. 15, 2011, and concluded that this species should remain listed as threatened.

When originally listed, native Chinook populations as well as naturally spawned populations within the boundaries of Puget Sound that originated from hatchery stock were included. As of this writing, NMFS is under a court order to include Chinook salmon raised in hatcheries and released to the wild.

The Snohomish River is the most likely origin for Chinook salmon that use the waters around NAVSTA Everett. Both adults and juveniles can inhabit waters near NAVSTA Everett, but the extent of Chinook presence around the station's piers and along the shoreline is unknown. Historically, Chinook salmon utilized the waters of the East Waterway. However, the best habitat for juvenile salmon lies west of the mouth of the Snohomish River, along Jetty Island and in the shallow areas west of the island. Juvenile salmon are typically found over sand, mud, and gravel substrates, with preferences for finer substrates due to an abundance of epibenthic prey in this type of habitat (Beauchamps, 1986). Shoreline habitat bordering NAVSTA Everett consists of riprap, pilings, and piers. Although juvenile Chinook salmon are known to forage amongst riprap, there is little aquatic vegetation and no eelgrass beds along or near the shoreline of the station that would provide quality foraging and resting habitat (Figure 2-19).

Washington Department of Fish and Wildlife includes Chinook salmon on their Priority Habitat and Species List (WDFW, 2008a). WDFW indicates this species meets all three priority species criteria, meaning Chinook salmon warrant protection based upon Criteria; 1) their status as threatened, 2) because they are a species that demonstrates a tendency to aggregate and 3) they are a species of recreational, commercial and/or tribal importance. WDFW has assigned Chinook salmon a "State Candidate" status on the Washington State Species of Concern List (WDFW, 2012c).

Chinook Salmon Critical Habitat

Critical habitat for Chinook salmon was most recently designated on September 2, 2005. Critical habitat for Chinook salmon was designated in Port Gardiner and the East Waterway, with the exception of the waters within the boundaries of Department of Defense managed lands and waters. This exempts areas within NAVSTA Everett's boundary from critical designation status.

4.2.8.1 Criteria 1, Conservation Benefit

Timing: The NAVSTA Everett Command will ensure that all proposed routine construction or repair activities taking place below mean higher high water (MHHW) will be performed during the approved in-water work time for the species for the associated water body (Annexes B & C).

Consultation: NAVSTA Everett will ensure that all proposed actions at the installation potentially affecting (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with NMFS. This includes emergency repairs to structures and other activities that are required by the installation's mission.

Operations & Oversight: The NRM will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station's departments to minimize or eliminate releases to fresh or marine waters. The NRM will, under the direction of the Installation Environmental Program Director (IEPD), assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The NRM or designated staff will regularly inspect any NAVSTA Everett structures that extend below the MHHW line (such as security booms around ships) and keep the structures free of debris or other materials that could hinder species movement along the shoreline.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.2.8.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a NRM position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding for natural resources management issues, including habitat enhancement project and special projects to assist in the recovery of TES species, as circumstances require.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.2.8.3 Criteria 3, Management Effectiveness

NAVSTA Everett

Goals: In the marine context, given the highly developed, intruded nature of the shoreline areas as well as the intensity of on-going mission requirements there is little opportunity for Chinook habitat restoration or enhancement at NAVSTA Everett. NAVSTA Everett requires a deep water setting and lacks what is referred to as “the landscape context” required to yield sufficient benefits at a reasonable cost; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions (Fresh, 2004).

Parameters: Under the auspices of the Puget Sound Salmon Recovery Plan, scientists on the Puget Sound Technical Recovery Team established four parameters for healthy salmon populations in the Snohomish River:

- Abundance, the number of fish in a population at any given time.
- Productivity, a population’s ability to replace itself or grow with the next generation.
- Spatial structure, the amount and variety of habitat salmon occupy in a river.
- Genetic diversity, which makes the populations better able to survive and adapt to disease and other challenges (Strategy Development Committee, 2007).

Using these parameters as a guide, NAVSTA Everett may contribute to the preservation of Chinook salmon by adopting the following goals:

- Ensure existing habitats are not negatively impacted.
- Ensure Chinook salmon are not directly harmed or harassed resulting in an unpermitted “take.”
- Contribute information to the greater body of scientific knowledge in order to improve the quality and effectiveness of wildlife management efforts by conducting surveys (see Project Recommendations, Appendix A).

Monitoring & Adaptive Management: Species surveys and monitoring are included in Section 6. Final detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor species habitat and abundance.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide a suitable mechanism and sufficient flexibility to enable plan effectiveness.

Smokey Point FSC:

Chinook salmon have been observed in the Middle Fork Quilceda Creek several miles downstream from the Smokey Point FSC, but their presence in Hayho Creek is considered unlikely due to narrow and shallow conditions downstream. (Snohomish County, 2012)

The NAVSTA Everett NRM will monitor the grounds for TES species and, if found, this plan will be updated to include appropriate management prescriptions.

4.2.9 Management and Protection Plan for Steelhead



Steelhead

(Source: US Forest Service)

Genus, Species:	Oncorhynchus mykiss
Status:	Threatened (NMFS, 2012g)
Citation:	Federal Register, Vol. 72, p 26722.
Habitat Designated:	Federal Register, Vol. 78, p 2725
Habitat exemption:	Critical Habitat not proposed in Marine Waters.
In-Water work window:	Freshwater Environments: See Annex B. Saltwater Environments: See Annex C.

Steelhead are an anadromous form of rainbow trout, and difficult to distinguish from rainbow trout living exclusively in fresh water streams. Steelhead are distributed along the entire Pacific coast and their populations are split into distinctive population segments (DPSs). The DPS near NAVSTA Everett is the Puget Sound DPS, which was listed as threatened by NMFS in 2007 (NMFS, 2007a). The Puget Sound steelhead DPS is large and includes all naturally spawned anadromous summer-run and winter-run steelhead populations in streams located within the river basins of the Strait of Juan de Fuca, Puget Sound, and Hood Canal, Washington.

Stream-maturing steelhead, also called summer-run steelhead, enter fresh water at an early stage of maturation, usually from May to October. These summer-run fish migrate to headwater areas and hold for several months before spawning in the spring. Ocean-maturing steelhead, also called winter-run steelhead, enter fresh water from December to April at an advanced stage of maturation and spawn from March through June (Hard *et al.*, 2007). While there is some temporal overlap in spawn timing between these forms, in basins where both winter- and summer-run steelhead are present, summer-run steelhead spawn farther upstream, often above a partially impassable barrier. In many cases it appears that the summer migration timing evolved to access areas above falls or cascades that present velocity barriers to migration during high winter flow months, but are passable during low summer flows. Winter-run steelhead are predominant in Puget Sound, in part because there are relatively few basins in the Puget Sound DPS with the geomorphological and hydrological characteristics necessary to establish the summer-run life history. Summer-run steelhead stocks within this DPS are all small and occupy limited habitat (NMFS, 2013).

Summer Run

There is little information on summer-run steelhead in the Snohomish River. Summer-run steelhead has also not been widely monitored, in part, because of their small population size and the difficulties in monitoring fish in their headwater holding areas. Historically the Snohomish River had a smaller summer run steelhead population (as compared to winter-run populations); however this population was supplemented with stocks imported from Skamania in the 1950s. Both native and transplanted stocks persist in the Skykomish and Tolt Rivers and use approximately 166 miles of watershed. Escapement from SF Skykomish River and Tolt River are described as healthy, however NF Skykomish River escapement is unknown (Scott, 2008). Otherwise, sufficient population information exists for only 4 of the 16 Puget Sound summer-run Steelhead populations (NMFS, 2005c). As opposed to the summer run, there is a great deal more information regarding winter-run steelhead.

Winter Run

In Washington, spawning for winter-run steelhead occurs from January to mid-June, with peak spawning observed April through May. Juveniles generally remain in fresh water for two years before moving into seawater habitats. General habitat types where this species is known to reside include nearshore marine, estuarine, and cool, shallow streams (NMFS, 2005d).

The Snohomish River estuary is utilized by rearing juvenile steelhead as well as foraging adults (NMFS, 2007b). Adult steelhead typically enter the river in October and may be present in Port Gardner Bay around that time. Occurrence in the immediate area of NAVSTA Everett is doubtful, however, because of the lack of habitat (foraging, rearing, staging,) for adults or juveniles in the East Waterway.

There is no federally authored recovery plan for Puget Sound steelhead. WDFW published a Statewide Steelhead Management Plan in 2008. This document is essentially a strategic framework, which calls for the development of regional management plans for steelhead, including the Puget Sound DPS (WDFW, 2008b). This was followed up with the WDFW 21st Century Salmon and Steelhead Initiative which describes an integrated, goal driven species management strategy with support from a broad range of interested parties (WDFW, 2012a). WDFW has not assigned Puget Sound Steelhead a Species Status on the Washington State Species of Concern List (WDFW, 2012c).

Washington Department of Fish and Wildlife includes steelhead on their Priority Habitat and Species List (WDFW, 2008a). Washington Department of Fish and Wildlife indicates this species meets two out of three priority species criteria, meaning steelhead warrant protection, based on; 1) their status as threatened, and 3) they are a species of recreational, commercial and/or tribal importance. WDFW has assigned steelhead a “State Candidate” status on the Washington State Species of Concern List (WDFW, 2012c).

Steelhead Critical Habitat

NMFS published a proposed rule (78 FR 2726) regarding steelhead critical habitat on January 15th, 2013. NMFS considered marine areas in Puget Sound for steelhead as potential critical habitat, but concluded that at this time the best available information suggests there are no areas that meet the definition of critical habitat per the ESA. Steelhead move rapidly out of freshwater and into offshore marine areas, making it difficult to identify specific foraging areas where the essential features are found. NMFS therefore determined that for Puget Sound steelhead it is not possible to identify specific critical habitat in the nearshore zone in Puget Sound (NMFS, 2013).

Therefore, while the Puget Sound DPS of steelhead remains Threatened under ESA, and no take of the species is allowed, there is no designated critical habitat near NAVSTA Everett.

4.2.9.1 Criteria 1, Conservation Benefit

Timing: The NAVSTA Everett Command will ensure that all proposed routine construction or repair activities taking place below the mean higher high water (MHHW) line will be performed during the approved in-water work time for the species for the associated water body (Annexes B and C).

Consultation: NAVSTA Everett will ensure that all proposed actions at the station that potentially affect (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with NMFS. This includes emergency repairs to structures and other activities that are required by the installation’s mission.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station's departments to minimize or eliminate releases to fresh or marine waters. The Natural Resources Manager will, under the direction of the Installation Environmental Program Director (IEPD), assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The Natural Resources Manager or designated staff will regularly inspect any NAVSTA Everett structures that extend below the MHHW line (such as security booms around ships) and keep the structures free of debris or other materials that could hinder species movement along the shoreline.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.2.9.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a Natural Resources Manager (NRM) position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. Naval Station Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding for natural resources management issues, including habitat enhancement project and special projects to assist in the recovery of TES species, as circumstances require.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.2.9.3 Criteria 3, Management Effectiveness

Goals: In the marine context, given the highly developed, intruded nature of the shoreline areas as well as the intensity of on-going mission requirements, there is little opportunity for steelhead habitat restoration or enhancement at NAVSTA Everett. Naval Station Everett requires a deep water setting and lacks what is referred to as "the landscape context" required to yield sufficient benefits at a reasonable cost; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions (Fresh, 2004). However, NAVSTA Everett may contribute to the preservation of steelhead by adopting the following goals:

- Ensure existing habitats are not negatively impacted.
- Ensure steelhead are not directly harmed or harassed resulting in an unpermitted "take."

- Con.tribute information to the greater body of scientific knowledge in order to improve the quality and effectiveness of wildlife management efforts by conducting surveys (see Project Recommendations, Appendix A).

Monitoring & Adaptive Management: Species surveys and monitoring are included as projects in Section 6. Final detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor species habitat and abundance.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW, USFWS and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specific endpoint. Annual reviews and a review for operation and effect at least every 5 provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

Smokey Point FSC

Steelhead are not known to use Hayho Creek adjacent to the Smokey Point FSC, but have been observed in Quilceda Creek, further south.

The NRM will track reporting by other agencies and schedule confirmation site visits during appropriate fish passage and spawning times to confirm the absence or presence of the species in Hayho Creek.

4.2.10 Management and Protection Plan for Bull Trout



Bull Trout

(Source: US Forest Service)

Genus, Species:	Salvelinus confluentus
Status:	Threatened (USFWS, 2012a)
Citation:	Federal Register, Vol 64, p 58910 (1999).
Habitat Designated:	Federal Register, Vol 75, p 63945. (2010)
Habitat exemption:	Exempt (INRMP), USFWS.
In-water Work Windows:	Freshwater Environments: See Annex B Saltwater Environments: See Annex C

Bull trout range is the Pacific Northwestern areas of Washington, Oregon and Canada, and east into Idaho, Montana and Nevada. This species is thought to have the most particular habitat requirements of all the Pacific Northwest salmonids, with a need for cold and clean water, complex habitats, and a connection between rivers, lakes or ocean habitats to headwater streams for migratory activities. As a result, bull trout are more sensitive to habitat degradation or destruction, and the health of this species can serve as a good indicator of water quality. The species was listed as threatened throughout their range in the United States in 1999 (USFWS,

1999) (USFWS, 2005). Subsequently, USFWS completed a 5-year status review on 6 March, 2012 and affirmed this species status (USFWS, 2012a).

Bull trout habitat requirements vary by life stage and form. The Coastal Puget Sound population is an amphidromous form, spawning in rivers and streams and rearing young in coastal ocean waters. Bull trout live to spawn during consecutive years. Requirements for spawning habitat are variable, but generally include streams with deep pools, riffles, undercut banks and numerous large logs. All life stages of bull trout require some type of cover, such as vegetative cover or undercut banks that form ledges (USFWS, 2004).

Four distinct populations of bull trout are known to occupy and use the Snohomish River and the Snohomish estuary for rearing, and may be present near NAVSTA Everett. One population is resident and does not migrate, while the remaining three populations do migrate to the marine environment. The total number of bull trout in the Snohomish Basin is unknown, though it is believed that only one migratory population has greater than 100 individuals (NMFS, 2007b). Those populations that migrate are opportunistic feeders and have been observed foraging on juvenile salmon and forage fish during the spring months along the northern end of Jetty Island (Snohomish Basin Salmon Recovery Forum , 2005) (Port of Everett, 2006). Occurrence on NAVSTA Everett is doubtful, due to lack of habitat (foraging, rearing, staging,) for adults or juveniles in the pierside, deeper water environments.

Washington Department of Fish and Wildlife (WDFW) include this species on their Priority Habitat and Species List (WDFW, 2008a). WDFW indicates this species meets all three priority species criteria, meaning the species warrant protection based upon Criteria; 1) their status as threatened, 2) because they are a species that demonstrates a tendency to aggregate and 3) they are a species of recreational, commercial and/or tribal importance. WDFW has assigned the species a “State Candidate” status on the Washington State Species of Concern List (WDFW, 2012c).

Bull Trout Critical Habitat

Critical habitat has been designated for the Coastal-Puget Sound DPS of Bull Trout (USFWS, 2005). However, the designation excludes Department of Defense Lands subject to an approved Integrated Natural Resources Management Plan. Naval Station Everett has an approved INRMP, so the marine waters on the Station are not designated critical habitat for Bull Trout.

4.2.10.1 Criteria 1, Conservation Benefit

Timing: The NAVSTA Everett Command will ensure that all proposed routine construction or repair activities taking place below mean higher high water (MHHW) will be performed during the approved in-water work time for the species for the associated water body (Annexes B and C).

Consultation: NAVSTA Everett will ensure that all proposed actions at NAVSTA Everett that potentially affect (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with USFWS ; this includes emergency repairs to structures and other activities that are required by the installation’s mission.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and installation departments to minimize or eliminate releases to fresh or marine waters. The NRM will, under the direction of the Installation Environmental Program Director (IEPD), assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The NRM or designated staff will regularly inspect any NAVSTA Everett structures that extend below MHHW (such as security booms around ships) and keep the structures free of debris or other materials that could hinder species movement along the shoreline.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.2.10.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a Natural Resources Manager (NRM) position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding for natural resources management issues, including habitat enhancement project and special projects to assist in the recovery of TES species, as circumstances require.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.2.10.3 Criteria 3, Management Effectiveness

Goals:

WDFW Goal: The WDFW Bull Trout Management Plan includes the following goal: "To restore/maintain the health and diversity of Bull Trout and Dolly Varden stocks and their habitats

to/at self-sustaining levels that would allow recreational utilization within resource protection guidelines” (WDFW, 2000).

USFWS Goal: The US Fish & Wildlife Service set the following recovery goals as best estimates for what is required to reduce bull trout risk of extinction:

- Each of the three migratory populations needs to have greater than 100 adults.
- The total number of adult bull trout in the Snohomish system should equal 500.
- The remaining bull trout population is considered resident, meaning those fish do not migrate from the place where they hatch; this population does not have recovery targets (NMFS, 2007b).

INRMP Goals:

Naval Station Everett requires a deep water setting and lacks what is referred to as “the landscape context” required to yield sufficient benefits at a reasonable cost; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions (Fresh, 2004).

Recognizing NAVSTA Everett’s limitations, and using the Management Plan goals and parameters as a guide, NAVSTA Everett may contribute to the preservation of bull trout by adopting the following goals:

- Ensure existing habitats are not negatively impacted by station actions.
- Ensure bull trout are not directly harmed or harassed resulting in an unpermitted “take.”
- Preserve and maintain water quality for the benefit of the species.
- Contribute information to the greater body of scientific knowledge in order to improve the quality and effectiveness of wildlife management efforts by conducting surveys (see Project Recommendations, Appendix A).

Parameters:

Under the auspices of the Puget Sound Salmon Recovery Plan, scientists on the Puget Sound Technical Recovery Team established four parameters for healthy salmon and bull trout populations in the Snohomish River, as described below:

- Abundance, the number of fish in a population at any given time;
- Productivity, a population’s ability to replace itself or grow with the next generation;
- Spatial structure, the amount and variety of habitat salmon occupy in a river; and
- Genetic diversity, which makes the populations better able to survive and adapt to disease and other challenges (NMFS, 2007b).

Monitoring & Adaptive Management: Species surveys and monitoring are included in Appendix A. Final detailed survey plans for bull trout should comply with the protocols recommended by WDFW. Necessary surveys will be designed in accordance with the cited standards and timed to deliver the best quality data possible within the constraints of the project budget. Survey design

will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor species habitat and abundance.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specific endpoint. Annual reviews and a review for operation and effect at least every 5 years provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

Smokey Point FSC

The species is not known to use Hayho Creek adjacent to the Smokey Point FSC.

4.2.11 Management and Protection Plan for Rockfish



Bocaccio, Canary & Yelloweye Rockfish

(NMFS Photos)

Genus/Species	Yelloweye Rockfish (Sebastes ruberrimus): Canary Rockfish (Sebastes pinniger) Bocaccio Rockfish (Sebastes paucispinis),
Status:	Bocaccio Rockfish - Endangered Canary Rockfish - Threatened Yelloweye Rockfish - Threatened
Citation:	Federal Register, Vol 75, p 22276.
Habitat Designated:	Federal Register, Vol 79, 68041 (2014) NMFS
Habitat exemption:	Exempt (INRMP) - NMFS
In-Water work window:	NA

Three species of rockfish were listed under the Endangered Species Act by NMFS in 2010. The Puget Sound/Georgia Basin Distinct Population Segments (DPSs) of yelloweye rockfish (*Sebastes ruberrimus*) and canary rockfish (*Sebastes pinniger*) were listed as threatened, and the Bocaccio rockfish (*Sebastes paucispinis*) was listed as Endangered.

Rockfish fertilize their eggs internally and the young are released as pelagic, free-floating larvae. The larvae are often found in the upper portion of the water column floating near the water surface (Love M. Y., 2002). They are often observed under free-floating algae, sea grass, and kelp (Shaffer, 1995).

Rockfish larvae in open waters are passively distributed with the local prevailing currents. For this reason they would likely not be carried into waters near NAVSTA Everett. The freshwater influence of the nearby Snohomish River, and tidal currents from rising and falling tides, acting with the river's current create strong surface water movements. Should there be larvae in the vicinity, they would be readily dispersed and not concentrated or present in one location. The unique oceanographic conditions within Puget Sound likely result in rockfish larvae staying within the region where they are released rather than being broadly dispersed (Drake, 2010).

When Bocaccio and canary rockfish reach sizes of 1 to 3 1/2 inches, or 3 to 6 months of age, they settle in shallow nearshore waters, in rocky or cobble substrates with or without kelp. These habitat features provide warmer temperatures, food and refuge from predators (Love & Carr, 1991). Areas with floating and submerged kelp species support the highest densities of most juvenile rockfish (Carr, 1983) (Haldorson & Richards, 1987) (Matthews, 1989) (Hayden-Spear, 2006). Unlike Bocaccio and canary rockfish, juvenile yelloweye rockfish do not typically occupy intertidal waters, but settle in 100 to 130 feet of water near the upper depth range of adults (Yamanaka & Lacko, 2001).

The Washington Department of Fish and Wildlife include these species on their Priority Habitat and Species List (WDFW, 2008a). WDFW indicates this species meets all three priority species criteria, meaning the species warrant protection based on; 1) their status as threatened or endangered, 2) because they are a species that demonstrates a tendency to aggregate and 3) they are a species of recreational, commercial and/or tribal importance. WDFW published a Puget Sound Rockfish Conservation Plan (PSRCP) in 2011. The goal of the plan is to provide a pathway to protect existing stocks of rockfish, rebuild depleted stocks, and provide sustainable fishing and other economic and harvest benefits to the citizens of Washington State. The conservation goal and rationale for this plan is described as follows:

The goal of the PSRCP is to restore and protect our natural heritage of Puget Sound rockfish populations. Increases in the abundance, distribution, diversity and productivity of rockfish will help restore the Puget Sound ecosystem, provide opportunities to view rockfish in the marine environment, and, when appropriate, provide sustainable fishing opportunities (WDFW, 2011).

The plan identified conservation strategies and action items call for the development of standards, benchmarks, evaluation of indicator species, marine reserve areas and integrated

management processes across WDFW agency program areas and engage with NGOs in the long term. This plan is clearly the forerunner to a fully developed management plan. WDFW has assigned the species a “State Candidate” status on the Washington State Species of Concern List (WDFW, 2012c).

Rockfish Critical Habitat

Rockfish adults of the three listed species are most commonly found in waters deeper than 120 feet (Orr, Brown, & Baker, 2000). As the juveniles grow they move to deeper water. Sub adult and adult yelloweye rockfish, canary rockfish and Bocaccio typically utilize habitats with moderate to extreme steepness, complex bathymetry and rock and boulder-cobble complexes. Yelloweye rockfish remain near the bottom and have small home-ranges, while some canary rockfish and Bocaccio have larger home ranges, move long distances, and spend time suspended in the water column (Love M. Y., 2002).

In Puget Sound, most Bocaccio are found south of Tacoma Narrows (NOAA, 2012g). Marine waters adjacent to NAVSTA Everett generally do not contain habitat features such as kelp beds or other aquatic vegetation, complex, rocky substrate (except for the rip-rapped shoreline), and steep underwater areas that support rockfish (Figures 2-18, 2-19, 2-20). Adults of the three rockfish species are unlikely to be found in the waters at NAVSTA Everett. Water levels around the installation are less than 50 feet (MLLW) in depth; much shallower than depths at which adult rockfish would occur (around 120 feet).

4.2.11.1 Criteria 1, Conservation Benefit

Timing: The NRM will ensure that all proposed routine construction or repair activities taking place below the mean higher high water (MHHW) line will be managed in a manner consistent with the continued use of designated habitat, once established.

Consultation: NAVSTA Everett will ensure that all proposed actions at the station that potentially affect (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with NMFS. This includes emergency repairs to structures and other activities that are required by the installation’s mission.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station’s departments to minimize or eliminate releases to fresh or marine waters. The NRM will, under the direction of the IEPD, assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The NRM or designated staff will regularly inspect any NAVSTA Everett structures that extend below MHHW (such as security booms around ships) and keep the structures free of debris or other materials that could hinder species movement along the shoreline.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the

upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.2.11.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a Natural Resources Manager (NRM) position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The Natural Resources Manager (NRM) will seek funding to execute a planning level survey of the aquatic nearshore environment in order to determine the presence and abundance of the listed species.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.2.11.3 Criteria 3, Management Effectiveness

Goals: In the marine context, given the highly developed, intruded nature of the shoreline areas as well as the intensity of on-going mission requirements there is little opportunity for rockfish habitat restoration or enhancement at NAVSTA Everett. NAVSTA Everett requires a deep water setting and lacks what is referred to as "the landscape context" required to yield sufficient benefits at a reasonable cost; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions (Fresh, 2004). However, NAVSTA Everett may contribute to the preservation of listed rockfish species by adopting the following interim goals:

- Ensure existing habitats are not negatively impacted.
- Ensure listed rockfish are not directly harmed or harassed resulting in an unpermitted "take."
- Contribute information to the greater body of scientific knowledge in order to improve the quality and effectiveness of wildlife management efforts by conducting surveys (see Project Recommendations, Appendix A).

Parameters: Parameters are pending due, in particular, to the lack of specific information regarding presence and abundance of the species in local waters. Generally, subsequent to the listing of a species and designation of habitat NMFS authors a Species Recovery Plan in cooperation with other agencies with jurisdiction. This plan will represent the best available science for species recovery, from which goals, priorities and parameters may be build.

Monitoring & Adaptive Management: Species survey and monitoring efforts are addressed as projects, under Section 6. Final detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will

consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor species habitat and abundance.

The scope of the INRMP is five years in duration, but includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW, USFWS and NMFS staff to identify necessary changes to the plan that would benefit of rockfish species. The NRM will annually report on the status of projects, requested funding and the results of regular inspections.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide a suitable mechanism and sufficient flexibility to enable plan effectiveness.

Smokey Point FSC

Not Applicable

4.2.12 Management and Protection Plan for Pacific Eulachon



Pacific Eulachon

(Source: NOAA)

Genus/Species	Pacific Eulachon (<i>Thaleichthys pacificus</i>)
Status:	Southern DPS - Threatened (NOAA, 2012h)
Habitat exemption:	Not Applicable
Listing Citation:	Federal Register, Vol 75, No. 52, p 13012-13024
Federal Register date:	March 18, 2010
Habitat Designated:	Federal Register, Vol 76, No. 203, p 65324- 65352
Federal Register date:	20 October, 2011
In-Water work window:	NA

On March 18, 2010, NMFS listed the southern Distinct Population Segment of Eulachon (*Thaleichthys pacificus*) as threatened under the Endangered Species Act (ESA) (75 FR 13012).

Eulachon are an anadromous fish, meaning adults spend most of their lives (95 to 98 percent in this instance) in the ocean but migrate into fresh water to spawn. Current data provides an incomplete picture concerning their saltwater existence. Their offspring hatch in fresh water but are carried to the estuary/ocean as larvae by the flow of the natal creek or river. The species is endemic to the northeastern Pacific Ocean, ranging from northern California to the southeastern Bering Sea in Bristol Bay, Alaska. This distribution coincides closely with the distribution of the

coastal temperate rain forest ecosystem on the west coast of North America, with the exception of populations spawning west of Cook Inlet Alaska.

Eulachon spend most of their adult lives in the Pacific Ocean and range from Northern California to coastal British Columbia. Adults return to large rivers to spawn in the winter usually starting in December and continuing until spring. The larvae incubate in the gravel until they hatch and drift downstream to the ocean. Very little is known regarding their marine life history.

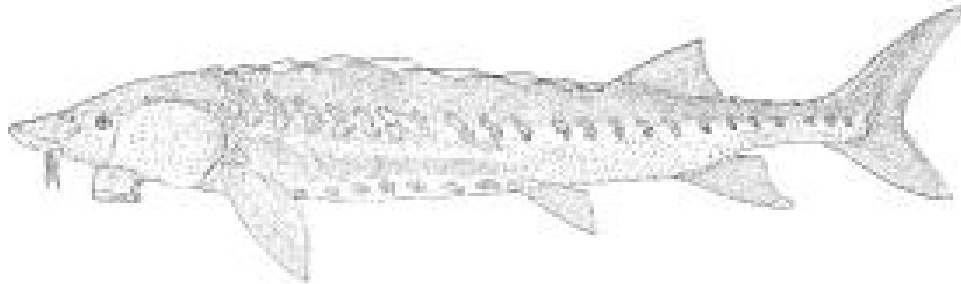
NMFS has identified 16 specific areas as candidates for critical habitat designation, however did not identify any specific marine areas that meet the definition of critical habitat. NMFS has not identified any unoccupied areas that may be essential to the conservation of the southern DPS. However, there is no evidence of eulachon spawning in freshwater systems draining to Puget Sound. The nearest documented occurrences of spawning have been in the Quinault River and associated watershed, and in the Elwha River on the Olympic Peninsula, for several consecutive years starting in 2005 (NMFS, 2011).

Based on information compiled by the Eulachon Biological Review Team (BRT) and emails between the Navy and NMFS, eulachon are not expected to occupy waters near NAVSTA Everett (Longenbaugh, 2011). Accordingly, there is no Management Plan for Pacific Eulachon in this INRMP.

Washington Department of Fish and Wildlife (WDFW) include these species on their Priority Habitat & Species List (WDFW, 2008a). WDFW indicates this species meets all three priority species criteria, meaning the species warrant protection based upon Criteria; 1) their status as threatened or endangered, 2) because they are a species that demonstrates a tendency to aggregate and 3) they are a species of recreational, commercial and/or tribal importance. WDFW has assigned the species a “State Candidate” status on the Washington State Species of Concern List (WDFW, 2012c).

The NRM will maintain situational awareness of this species and best available information. Should new information become available indicating this species may be present or that NAVSTA Everett may have Habitat Elements favorable to this species, then further action and planning will be undertaken.

4.2.13 Management and Protection Plan for Green Sturgeon



Green Sturgeon

Genus/Species	Green Sturgeon (<i>Acipenser medirostris</i>)
Status:	Southern DPS - Threatened (NOAA, 2012d)
Citation:	Federal Register, Vol 71, p 17757.
Habitat Designated:	Federal Register, Vol 74, p 52300.
Habitat exemption:	NA; CH not proposed in Puget Sound - NOAA
In-Water work window:	NA

Sturgeons are a family of large (over 8 feet long), primitive, bottom dwelling, and extremely long-lived (up to 70 years) anadromous fish. They spawn in rivers, remaining in this environment as juveniles, and migrate to coastal marine areas and estuarine habitats, occupying waters up to 110m of depth (NOAA, 2012e). Green sturgeon congregates in coastal waters and estuaries where they are vulnerable to capture as bycatch to salmon fisheries. In Washington State green sturgeon enter estuaries in the summer time, when estuarine water temperatures are 2°C/4°F warmer than the coastal waters (Moser & Lindsey, 2007).

The southern DPS of green sturgeon is federally listed as threatened (NMFS, 2006b). This DPS is now limited to a single population that spawns in the Sacramento River but disperses widely along the Pacific coast. Designated critical habitat includes areas believed to be important for dispersal, foraging, and development migration along the outer Washington coast but does not extend to the eastern shores of Puget Sound. A few green sturgeon are recovered in Puget Sound as incidental harvest (mostly in trawl fisheries) in small coastal bays and estuaries during tribal salmon fisheries, but the origin of these is unknown and could be the unlisted northern DPS. The closest known green sturgeon spawning area is for the northern DPS in the Rogue River in southern Oregon (Adams, P.B.; Grimes, C.B.; Hightower, J.E.; Lindley, S.T.; Moser, M.L.,

2002). NMFS SW Region is developing a southern DPS green sturgeon recovery plan scheduled for release in the summer of 2012 (NOAA, 2011).

Washington Department of Fish and Wildlife includes green sturgeon on their Priority Habitat and Species List, showing their principal habitat along the coastal counties of Washington (WDFW, 2008a). WDFW indicates this species meets all three priority species criteria, meaning green sturgeon warrant protection based upon Criteria; 1) their status as threatened, 2) because they are a species that demonstrates a tendency to aggregate and 3) they are a species of recreational, commercial and/or tribal importance. While fisheries rules require the release of all green sturgeon unharmed, WDFW has not assigned green sturgeon a Species Status on the Washington State Species of Concern List (WDFW, 2012c).

Green Sturgeon Critical Habitat

Critical habitat has been designated for the green sturgeon Southern DPS in the following specific areas, known to be presently occupied by the listed species: coastal U.S. marine waters from MLLW to 60 fathoms from Monterey Bay, California (including Monterey Bay), north to Cape Flattery, Washington, including the Strait of Juan de Fuca to its United States boundary (NMFS, 2009). However, the designation excludes all of Puget Sound, including Department of Defense Lands at Naval Station Everett.

The Report “Status Review for North American Green Sturgeon, *Acipenser medirostris*” indicates conservation measures for the benefit of Chinook salmon appear to deliver similar benefits to green sturgeon, at least in the fresh water/estuarine environment (Adams, P.B.; Grimes, C.B.; Hightower, J.E.; Lindley, S.T.; Moser, M.L., 2002). Considering there are no apparent barriers that would preclude movement of the species, it seems the nearest suitable estuarine environment for green sturgeon could be the Snohomish River estuary to the north of NAVSTA Everett. However, in practical terms it would not be possible for NAVSTA Everett staff to determine the origin of any green sturgeon that might occupy the estuary, whether from the northern or southern distinct population segments.

Management for the benefit of a DPS green sturgeon is therefore not likely to affect the species in the long term. The principal risk to the species is the loss of spawning/rearing habitats located significant distances to the south - areas far beyond the boundaries of NAVSTA Everett. Therefore, action undertaken as part of this INRMP will have little impact/effect upon this main source of risk. Assessing the critical habitat elements, NAVSTA Everett seems unlikely to be attractive to green sturgeon.

Accepting this conclusion, and absent any broader Species Management Plan for green sturgeon, the special management and protection measures for Chinook salmon will be used as a guide for green sturgeon, for the benefit of this species.

4.2.13.1 Criteria 1, Conservation Benefit

Consultation: Naval Station Everett will ensure that all proposed actions at the station that potentially affect (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with NMFS. This

includes emergency repairs to structures and other activities that are required by the installation's mission.

Operations & Oversight: The NRM will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and installation departments to minimize or eliminate releases to fresh or marine waters. The Natural Resources Manager will, under the direction of the IEPD, assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The Natural Resources Manager or designated staff will regularly inspect any NAVSTA Everett structures that extend below MHHW (such as security booms around ships) and keep the structures free of debris or other materials that could hinder species movement along the shoreline.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.2.13.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a NRM position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding for natural resources management issues, including habitat enhancement project and special projects to assist in the recovery of TES species, as circumstances require.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.2.13.3 Criteria 3, Management Effectiveness

There is no Recovery Plan for green sturgeon. Based upon a review of current literature the future of the green sturgeon appears to rest, to a significant extent, with the restoration of spawning and rearing habitats outside Puget Sound. Given the natal waters for the southern DPS green sturgeon lay in California and Oregon, actions undertaken by NAVSTA Everett cannot affect the spawning success or failure of the species. The species is not a significant contributor to commercial fisheries.

Goals: In the marine context, given the highly developed, intruded nature of the shoreline areas as well as the intensity of on-going mission requirements there is little opportunity for green sturgeon habitat restoration or enhancement at NAVSTA Everett. NAVSTA Everett requires a deep water setting and lacks what is referred to as “the landscape context” required to yield sufficient benefits at a reasonable cost; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions (Fresh, 2004).

However, NAVSTA Everett may contribute to the preservation of green sturgeon by adopting the following goals:

- Ensure existing habitats are not negatively impacted.
- Ensure green sturgeon are not directly harmed or harassed resulting in an unpermitted “take.”
- Contribute information to the greater body of scientific knowledge in order to improve the quality and effectiveness of wildlife management efforts through the conduct of surveys.

Monitoring & Adaptive Management: Species surveys and monitoring are included in Appendix A. Final detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor species habitat and abundance.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide a suitable mechanism and sufficient flexibility to enable plan effectiveness.

Smokey Point FSC: Not applicable.

4.3 Marine Mammals

The Marine Mammal Protection Act of 1972 (MMPA) prohibits, with certain exceptions, the take (see definition below) of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the import of marine mammals and marine mammal products into the U.S. The Congress passed the MMPA based on the following findings and policies:

- Some marine mammal species or stocks may be in danger of extinction or depletion as a result of human activities.
- These species or stocks must not be permitted to fall below their optimum sustainable population level (depleted).
- Measures should be taken to replenish these species or stocks.
- There is inadequate knowledge of the ecology and population dynamics; and
- Marine mammals have proven to be resources of great international significance.

Definitions

Take: to harass, hunt, capture, or kill, or attempt to harass, hunt, capture or kill any marine mammal.

The Marine Mammal Protection Act reauthorization bill went to Congress on June 16, 2005. Among other proposals, the bill includes amendments to clarify the harassment definition:

Section 3 (16 USC section 1362) is amended in subsection (18) to read as follows:

“(18) The term “harassment” means any act which–

(A) [Level A] injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild; or

(B) [Level B] (i) disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered; or (ii) is directed toward a specific individual, group or stock of marine mammals in the wild that is likely to disturb the individual, group, or stock of marine mammals by disrupting behavior, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering.

The NRM will review all proposed projects, operations, and training plans for possible impacts to marine mammals. If impacts to marine mammals are identified, the NRM will provide recommendations to the program/project managers so that changes or mitigation can be considered early in the planning process. The NRM will also inform personnel that operate watercraft about the MMPA regulations and restrictions regarding marine mammals.

If distressed or stranded marine mammals are located at NAVSTA Everett, the Installation Environmental Program Director (IEPD)/NRM should be immediately contacted; after recording species and location information, the Installation Environmental Program Director (IEPD)/NRM should contact the State Patrol or the Whale Hotline (1-866-767-6114) to alert the Northwest Marine Mammal Stranding Network Hotline number (1-800-853-1964).

Threatened and Endangered Species with Management & Protection Plans include Southern Resident Killer Whale (*Orcinus orca*), and humpback whale (*Megaptera novaeangliae*).

4.3.1 Management and Protection Plan for Southern Resident Killer Whale



Killer Whale

(NOAA Photo)

Genus/Species	Southern Resident Killer Whale (<i>Orcinus orca</i>)
Status:	Southern DPS - Endangered (NMFS, 2012a)
Citation:	Federal Register, Vol. 70, p. 69903.
Habitat Designated:	Federal Register, Vol. 71, p. 69054.
Habitat exemption:	National Defense Exemption - NOAA
In-Water work window:	NA

Killer Whales (*Orcinus orca*) are the world's largest dolphin, members of the family Delphinidae, which includes 17-19 genera of marine dolphins (Rice, 1998) (R.G., Perrin, & Dizon, 1999). They are highly social animals that occur primarily in groups or pods of up to 40-50 animals (Dahlheim & Heyning, 1999) (Baird, 2000). Three of these pods comprise the SRKW population; Pods J, K & L. Single whales, usually adult males, also occur (Hoelzel, 1993) (Baird, 1994). In the U.S. Pacific Marine Mammal Stock Assessments: 2012 (Draft) the estimated total population of SRKW is 87 whales (NMFS, 2012h). In comparison, the Northern Resident Killer Whale population in Canada includes 216 whales (Ford, Ellis, & Balcomb, 2000).

Southern Resident Killer Whale (SRKW), a subpopulation of *Orcinus orca*, use various habitats in association with different life stages and activities, but the main activity that determines location is prey availability. They can be found in a wide range of depths, salinities and water temperatures; there have even been some reports of Killer Whales in brackish and fresh water. A major distinction exists for habitat use by resident versus transient populations, with transients using habitats with greater variability than residents. Orcas have been observed in Admiralty Inlet and the Straits of Juan de Fuca on numerous occasions, and they often visit areas of Puget Sound. The SRKW are fish-eaters. Other transient killer whale populations move through the area and are mammal-eaters, primarily feeding on seals and sea lions. Resident animals differ from transient and offshore Killer Whales by having a dorsal fin that is more curved and rounded at the tip (Ford, Ellis, & Balcomb, 2000). The Transient population range farther out to sea and are not regular visitors to Puget Sound.

The SRKW was designated as a depleted stock by NMFS and in November 2005 that agency published its intent to list them as endangered under the ESA, effective in February 2006. Habitat was established in November 2006. A five-year status review was published on March 17th, 2011 under which NMFS determined they would not change the endangered status of the SRKW population (NMFS, 2012b). Factors thought to contribute to the decline of the SRKW population include prey availability, human-generated noise, vessel presence/harassment, and chemical contamination.

Locations of SRKW 1990-2008 have been documented by NMFS (Figure 4-1).

Washington Department of Fish and Wildlife (WDFW) include this species on their Priority Habitat & Species List (WDFW, 2008a). WDFW indicates this species meets two of the three priority species criteria, meaning the species warrant protection based upon Criteria; 1) their status as threatened or endangered, and 3) they are a species of recreational, commercial and/or tribal importance. WDFW has assigned the species a “State Endangered” status on the Washington State Species of Concern List (WDFW, 2012c).

Critical Habitat

Critical habitat has been designated for Southern Resident Killer Whales; however NAVSTA Everett has been excluded from this designation pursuant to a National Defense exemption. Beyond the boundaries of NAVSTA Everett, waters greater than 20 feet in depth in Puget Sound, Haro Strait (between San Juan Island and Vancouver Island) and the Strait of San Juan de Fuca are included in the designation.

4.3.1.1 Criteria 1, Conservation Benefit

Timing: Timing pierside operations to avoid direct exposure will have beneficial effects for SRKW. For example, SONAR testing is subject to operational requirements to contact the NRM three days prior to a scheduled test, and again immediately prior to the tests. This process allows the NRM to review recent reports and logs from various sources, to maintain local situational awareness and make recommendations to SONAR operators on whether there are any whales reported in the vicinity. Southern Resident Killer Whales have been sighted in Port Gardner Bay and Possession Sound nearly year-round, with June being the sole exception (Figure 4-1).

However, given sightings have occurred in 11 out of 12 months, it seems probable that SRKW may have been present, but simply not documented during the month of June.

Consultation: NAVSTA Everett will ensure that all proposed actions at the station that potentially affect (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with NMFS; this includes emergency repairs to structures and other activities that are required by the installation's mission.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station's departments to minimize or eliminate releases to fresh or marine waters. The Natural Resources Manager will, under the direction of the Installation Environmental Program Director (IEPD), assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The Natural Resources Manager or designated staff will regularly inspect any NAVSTA Everett structures that extend below MHHW (such as security booms around ships) in order to ensure they are in good repair and will not pose unnecessary hazard to the species.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.3.1.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a NRM position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. Naval Station Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: Given the mobility and range of the species, there are few actions that may be conducted at NAVSTA Everett that will have a definable or measurable effect upon SRKW critical habitat, beyond those measures which represent responsible stewardship. Projects oriented upon habitat enhancement on behalf of SRKW are therefore not reasonably within the scope of this INRMP. It is through efforts to preserve, enhance or restore depleted fish stocks on which the SRKW feed that NAVSTA Everett may deliver benefit to this species.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.3.1.3 Criteria 3, Management Effectiveness

Species Recovery Goals:

The "Recovery Plan for Southern Resident Killer Whale" authored by NOAA in 2008 indicates it has not been possible to determine which among the numerous possible causes of population decline will be most effective in restoring the SRKW population to health. Accordingly, the plan represents an initial approach.

The overall goal of the SRKW Recovery Plan is to achieve the recovery of the Southern Resident Killer Whale distinct population segment (DPS) and its ecosystem to a level sufficient to warrant its removal from the Federal List of Endangered and Threatened Wildlife and Plants under the ESA. This includes consideration of the population's abundance and demographic parameters, together with known threats. Threats are discussed and goals and criteria to measure success in managing threats to the species are discussed in detail within Chapter 4 of the Recovery Plan (NMFS, 2008a).

Parameters:

In order to demonstrate a successful recovery strategy, SRKW population must demonstrate:

- (1) Adequate Abundance: Positive population growth over a time frame (28 years for this species) long enough to encompass expected environmental and stochastic variability; in particular, attaining a population of approximately 155 animals by 2029, and
- (2) Proper Demographics: Adequate number of individuals of both sexes and mixed ages, distributed among the three pods, to make it unlikely the population will fall below a threshold at which it is in danger of extinction during inevitable periods of low survival or productivity. Specific demographic parameters include:

1. Representation from at least three pods.
2. More than two reproductive age males in each pod or information that fewer males are sufficient.
3. A ratio of juveniles, adults, post-reproductive, male and female individuals similar to the Northern Resident population model [i.e., 47 percent juveniles, 24 percent reproductive females, 11 percent post-reproductive females, and 18 percent adult males].
4. Adequate inter-birth intervals to allow for population growth.
5. No significant increase in mortality rate for any sex or age class.

Intermediate Goal:

There is also an intermediate goal described in the SRKW Recovery Plan. This focuses upon what would be necessary to “downlist” the population, from Endangered to Threatened, short of full recovery.

Intermediate Parameters:

- (1) Adequate Abundance: Positive population growth over a time frame (14 years for the intermediate goal) at an average population growth rate of 2.3 percent, attaining a population of approximately 113 animals by 2015, and
- (2) Proper Demographics: Given the truncated period of performance and impacts this would have on analysis and study, the following specific demographic parameters include:
 - a. Representation from at least three pods, and
 - b. At least two reproductive age males in each pod.

Attaining the intermediate goal of downlisting also requires attainment of intermediate parameters on the full host of factors that threaten the species.

NAVSTA Everett

Goals: In the marine context, given the highly developed, intruded nature of the shoreline areas as well as the intensity of on-going mission requirements there is little opportunity for Killer Whale restoration or enhancement at NAVSTA Everett. NAVSTA Everett requires a deep water setting and lacks what is referred to as “the landscape context” required to yield sufficient benefits at a reasonable cost; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions. However, NAVSTA Everett may contribute to the preservation of Southern Resident Killer Whale by adopting the following goals:

1. Ensure existing habitats are not negatively impacted, to include effective oil spill prevention plans (Objective, Factor A, SRKW Recovery Plan).
2. Ensure the species are not directly harmed or harassed resulting in an unpermitted “take” (Criteria A4, SRKW Recovery Plan).
3. To the extent possible, reduce vessel disturbance and auditory masking during pierside operations (Criteria A4, SRKW Recovery Plan).
4. Contribute information to the greater body of scientific knowledge in order to improve the quality and effectiveness of wildlife management efforts through the monitoring and reporting sightings (Criteria A2, SRKW Recovery Plan).
5. Support the recovery or management plans for listed salmonids (and other prey species as appropriate) to restore them to the point that they are self-sustaining members of their ecosystems (Criteria A2, SRKW Recovery Plan). Also, see Project Recommendations, Appendix A.
6. Develop an education/outreach program with the aim of informing NAVSTA Everett population of the importance of water quality and spill prevention to species recovery. (Criteria A4, SRKW Recovery Plan). This could be addressed in part through a proposed project, EPR# 68967NR005 (Appendix A).

Monitoring & Adaptive Management: Species presence and frequency will be monitored by the NRM using existing resources. SONAR operations and in-water work will be coordinated and permitted only when SWKW are no in close proximity to the station.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW, USFWS and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

Smokey Point FSC

Not Applicable

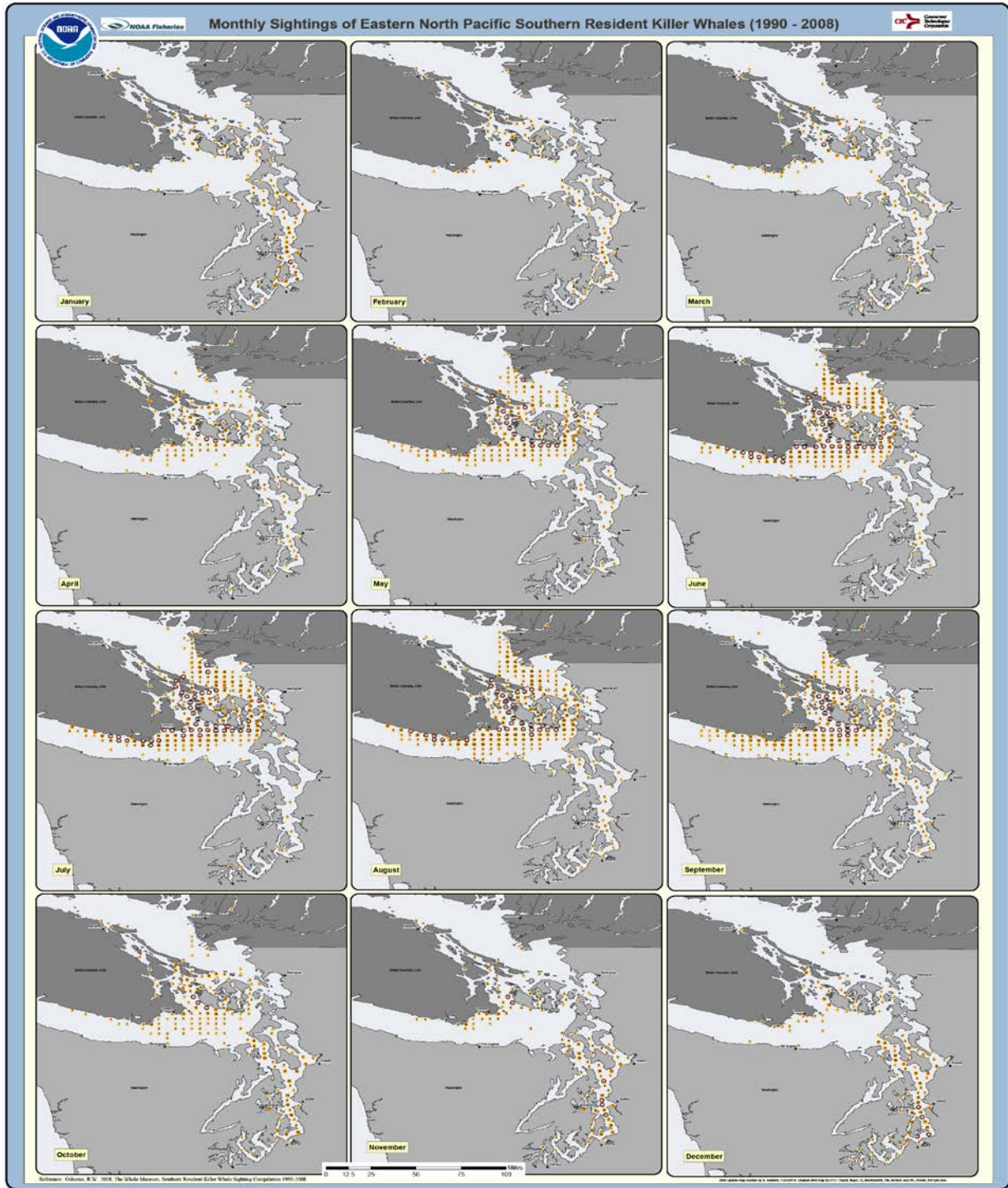


Figure 4-1. SRKW Sightings 1990-2008
(Source: NOAA)

4.3.2 Management and Protection Plan for Humpback Whale



Humpback Whale

(NOAA Photo)

Genus/Species	Humpback whale (<i>Megaptera novaeangliae</i>)
Status:	Endangered, under “Baleen Whales – all species”. (NOAA, 2012f)
Citation:	Vol 35, No. 6069, p 8491.
Habitat Designated:	Vol 35, No. 8491, p 8498, “Where Found”.
Habitat exemption:	None
In-Water work window:	NA

The humpback whale has a worldwide distribution, with three major distinct populations: the North Atlantic, North Pacific, and southern oceans. This species inhabits waters over continental shelves, along edges, and around some oceanic islands. During winter individuals are usually found in tropical or temperate waters (10-23° latitude). During the summer, most migrate considerable distances to waters with higher biological productivity, typically at high latitudes (35 - 65°).

Humpback whales have been protected since 1965, and remain listed as endangered under the ESA. In the North Pacific, there are three distinct population groups: a western north Pacific population, a central population that migrates between Hawaii and Alaska, and a Mexico-California-Alaska population that seasonally migrates past Washington State between breeding areas and feeding areas. During the summer, humpback whales in the North Pacific migrate and feed over the continental shelf and along the coasts of the Pacific Rim, from Point Conception, California to the Gulf of Alaska, Prince William Sound, and Kodiak Island. Humpback whales spend the winter in three separate wintering grounds: the coastal waters along Baja California and the mainland of Mexico, the main islands of Hawaii, and the islands south of Japan.

In recent years humpback whales have been intermittently sighted in Puget Sound and these sightings has been documented by the Orca Network, a private organization that provides information and advocates for various marine mammals that utilize or pass through the northwest. An analysis of data compiled by the Orca Network shows humpbacks are regular visitors to the Straits of Juan De Fuca, although in low numbers, but only rarely enter Puget Sound. (See previous discussion under Section 2.5.2 for additional information).

The Washington Department of Fish and Wildlife includes humpback whales on their Priority Habitat & Species List (WDFW, 2008a). WDFW indicates this species meets two of the three priority species criteria, meaning the species warrant protection based upon Criteria; 1) their status as threatened or endangered, and 3) they are a species of recreational, commercial and/or tribal importance. WDFW has assigned the species a “State Endangered” status on the Washington State Species of Concern List (WDFW, 2012c).

Critical Habitat

Critical habitat has not been designated for the humpback whale. This species is identified as protected “where found”.

4.3.2.1 Criteria 1, Conservation Benefit

Timing: Timing pierside operations to avoid direct exposure will have beneficial effects for humpback whale. For example, SONAR testing is subject to operational requirements to contact the NRM three days prior to a scheduled test, and again immediately prior to the tests. This process allows the NRM to review recent reports and logs from various sources and to issue local situational awareness and a recommendation to the operators on whether there are any whales reported in the vicinity

Consultation: NAVSTA Everett will ensure that all proposed actions at the station that potentially affect (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with NMFS. This includes emergency repairs to structures and other activities that are required by the installation’s mission.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could affect water quality (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station’s departments to minimize or eliminate releases to fresh or marine waters. The NRM will, under

the direction of the IEPD, assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to fresh or marine waters. The Natural Resources Manager or designated staff will regularly inspect any NAVSTA Everett structures that extend below MHHW (such as security booms around ships) in order to ensure they are in good repair and will not pose unnecessary hazard to the species.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.3.2.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks the NRM position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: Given the mobility and range of the species, there are few actions that may be conducted at NAVSTA Everett that will have a definable or measurable effect upon humpback whale critical habitat, beyond those measures which represent responsible stewardship. Projects oriented upon habitat enhancement on behalf of humpback whale are therefore not reasonably within the scope of this INRMP.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for TES species and their respective habitats.

4.3.2.3 Criteria 3, Management Effectiveness

Goals: There is a "Final Recovery Plan for the Humpback Whale" that was issued by NMFS in 1991. The overall goal of the plan is to ensure the success of the species. Accordingly, "[b]iological success will be achieved when humpback whales occupy all of their former range in sufficient abundance to buffer their populations against normal environmental fluctuations or anthropogenic environmental catastrophes." This will lead to the second order "Political Success" of the species, when "... humpback whales are abundant enough to allow them either to be reclassified from 'endangered' to 'threatened'; or possibly removed from the list of protected species" (NMFS, 1991).

Goals specified within this document include the following:

- Maintain and enhance habitats used by humpback whales currently or historically.
- Identify and reduce direct, human-related mortality, injury and disturbance.
- Measure and monitor key population parameters.
- Improve administration and coordination of recovery program 1 for humpback whales.

This 1991 plan does not include clear parameters, but lays out a number of action items, intermediate studies and identifies information & process gaps that needed to be addressed in an adaptive management approach. There are no clear or detailed goals articulated in this plan beyond doubling the population of humpback whales within a 20 year period (1991-2011).

Given the similarity between the broadly stated goals of both the humpback whale and Southern Resident Killer Whale plans, in application, selected goals and parameters from the SRKW may also serve to protect humpback whale.

NAVSTA Everett

Goals: In the marine context, given the highly developed, intruded nature of the shoreline areas as well as the intensity of on-going mission requirements there is little opportunity for humpback Whale restoration or enhancement at NAVSTA Everett. NAVSTA Everett requires a deep water setting and the nature and tempo of activities; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions. However, NAVSTA Everett may contribute to the preservation of humpback whale by adopting the following goals:

1. Ensure existing habitats are not negatively impacted.
2. Innovate and execute effective oil spill prevention plans.
3. Comply with the requirements of the MMPA. Ensure humpback whale are not directly harmed or harassed resulting in an unpermitted “take.”
4. To the extent possible, reduce vessel disturbance and auditory masking during pierside operations.
5. Contribute information to the greater body of scientific knowledge in order to improve the quality and effectiveness of wildlife management efforts through the monitoring and reporting humpback whale sightings.
6. Develop an education/outreach program with the aim of informing NAVSTA Everett population of the importance of water quality and spill prevention to species recovery.

Monitoring & Adaptive Management: Species presence and frequency will be monitored by the NRM using existing resources. SONAR operations and in-water work will be coordinated and permitted only when humpback whales are no in close proximity to the station.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

Smokey Point FSC

Not Applicable

4.4 Bird Species

Birds protected under the Migratory Bird Treaty Act are discussed in Section 4.2.4.

4.4.1 Partners in Flight

In 1990, the National Fish and Wildlife Foundation initiated the Neotropical Migratory Bird Conservation Program, known as “Partners in Flight - Aves de Las Americas.” The initiative stresses the importance of international conservation partnerships to focus limited resources, financial and human, to provide for the long-term health of avifauna throughout the western hemisphere. The purpose of the program is to bring together the diverse array of groups and individuals involved in the conservation and management of birds and their habitats. The initial focus was on Neotropical migrants, but has now spread to include most birds requiring terrestrial habitats. In the U.S., more than 300 partners from federal and state agencies, conservation groups, foundations, academia, and forest products companies have contributed expertise and resources to make Partners in Flight (PIF) successful in its conservation efforts. The PIF strategy for effective conservation relies on setting realistic biological priorities, using an appropriate geographic scale, and applying an ecosystem management approach.

DoD INRMPs employ many of these same conservation principles. These plans can utilize birds as indicators of overall ecosystem health because the food sources upon which they rely do not thrive in degraded habitats. Another benefit of using birds as ecosystem health indicators is the ease of monitoring and surveying populations compared to other fauna. Avian population and health data also helps natural resources managers create and maintain healthy, functional ecosystems.

The DoD PIF policy is to: “Promote and support our partnership role in the protection and conservation of birds and their habitats by protecting vital DoD lands and ecosystems, enhancing biodiversity, and maintaining healthy and productive natural systems consistent with the military mission” (DoD 2002). Implementation of this strategy will allow DoD natural resources managers to determine best management practices based on regional or physiographic delineations rather than on a species basis. This ecosystem management approach provides a framework to consider the biological diversity on military lands in the context of the surrounding

landscape. This approach will improve long-term planning and efficiency and promote better integration of mission and resource requirements.

The primary goals and objectives of the DoD PIF program are to:

- Apply information collected from this partnership program to support DoD mission requirements.
- Take proactive management actions to prevent bird species from reaching threatened or endangered status.
- Facilitate cooperative partnership efforts consistent with the military mission;
- Determine the status of migratory and resident bird populations on DoD lands and the causes of population fluctuations.
- Reduce bird aircraft strike hazard risks through implementation of mobile radar;
- Maintain and restore priority habitats on DoD lands for migratory and resident bird populations.
- Reduce or eliminate pesticide use in sensitive habitats, especially in and around wetlands and riparian areas.
- Reduce the spread and impact to birds and their habitats of invasive and nuisance species on military lands, including feral and free-roaming cats.

Further information on the DoD Partners in Flight program is available at <http://www.DoDpif.org>.

4.4.2 Management and Protection Plan for Marbled Murrelet



Marbled Murrelet

(USGS Photo)

Genus/Species	Marbled Murrelet (<i>Brachyramphus marmoratus</i>)
Status:	Threatened (USFWS, 2012b)
Description of exemption:	None
Citation:	Federal Register, Vol 57, No. 191, p 45328.
Federal Register date:	1 October, 1992
Habitat Designated:	None on NAVSTA Everett or Smokey Point FSC.

Marbled murrelets were listed as threatened under the ESA on October 1, 1992. Murrelets range from the Aleutian Archipelago in Alaska to central California. The majority of their lives are spent in the marine environment within 1.6 miles of shore, where they feed primarily on small fish such as sand lance and Pacific herring. Marbled murrelets nest in inland forests, typically in old-growth, mature stands at lower elevations. Nesting occurs from late March to late September when both parents tend a single young. Murrelet habitat maps show designated nesting areas, but does not include areas where the birds congregate or forage.

Neither Naval Station Everett nor the Smokey Point FSC support suitable nesting habitat for the marbled murrelet. The nearest designated critical habitat for marbled murrelet to Naval Station Everett, is located approximately 13 miles to the east in the Mount Baker-Snoqualmie National

Forest (Figure 2.22). Additionally, the nearest designated habitat for marbled murrelet to the Smokey Point FSC is located at NRS(T) Jim Creek, approximately 10 miles to the northeast.

Marbled murrelets regularly occur in Possession Sound. Daily flights between their nesting sites and forage grounds occur near dawn and sunset during the nesting period, and the birds tend to follow watercourses while in transit (Stumpf, 2011). This represents a key exposure time, when marbled murrelets may pass over or near NAVSTA Everett and the Smokey Point FSC.

In 1991 Parametrix documented as many as 53 marbled murrelets on Port Gardner Bay (Parametrix, 1991). Further work by Parametrix in a 1992 Biological Assessment, documented the results of five on-water surveys and reported from 5 to 21 marbled murrelets congregating west and southwest of Jetty Island, shown in Figure 2-21 (Parametrix, 1992). Otherwise, the Northwest Forest Plan Effectiveness Monitoring Plan (2000-2007) on-water surveys show marbled murrelets mostly occupying waters near Gedney Island, several miles to the west. The presence of marbled murrelet were documented on the waters of Port Gardner Bay during the 17 December, 2011 Audubon Christmas Bird Count, and again incidental to Marine Mammal observations on 8 March, 2012, confirming the birds use of waters within Port Gardner Bay, in close proximity to NAVSTA Everett. Marbled murrelets have not been observed in terrestrial habitat or landscaped areas at NAVSTA Everett.

The WDFW includes this species on their Priority Habitat & Species List (WDFW, 2008a). The WDFW indicates this species meets two of the three priority species criteria, meaning the species warrant protection based on; 1) their status as threatened or endangered, and 2) because they are a species that demonstrates a tendency to aggregate. The WDFW has assigned the species a “State Threatened” status on the Washington State Species of Concern List (WDFW, 2012c).

4.4.2.1 Criteria 1, Conservation Benefit

Timing: The NAVSTA Everett Command will consider timing for all proposed routine construction or repair activities. In particular, work requiring the use or installation of antennae, cranes or other tall or linear structures is proposed as well as their use and operation may have to be managed in a manner that does not pose unnecessary risk to marbled murrelets. This is a particular issue during periods of poor visibility, i.e. fog or heavy rain.

Consultation: NAVSTA Everett will ensure that all proposed actions that potentially affect (including beneficially affect) the species comply with Section 7 of the Endangered Species Act which requires, at a minimum, informal consultation with USFWS; this includes emergency repairs to structures and other activities that are required by the installation’s mission.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could harm or harass marbled murrelets. The Natural Resources Manager will be regularly inspected to ensure they are maintained in good working order and pose no unnecessary hazard to migratory birds.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.4.2.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a NRM position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. Naval Station Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: Given the mobility and range of the species, there are few actions that may be conducted at NAVSTA Everett that will have a direct, measurable effect upon marbled murrelet habitat, beyond those measures which represent responsible stewardship. Projects oriented upon habitat enhancement on behalf of migratory are therefore not reasonably within the scope of this INRMP.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for marbled murrelet.

4.4.2.3 Criteria 3, Management Effectiveness

Goals: NAVSTA Everett may contribute to the preservation of marbled murrelet by adopting the following goals:

- Ensure existing habitats are not negatively impacted.
- Reduce the use of pesticides and fertilizers and other human introduced contaminants in order to protect the aquatic food chain on which the species depends.
- Ensure marbled murrelet are not directly harmed or harassed resulting in an unpermitted "take."
- Maintain situational awareness of marbled murrelet recovery plans, habitat and life stage issues.

Monitoring & Adaptive Management: Species presence and frequency will be monitored by the NRM using existing resources. A Navy Region Northwest proposed project will continue the collection of winter density data (EPR# 68742CN001; Appendix A).

The INRMP includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with NMFS, USFWS and WDFW to identify necessary changes to the plan that would benefit the marbled murrelet.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

4.5 Management and Protection Plan for Wetlands



Wetland Environment

(USFWS Photo)

Wetland management strategies vary depending primarily on the wetland classification, which is determined by the value of a particular wetland area. A wetland's value is decided by the quality of the functions it provides, including its biomass production, habitat, erosion control, stormwater storage, water quality protection, aquifer recharge potential, and low flow augmentation. Some of the factors used to measure the quality of these functions are the wetland's size, its location in the watershed, the amount of development in the watershed, vegetative structure and composition, rate of water flow through the wetland, the size of natural buffers, and surrounding land uses. Regardless of the habitat value, wetland areas are almost always poor choices for building sites or for most activities, other than providing non-consumptive enjoyment of the outdoors. The NRM, during the program/project review process, will be diligent about encroachment and impacts to wetlands and ensure that program/project managers are aware of the laws and regulations regarding the protection of wetlands.

NAVSTA Everett

There are no wetlands located on NAVSTA Everett.

Smokey Point FSC

Existing wetlands located at the Smokey Point FSC were previously described and discussed under Section 2.6 of this document and shown in Figure 2-3.

The Navy will preserve and enhance the natural and beneficial values of wetlands while carrying out its mission activities. In order to comply with the "No Net Loss of Wetlands Policy" of the Navy, NAVSTA Everett shall ensure the following:

4.5.1 Criteria 1, Conservation Benefit

Timing: The NAVSTA Everett Command will ensure that all proposed wetland or wetland buffer maintenance, pest control, invasive species control and/or enhancement activities that take place in proximity to the wetlands are restricted to appropriate seasons and to appropriate weather conditions in the interest of minimizing negative impacts or maximizing benefits to wetland and buffer function.

Consultation: The Navy will plan all construction and operational actions to avoid adverse impacts to or destruction of wetlands. Any construction requirement that cannot be sited to avoid wetlands shall be designed to minimize wetlands degradation and shall include compensatory mitigation as required by wetlands regulatory agencies in all phases of the project's planning, programming, and budgeting process. Within this policy, use of Navy lands and lands of other entities are permissible for mitigation purposes for Navy projects when consistent with EPA and COE guidelines or permit provisions. Requests by non-Navy entities to mitigate the effects of non-Navy projects on Navy property should be reviewed on a case-by-case basis for their effect on Navy mission, the environment, and appropriateness of economic compensation to the Navy for the long-term use of the site, all such projects need to be approved by the chain of command.

Operations & Oversight: The NRM will identify operations and infrastructure at the Smokey Point FSC that could affect wetland function (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station's departments to minimize or eliminate releases. The Natural Resources Manager will, under the direction of the Installation Environmental Program Director (IEPD), assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases to wetland areas. The Natural Resources Manager or designated staff will regularly inspect any Smokey Point FSC structures that may drain into or otherwise impact the wetlands.

Implementation of wetlands creation or enhancement projects and wetlands banking, where compatible with the installation mission, is encouraged. Natural resources managers will identify potential wetland mitigation sites.

Boundaries of legally defined wetlands, on all Navy lands, must be identified and mapped with sufficient accuracy to protect them from potential unplanned impacts, and that the maps are distributed to all potential users, including facilities planners, operational units, and tenant commands. Jurisdictional maps may be required prior to actual construction if there is any potential of wetlands present in the vicinity of the project. Field verification and jurisdictional determinations should be required for all projects;

Buffer Management: The Navy will maintain the 25-foot wetland buffer identified in the Navy Community Support Complex Utilities and Site Improvements As-Built drawings dated 3

October, 1994. The buffer areas will be regularly surveyed in order to monitor buffer condition, the suitability of plant types and buffer enhancements/mitigation plans developed, as necessary.

4.5.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks the NRM with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding for natural resources management issues, including habitat enhancement project and special projects to assist in the maintenance and improvements of wetlands, as required.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for wetlands and their associated buffers.

4.5.3 Criteria 3, Management Effectiveness

Goals:

- Maintain and enhance the natural and beneficial values of wetlands for habitat and water quality purposes.
- Manage and/or eliminate incursion of invasive plant types into the wetland buffer areas.
- Ensure wetland areas are properly classified in accordance with USACE Wetlands Delineation Manual (1987). Ensure wetland areas are accurately mapped (see EPR # 68742NWTJ1, Appendix A).

Parameters:

- Via field tests, map and monitor the extent and depth of hydrophilic vegetation & hydric soils along the wetland edge: larger/deeper is better.
- Survey and monitor bird types in order to determine if wetland is supporting obligate species of birds: more is better.
- Survey and manage plant types within the wetland buffer and manage for succession; mature buffer is better.

Monitoring & Adaptive Management: If extensive monitoring is required, then detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor wetland function and quality.

INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS, WDFW and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW, USFWS and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

4.5 Law Enforcement

Law enforcement pertaining specifically to enforcement of hunting or fishing regulations is not needed, since these activities are not available at NAVSTA Everett or the Smokey Point FSC. Compliance with laws such as the ESA, MMPA and MBTA is managed through the NAVFAC NW Environmental Division at Naval Station Everett. Violations documented by NAVSTA Everett organizations would be brought to the attention of the Environmental Division and reported to the appropriate State or Federal fish and wildlife management agency. These agencies would be relied on to provide law enforcement assistance in upholding State and Federal laws and would be provided access to NAVSTA Everett for this purpose. Violations would also be referred to the NAVSTA Everett CO for determining the need for further investigation, adjudication and correcting and/or punitive action.

Law enforcement associated with individual actions beyond official federal duties, such as harassing protected migratory birds, seals, or sea lions, is the responsibility of base security or other entities as directed by the CO with technical assistance from the IEPD and NRM. The services of State and Federal fish and wildlife agency or other regulatory enforcement personnel may be requested where their technical expertise or manpower is needed.

4.6 Fish and Wildlife

4.6.1 Personnel

The fundamental component of natural resources management is personnel and funding. OPNAV M-5090.1 requires each installation to have a designated (in writing) natural resources manager who is knowledgeable and trained in the particular resource issues for that area or region. The natural resources manager for NAVSTA Everett is a permanently funded position. This position reports both to the Installation Environmental Program Manager and to the Commanding Officer of NAVSTA Everett. The NRM can call upon other environmental professionals within the Navy Region Northwest, as well as the Naval Facilities Engineering Command Northwest, to assist in the management of natural resources on NAVSTA Everett.

Program and Project Review:

The NRM is part of the planning team at NAVSTA Everett and reviews all proposed projects, operations, and training plans for possible impacts to habitat, fish and wildlife. If impacts to

habitat or fish and wildlife are identified, the NRM provides recommendations to the program/project managers so that changes or mitigation can be considered early in the planning process. The recommendations may include, but are not limited to, minor changes to the project layout or site plan, changes to project time or schedule, construction best management practices (BMPs) for erosion control, changing the aspect or placement of a new building to protect trees, identifying wetlands and wetland buffers that must be protected, or other recommendations that will help NAVSTA Everett preserve its fish and wildlife and their essential habitat. The NRM is also available to help determine mitigation designs if habitat impacts cannot be avoided.

4.6.2 Habitat

Management Plans for **Wetlands** Environment is discussed in Section 4.4.

Management Plans for **Coastal/Marine** Environment is discussed in Section 4.8.

4.6.2.1 Terrestrial Habitats

Both the NAVSTA Everett Site and the Family Support Complex sites are highly developed upland areas typical of urbanized development with a very high percentage of impermeable surface area associated with the dense infrastructure, administrative buildings and warehouse/industrial use areas. The existing vegetation is primarily ornamental in character and within a landscaped development. This setting has poor habitat values and is most often inhabited by species easily habituated to the urban environment and human activities.

4.6.2.2 Habitat Enhancement and Restoration via Sikes Act Fees

Hunting, fishing, and trapping fees may be collected under the authority of the Sikes Act to recover expenses of implementing these programs and shall be used only to defray costs of the fish and wildlife management program at the installation collecting the fees. Collected fees shall be accounted for and reported under a special fund entitled “Wildlife Conservation”.

Currently, hunting and fishing activities are not permitted at NAVSTA Everett and the Smokey Point FSC and neither of these programs are anticipated. If fishing or hunting is established, fees will be collected and deposited into the Wildlife Conservation account.

4.6.3 Fish

Marine Species: The Magnuson-Stevens Fishery Conservation and Management Act, as amended in October 1996, requires that federal agencies consult with the U.S. Secretary of Commerce (which has been delegated to NMFS) on any action proposed to be undertaken that may adversely affect essential fish habitat (EFH). The objective of this EFH assessment is to determine whether or not the proposed project may adversely affect designated EFH for relevant commercial, federally managed fish species within the proposed action area. It also describes conservation measures proposed to avoid, minimize, or otherwise offset potential adverse effects to designated EFH resulting from the proposed project. Subsection 50 CFR 600.920(f) specifies

that EFH consultation should be consolidated with existing environmental review procedures required by other statutes, such as ESA, when appropriate. The NRM will review all proposed projects, operations, and training plans for possible impacts to EFH. If impacts to EFH are identified, the NRM provides recommendations to the program/project managers so that changes or mitigation can be considered early in the planning process.

Freshwater and Anadromous Species: Naval Station Everett is located at the mouth of the Snohomish River. This is a brackish water area where freshwater meets the salt water of Puget Sound. Anadromous fish use these waters, but fish that are strictly freshwater fish may not be in the area near the installation. At the Smokey Point FSC, there are likely resident cutthroat trout and other fish species present in the stream along the south and west property boundary. As mentioned in the specific Management and Protection Plans, the NRM reviews all proposed projects and operations for potential impacts to the environment, and this practice will help prevent impacts to both marine and freshwater fish at the Naval Station and at the Smokey Point FSC.

4.6.4 Reptiles and Amphibians

There have not been formal surveys conducted in order to determine the presence of reptiles and amphibian species on NAVSTA Everett and the Smokey Point FSC. A project is included in this INRMP (EPR# 68967NR019).

The Washington Herp Atlas provides a list of 49 reptiles and amphibians found in Washington State (Appendix C) (WDNR). Of these, the following warrant specific discussion based upon preservation status established by WDFW (S1, S2 or S3), species distribution within the Puget Trough as depicted in the Washington Herp Atlas and the presence of constituents habitat elements on NAVSTA Everett or the Smokey Point FSC.

Chytridiomycosis at Smokey Point FSC

Lannoo et al. (2014) recommended the following steps to prevent the spread of the Chytridiomycosis disease caused by high levels of Bd. These recommendations are incorporated here as part of the natural resources management at Smokey Point FSC.

- Wet or muddy boots, fishing, and camping equipment may be contributing to the spread of the disease. Sterilize equipment with a solution of diluted bleach if the equipment is used in wetlands off the installation.
- Monitor wetland sites in the spring for dead/dying frogs. A high mortality rate of amphibians may indicate Bd infection.
- Do not allow the collection or translocation of amphibian species on or off the installation.
- Prevent the release of exotic amphibian pets on DoD installations.
- Increase the awareness of military personnel and installation residents about the disease.

4.6.4.1 Western Toad

Washington Department of Fish and Wildlife (WDFW) include western toad on their Priority Habitat & Species List (WDFW, 2008a). WDFW indicates this species meets one of the three priority species criteria, meaning the species warrants protection based upon Criteria; 1) their status as threatened or endangered. WDFW has assigned the species a “State Candidate” status. USFWS considers the Western Toad a “Species of Concern”.

This is a medium-sized to large toad with a blunt head, stout body, broad waist, short legs, and “warty” skin. Adults range in size from 2-5 inches snout-vent length. Females attain larger sizes than males. During the breeding season, males develop a smoother skin than females. Newly metamorphosed toads emerge from the water with remnants of the tail and dark skin. Within days they develop the appearance of miniature adults except the parotid glands are not as obvious and the dorsal stripe may be subtle or absent.

Western Toad Habitat

Western toads occur in a variety of terrestrial habitats including prairies, forests, canyon grasslands and ponderosa pine-Oregon Oak habitat. Transformed toads are primarily terrestrial, but often occur near water bodies, especially in drier climates. Overwintering habitat has not been described for Washington. In Thurston County, individual toads have been found in mid-February within duff under sword ferns suggesting that some individuals overwinter terrestrially in areas with mild winters or at least occur terrestrially during the mild portions of winters.

Males spend a great deal of time on logs and floating vegetation around the breeding site. Females are much more cryptic and secretive and are uncommon at breeding sites until breeding is about to commence. Western toads are explosive breeders; most toads at each breeding site lay all eggs within a week (Hallock & McAllister, 2011).

NAVSTA Everett

NAVSTA Everett does not have any wetland areas or above ground stormwater detention structures that might be attractive habitat for these species.

Smokey Point FSC

The Smokey Point FSC includes Hayho Creek, a wetland and storm water detention facilities which might support populations of amphibians or reptiles. Accordingly, it will be necessary to conduct preliminary habitat assessments in order to determine the suitability of stream and wetland systems, as well as storm detention facilities as habitat. If preliminary assessments indicate the sites may be of value to the species, then more formal surveys for the species may be proposed.

In the interim, managing these areas for diversity, protection, and enhancement will have the greatest benefit for wildlife, including reptiles and amphibians, on the Smokey Point FSC. Protection of wetlands, retention of some downed logs and biodegrading natural litter, i.e. limbs, branches and leaves have the greatest value to these species.

4.6.5 Terrestrial Mammals

The NRM will review all proposed projects, operations, and training plans for possible impacts to terrestrial mammals, realizing, however, that many minor as well as major projects may impact small mammals such as mice and voles, without consequences to the health of the populations of these species. If serious impacts to terrestrial mammals on the Station or at the Smokey Point FSC are identified, the NRM will provide recommendations to the program/project managers so that changes or mitigation can be considered early in the planning process.

4.7 Forests

No forest stands exist on either NAVSTA Everett or the Smokey Point FSC.

4.8 Vegetation

Grounds Maintenance & Landscaping

Grounds maintenance and landscaping includes considerations for weed control and urban forestry. It is Navy policy that environmentally and economically beneficial landscaping practices be used. These practices are detailed in the 21 April 2000, EO 13148 “Greening the Government through Leadership in Environmental Management”, which consolidated and superseded a number of previous instructions and orders. In particular, Section 207 of this order directs federal agencies to use landscaping techniques that enhance the local environment and minimize the adverse effects that landscaping can have on the environment. This EO has subsequently become the impetus for choosing regionally native plants and practices. Integrated measures include reducing use of fertilizers, pesticides, and water use for both economic and environmental benefits.

Regarding the control of noxious weeds, NAVSTA Everett and the Smokey Point FSC will cooperate with county and state programs for controlling noxious plants. This action is supported by EPR Project 68967NR004 (Appendix A).

Within the intensively used Industrial & Logistics Support Zone and the Station & Personnel Support Zones the following guidelines should be followed:

- Where feasible, reduce the mowed areas. Transition mowed areas into scrub/shrub areas with native vegetation types, enhancing wildlife habitat. This may also result in a maintenance cost savings for the Navy.
- Use native vegetation for landscaping around buildings. Native vegetation is well-suited to the conditions of the Pacific Northwest and will require less maintenance to keep healthy. Native vegetation provides better wildlife habitat than exotic, non-native plants and trees.
- Reduce pesticide/herbicide/fertilizer use. Selection of native plant species should out-compete non-native ornamentals, and therefore require fewer applications of pesticide, herbicide and fertilizer.

These three guidelines will serve as evaluation criteria when reviewing Chapter 3 of the Naval Station Everett Architecture Plan.

Management Plans for Control of **Invasive Species** is discussed in Section 4.9 of this INRMP.

4.9 Coastal/Marine Environment

Within this environment, natural resources include biological or physical resources that are found permanently or cyclically within the coastal zone. Biological and physical resources include but are not limited to: air, tidal and non-tidal wetlands, ocean waters, estuaries, rivers, streams, lakes, aquifers, submerged aquatic vegetation, land, plants, trees, minerals, fish, shellfish, invertebrates, amphibians, birds, mammals, reptiles, and coastal resources of significance.

Coastal uses and resources also include uses and resources described in the Washington State Shoreline Management Program, and the Shoreline Management Programs of Snohomish County and the City of Everett, in particular Shorelines of Statewide Significance.

NAVSTA Everett

NAVSTA Everett makes contact with two different Shoreline Ecological Management Units (EMU), as described by the City of Everett's Shoreline Management Plan. EMUs are differentiated based upon the degree of fresh water and marine influence. The Everett SMP characterizes these current conditions of this EMUs as follows:

EMU 5 - Lower Snohomish Channel

EMU 5 contains highly modified or artificially created habitats in the Snohomish River channel. This EMU includes the industrialized area of the Everett waterfront, extending from Preston Point southward to Naval Station Everett, and the east shore of Jetty Island. Prior to the construction of Jetty Island, this EMU resembled the extensive mud and sand flats that persist today in EMUs 3 and 4. Other emergent marshes similar to Maulsby swamp likely were present along the base of the bluff south toward the Naval base. Farther south, the littoral area was probably comprised of mixed sands, silt and mud. The main stem Snohomish River likely meandered out over the delta, but certainly was shallower and wider than its present configuration.

Much of the Everett waterfront shoreline has been modified by hard structures, including rock riprap, pilings, concrete bulkheads, docks and adjacent roads, parking lots and industrial yards and buildings. This area has been extensively dredged and filled, primarily for timber related industries, since the inception of the City of Everett. Filling has occurred just south of Preston Point, at the 10th Street boat launch, the North and South marinas, and the Naval Base. It is estimated that this activity has reduced the area of historical intertidal mudflats by approximately 50%. Extensive mudflats do persist waterward of Maulsby swamp and along the east side of Jetty Island, but have been extensively used for log raft storage.

The lower Snohomish River channel is part of the Port of Everett's active deep water port facility served by a federal navigation channel which runs six miles upstream from the river mouth. The channel is maintained by the US Army Corps of Engineers through sponsorship of the Port of Everett. Approximately 150,000 cubic yards of dredged materials are removed from the navigation channel on an average annual basis. In addition, the Port carries out its own dredging activities in waterways under its jurisdiction, including those waterfront areas along the east side of the navigation channel from 4th Street south to the end of the deep water terminal. In addition, smaller property owners have dredged to gain access to the navigation channel and operate water-dependent businesses. Maintenance dredging is also required for these activities.

EMU 6 – Everett Harbor (East Waterway)

The East Waterway was transformed into a deep-water port by dredging and filling in the early part of the last century and has provided shipping and processing facilities for timber, pulp and alumina. As a result, this EMU consists primarily of highly modified deep water and some limited shallow sub-tidal and intertidal habitat. Littoral habitats largely are associated with fill, as nearly all mudflat areas have been eliminated by dredging, fill, riprap or bulkheads. This area is primarily marine in nature. Prior to alteration, this area was probably comprised of beaches consisting of cobbles and mixed sands and silts similar to those that currently line the Mukilteo shoreline to the south.

The Corps of Engineers maintains the East Waterway to a depth of approximately 30 feet MLLW. This area is primarily used for the US Navy base and port-related deep water shipping operations. Along the marine terminal shipping berths in the East Waterway, the Port of Everett maintains water depths to approximately 40 feet MLLW. The Port of Everett facilities are utilized for a variety of uses, which include, but are not limited to, coastwise and international trade, vessel repair, fishing vessel resupply, and temporary lay-up. The US Navy maintains its berths and turning basins at approximately 55 feet MLLW. In addition to the commercial activity of the Port of Everett and the presence of the US Navy, the East Waterway is used for mooring barges, log rafts, and small commercial vessels (City of Everett, 2011).

4.9.1 Port Gardner Bay Water Quality

Port Gardner has been classified as an impaired water body, due principally to the existence of contaminated sediments in the East Waterway, identified as EMU 6 above. (SAIC, 2010). Future work or expansion within this area may require specific construction techniques, project timing, monitoring and management regimes or, in the extreme, contaminant cleanup or use restrictions. Ongoing engagement in this area will be important to understanding the issues and how the Navy may continue to maintain mission effectiveness, while addressing potential constraints.

4.9.2 Puget Sound Partnership

One of the major regional conservation efforts is the Puget Sound Partnership (PSP). The Puget Sound Partnership is a community effort of citizens, governments, tribes, scientists and businesses working together to restore and protect Puget Sound. The PSP agenda includes prioritizing cleanup and improvement projects, coordinating federal, state, local, tribal and

private resources, and making sure all are working cooperatively. They are dedicated to basing decisions on sound science, focusing on actions having the biggest impact, and holding people and organizations accountable for results. Their ultimate goal is to create a roadmap and to make Puget Sound healthy again, and for how to get it done.

In coordination with the Snohomish Basin Salmon Recovery Forum, in 2005 PSP published a Snohomish Basin 10 Year Recovery Plan and a separate 3-Year Work Plan, which was subsequently updated in 2011. The goals of the 3-Year Work Plan include:

- To provide a forum for watershed groups to discuss the work, status and needs of salmon recovery.
- To have tools that document the work, status and needs of salmon recovery for the subsequent three years that can be rolled into a regional statement of the funding and capital needs, current status and existing work underway.
- To be a tool for identifying priority projects for current and future funding opportunities.
- To document changes in the implementation of each salmon recovery watershed chapter.

The Snohomish River Basin Three-Year Work Plan identifies work planned to advance salmon recovery through habitat protection, restoration, hatchery operations, harvest management and integration of other activities. In the immediate area of NAVSTA Everett there are only two projects identified;

- *Re-nourish Existing Jetty Island Berm (project 07-NR-005)*. This is a recurring Port of Everett project for beach nourishment occurring roughly every two years. The purpose for this project is to restore degraded nearshore areas for the benefit of Chinook salmon.
- *Jetty Island South Extension Phase II (project 07-NR-003)*. This is a long term, joint Port of Everett/US Army Corps of Engineers project to using dredged material as fill to extend Jetty Island 2200-feet to the south, as well as increase both the width and elevation of the island. This project is expected to include multiple phases and will not be complete until the end of the year 2020. The purpose for this project is to restore degraded nearshore areas for the benefit of Chinook salmon.

The Snohomish River Basin 10 Year Recovery Plan established a goal for the creation of 1-mile of additional nearshore habitat. In terms of status, as of 2011 there has been only 0.20-mile of nearshore habitat created. Other projects identified in the vicinity can be characterized as estuarine areas restoration on the Swinomish Reservation (1 project), in Marysville (4 projects) and tidal marshland restoration in and around Everett (9 projects) (Puget Sound Partnership, 2011).

Given the location of these projects, there are no actions that may be undertaken on NAVSTA Everett that may directly contribute to the execution of these nearshore or estuarine habitat restoration projects.

However, high value activities, beneficial processes and species exist in the marine coastal and shoreline areas of NAVSTA Everett. In the interest of protecting and preserving these processes the NRM will take the following actions to protect shoreline habitats:

4.9.3 Criteria 1, Conservation Benefit

Timing: The NAVSTA Everett Command will ensure that all actions, uses and developments taking place within 200-feet of Ordinary High Water Mark (OHWM) of the shoreline are restricted to appropriate seasons and to appropriate weather conditions in the interest of minimizing negative impacts or maximizing benefits to wetland and buffer function.

Consultation: The Navy will plan and ensure activities affecting any coastal use or resource comply to the maximum extent practicable with Coastal Zone Management Act (CZMA) requirements. Any construction requirement that cannot be sited to avoid wetlands shall be designed to minimize impacts and shall include compensatory mitigation as required by regulatory agencies in all phases of the project's planning, programming, and budgeting process. Within this policy, use of Navy lands and lands of other entities are permissible for mitigation purposes for Navy projects when consistent with NMFS and US Army Corps of Engineers guidelines or permit provisions. Requests by non-Navy entities to mitigate the effects of non-Navy projects on Navy property should be reviewed on a case-by-case basis for their effect on Navy mission, the environment, and appropriateness of economic compensation to the Navy for the long-term use of the site, all such projects need to be approved by the chain of command. To date, the Navy has not had a request by non-Navy entities to mitigate the effects of non-Navy projects on Navy property.

Operations & Oversight: The NRM will identify operations and infrastructure that could affect the Coastal/Marine environment (example: storm drains that discharge directly to the water; pesticide applications near the shore) and coordinate with the command and station's departments to minimize or eliminate releases. The NRM will, under the direction of the IEPD, assist in the development of spill prevention, control, and countermeasures and that they are implemented to prevent accidental contaminant releases into the Coastal/Marine environment. The Natural Resources Manager or designated staff will regularly inspect any NAVSTA Everett structures that may drain into or otherwise impact the Coastal/Marine environment.

The OHWM) for NAVSTA Everett must be identified and mapped with sufficient accuracy to protect the Coastal/Marine environment from potential unplanned impacts. Maps must be distributed to all potential users, including facilities planners, operational units, and tenant commands. Jurisdictional maps may be required prior to actual construction if the project or use is located within 200-feet of OHWM. Field verification and jurisdictional determinations must be completed for all projects in proximity to the OHWM.

Buffer Management: Setbacks from OHWM will be considered and evaluated. Discussion and consideration of buffer management will be discussed as part of the Annual Increment process with partner agencies.

4.9.4 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a NRM position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding for natural resources management issues, including habitat enhancement project and special projects to assist in the maintenance and improvements of the Coastal/Marine environment, as required.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for the Coastal/Marine environment.

4.9.5 Criteria 3, Management Effectiveness

Goals:

- Maintain and enhance the natural and beneficial values of the Coastal/Marine environment for habitat and water quality purposes.
- Manage and/or eliminate incursion of invasive plant types into the Coastal/Marine environment areas.
- Ensure the Shoreline is properly identified and delineated in accordance with Washington State Shoreline Master Program guidelines. Ensure wetland areas are accurately mapped and input into GIS.

Monitoring & Adaptive Management: If extensive monitoring is required, then detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor wetland function and quality.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the WDFW, NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW, USFWS and NMFS staff to identify necessary changes to the plan that would benefit of the species.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specific endpoint. Annual reviews and a review for operation and effect at least every 5 years provide a suitable mechanism and sufficient flexibility to enable plan effectiveness.

4.10 Control of Invasive Species



Common Tansy

(Source: USDA-NRCS PLANTS Database)

The term “invasive species” means “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health” (Executive Order 13112).

The example shown above, Tansy, is an invasive, toxic biennial weed most often found in pastures and along roads and trails. It is a Noxious Weed in Washington State and control is required in selected counties in the state. An invader from Europe, tansy ragwort was first seen in seaports in the early 1900s and is often spread in contaminated hay. When prevalent, tansy ragwort is one of the most common causes of poisoning in cattle and horses, caused by consumption of the weed found in pasture, hay or silage. Milk produced by affected cows and goats can contain toxins. Stock does not reject or avoid it in hay or silage; its poisonous alkaloids are unaffected by drying. Honey from tansy ragwort also contains the alkaloids (King County, 2012). Tansy is present within Snohomish County and is common in pasture area, like those nearby the Smokey Point FSC.

The Executive Order goes on to define an alien species as any species not native to a particular ecosystem, including the seeds, eggs, spores, or other biological material capable of propagating

that species. Exotic invasive plants and animals have the potential to cause vast ecological and economical damage, and sometimes pose human health impacts in areas they infest.

Discussion of Invasive Species is often associated with Integrated Pest Management Plans. A more detailed review of this is addressed in Section 4.12.

The Washington Comprehensive Wildlife Conservation Strategy indicates that invasive species constitute a severe and growing threat to Washington's native wildlife, habitat and biodiversity second only, many believe, to habitat fragmentation. Throughout the entire state, aggressive non-native plants and animals are displacing native species, profoundly altering natural systems and affecting the state's economy and human health. These non-native invasive plant and animal species have become introduced through both intentional and unintentional releases, including "hitchhiking" on horses and other livestock, trucks and boats; transport on ocean currents and in ballast water; importation in aquaculture and horticulture products and the pet/aquarium trade; and accidental releases from research institutions and laboratories. Normally non-native species that are introduced to new areas are unable to form self-sustaining populations and normally die out. However, some become established and thrive, and out-compete native species, thus altering the natural ecosystem processes (WDFW, 2005).

The effect of invasive species is especially severe in the shared inland marine waters of Puget Sound and the Georgia Basin to the north, where introduced species include the following:

- Cord grasses (*Spartina*) and Japanese eelgrass (*Zostera japonicum*), out-compete and eliminate native salt marsh vegetation and raise the level of the marsh substrate.
- Oyster drills (*Urosalpinx cinerea* and *Ocenebrellus inornatus*), prey upon young oysters.
- Varnish or dark mahogany clam (*Nuttalia obscurata*), compete for similar food sources.
- European green crab (*Carcinus maenas*), first reported in Willapa Bay in 1998, is a voracious predator that feeds on many types of organisms, particularly bivalve mollusks (clams, oysters and mussels), polychaetes and small crustaceans, and also out-competes Dungeness crab for habitat and food supply, and will eat juveniles.

In freshwater habitats, the proliferation of non-native bullfrogs has had a severe impact on declining species such as western pond turtles, northern leopard frogs, and other native species. Alien zebra mussels have invaded the Great Lakes, and it is probably only a matter of time before they are found in other freshwater environments.

Washington also experiences habitat destruction in freshwater habitats where introduced ornamental plants for aquariums or water gardens have invaded natural habitats. Eurasian water milfoil is one aquatic noxious weed that is a particular problem statewide. It reproduces by fragmentation and proliferates to form dense mats of vegetation in the littoral zone of lakes and reservoirs, where it crowds out native aquatic vegetation, reduces dissolved oxygen (DO) and can severely degrade the ecological integrity of a water body in just a few growing seasons.

Problems associated with invasive non-native plants and animals are currently being addressed at many different levels in Washington, within the constraints of budgets and staffing resources. Examples include Washington's Noxious Weed Control Board, and the Washington State Aquatic Nuisance Species Committee. Each serves as the state's coordinating bodies and advocates for management of these invasive organisms.

Washington State's Aquatic Nuisance Species (ANS) Committee was constituted in 2000 and since that time has worked consistently and effectively to foster state, federal, tribal, and private cooperation on Aquatic Nuisance Species issues and implement the Washington State ANS Management Plan. This committee is in the process of standing down and transferring its responsibilities to the Washington Invasive Species Council (Aquatic Nuisance Species Committee, 2012). To date the ANS Management Plan outline a broad, coordinated approach, including new law, new regulation, new studies, assessments, public education, public outreach and other responsible measures aimed at controlling and eliminating the introduction of harmful bio-invasive organisms and avoiding or mitigating the harm they cause.

In 2000, the Washington Legislature passed a ballast water management law that requires oceangoing vessels and vessels involved in coastal trade to conduct any ballast water exchange at least 50 miles offshore and to report all ballast water discharges to the Coast Guard or the state (WDFW, 2005).

The Washington Department of Agriculture also has a lead role in coordinating an aggressive state/federal/private effort to eradicate or at least stop the spread of invasive Cordgrass (*Spartina*), which has been reduced from 9000 acres in 2003 to a 12 acres in 2011, with only 5 acres of this total remaining within the Puget Sound (Washington State Department of Agriculture, 2010).

The European green crab is a vigorous competitor for habitat and forage with Dungeness crab. While the Dungeness is not listed as endangered or threatened and not accorded the protection of a listed species, it is identified by WDFW as a priority species and is considered a commercially valuable resource within the state. Dungeness crab inhabits Port Gardner Bay and nearby waters, so it is possible that European green crab may be present.

On the State level Aquatic Nuisance Species programs and enforcement is in competition for funding, and Federal funding has been diminishing since 2001, so the future and effectiveness of this program appears to be dynamic (Aquatic Nuisance Species Committee, 2012).

In order to protect NAVSTA Everett and the Smokey Point FSC, the following actions will be undertaken. In addition, a proposed project to survey for and control invasive and non-native plants and animals is included in this INRMP (EPR Project # 68967NR004, Appendix A):

4.10.1 Criteria 1, Conservation Benefit

Timing: Site surveys and eradication will be planned and timed for maximum effectiveness for the protection of natural resources on the effected installations.

Consultation: No consultation is required for noxious weed control, however Snohomish County and the Natural Resources Conservation Service often holds training sessions on plant identification and eradication. While consultation is not required, it may prove to be valuable.

Operations & Oversight: The NRM will conduct surveys on the terrestrial portions of NAVSTA Everett and the Smokey Point FSC in order to determine the presence, location and extent of any noxious and invasive plant types.

Required grounds maintenance actions will be coordinated to eradicate Class A Noxious Weeds, where present. The Washington State Noxious Weed Control Board describes Class A noxious weeds as noxious weeds not native to the state that is of limited distribution or is unrecorded in the state and that pose a serious threat to the state. These weeds are a threat to all counties of the state and eradication is required. Additional information on noxious weeds is located at: http://www.nwcb.wa.gov/ab_weedlaws.htm .

Buffer Management: Wetland buffer areas will be surveyed for invasive species as part of a whole-site approach. Immature wetlands are higher risk for invasive grasses, which must be managed effectively to enable/facilitate plant succession into more mature states (see EPR Project # 68742NWTJ1, Appendix A).

There is a Native Growth Protection Easement along Hayho Creek, on the western property boundary of the Smokey Point FSC. This Native Growth Buffer will be managed to ensure noxious weeds do not dominate through this corridor. If significant populations of non-native plant species are observed at the Smokey Point FSC within the Native Growth Protection Easements, these undesirable species will be removed and controlled. Primary efforts at control should consist of manual and/or mechanical removal and replacing with native plants, with emphasis on fast-growing species such as willows, dogwood, spirea, and black cottonwood.

4.10.2 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks a NRM position with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: The NRM annually proposes and submits projects and seeks funding for natural resources management issues, including habitat enhancement project and special projects to assist in the maintenance and improvements of the Coastal/Marine environment, as required.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate measures to avoid the spread of invasive species.

4.10.3 Criteria 3 Management Effectiveness

Goals:

- Ensure no communities of Class A Noxious Weeds are permitted to thrive on the installations.
- Monitor and maintain situational awareness of aquatic bio-invasive fauna through USFWS/WDFW channels. Advise Command if it appears that site surveys or more extensive management efforts will be required, (see EPR Project # 68967NR004, Appendix A).
- Protect and maintain Native Plant Buffer on Hayho Creek at the Smokey Point FSC.
- Increase awareness and expertise through training offered by the DoD-sponsored Center for Invasive Plant Management at Montana State University, <http://www.weedcenter.org/> or weedcenter@montana.edu.

Parameters:

- Class A noxious weeds surveyed and identified.
- Class A noxious weeds eradicated in a timely manner.
- Complete Consultation with USFWS & WDFW as part of the annual INRMP Natural Resources agency review.
- Complete additional training through NRSC, Snohomish County or MSU Weed Center.

Monitoring & Adaptive Management: If extensive monitoring is required, then detailed survey plans will be designed and timed to deliver the best quality data possible within the constraints of the project budget. Survey design will consider repeatability with the intent to enable easy transition for planned follow up surveys over time, in order to monitor invasive species.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with USFWS and WDFW staff to identify necessary changes to the plan to improve effectiveness of controls.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 provides a suitable mechanism and sufficient flexibility to enable plan effectiveness.

Wildland Fire

Neither tree stands nor range/grassland areas are present at NAVSTA Everett or the Smokey Point FSC. Not Applicable.

4.11 Land Management: Zoning Areas

NAVSTA Everett and the Smokey Point FSC have six associated zoning areas (Figure 4-2). The zoning is based on military mission and areas required to be in the approximate vicinity of the military mission.

Waterfront Operations: Includes a narrow range of unique facilities which are essential to the core waterfront operations of the installation. These facilities include homeport piers for aircraft carriers and other surface ships, and other waterfront operations support facilities.

Logistical/Industrial: Includes facilities that directly support the waterfront operations core mission and require immediate adjacency in order to perform that support function in an efficient, timely manner. A defining criteria supporting an adjacency looks at the frequency of foot and support equipment travel between the facility and the core facilities. It also includes conditional uses for specific operational facilities and utilities that directly support the waterfront facilities.

General Mission Support: Includes functions which support waterfront operations and need to be within reasonable siting distance to support operational efficiencies, but are not required to be immediately adjacent to the waterfront operation facilities. These include functions which indirectly support community services and BQ housing functions.

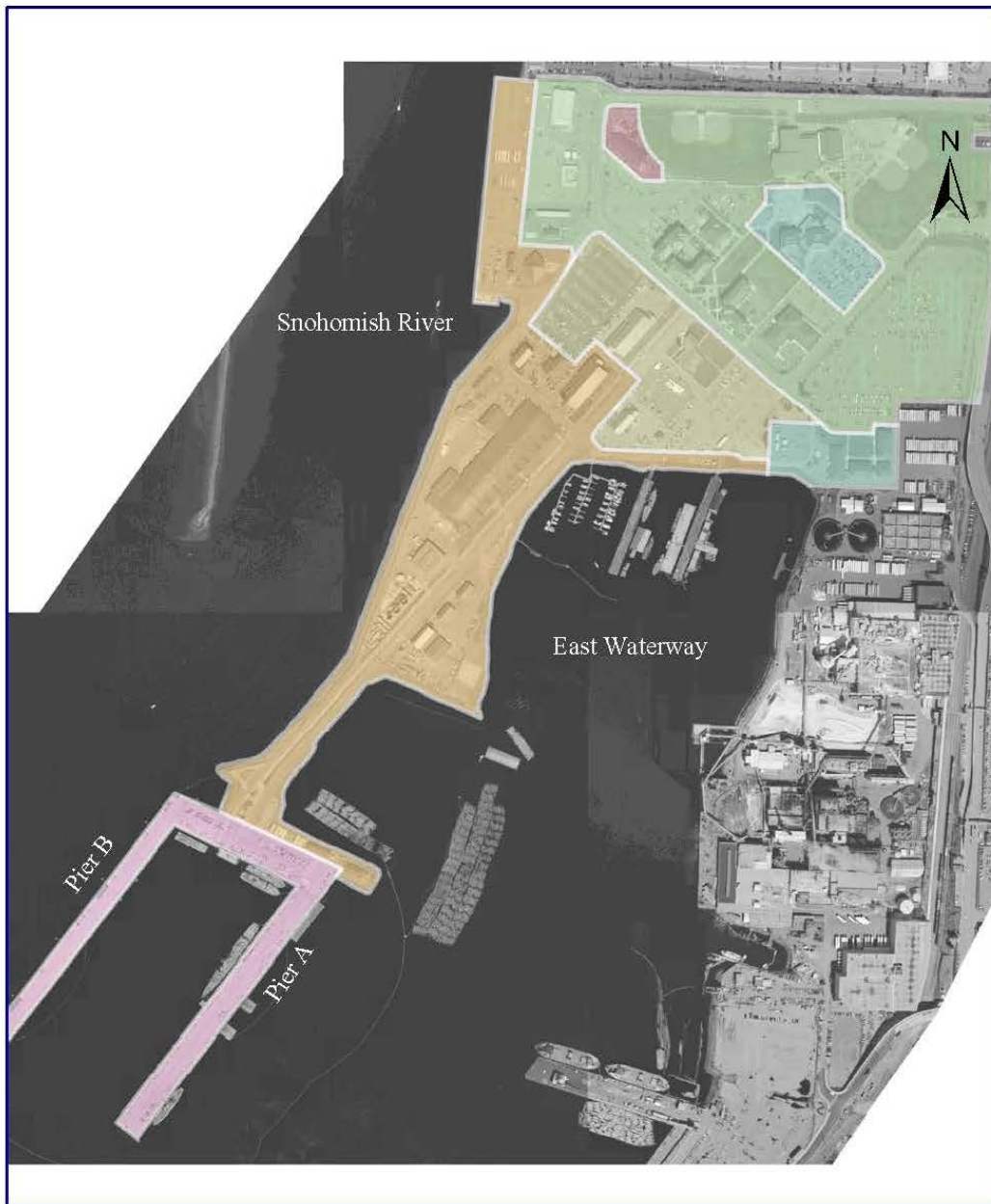
Military Personnel Support: Includes functions that provide community support services primarily to personnel living bachelor housing as well as medical support and recreation for those personnel. It includes conditional uses for specific functions which support military personnel and need to be co-located to allow for operational efficiencies. These conditional uses are functions which need to be located immediately adjacent or within reasonable siting distance from the bachelor quarters.

Administration: Includes functions which support general base operations, regional missions, and community services. These functions indirectly support the operational mission and have flexibility in siting with no proximity to the mission requirement.

Quality of Life: Includes functions which provide community support services primarily to military families and personnel living off base, including commissary and exchange facilities, recreation and other personnel support functions. These functions indirectly support the operational mission and have the flexibility of siting with no proximity to the mission requirement.

NAVAL STATION EVERETT

Naval Station Everett INRMP (2014)



Land Use Zones



Legend

- | | |
|------------------------|----------------------------|
| Operations | Military Personnel Support |
| Logistics & Industrial | Administrative Support |
| Mission Support | Quality of Life |

Reference:
RSIMS_DATA\imagery2
RSIMS_DATA\geodb\rsims_050329_ctc.mdb

Figure 4-2. NAVSTA Everett Land Use Zones.
(Source: NAVFAC)

Integrated Pest Management

Integrated Pest Management Plans (IPMP) are reviewed and updated as needed on a yearly basis according to DoD Instruction 4150.07 and OPNAVINST 6250.4C. Changes in pest management strategy, pest control methods, pesticides used, pesticide safety and pest survey techniques are discussed in the Naval Station Everett IPMP. The IPMP is prepared by NAVFAC's Applied Biology Division and reviewed by the Pest Management Coordinator, the Public Works Officer, Environmental Office and Medical Officer. Approval of the IPMP is conducted through joint review by the Naval Facilities Engineering Command Area Pest Management Consultant and Officer-in Charge, Naval Disease Vector Ecology and Control Center. The Everett IPMP was updated and approved in 2014. The IPMP can be obtained from NAVSTA Everett's Pest Management Coordinator.

Poisonous plants and noxious weeds shall be controlled or destroyed in accordance with approved practices and applicable laws when they interfere with safe and efficient land use, endanger the health and welfare of personnel, or constitute a source of weed infestation to adjacent property. The control of such plants shall be implemented within the guidelines found within the IPMP.

4.12 Storm Drains

4.12.1 NAVSTA Everett

At the waterfront site, all storm drains flow into one of four outfalls which then discharge to the Snohomish River (Figure 4-3). Each outfall is equipped with an oil-water separator and a tide gate that closes during high tides. These gates are simple flapper valve gates that will open during heavy rainstorms. In addition to these gates, Outfall A, which drains stormwater from Piers A, B, and the South Wharf, has an emergency gate closure system, operated from various control switches on the piers. The emergency gate closure system can be activated to prevent discharges if a spill of oil or other material occurs on the piers or the South Wharf.

Although the oil-water separators are not absolute in their ability to prevent oil from being discharged, they do provide a measure of assurance during normal conditions, such as a small spill in a parking lot or along a road. The outfalls are cleaned on a regular basis and the flapper gates are inspected at least annually. The emergency gate on Outfall A is tested at least annually.

Please refer to "Research Needs", Section 4.25 for discussion of potential Climate Change phenomena that may impact function and performance of the storm drainage system at NAVSTA Everett.

4.12.2 Smokey Point FSC

At the Navy Support Complex, water that enters storm drains flows into detention ponds that impound, then slowly release the water to percolate into groundwater or infiltrate into nearby surface water channels. The detention ponds are designed with overflow devices. Therefore, during high precipitation events, the water in the ponds flows into the Hayho Creek and from there into Middle Fork Quilceda Creek.

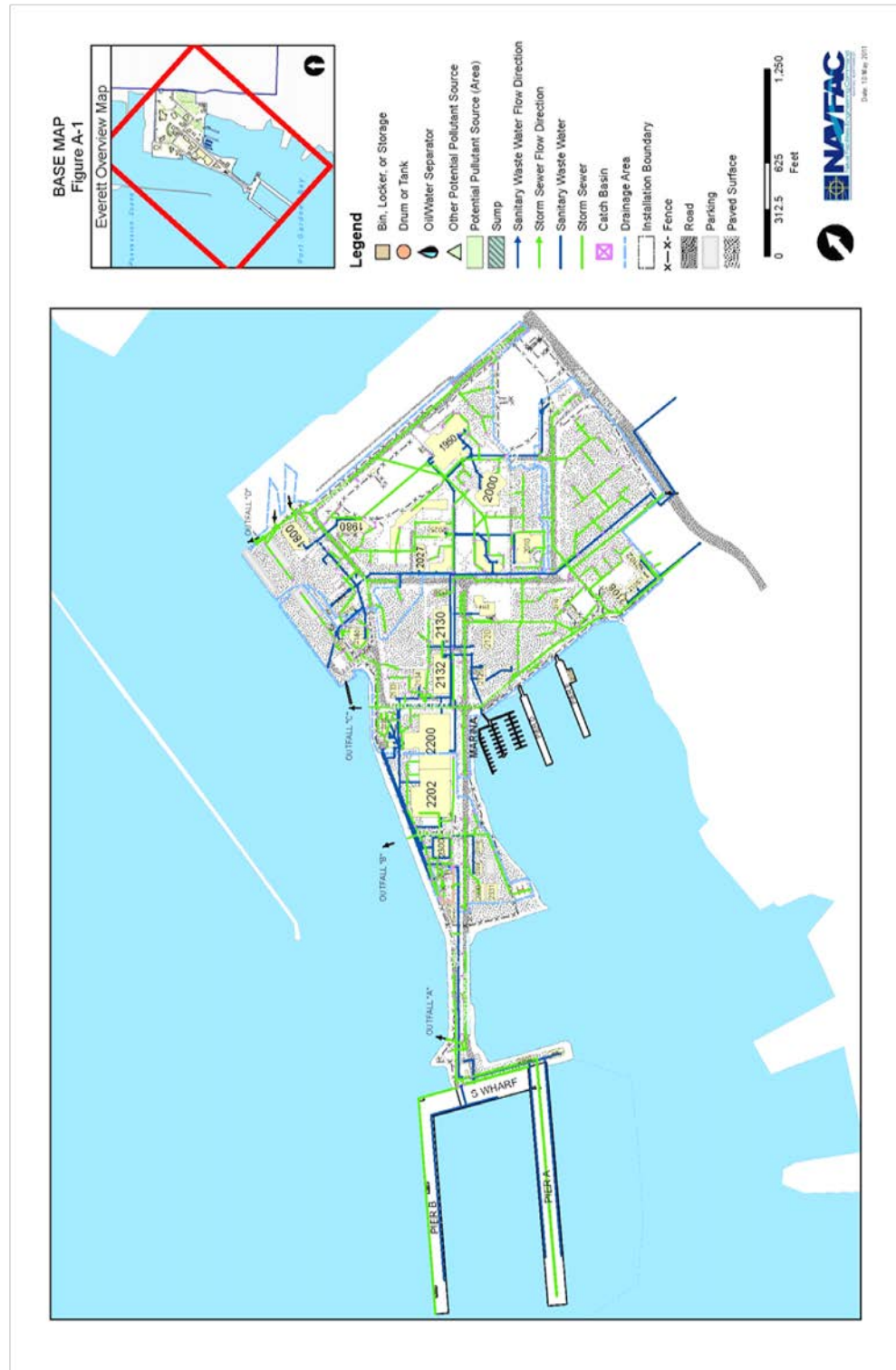


Figure 4-3. NAVSTA Everett Stormwater System.

Only the storm drains near the NEX gas station flow into an oil-water separator; these then flow into the large detention pond on the east side of the property. The separators are inspected and cleaned at least annually.

4.13 Hazardous Materials Management

The Environmental Division and the Safety Director review and approve all hazardous material usage on the Station. There is a hazardous materials storage facility in Building 2202 where materials are brought, logged into a tracking system, and disbursed to various tenant commands and ships upon request. The facility is equipped with holding tanks in case of a spill. No spilled materials can reach the storm drains or sanitary sewer system.

4.14 Hazardous Waste Management

Building 2150 contains the Hazardous Waste Facility. The facility is staffed by three hazardous waste employees whose duties are to pick-up hazardous waste from the ships and tenant commands (including the Smokey Point FSC), transport it back to the facility, characterize the waste, repackage it if necessary, and manage the proper shipping and disposal of the waste according to the EPA and the State of Washington hazardous waste regulations. Hazardous waste is only stored in Building 2150, which is equipped with a holding tank and other measures to prevent any spilled material from entering storm drains.

4.15 Spill Prevention, Control & Countermeasures

A Spill Prevention, Control & Countermeasures (SPCC) plan for the Station was written and approved in 2006. A full description of the plan is not included here. However, it is important to note that the Environmental Division manages the plan, coordinates training and spill drills for Station staff, carries out inspections of storage tanks, equipment, and procedures that have a potential to release oil to the environment, and participates as spill response team members in the event of an actual release. The SPCC plan identifies sensitive shorelines and wildlife areas in the vicinity of the Station and prescribes strategies for protecting these areas. The Station's Port Operations Division is trained and has the necessary equipment to respond to a spill to the water and begin clean-up procedures. The Station's firefighters are trained in hazardous materials response. Both organizations are staffed and available for spill response 24 hours a day. The Station can also call upon the Commander, Navy Region Northwest, for help in staffing and equipping a response to a spill. As a preventive measure, Piers A and B have floating spill booms that are kept closed around all ships when they are moored to the piers. Should a spill of petroleum-based products occur, these booms will help prevent the spread of the spilled product and allow for faster clean-up.

4.16 Feral Dogs & Cats

Sailors quartered on base at NAVSTA Everett are prohibited from having dogs and cats. NAVSTA Everett is completely fenced and it is unlikely that dogs or cats would use the installation, although they could potentially walk in from the north at low tides.

The Smokey Point FSC is unfenced and is surrounded by agricultural fields, woods, and suburban residential areas. Feral dogs and cats could utilize the Smokey Point FSC, but they have never been observed or considered a problem. Also, coyotes have been spotted in the adjacent fields (J. Miller, Natural Resources Manager, personal observation, 2004) and they could act as a control on cats, and possibly keep feral dogs away. There is a Bachelor Officer Quarters on the Smokey Point FSC, but dogs and cats are not allowed. There are no residential housing units on the Smokey Point FSC. There is no prohibition preventing users of the Smokey Point FSC (active duty, dependents, retirees, or others) from bringing pets onto the Smokey Point FSC, as long as they are on a leash and kept under control. It is common to see people with dogs on leashes walking around the facility.

4.17 Pest Management

As described in the Fish and Wildlife section, U.S. Department of Agriculture Wildlife Services is contracted by the Station to handle problems with birds. The Station's Public Works Department manages this contract. Wildlife Services also has the ability to manage other problem wildlife (such as coyotes). There have been no wildlife concerns at the Smokey Point FSC.

The North Sound IPMP includes NAVSTA Everett. This plan is managed by the Public Works Department and provides guidelines for the use and storage of pesticides and herbicides.

4.18 Floodplains

Not Applicable.

4.19 Outdoor Recreation

4.19.1.1 NAVSTA Everett

There are no significant outdoor recreation opportunities at NAVSTA Everett, aside from the MWR-operated Marina and the athletic fields.

4.19.1.2 Smokey Point FSC

MWR has discussed the possibility of developing an RV camping area at the FCS in the past, but did not progress past the feasibility phase. Otherwise, there have been no other proposals and no other high value outdoor recreation opportunities are available at the Smokey Point FSC.

4.20 Bird/Animal Aircraft Strike Hazard

4.20.1.1 NAVSTA Everett

There is a helicopter landing pad near the South Wharf but helicopter flights are very rare. The pad is maintained but there is no Bird/Animal Aircraft Strike Hazard (BASH) plan for the helicopter pad at this time. The NRM will inspect the periphery of the pad to identify Canada goose or other bird nests and inform APHIS-WS or the appropriate authorized contractor so that nests may be removed. Grass growing on top of the rip rap will be cut short to minimize or eliminate nesting habitat for these birds.

Smokey Point FSC

Not applicable.

4.21 Agricultural Outleasing

Not applicable.

4.22 Other Leases

Not applicable.

4.23 Migratory Birds



Migratory Birds

(USFWS Photos)

Genus/Species

Listed Migratory Birds (Multiple)

Status:

Protected

Description of exemption:

Via Predation Permit only.

Citation:

Migratory Bird Treaty Act, 16 USC. 703-711

CFR 10.13, List of Migratory Birds;

EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (17 January 2001)

Permit:

MB692908-4 held by USDA-WS-APHIS

4.23.1 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under the Act, taking, killing or possessing migratory birds is unlawful.

This Act protects migratory birds and their nests and eggs from being hunted, captured, purchased, or traded. If an installation uses pesticides to manage bird populations other than European starlings (*Sturnus vulgaris*), house sparrows (*Passer domesticus*), and feral pigeons (*Columba livia*), it may be required to coordinate with the USFWS.

4.23.2 Prohibited Acts

Unless permitted by regulations, the Act states it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or receive any migratory bird, part, nest, egg or product, manufactured or not.

On March 15, 2005, the USFWS published in the Federal Register (FR 70(49):12710-12716) a final list of the bird species to which the MBTA does not apply because they are not native to the United States and have been introduced by humans everywhere they occur in the nation. The list of migratory birds protected by the MBTA is published in the Code of Federal Regulations (Title 50, Part 10.13).

Nuisance birds using NAVSTA Everett include Glaucous-winged gull, Canada goose, Rock dove, Eurasian starling, and House sparrow. Gulls and geese are a particular nuisance because of the large amount of feces they produce; however feces material is not a regulated waste. While not a regulated waste it may be necessary to clear away this material in the interest of public health.

The Navy has contracted with U.S. Department of Agriculture Wildlife Services (USDA-WS) to control these problem birds on some of the installations. USDA-WS has the expertise and the necessary permits to handle problem wildlife, not just birds (example: coyote depredation on the airfields at Naval Air Station Whidbey Island), and are a good resource should there be a need for systematic bird or other animal control in the future. Private contractors also have the capability of handling problem wildlife. Regardless of the agent chosen to manage these wildlife issues, the NRM will ensure that the responders have the necessary depredation permits.

4.23.3 Criteria 1, Conservation Benefit

Timing: The NAVSTA Everett Command will consider timing for all proposed routine construction or repair activities. In particular, work requiring the use or installation of antennae, cranes or other tall, linear structures, their use and operation must be managed in a manner that does not pose unnecessary risk to migrating birds. This is a particular issue at night time and during periods of particularly poor visibility. Lighting of equipment or structures will take bird behavior into account and avoid becoming an attractive nuisance to migrating species.

Consultation: NAVSTA Everett will ensure that consultation with the Agencies is conducted for all proposed actions at the station that have the potential to harass or harm migratory species.

Operations & Oversight: The Natural Resources Manager will identify operations and infrastructure that could harm or harass migratory birds. The Natural Resources Manager will conduct regular surveys of facilities and operations in order to identify potential hazards to migratory birds. Bird deterrent structures on the installation will be regularly inspected to ensure they are maintained in good working order and pose no unnecessary hazard to migratory birds.

Buffer Management: Buffer management is not included in this management plan because use of the land/water interface is vital to the operation of the installation and the necessary use of the upland areas adjacent to the shoreline has been reviewed extensively. Impacts to this area cannot be avoided.

4.23.4 Criteria 2, Implementation of the Plan

Staffing: Commander, Navy Region Northwest (CNRNW) annually funds and tasks the Natural Resources Manager (NRM) with natural resources oversight of the facilities and grounds. The NRM is directed by the Command to implement the INRMP. NAVSTA Everett is also able to call upon the natural resources expertise of the Naval Facilities and Engineering Command Northwest, which is staffed with environmental planners and specialists to assist facility managers in conservation and environmental compliance requirements.

Projects & Funding: Given the mobility and range of the species, there are few actions that may be conducted at NAVSTA Everett that will have a definable or measurable effect upon migratory bird habitat, beyond those measures which represent responsible stewardship. Projects oriented upon habitat enhancement on behalf of migratory are therefore not reasonably within the scope of this INRMP.

Planning & Authority: The NRM has the authority to implement maintenance and protection plans and obtain all the necessary authorizations or approvals for proposed management actions.

Concurrency: The NRM will regularly meet with NAVSTA Everett's command and departments to ensure that proposed new missions, or changes to existing missions consider adequate protection measures for migratory bird species.

4.23.5 Criteria 3, Management Effectiveness

Goals: In the marine context, given the highly developed, intruded nature of the shoreline areas as well as the intensity of on-going mission requirements there is little opportunity for migratory bird habitat restoration or enhancement at NAVSTA Everett. NAVSTA Everett requires a deep water setting and lacks what is referred to as "the landscape context" required to yield sufficient benefits at a reasonable cost; therefore NAVSTA Everett remains a poor candidate site for restoration or recovery actions that might benefit migratory birds.

However, NAVSTA Everett may contribute to the preservation of migratory birds by adopting the following goals:

- Ensure existing habitats are not negatively impacted.
- Other than harassment approved by the existing permit MB692908-4, ensure migratory birds are not directly harmed or harassed resulting in an unpermitted "take."

- Continue to participate in the Audubon Society's Christmas Bird Count.
- Explore and consider participation in International Migratory Bird Day inventories.

Monitoring & Adaptive Management: Species presence and frequency will be monitored by the NRM using existing resources.

The INRMP implementation process includes provisions for annual review, analysis and adaptation in coordination and after consultation with the NMFS and USFWS. However, out-of-cycle adaptation is not prohibited. While subject to required consultation and approval, the plan is adaptable.

Reporting: During the annual review of the INRMP, consult with WDFW to identify necessary changes to the plan that would benefit migratory birds.

Sufficient Duration: The INRMP is intended to provide continual management guidance with no specified endpoint. Annual reviews and a review for operation and effect at least every 5 years provide suitable mechanisms and sufficient flexibility to enable plan effectiveness.

4.24 Research Needs

4.24.1 Climate Change Initiatives

Climate change regulations are evolving. To implement its climate policy, the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science. A more regulatory approach to addressing this issue may evolve over time at the national level. Currently, the following serve as guidance:

EO 13514: Oct 2009. Energy (GHG reduction), Water, Waste conservation and reduction goals

- Requires agency Strategic Sustainability Performance Plans
- "...evaluate agency climate-change risks and vulnerabilities to manage the effects of climate change on the agency's operations and mission in both the short and long term..."
-

Whitehouse Council on Environmental Quality (CEQ): (Mar 2011). "Federal Agency Climate Change Adaptation Planning, Implementing Instructions" require federal agencies to:

- Assess likely effect of climate change on agency's ability to achieve its mission & strategic goals, Sept 30, 2011
- Identify priority adaptation actions to be implemented, Sept 30, 2011
- Submit publically-available agency climate change adaptation plan

QDR: (Feb 2010) "DoD will need to adjust to the impacts of climate change on our facilities and military capabilities... The Department must complete a comprehensive assessment of all installations to assess the potential impacts of climate change on its missions and adapt as required."

Department of Defense Strategic Sustainability Performance Plan: (August 2010). Planning actions in accordance with EO13514

DoDI 4715.03: (Feb 2011). Integrate climate change impact assessment and adaptation planning in INRMPS.

Local governments and Washington State have already instituted some policies and regulatory initiatives addressing climate change. In 2008 the State of Washington, along with other western states, provinces in Canada and Mexico established the Western Climate Initiative, in order to:

- Set a regional greenhouse gas reduction goal that is consistent with each partner's individual reduction goal.
- Join a multi-state registry to track, manage and credit entities that report their greenhouse gas emissions and the reductions they make.
- Develop a design for a regional multi-sector market based mechanism, such as a load-based cap and trade program, to help achieve the emission reductions (WSDOE, 2008).

Subsequently, Washington State has adopted a broad approach to climate change issues and has initiated emission inventory and reporting requirements, set greenhouse gas emission goals (Washington State, 2009), sought to reduce emissions in the transportation and facilities through demand reduction and upgrades in equipment and systems. There have been finance and tax incentives passed, and through executive orders the Governor has established both goals and standards for state operations and facilities. Several laws have been passed at the state level to enable development and inaction of regulation at the local level.

4.24.2 Climate Change Vulnerability Assessment

The US National Oceanic and Atmospheric Administration (NOAA) adopted the Intergovernmental Panel on Climate Change (IPCC) definition, which state “vulnerability is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity.” (NOAA, 2010). Within the context of this INRMPS, the “system” described above in the IPCC definition above is synonymous with “natural resource” for the purpose of conducting a vulnerability assessment.

In 2012 the DoD published a Climate Change Adaptation Roadmap in order to fulfill requirements of the Executive Order (EO 13514), and called for the evaluation of climate change risks and vulnerabilities in order to manage both the short and long term effects of climate change on DoD missions and operations. This document says, in part “...DoD will need to adjust to the impacts of climate change on its facilities, infrastructure, training and testing activities, and military capabilities. DoD’s operational readiness hinges on continued access to land, air, and sea training and test space, all of which are subject to the effects of climate change.” (Department of Defense, 2012)

A thorough vulnerability assessment will lay the foundation for an adaptation strategy. It will help planners understand what might happen as climate changes and help focus attention on the

areas or assets, in this case - natural resources, that are most vulnerable as well as the phenomena and associated impacts that could cause the greatest losses. The roadmap document calls for regionally coordinated assessments, proactive implementation and flexible approaches that recognize uncertainty and incorporates best available science (BAS).

The phenomena expected to be of greatest importance and applicability for NAVSTA Everett are as follows:

- Rising Sea Levels
- Sediment Dynamics & Wetland Migration
- Increasing Storm Intensity/Frequency
- Increased Air Temperatures
- Increased Water Temperatures
- Ocean Acidification

Observed Conditions

Using official records and studies from the last century the following conditions and changes in climatic conditions in the Northwest have been documented:

- The region experienced an average temperature increase of 1.5°F over the last century, with some areas having an average increase of up to 4°F.
- Higher cool season temperatures have resulted in more precipitation falling as rain rather than snow and leading to an earlier snowmelt.
- The April 1 snowpack has declined substantially throughout the region. The average decline in the Cascade Mountains was about 25 percent over the past 40 to 70 years, with most of this due to the 2.5°F increase in cool season temperatures over that period.
- The timing of the peak spring runoff has been shifting over the past 50 years with the peak of spring runoff shifting from a few days earlier in some places to as much as 25 to 30 days earlier in others.
- A low oxygen dead zone off the coast of Washington and Oregon is believed to be driven by climate change.
- Ocean acidification is occurring along the Northwest coast (Karl, Melillo, & Peterson, 2009).

These observed changes have been incorporated with inventories, analysis and input from Federal and State agencies, have been processed through GIS based analysis and predictive models in order to project the following climate-related changes for the Northwest through the end of this century.

Anticipated Conditions

Changes in climatic and related conditions expected in the Northwest

- Temperatures are projected to increase another 3 to 10°F by 2100.
- Increases in winter precipitation and decreases in summer precipitation are projected, though these projections are less certain than those for temperature.
- Heavier winter rainfall suggests an increase in saturated soils and, therefore, an increased number of landslides on coastal bluffs, which will be especially problematic in areas where there has been intensive development on unstable slopes. Sea level rise will exacerbate these conditions.
- Further declines in the region's snowpack are expected, with variations due to latitude, elevation, and proximity to the coast. A decline in the April 1 snowpack in the Cascades of 40 percent is projected by the 2040s.
- The trend in the earlier timing of the peak spring runoff is projected to continue, with shifts anticipated of 20 to 40 days. However, major shifts in the timing of runoff are not expected in areas dominated by rain instead of snow.
- Extreme high and low stream flows are also projected to change. Increased winter rainfall is expected to lead to more flooding in some areas, and low flows in the late summer are projected to decrease further.
- Sea level rise along vulnerable coastlines will result in increased erosion and the loss of land. Some areas in the Northwest are experiencing falling sea levels due to uplift. A mid-range estimate of 13 inches by 2100 has been made for the Puget Sound basin.
- Salmon and other cold-water species will experience additional stresses as a result of rising water temperatures and declining summer stream flows (U.S. Global Change Research Program, 2009).

A more pessimistic presentation of climate change scenarios are described in "*The Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate*". The following expected conditions may be applicable to NAVSTA Everett:

- An increase in average annual temperature of 1.8°C (3.2°F) by the 2040s (Mote and Salathé 2009, this report);
- A 37-44% decline in spring snowpack by the 2040s (Elsner et al. 2009, this report);
- A 13-16% decrease in summer hydropower production by the 2040s and a 363-555% increase in summer cooling demands, which is related to warmer summer temperatures as well as population growth and building trends (Hamlet et al. 2009, this report);
- A quadrupling of the duration of temperatures causing migration barriers and thermal stress for salmon (temperatures greater than 70°F) in the interior Columbia Basin by the 2080s (Mantua et al. 2009, this report);
- Increasing coastal threats associated with higher mean sea level, increased coastal storm strength and flooding, increased beach and bluff erosion, and increased ocean temperatures and acidity (Huppert et al. 2009, this report);

- Projected increases in extreme rainfall magnitudes throughout the state by mid-century, although the projections vary substantially by both model and region (Rosenberg et al. 2009, this report); and
- An additional 156 deaths annually among persons aged 45 and above during heat events in 2045 in the greater Seattle, Washington, area alone, as well as an additional 132 deaths between May and September annually due climate change impacts on air quality (Littell, Elsner, Binder, & Snover, 2009).

Potential Vulnerabilities

The environment most affected by observed and anticipated climatic changes is the Coastal/Marine environment of NAVSTA Everett. Affected areas include the North Wharf, all piers, the marina docks and proposed boat-launch. Affected resources would be fish and ocean creatures that use this habitat in their various life stages, as well as some NAVSTA Everett infrastructure.

On the marine shoreline, these anticipated conditions bring to light the following areas of concern: 1) Function of outfalls for stormwater discharge; 2) Continued use and stability of piers, docks, wharf and seawalls, and; 3) Health and preservation of ESA listed species.

Discussion:

1. Function of Outfalls for Stormwater Discharge

Changes in sea level alone and in conjunction with changes in timing and severity of storm events and change in the timing and flow of water in the Snohomish River have the potential to impact the capability of NAVSTA Everett to affect discharge of stormwater into the Snohomish River and Port Gardner Bay.

The numerous stormwater discharge outfalls are equipped with tide gates to prevent backflow of river and seawater into NAVSTA Everett stormwater systems. However, considering the magnitude of the sea level change expected and the increased frequency and severity of seasonal and high water flow events, it is reasonable to expect that that discharge frequency and duration will decrease to some degree.

As a result of this, the ability to convey stormwater off of NAVSTA Everett may be impeded. With the impoundment of water and retention of higher volumes of water in the stormwater management system will increase the likelihood of system bypass. The threat lies in the fact that in a bypass condition the stormwater does not undergo processing in the oil-water separators, and this raises the possibility of an accidental discharge of contaminants into the nearshore marine waters utilized by ESA listed species and other marine organisms.

Finally, if the stormwater management system is not able to function as designed it may not be possible to convey stormwater from NAVSTA adequately, causing backups onto internal roadways and walkways, constituting a safety and health concern.

2. Continued Use and Stability of Piers, Docks, Wharf and Seawalls

Changes in sea level alone and in conjunction with changes in timing and severity of storm events and change in the timing and flow of water in the Snohomish River, and the effects of these phenomena on sediment dynamics and wetland migration have the potential to impact the continued use and stability of Piers, Docks, Wharfs and Seawalls at NAVSTA Everett to some degree.

Piers and docks on NAVSTA Everett were designed based upon criteria (elevations) established more than 20 years ago. These structures are expected to perform and withstand forces and effects reasonably anticipated at that time. However, in light of the anticipated increase in MSL and the increased frequency and intensity of storm events, these legacy design criteria may not be adequate. In particular, as rainfall increases peak seasonal flows in the Snohomish River and its tributaries, additional severe flood events are anticipated. While the elevation and pile configurations of the Piers and Docks, and the crest elevations of the wharfs and seawalls may be sufficient to accommodate the volume of water and increased water elevation, additional debris is likely to be transported by the floodwaters.

It is therefore reasonable to conclude it may be necessary to monitor these events and determine if it is necessary to design and install additional debris deflectors to protect the pile supported structures on NAVSTA Everett. Additionally, large woody debris swept downstream by floodwaters serves as a possible failure mechanism for rip-rap armored shoreline structures, as battering tends to loosen and eventually dislodge rocks, thus compromising the integrity of the protective structure. It may be necessary to increase inspection and maintenance for these structures. Further, as time passes it may prove better to evaluate new performance criteria in order to determine if it is necessary to increase the rock sizing on rip-rap shorelines, determine if more deliberate fitment of the rock is warranted, or if different solutions are more suitable for shoreline protection from battering, wave erosion and high water conditions.

3. Health & Preservation of ESA Listed Species & Critical Habitat

Changes in sea level, changes in timing and severity of storm events and change in the timing and flow of water in the Snohomish River have the potential to directly impact listed species and their critical habitat on NAVSTA Everett.

Changes in air and water temperatures in upstream locations, in conjunction with changes in the timing, duration and severity of flows from streams and water bodies higher in the Snohomish River watershed, WRIA 7, have the potential to impact fish directly, as well as their necessary critical habitat for spawning and rearing. Anticipated changes, in conjunction with existing stressors, are expected to have some effect upon listed species in terms of fish mortality rates, rates of return and the timing for movements associated with life stage development. Further, second order impacts from other expected climate change phenomenon will act upon the terrestrial ecosystem and affect water quality indirectly, for example increased rain and loss of groundcover resulting in mass wasting events or changes in forest composition and health through changes in the plant communities or forest fires that may impact the quality of important riparian corridors.

When faced with these anticipated phenomena, it seems reasonable to deliberately downgrade the confidence the scientific community may have for in its ability to predict both the status and behavior of these complex aquatic resources. Moving forward, it seems more reasonable to assume a flexible position and be prepared to adapt to the findings of local surveys, regional studies and management plans as well as the research from various competent agencies and organizations.

Ecosystem Management acknowledges there are aspects of the dynamic natural systems that remain little understood or unknown, and therefore must be managed in an adaptive manner using Best Available Science (BAS). The phenomena described above represents the BAS relative to climate change in the Pacific Northwest, however it is not instructive and serves best as the basis for a new norm, or basis for change.

The Sikes Act, as codified in OPNAV M-5090.1, requires that DON consult with DOI/USFWS, NMFS, and the State of Washington in the interest of preserving the natural resource and in order to ensure there is no net loss in the ability of the Navy to accomplish its vital mission. As these agencies manage the resources within their jurisdiction NAVSTA Everett must be positioned to be adaptive to both the requirements of these regulatory agencies and to the ESA listed resources. Accordingly, adaptability of the INRMP through the use of the INRMP Update and INRMP Increment process gains great significance. Regular planning level surveys will be vital, planned preservation/restoration projects must be broadly applicable and consultation with the other agencies will, of necessity, be iterative and frequent.

Additionally, in order to keep costs reasonable NAVSTA Everett should reach out to the agencies and their implementing partners and consider becoming a partner in ongoing research and incorporate the findings of emerging research into resource management plans, as applicable.

In order to transition from just-in-time to proactive planning it may be necessary to invest in additional research and study to enable the use of models and programs to establish a more comprehensive understanding of the status of natural resources on the installation, as well as determine their sensitivity and vulnerability under different circumstances. Examples of these would be the Revised Universal Soil Loss Equation (RUSLE2) or the NatureServe Vista programs.

RUSLE2 is a computer model containing both empirical and process-based science to predict rill and interrill erosion by rainfall and runoff. Use of such a model would be instructive and help reach an understanding of whether there is a net loss or net gain of topsoil under different conditions. This has long term implications for terrestrial resource sustainability as well as water quality.

NatureServe Vista is a decision-support system that helps users integrate conservation with land use and resource planning of all types. It enables planners, resource managers, scientists, and conservationists to conduct conservation planning and assessments, integrate conservation values with other planning and assessment activities, such as land use, transportation, energy, natural resource, and ecosystem-based management and to evaluate, create, implement, and monitor

land use and resource management scenarios designed to achieve conservation goals within existing economic, social, and political contexts.

4.25 Use of Geographical Information Systems

Discussions have begun with Regional Shore Installations Management System GeoReadiness Exchange (GRX) representatives in order to focus current data mining goals and priorities with the intent to progressively build up a meta-data library sufficient to enable analysis on a landscape scale.

Planning level surveys proposed under this INRMP will be scoped to require the submittal of data in an appropriate format and to a sufficient standard to enable spatial queries and use of the data within a greater GIS suite. To this end, GRX will be consulted during the project design phase in order to ensure sufficient fidelity

5 IMPLEMENTATION

This chapter of the INRMP addresses how the plan will be carried out as a means of supporting the military mission through effective land stewardship. The INRMP reflects a strategy that addresses legal, regulatory, DoD, DON, and CNO directive or policy requirements regarding funding and manpower. “Implementation” of the INRMP anticipates the execution of all Environmental Readiness Level (ERL) 4 projects and activities in accordance with specific timeframes identified in the INRMP. However, all actions contemplated in this INRMP are subject to the availability of funds properly authorized and appropriated under Federal law. Nothing in this INRMP is intended to be nor must be construed to be a violation of the Anti-Deficiency Act (31 USC. 1341 et seq.)

5.1 What “Implemented” Means

The INRMP is considered implemented once the installation:

- Actively requests, receives, and uses funds for all Level 4 projects and activities (definition described below in Section 5.2.1.2).
- Ensures that sufficient numbers of professionally trained natural resources management staff are available to perform the tasks required by the INRMP.
- Coordinates annually with all cooperating agencies.
- Documents specific INRMP action accomplishments undertaken each year.

5.2 Project Drivers

5.2.1 INRMP Programming Hierarchy

The Navy programming hierarchy is based on DoD funding level classifications; therefore, the DoD programming hierarchy is described first, followed by the Navy programming hierarchy.

5.2.1.1 Priority Setting and Funding Classification

Project priority within this INRMP is initially determined by funding classification as defined in Department of Defense Instruction 4715.03, *Natural Resources Conservation Program* (DoD 2011). This instruction identifies recurring and non-recurring requirements:

5.5.1. Recurring and Non-Recurring Conservation Management Requirements (DoD 4715.03, 2011)

Recurring Requirements:

- a. Administrative, personnel, and other costs associated with managing the DoD Natural Resources Conservation Program that are necessary to meet applicable compliance requirements

in Federal and state laws, regulations, Executive Orders (Eos), and DoD policies, or in direct support of the military mission.

b. DoD components shall give priority to recurring natural resources conservation management requirements associated with the operation of facilities, installations, and deployed weapons systems. These activities include day-to-day costs of sustaining an effective natural resources management program, as well as annual requirements, including manpower, training, supplies, permits, fees, testing and monitoring, sampling and analysis, reporting and recordkeeping, maintenance of natural resources conservation equipment, and compliance self-assessments.

Non-Recurring Requirements:

Current Compliance - Includes installation projects and activities to support:

- a. Installations currently out of compliance (e.g., received an enforcement action from an authorized Federal or state agency or local authority).
- b. Signed compliance agreement or consent order.
- c. Meeting requirements with applicable Federal or state laws, regulations, standards, EOs, or DoD policies.
- d. Immediate and essential maintenance of operational integrity or military mission sustainment.
- e. Projects or activities that will be out of compliance if not implemented in the current program year. Those activities include:
 - i. Environmental analyses for natural resources conservation projects, and monitoring and studies required to assess and mitigate potential impacts of the military mission on conservation resources.
 - ii. Planning documentation, master plans, compatible development planning, and INRMPs.
 - iii. Natural resources planning-level surveys.
 - iv. Reasonable and prudent measures included in incidental take statements of biological opinions, biological assessments, surveys, monitoring, reporting of assessment results, or habitat protection for listed, at-risk, and candidate species so that proposed or continuing actions can be modified in consultation with the USFWS or National Marine Fisheries Service (NMFS) Fisheries Service.
 - v. Mitigation to meet existing regulatory permit conditions or written agreements.
 - vi. Nonpoint source pollution or watershed management studies or actions needed to meet compliance dates cited in approved state coastal nonpoint source pollution control plans, as required to meet consistency determinations consistent with Coastal Zone Management.
 - vii. Wetlands delineation critical for the prevention of adverse impacts to wetlands, so that continuing actions can be modified to ensure mission continuity.
 - viii. Compliance with missed deadlines established in DoD-executed agreements.

Maintenance Requirements - Includes those projects and activities needed to meet an established deadline beyond the current program year and maintain compliance. Examples include:

- a. Compliance with future deadlines.

- b. Conservation, GIS mapping, and data management to comply with Federal, state, and local regulations, EOs, and DoD policy.
- c. Efforts undertaken in accordance with non-deadline specific compliance requirements of leadership initiatives.
- d. Wetlands enhancement to minimize wetlands loss and enhance existing degraded wetlands.
- e. Conservation recommendations in biological opinions issued pursuant to the ESA.

Enhancement Actions - Beyond Compliance. Includes those projects and activities that enhance conservation resources or the integrity of the installation mission, or are needed to address overall environmental goals and objectives, but are not specifically required by law, regulation, or EO, and are not of an immediate nature. Examples include:

- a. Community outreach activities, such as International Migratory Bird Day, Earth Day, National Public Lands Day, Pollinator Week, and Arbor Day activities.
- b. Educational and public awareness projects, such as interpretive displays, oral histories, Watchable Wildlife areas, nature trails, wildlife checklists, and conservation teaching materials.
- c. Restoration or enhancement of natural resources when no specific compliance requirement dictates a course or timing of action.
- d. Management and execution of volunteer and partnership programs.

5.2.1.2 Environmental Program Priorities

In accordance with the OPNAV M-5090.1 CH 2, the Environmental Program Priorities are subdivided into four separate Environmental Readiness Levels (ERL):

(1) ERL 4:

- a. Supports all actions specifically required by law, regulation or Executive Order (DoD Class 1 and 2 requirements) just in time.
- b. Supports all DoD Class 0 requirements as they relate to a specific statute such as hazardous waste disposal, permits, fees, monitoring, sampling and analysis, reporting and record keeping.
- c. Supports recurring administrative, personnel and other costs associated with managing environmental programs that are necessary to meet applicable compliance requirements (DoD Class 0).
- d. Supports DoD policy requirement to comply with overseas Final Governing Standards (FGS) and Overseas Environmental Baseline Guidance Document (OEBGD).
- e. Supports minimum feasible Navy executive agent responsibilities, participation in Office of the Secretary of Defense (OSD) sponsored inter-department and inter-agency efforts, and OSD mandated regional coordination efforts.

(2) ERL 3:

- a. Supports all capabilities provided by ERL4.

- b. Supports existing level of Navy executive agent responsibilities, participation in OSD sponsored inter-department and inter-agency efforts, and OSD mandated regional coordination efforts.
 - c. Supports proactive involvement in the legislative and regulatory process to identify and mitigate requirements that will impose excessive costs or restrictions on operations and training.
 - d. Supports proactive initiatives critical to the protection of Navy operational readiness.
- (3) ERL 2:
- a. Supports all capabilities provided under ERL3.
 - b. Supports enhanced proactive initiatives critical to the protection of Navy operational readiness.
 - c. Supports all Navy and DoD policy requirements.
 - d. Supports investments in pollution reduction, compliance enhancement, energy conservation and cost reduction.
- (4) ERL 1:
- a. Supports all capabilities provided under ERL2.
 - b. Supports proactive actions required to ensure compliance with pending/strong anticipated laws and regulations in a timely manner and/or to prevent adverse impact to Navy mission.
 - c. Supports investments that demonstrate Navy environmental leadership and proactive environmental stewardship.

5.3 Funding

Once validated, INRMP requirements are entered into EPR-web. Typically, funding for all ERL Level 3 and 4 projects will be programmed. Projects that are ERL 1 and 2 should seek alternate funding sources, which are listed below. Executed funding will be entered into EPR-web. There are restrictions on how different Navy funding sources for natural resources management can be used. It is important, therefore, that appropriate funding sources are used and that EPR entries clearly justify funding requests so that: (1) natural resource funds are distributed wisely and (2) funding levels are not threatened by the use of funds in ways that are inconsistent with funding program rules. The following are the primary funding sources for Navy natural resources programs:

- (1) *O&MN Environmental Funds*. The majority of natural resource projects are funded with Operations and Maintenance, Navy (O&MN) environmental funds. These appropriated funds are the primary source of resources to support must-fund, just-in-time environmental compliance (i.e., Navy Environmental Readiness (ERL) 4 projects). O&MN funds are generally not available for Navy ERL 1-3 projects. In addition to the restriction to Environmental Readiness Level 4 requirements, there are other limitations placed on the use of O&MN funds:

Only the initial procurement, construction, and modification of a facility or project are considered valid environmental funding requirements. The subsequent operation, modification due to mission requirements, maintenance, repair, and eventual replacement is considered a Real Property Maintenance (RPM) funding requirement. For example, the cost of initially installing a best management practice (BMP) can be funded through O&MN, but future maintenance or repair of that BMP must be paid by RPM funds.

When natural resource requirements are tied to a specific construction project or other action, funds for the natural resource requirements should be included in the overall project costs. For example, if a permit for filling wetlands is required as part of a military construction (MILCON) project, the costs of obtaining the permit and implementing required mitigation should be paid by MILCON funds as part of the overall construction project costs.

(2) *The Legacy Resource Management Program (Legacy Program)*: is an initiative to fund military conservation projects. Although the Legacy Program was originally funded from 1991 to 1996 only, funds for new projects have continued to be available through this program. The program assists DoD in protecting and enhancing resources while supporting military readiness. A Legacy project may involve regional ecosystem management initiatives, habitat preservation efforts, archaeological investigations, invasive species control, Native American consultations, and/or monitoring and predicting migratory patterns of birds and animals. Three principles guide the Legacy program: stewardship, leadership, and partnership. *Stewardship* initiatives assist DoD in safeguarding its irreplaceable resources for future generations. By embracing a *leadership* role as part of the program, the Department serves as a model for respectful use of natural and cultural resources. Through *partnerships*, the program strives to access the knowledge and talents of individuals outside of DoD. Legacy Program funds are subject to the following caveats:

- The availability of Legacy funds is generally uncertain early in the year.
- Pre-proposals for Legacy projects are due in March and submitted using the Legacy Tracker Website: <https://www.dodlegacy.org> .
- Project proposals are reviewed by the Navy chain of command before being submitted to the DoD Legacy Resources Management Office for final project selection.
- The Legacy Website provides further guidance on the proposal process and types of projects requested.

(3) *Forestry Revenues*. Revenues from the sale of forest products on Navy lands are a source of funding for forestry and potentially other natural resources management programs. Forestry revenues provide funds for two different funding programs:

- a. Annual Navy Forestry Funds. These funds support commercial forestry operations at installations. Borrowed from NAVFACENCOM Headquarters (NAVFAC HQ) O&MN funds at the beginning of each fiscal year, the funds are reimbursed when the forestry revenues are received. The NAVFAC field offices solicit funding needs each year from installations with commercial forestry programs in place. Forestry operations must be commercially viable to be eligible for these funds. The NAVFAC field offices can work with installations to make a work plan, known as an annual increment, for the commercial forestry program and ensure that all funding needs are included. Funding recommendations are forwarded from the field offices to NAVFAC HQ for final approval and disbursement of funds, based on revenue from timber sales.
- b. DoD Forestry Reserve Account. Forestry revenues are first used to reimburse commercial forestry expenses. Then, as directed by DoD Financial Management Regulation 7000.14-R Volume 11A, 40 percent of installation net proceeds for the fiscal year are distributed to the state that contains the installation. The funding is used to support road systems and schools. Once the commercial forestry expenses are reimbursed and a portion of the proceeds are distributed among the state counties, any remaining amount is transferred to a holding account known as the DoD Forestry Reserve Account. Reserve account funds can be used for the following:
 - a) Improvement of forest lands;
 - b) Unanticipated contingencies in the administration of forest lands and the production of forest products for which other funding sources are not available within an acceptable timeframe (e.g., actions necessary as a result of a storm or wildfire);
 - c) Natural resources management that implements approved plans and agreements. To be eligible for funding, these project must (1) be specifically included in an approved management plan, such as an INRMP, and (2) provide for at least one of the following purposes: fish and wildlife habitat improvements or modifications; range rehabilitation where necessary for support of wildlife; control of off-road vehicle traffic; specific habitat improvement projects and related activities; and adequate protection for species of fish, wildlife, and plants considered threatened or endangered;
 - d) Projects included in a) and b) are generally given preference in the allocation of these funds. The amount available through this account varies from year to year, but the amount remaining for natural resources management as described in c) is relatively small. The NAVFAC field offices usually solicit project

proposals for the Forestry Reserve Account once there is an indication of the level of funding available (usually January or February). Installations need not harvest timber to be eligible for Reserve Account funds. Proposals are submitted to NAVFAC HQ via the field office where they are reviewed and forwarded to the DUSD (I&E) for final selection. The installation should contact a NAVFAC field office or other references for more information on funding availability and timelines. It is important to note that these funds may not be used for “must fund” projects.

- (4) *Agricultural Outleasing*. Money collected through the leasing of Navy-owned property for agricultural use is directed back into the natural resources program and reallocated throughout the Navy by NAVFAC HQ. These funds are available to natural resource managers primarily for agricultural outlease improvements, and potentially for natural resources management and stewardship projects once the primary objective is met. Agricultural and grazing leases revenues from agricultural outleasing are available for the following:
- a. Administrative expenses of agricultural lease (salaries of professional and technical support of the grazing and cropland programs in direct support of agricultural outlease which meet INRMP goals and objectives, training, scientific meetings, parts and supplies);
 - b. Initiation, improvement, and perpetuation of agricultural outleases (increased productivity, reduced soil erosion, and fencing);
 - c. Implementation of INRMP Stewardship Projects (compliance measures should be budgeted from O&MN Conservation Program Objective Memorandum process).

The NAVFAC field office sends a request for project proposals for agricultural outleasing funds to the regions and installations in November of each year. Proposals are submitted to the field office and reviewed. Recommended projects are forwarded to NAVFAC HQ for final review and project selection. While the available funding varies from year to year, this is one of the more consistent funding sources for implementing INRMP projects that are not Level 1 requirements. The installation should contact the field office for additional information on funding availability and timeline.

- (5) *Fish and Wildlife Fees*. User fees collected for the privilege of hunting or fishing are collected, deposited and used in accordance with the Sikes Act and the DoD financial management regulations. The Sikes Act specifies that user fees collected for hunting and fishing shall be used only on the installation where collected. Further, collections will be used exclusively for fish and wildlife conservation and management on the installation where collected.

The same fee schedule will be used for all participants with the exception of senior citizens, children and the handicapped. Membership in an installation conservation organization will not give members priority in participating in hunting, fishing and trapping programs. Efforts should be made to utilize the services of the installations MWR function to collect and administer these funds locally in accordance with Sikes Act authorization.

- (6) *Recycling Funds.* An installation with a Qualified Recycling Program (QRP) may use proceeds for some types of natural resource projects. Proceeds must first be used to cover QRP costs. Up to 50 percent of net proceeds may then be used for pollution abatement, pollution prevention, composting, alternative fueled vehicle infrastructure support, vehicle conversion, energy conversion, or occupational safety and health projects, with first consideration given to projects included in the installation's pollution-prevention plans. Remaining funds may be transferred to the non-appropriated MWR account for approved programs, or retained to cover anticipated future program costs. Natural resource projects can be funded as pollution prevention/abatement (e.g., wetlands or riparian forest restoration) or MWR projects (e.g., trail construction and maintenance).
- (7) *Strategic Environmental Research and Development Program (SERDP) Funds:* SERDP is DoD's corporate environmental research and development (R&D) program, planned and executing in full partnership with the Department of Energy (DOE) and Environmental Protection Agency (EPA), with participation by numerous other Federal and non-Federal organizations. SERDP funds for environmental and conservation are allocated through a competitive process. Within its broad areas of interest the SERDP focuses on Cleanup, Compliance, Conservation, and Pollution Preventions technologies. The purpose of the conservation technology program is to use research and development to provide improved inventory and monitoring capabilities; develop more effective impact and risk assessment techniques; and provide improved mitigation and rehabilitation capabilities. Recently, the program solicited Statements of Need for conservation technology proposals to research indicators of stress on threatened and endangered species and to develop techniques to inventory and monitor threatened and endangered species in accessible areas.
- (8) *Non-DoD Funds.* Many grant programs are available for natural resources management projects, such as watershed management and restoration, habitat restoration, and wetland and riparian area restoration. When Federally funded, these programs typically require non-Federal matching funds. However, installations may partner with other groups to propose eligible projects.

Funds generated from the Forestry Revenues, Agricultural Outleasing, and Fish and Wildlife Fees are not available as Naval Station Everett does not have resources available to support these efforts (i.e., large timber stands, acreage for farming, hunting and fishing opportunities).

INRMPs should include valid ERL 1 and 2 projects and actions that would enhance an installation's natural resources. Nontraditional sources of funding for natural resources programs

include non-appropriated reimbursable funds (i.e., agricultural out-leasing, forestry, hunting and fishing fees), and appropriated reimbursable funds (e.g., DoD Legacy Program, U.S. Department of Agriculture (USDA) Pest Management Program). These accounts are sources of funds for ERL 3 projects. Installations, however, should not depend on reimbursable programs to fund their natural resources management programs.

5.4 Environmental Planning and Mission Sustainability

5.4.1 Achieving No Net Loss

Past efforts by the installation and Region have successfully achieved No Net Loss through effective coordination with the agencies in order to obtain key National Defense Exemptions under ESA. By emplacing plans that protect species and habitat at NAVSTA Everett and the Smokey Point FSC habitat designations have not impacted either station.

5.4.2 Use of Cooperative Agreements

Under the Sikes Act, the Navy can enter into Cooperative Agreements to accomplish natural resource management projects. Further, per a 20 June, 2014 memo from DOD to the Assistant Secretary of the Navy (Energy, Installations and Environment), priority is to be given to federal and state agencies responsible for conservation or management of fish and wildlife when contracting for projects identified in INRMPs.

Cooperative agreements have been used successfully to conduct INRMP projects in other locations within NSE's Area of Responsibility, for example conducting marbled murrelet and American pika surveys at Naval Radio Station (T) Jim Creek. Cooperative agreements will be considered as a mechanism to conduct specific surveys or natural resource projects, should they be identified at Pacific Beach to further the implementation of this INRMP.

Other Agreements

On a larger scale, the following list contains partnerships and collaborative agreements that DoD has entered to assist with natural resources management.

- NAVSTA Everett and the Smokey Point FSC, as part of DoD, benefit from the January 2006 Memorandum of Understanding (MOU) between DoD, USFWS and the International Association of Fish and Wildlife Agencies for a Cooperative Integrated Natural Resources Management Program on Military Installations.
- NAVSTA Everett and the Smokey Point FSC, as part of DoD, benefit from the July 2006 MOU between the USFWS and DoD to Promote the Conservation of Migratory Birds.

- NAVSTA Everett and the Smokey Point FSC, as part of DoD, benefit from the November 2006 MOU between DoD and USDA NRCS. Both agencies signed an MOU agreeing to coordinate activities to preserve land and improve water quality on lands surrounding government-owned military bases.
- NAVSTA Everett and the Smokey Point FSC, as part of DoD, benefit from the 1996 MOU between the USEPA and DoD for coordinating of Integrated Pest Management activities.
- NAVSTA Everett and the Smokey Point FSC, as part of DoD, benefit from the 1996 cooperative agreement between DoD and The Nature Conservancy for conducting natural resources inventories at installations.

5.5 National Environmental Policy Act Compliance

This INRMP is considered a major Federal action subject to analysis under NEPA. A Environmental Assessment (EA) will be conducted to identify and evaluate the potential effects to the human environment of adopting and implementing this INRMP (Annex J). Guidance under which the EA will be developed includes: the National Environmental Policy Act (NEPA) of 1969 (42 USC. §4321-4370h), as implemented by the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508); Navy regulations for implementing the NEPA (32 CFR Part 775); and Chief of Naval Operations Instruction 5090.1D, Environmental Readiness Program.

Future updates of this INRMP may not necessarily require a new EA and may instead rely on the analysis and findings of the earlier EA, if the updated INRMP is within the scope of that analysis.

As specific project designs are developed, project- and site-specific NEPA analysis or regulatory consultations may be required. Individual projects that are proposed in the future to implement the INRMP, but unforeseen at this time, will be assessed to determine the type of NEPA analysis needed. Also, actions proposed by the Navy under this INRMP may be minor in nature and may have been adequately addressed under previous NEPA analyses.

6 APPENDICES

Appendix A	List of Projects
Appendix B	List of Required Mitigations
Appendix C	List of Washington Amphibians and Reptiles
Appendix D	Audubon Christmas Day Count (CBC) Species Table
Appendix E	List of Acronyms
Appendix F	Terms and Definitions
Appendix G	Natural Resources Manager Designation Letter

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Appendix A: List of Projects

EPR Number	INRMP Section	Funding Source	ERL	Legal Drivers	Implementation Frequency	Year	Natural Resources Metrics Builder	Project Goals	Project Cost Estimate (\$)
68967NR004	4.9	O&MN	4	ESA EO13112 MSFCM	Bi-annual	2016 2018 2020	1. Ecosystem integrity 2. Listed Species & Critical Habitat	Control invasive, non-native plants and animals	30,000 51,970 54,070
<p>CHS EO 13112 NW. Survey, monitor and control terrestrial and aquatic invasive non-native plants and animals. If significant populations of non-native plant species are found, pursue their removal and control. Primary efforts at control should consist of manual or mechanical methods. Replacement with native plants should be pursued.</p>									
68967A0068	1.9	O&MN	4	ESA MMPA Sikes Act	Annual	2016 2017 2018 2019 2020	4. Sikes Act Cooperation 6. INRMP Implementation 7. INRMP Support of Installation Mission	Maintain an updated INRMP in compliance with the Sikes Act	10,410 10,608 10,809 11,025 11,246
<p>CHE NW. Naval Station Everett INRMP. Continued annual review and update of the INRMP including review for operation and effect.</p>									
68967NR005	2.8.2	O&MN	4	MMPA MBTA 703 ESA	Periodic	2016 2020	4. Sikes Act Cooperation	Prevent inadvertent harassment of marine mammals and protect migratory birds via education	14,481 15,659

EPR Number	INRMP Section	Funding Source	ERL	Legal Drivers	Implementation Frequency	Year	Natural Resources Metrics Builder	Project Goals	Project Cost Estimate (\$)
<p>MMPA NW. Produce and maintain interpretive signs at Naval Station Everett and FSC Smokey Point. Content at Everett to emphasize marine mammals, endangered fish, and their protection. Content at the Smokey Point FSC to emphasize migratory birds and project includes construction and placement of songbird nest boxes.</p>									
68742MMS01	2.8.2	O&MN	4	ESA MMPA Sikes Act	Annual	2016 2017 2018 2019 2020	1. Ecosystem Integrity 7. INRMP support of installation mission	Support in-water mission activities by collecting data on marine mammals	63,616 64,889 66,187
<p>5 S NRNW. Marine mammal density surveys. Conduct marine mammal density surveys in inland waters of Puget Sound near Naval Station Everett. This is part of a larger, Region-wide effort. Costs reflect total, regional cost.</p>									
68967NR019	2.8.2, 4.5.4	O&MN	4	Sikes Act DoDInst 4715.03	One time	2016	2. Listed Species & Critical Habitat 6. INRMP Implementation	Determine presence of amphibians & reptiles, and habitat	13,275
<p>NAVSTA Everett & Smokey Point FSC. Amphibian & reptile surveys. Evaluate Naval Station Everett and Smokey Point FSC for the presence of amphibians, reptiles, and suitable habitat. This will provide baseline information for management.</p>									
68742CN002	4.1, 4.2	O&MN	4	ESA MSFCM Sikes Act	Annual	2016 2017 2018 2019 2020	1. Ecosystem Integrity 2. Listed Species & Critical Habitat 4. Sikes Act Cooperation	Meet commitment re critical habitat exemption; Maintain information on nearshore use by ESA listed fishes and others	145,000 200,000 204,000 208,080 212,242

EPR Number	INRMP Section	Funding Source	ERL	Legal Drivers	Implementation Frequency	Year	Natural Resources Metrics Builder	Project Goals	Project Cost Estimate (\$)
<p>1 S NRNW. Threatened and endangered fish and forage fish surveys. Continue Region-wide commitment to survey for presence of ESA-listed fish and forage fish at Region installation shorelines. Project is a requirement to maintain exempt status for critical habitat. Costs reflect total, regional cost.</p>									
68742CN001	4.3.2	O&MN	4	ESA MBTA Sikes Act	Periodic	2016 2017 2019 2021	2. Listed Species & Critical Habitat	Gather winter density data useful to ESA consultations and filling data gaps	150,000 180,000 187,272 194,838
<p>1CR NRNW. Marbled murrelet density surveys. Continue Region-wide commitment to collect winter density data to contribute to at-sea winter population estimates and population trends. Costs reflect total, regional cost.</p>									
68742NWTJ1	2.6	CN	4	Sikes Act DoDInst 4715.03 OPNAV	Periodic	2018 2019 2020 2021 2022	1. Ecosystem Integrity	Delineate, protect enhance wetland vegetation at Smokey Pt.	50,053 51,054 52,075 53,117 54,179
<p>SIKES NRNW Establishing, sustaining and improving vegetated habitats. Region-wide effort to address multiple vegetation needs. Costs reflect total, regional cost.</p>									
NA	3.4.1	CN	2	NA	One-time	TBD	1. Ecosystem integrity	Maintain integrity and function of shorelines and wetlands	In-house labor
<p>Criteria-based siting. Develop or adopt by reference, siting criteria for shoreline and wetland buffer areas. This would be done in-house, not requiring project-specific funding.</p>									

EPR Number	INRMP Section	Funding Source	ERL	Legal Drivers	Implementation Frequency	Year	Natural Resources Metrics Builder	Project Goals	Project Cost Estimate (\$)
NA	2.8.3	CN	2	NA	One-time	TBD	1. Ecosystem integrity	Maintain buffer condition	In-house labor
<p>Cooperative/Joint Projects. Contact US Army Reserves facility adjacent to Smokey Point FSC and discuss possible cooperative efforts to improve buffer areas of Hayho Creek.</p>									
NA	4.23	O&MN	3	NA	Annual	2016 2017 2018 2019 2020	1. Ecosystem integrity 2. Listed Species & Critical Habitat	Contribute to abundance and population trend data for migratory and other birds	In-house labor
<p>Annual Bird Inventories. Participate in the Audubon Society's Christmas Bird Count. Conduct counts on Naval Station Everett property. This activity could be done by Navy volunteers or retired personnel.</p>									

Appendix B: List of Required Mitigations

Beak Consultants, Inc, 1994. “Spruance Boulevard Expansion at Naval Station Everett Epibenthic Habitat Mitigation Plan”, Kirkland WA

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**SPRUANCE BOULEVARD EXPANSION AT NAVAL STATION EVERETT EPIBENTHIC
HABITAT MITIGATION PLAN**

prepared for:

Project Development Along the East Waterway
Naval Station Everett
Everett, Washington

Contact Person:

Don Morris
Engineering Field Activity, Northwest
Silverdale, Washington

prepared by:

Beak Consultants, Incorporated
Kirkland, Washington

June 22, 1994
Beak Project Number 21931.200

SPRUANCE BOULEVARD EXPANSION AT NAVAL STATION EVERETT EPIBENTHIC HABITAT MITIGATION PLAN

1.0 INTRODUCTION

This report is the final epibenthic juvenile salmonid prey organism habitat mitigation plan for the Spruance Boulevard expansion project at Naval Station Everett. It summarizes, and serves as an addendum to, both the *Breakwater Pier Construction at Naval Station Everett Conceptual Epibenthic Habitat Mitigation Plan* dated 3 December 1993 (Beak, 1993), and the *Spruance Boulevard Expansion at Naval Station Everett Conceptual Epibenthic Habitat Mitigation Plan* dated 7 February 1994 (Beak, 1994), both written by Beak Consultants Incorporated. The environmental goals / performance standards, monitoring program, contingency plan, and engineering and construction sections of these plans remain as stated in the original plans.

Both mitigation plans are discussed in and are appended to the *Environmental Assessment for Project Development Along the East Waterway; Naval Station Everett, Everett, Washington*, dated May 1994 written by EDAW Inc (EDAW, 1994). This letter also incorporates relevant portions of the 10 June and 14 June 1994 memos to Brian Williams of the Washington Department of Fish and Wildlife (WDFW) from Jerry Erickson of Beak Consultants.

Significant changes from the previous discussions of habitat mitigation in the above documents are 1) the 'fish enhancement area' shown in Figure 4-5 (EDAW, 1994) will not be built, and 2) the area of the new riprap slope in Table 4-6 (EDAW, 1994) and in Beak (1994) was based on earlier drawings and is incorrect, 3) the substrate proposed for the intertidal bench shown in Figure 4-5 (EDAW, 1994) has been modified, and 4) additional area protected by dolphin placement in the South Cove, as discussed in Beak (1993) has been calculated as discussed below.

2.0 PROJECT IMPACTS TO EPIBENTHIC HABITAT

Table 1 presents the areas of existing habitat which will be impacted by riprap fill at the northern end of the Spruance Boulevard expansion project, by tidal elevation zones relevant to epibenthic juvenile salmonid prey organisms. The most abundant portion of this habitat is centered on 0.0 feet Mean Lower Low Water (MLLW) (Simenstad et al., 1991), and extends upward to +11.5 feet MLLW, which is the Ordinary High Water (OHW) line in the Port Gardner area, and downward to -10.0 feet MLLW according to the WDFW. The area of existing habitat which will be converted to upland has been calculated as the plan view area between the existing OHW line and the new OHW line on the riprap slope, i.e. as the flat surface area of the water if it is at the OHW line. The total area converted to upland will be approximately 7,413 square feet. The existing area which will be converted to the new in-water riprap slope and intertidal bench is calculated as surface area, i.e. taking the slope gradient into account. This area will be a total of approximately 12,759 square feet.

TABLE 1. Spruance Boulevard Riprap Fill Project Impacts to Existing Area and New Slope Area

Tidal Elevation Zone (feet MLLW)	Existing Area Which Will be Converted to Upland (sq. feet)	Existing Area Which Will be Converted to a New In-Water Slope (sq. feet)	New In-Water Riprap Slope and Bench (sq. feet)
+11.5 (OHW) to +8.0	2,202	711	2,990
+8.0 to +4.0	2,530	1,473	3,425
+4.0 to 0.0	1,521	2,370	2,568
0.0 bench			2,236
0.0 to -4.0	740	2,528	2,455
-4.0 to -8.0	420	3,358	2,261
-8.0 to -10.0		2,319	927
Total	7,413	12,759	16,862

The table also presents the surface area of the new riprap slope, calculated from plans drafted by HNTB (17 May 1994, with later revisions). Selected sheets from these drawings are enclosed (Figures 1,2 and 3). The new riprap slope incorporates an 8 foot wide intertidal bench at 0.0 feet MLLW for habitat enhancement purposes. The total area of the new slope and bench will be approximately 16,862 square feet, for a net gain of $16,862 - 12,759 = 4,103$ square feet in the -10.0 feet to +11.5 feet MLLW zone, 2,236 square feet of which is on the 0.0 feet MLLW intertidal bench, as discussed in the 10 June 1994 memo to Brian Williams of WDFW. The proposed substrate for the bench is discussed below. In addition to the impacts at the riprap fill site, existing habitat area will also be impacted by shading from bridging the southern portion of the Spruance Boulevard expansion project. This area will be approximately 3,950 square feet.

3.0 MITIGATION REQUIREMENTS

As stated in the 14 July 1993 letter to Don Morris (EFA Northwest) from Tim Flint (WDFW) and in Beak (1994), the loss of the 7,413 square feet converted to upland would have to be mitigated by new habitat created by excavation at a 1:1 ratio. As discussed in a phone conversation between Jerry Erickson (Beak) and Brian Williams (WDFW) on 31 January 1994, the 12,759 square feet of existing area converted to new in-water slope would have to be mitigated by habitat enhancement at a 2:1 ratio. In addition, as discussed in Beak (1994), half the 3,950 square feet shaded by the bridged portion of Spruance Boulevard, or 1,975 square feet, would have to be mitigated by habitat enhancement at a 2:1 ratio. Thus the total habitat enhancement requirements would be approximately $12,759 + 1,975 = 14,734$; $14,734 \times 2 = 29,468$ square feet, as discussed in the 10 June 1994 memo to Brian Williams of WDFW.

4.0 MITIGATION ACTIONS

The primary habitat enhancement mitigation action which will be undertaken by the Navy, under agreements with the Port of Everett, is the installation of 7 piling and 3 piling dolphins in the South Cove, to prevent log rafts stored in the cove from grounding out at low tide (Figure 4). This concept is discussed in detail in Beak (1993).

As discussed in the 14 June 1994 memo to Brian Williams, additional area in the South Cove, which will be protected by pilings and/or dolphins landward of the -10.5 feet Mean Lower Low Water (MLLW) line, was unaccounted for in Beak (1993). This area was not included in the mitigation plan, as only the 18 August 1993 HNTB hydrographic survey was available at the time. This survey included only the inner, westernmost portion of the South Cove. The surface area calculations in Table 2 are based on the 18 August 1993 HNTB and 18 November 1993 INCA Engineers hydrographic surveys, and the 30 December 1993 U.S. Army Corps of Engineers bathymetric map of the area. The surface area calculations account for the slope gradients at the locations. As detailed in Beak (1993), log rafts in the South Cove are assumed to impact the zone between -10.0 and +2.0 feet MLLW, by grounding out during low tides.

TABLE 2. South Cove Area Protected From Log Raft Grounding

Tidal Elevation Zone (feet MLLW)	Total Surface Area (sq. feet)	Total Surface Area x 0.89 (sq. feet)
+2.0 to 0.0	15,621	13,903
0.0 to -4.0	32,523	28,945
-4.0 to -8.0	32,537	28,958
-8.0 to -10.0	17,993	16,014
Total Surface Area	98,674	87,820

Thus, approximately 98,674 square feet or about 2.27 acres of habitat in the South Cove will be protected from log raft grounding waterward of -10.5 feet MLLW by the placement of pilings and dolphins. This area would then be multiplied by 0.89 to estimate the productivity gain per square area by preventing log raft grounding, using the results of the Smith (1977) study, as discussed in the 3 December 1993 Breakwater Pier mitigation plan. This results in the equivalent of approximately $98,674 \times 0.89 = 87,820$ square feet or 2.02 acres of habitat being restored to full productivity in the South Cove.

5.0 HABITAT ENHANCEMENT MITIGATION BALANCE

Table 3 accounts for all of the existing epibenthic juvenile salmonid prey habitat enhancement 'credits' available for the Spruance Boulevard Expansion and other projects at Naval Station Everett, as discussed in the 14 June 1994 memo to Brian Williams (WDFW). It then shows the allocation of these 'credits' for habitat mitigation purposes as 'debits'.

TABLE 3. Naval Station Everett Habitat Enhancement Mitigation Balance

Action	Habitat Mitigation 'Debits' (sq. feet)	Habitat Mitigation 'Credits' (sq. feet)	Running Balance (sq. feet)
South Cove Log Raft Protection		+87,820	87,820
Pier D Intertidal Area Unshaded		+1,423	89,243
Spruance Boulevard Intertidal Bench + New Slope		+4,103	93,346
Breakwater Pier Mitigation	-3,762		89,584
Spruance Blvd. Enhancement Mitigation	-29,468		60,116
Spruance Blvd. 8:1 Replacement Mitigation	-59,304		812

5.1 Habitat Enhancement 'Credits'

As discussed above, the total area of habitat enhancement 'credits' made available in the South Cove by the placement of the dolphins is approximately 87,820 square feet. The replacement of an older trestle with a smaller new trestle at Pier D at the Naval Station will yield approximately $3,782 - 936 = 2,846$; $2,846 \times 0.50 = 1,423$ square feet of additional enhancement 'credits' by removing shading from the intertidal area (6 May 1994 letter from Neil Bass to Jack Gossett). The area is multiplied by 0.50 to account for the estimated productivity depression due to shading, as estimated by WDFW. This results in approximately $87,820 + 1,423 = 89,243$ square feet of enhancement 'credits'.

The construction of an intertidal bench at 0.0 feet MLLW as part of the riprap fill placement would yield 2,236 square feet of additional habitat enhancement (discussed in the 10 June 1994 memo to Brian Williams). In addition, 1,867 square feet of new area would be produced in the -10.0 to +11.5 feet MLLW zone for a total of 4,103 square feet of habitat enhancement. This results in approximately $89,243 + 4,103 = 93,346$ square feet of enhancement 'credits'.

5.2 Habitat Enhancement 'Debits'

As discussed in the Breakwater Pier mitigation plan, 3,762 square feet would be subtracted from the total 93,346 square feet of habitat enhancement 'credits' to mitigate for impacts from the Breakwater Pier project. In addition, 29,468 square feet would be subtracted to mitigate for the impacts of bridge shading and riprap fill placement from the Spruance Boulevard project, as discussed above. This results in approximately $93,346 - 3,762 = 89,584$; $89,584 - 29,468 = 60,116$ square feet of remaining enhancement 'credits'.

To fulfill the habitat creation requirements of 7,413 square feet of new habitat, the Navy had previously proposed to create a 'pocket beach' as described in Beak (1994). Upon later consideration, the possibility of exposing contaminants at the site precluded this option. Upon discussions with Brian Williams (WDFW), the Navy proposes to utilize almost all of the remaining habitat enhancement 'credits' at an 8:1 ratio to mitigate for the loss of 7,413 square feet through conversion to upland. This results in approximately $7,413 \times 8 = 59,304$; $60,116 - 59,304 = 812$ square feet of remaining enhancement 'credits'.

6.0 INTERTIDAL BENCH SUBSTRATE

The proposed substrate for the 0.0 feet MLLW intertidal bench, constructed as part of the riprap fill at the northern portion of the Spruance Boulevard expansion project, is a mix of Washington State Department of Transportation (WSDOT) 9.03.1 (3)C Grading No. 4, Grading No. 5, and 5 to 6 inch spalls (as discussed in the 10 June 1994 memo to Brian Williams). The specifications for Grading No. 4 indicate that 80 to 100 percent of the material (by weight) would be washed gravel or crushed stone between 1 1/2 to 3/4 inches in diameter (WSDOT, 1994). Grading No. 5 contains material which would be 40 to 90 percent between 3/4 to 3/8 inches in diameter, with 10 to 40 percent smaller than 3/8 inches. The 5 to 6 inch spalls would be added to help stabilize the substrate mix. The final mix would be approximately:

67.5%	Grading No. 5
22.5%	Grading No. 4
10%	5 to 6 inch spalls

7.0 REFERENCES

- Beak Consultants. 1993. Breakwater Pier Construction at Naval Station Everett Conceptual Epibenthic Habitat Mitigation Plan. Beak Consultants, Inc. Kirkland, WA. December 3, 1993.
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- EDAW Inc. 1994. Environmental Assessment for Project Development Along the East Waterway; Naval Station Everett, Everett, Washington. EDAW, Inc. Seattle, WA. May 1994.
- Simenstad, C.A., C.D. Tanner, R.M. Thom, and L.L. Conquest. 1991. Estuarine habitat assessment protocol. September 1991. Puget Sound Estuary Program, U.S. EPA Region 10, Seattle, WA. 201 pp.
- Smith, J.E. 1977. A baseline study of invertebrates and of the environmental impacts of intertidal log rafting on the Snohomish River delta. Washington Cooperative Fishery Research Unit, College of Fisheries, University of Washington. Seattle, Washington.
- WSDOT. 1994. Standard specifications for road, bridge, and municipal construction. Washington State Department of Transportation. Olympia, WA.

Appendix C: List of Washington Amphibians and Reptiles

SOURCE: <http://www1.dnr.wa.gov/nhp/refdesk/herp/index.html>

AMPHIBIANS (CLASS AMPHIBIA)

Salamanders (Order Caudata)

Giant Salamanders (Family Dicamptodontidae)

Cope's Giant Salamander (Dicamptodon copei)

Pacific Giant Salamander (Dicamptodon tenebrosus)

Torrent Salamanders (Family Rhyacotritonidae)

Cascade Torrent Salamander (Rhyacotriton cascadae)

Columbia Torrent Salamander (Rhyacotriton kezeri)

Olympic Torrent Salamander (Rhyacotriton olympicus)

Mole Salamanders (Family Ambystomatidae)

Long-toed Salamander (Ambystoma macrodactylum)

Northwestern Salamander (Ambystoma gracile)

Tiger Salamander (Ambystoma tigrinum)

Newts (Family Salamandridae)

Rough-skinned Newt (Taricha granulosa)

Lungless Salamanders (Family Plethodontidae)

Dunn's Salamander (Plethodon dunni)

Ensatina (Ensatina eschscholtzii)

Larch Mountain Salamander (Plethodon larselli)

Van Dyke's Salamander (Plethodon vandykei)

Western Red-backed Salamander (Plethodon vehiculum)

FROGS (ORDER ANURA)

Spadefoot Toads (Family Pelobatidae)

Great Basin Spadefoot (Spea intermontana = Scaphiopus intermontanus)

True Toads (Family Bufonidae)

Western Toad (Bufo boreas)

Woodhouse's Toad (Bufo woodhousii)

Treefrogs (Family Hylidae)

Pacific Treefrog (Pseudacris regilla) = Pacific Treefrog (Hyla regilla) = Pacific Chorus Frog (Pseudacris regilla)

True Frogs (Family Ranidae)

Bullfrog (Rana catesbeiana)
Cascades Frog (Rana cascadae)
Columbia Spotted Frog (Rana luteiventris)
Green Frog (Rana clamitans)
Oregon Spotted Frog (Rana pretiosa)
Northern Leopard Frog (Rana pipiens)
Northern Red-legged Frog (Rana aurora)

Tailed Frogs (Family Ascaphidae)

Coastal Tailed Frog (Ascaphus truei)
Rocky Mountain Tailed Frog (Ascaphus montanus)

REPTILES (CLASS REPTILIA)

Turtles (Order Testudines)

Family Emydidae

Painted Turtle (Chrysemys picta)
Slider (Trachemys scripta)
Western Pond Turtle (Actinemys marmorata) = (Clemmys marmorata = Emys marmorata)

Lizards (Order Squamata)

Iguanids (Family Iguanidae = Phrynosomatidae)

Pygmy Short-horned Lizard (Phrynosoma douglassii)
Sagebrush Lizard (Sceloporus graciosus)
Side-blotched Lizard (Uta stansburiana)
Western Fence Lizard (Sceloporus occidentalis)

Skinks (Family Scincidae)

Western Skink (Eumeces skiltonianus)

Alligator Lizards (Family Anguidae)

Northern Alligator Lizard (Elgaria coerulea)
Southern Alligator Lizard (Elgaria multicarinata)

SNAKES (ORDER SQUAMATA)

Colubrids (Family Colubridae)

- California Mountain Kingsnake (*Lampropeltis zonata*)
- Common Garter Snake (*Thamnophis sirtalis*)
- Gopher Snake (*Pituophis catenifer*)
- Night Snake (*Hypsiglena torquata*)
- Northwestern Garter Snake (*Thamnophis ordinoides*)
- Racer (*Coluber constrictor*)
- Ringneck Snake (*Diadophis punctatus*)
- Sharptail Snake (*Contia tenuis*)
- Striped Whipsnake (*Masticophis taeniatus*)
- Western Terrestrial Garter Snake (*Thamnophis elegans*)

Vipers (Family Viperidae)

- Western Rattlesnake (*Crotalus viridis*)

Boas (Family Boidae)

- Rubber Boa (*Charina bottae*)

The preceding checklist contains the 25 native amphibian species and 21 native reptile species known in Washington. Sea turtles are occasional visitors to waters off the Washington coast but were not included in the species list. The Bullfrog and Slider are introduced species that are commonly encountered in Washington. The Green Frog is an introduced species known from three areas of Washington.

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Appendix D: Audubon Christmas Day Count (CBC) Species Table

Appendix D-1: 17 December, 2011

Species	Count
Surf Scoter	422
Barrow's Goldeneye	49
Horned Grebe	2
Double-crested Cormorant	43
Pelagic Cormorant	35
Great Blue Heron	13
Mew Gull	33
Ring-billed Gull	82
Western Gull	1
Glaucous-winged Gull	401
Glaucous-winged X W. Gull	51
American Crow	19
Song Sparrow	1
House Finch	12
Rock Sandpiper	2
TOTAL INDIVIDUALS	1166
TOTAL SPECIES FOUND	15

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Appendix E: List of Acronyms

APHIS	USDA Animal and Plant Health Inspection Service
BAS	Best Available Science
BASH	Bird/Animal Aircraft Strike Hazard
BMP	Best Management Practices
BGEPA	Bald & Golden Eagle Protection Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CH	Critical Habitat as designated by the Endangered Species Act
CO	Commanding Officer
CNIC	Chief of Naval Installations
CNO	Chief of Naval Operations
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DoD	U.S. Department of Defense
DoDI	Department of Defense Instruction
DoDM	Department of Defense Manual
DOI	U.S. Department of Interior
DON	Department of the Navy (includes U.S. Navy and U.S. Marine Corps)
DUSD	Department of the Undersecretary of Defense
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement

EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPR	Environmental Program Requirements
EPCRA	Emergency Planning and Community Right-to-Know Act
ERL	Environmental Readiness Level
ESA	Endangered Species Act
FE	Federally Endangered Species under the Endangered Species Act
FGS	Final Governing Standards
FONSI	Finding of No Significant Impact
FR	Federal Register
FSC	Family Support Complex
FT	Federally Threatened Species under the Endangered Species Act
GIS	Geographical Information System(s)
HBC	Hudson's Bay Company
HQ	Headquarters
ICRMP	Integrated Cultural Resources Plan
IMBD	International Migratory Bird Day
INRMP	Integrated Natural Resources Management Plan
MBTA	Migratory Bird Treaty Act
MILCON	Military Construction
MOU	Memorandum of Understanding
MMPA	Marine Mammal Protection Act
MWR	Morale, Welfare and Recreation
NAVFAC	Naval Facilities Engineering Command
NAVFACENGCOM	Naval Facilities Engineering Command
NEPA	National Environmental Policy Act

NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRM	Natural Resources Manager
OASN(I&E)	Office of the Assistant Secretary of the Navy (Installations & Environment)
OHWM	Ordinary High Water Mark
O&MN	Operations and Maintenance, Navy
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Chief of Naval Operation Instruction
OSD	Office of the Secretary of Defense
QRP	Qualified Recycling Program
PIF	Partners In Flight
POM	Program Objective Memorandum
RCRA	Resource Conservation and Recovery Act
R&D	Research and Development
RPM	Real Property Maintenance <i>or</i> Remedial Project Manager
RV	Recreational Vehicle
SAIA	Sikes Act Improvement Act
SERDP	Strategic Environmental Research and Development Program
SECNAV	Secretary of the Navy
SOP	Standard Operating Procedure
TES	Threatened or Endangered Species
TSCA	Toxic Substances Control Act
U&A	Usual and Accustomed (Resource Area)
US	United States of America
USACE	United States Army Corps of Engineers
USC	United States Code

USCG	United States Coast Guard
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USN	United States Navy
USFWS	United States Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WSDOE	Washington Department of Ecology

Appendix F: Terms and Definitions

Action. A program, activity, project, official policy (such as a rule or regulation), or formal plan directly carried out by a Federal agency (EO 13186.)

Agricultural outleasing. Agricultural outleasing is the use of non-excess DoD lands under a lease to an agency, organization, or person generally for growing crops or grazing domestic animals. The term "agriculture" includes activities related to producing, harvesting, processing, or marketing an agricultural, aquaculture, maricultural, or horticultural commodity, including the breeding, raising, shearing, feeding, caring for, training, and management of livestock, bees, poultry, fish, shellfish, and fur-bearing animals and wildlife, and the planting, cultivating for harvest, or processing short rotation (less than 15 years) forest products (OPNAV M-5090.1, Chapter 12).

Alien species (see also Exotic species). With respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem (EO 13112). According to USDA, an alien species is “a species introduced and occurring in locations beyond its known historical range. Synonyms for alien species include exotic, non-native, non-indigenous, and introduced species. Of the thousands of plants that have been introduced to the United States intentionally for cultivation or by accident, approximately 4,000 of these alien plant species now occur outside of cultivation 400 of these are considered problematic with respect to adverse effects on agricultural or our native biota.” (*Example:* Saltmarsh Cordgrass, native to eastern North American estuaries, has been introduced to western North American shoreline habitats and is considered an alien in these western habitats, where it adversely impacts native habitats and displaces native plant species.)

Annual increment. An INRMP addendum addressed annually, to facilitate implementation of the INRMP. Each installation must establish and maintain regular communications with the appropriate U.S. Fish and Wildlife Service (USFWS) and state fish and wildlife agency offices to address issues concerning natural resources management that are not addressed in the INRMP. At a minimum, this includes annual coordination with all cooperating offices. In addition, each installation will invite annual feedback from the appropriate USFWS and state fish and wildlife agency offices on the effectiveness of the INRMP (Per Deputy Under Secretary of Defense (I&E) Memorandum, 10 October 2002, Implementation of Sikes Act Improvement Act: Updated Guidance).

Best management practices (BMPs). BMPs are resources management decisions based on the latest professional and technical standards for the protection, enhancement, and rehabilitation of natural resources. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, treatment requirements, operating procedures, control practices, and other management practices to prevent or reduce pollution (OPNAV M-5090.1, Chapter 12).

Biodiversity. Biodiversity is the variety of life forms and the ecological processes that sustain it, including living organisms; the genetic differences among them; the communities and ecosystems in which they occur; and the ecological and evolutionary processes which keep them functioning, yet ever changing and adapting, for a given geographic area (OPNAV M-5090.1, Chapter 12).

Biological Assessment (BA). The information prepared by or under the direction of a Federal agency concerning proposed or listed species, as well as proposed or designated critical habitat that may present in the action area and the evaluation potential effects of the action on such species and habitat during consultation under the ESA (16 U. S. C. 1531 *et seq.*). The purpose of the BA is to determine whether or not the proposed action is likely to (1) adversely affect listed species or designated critical habitat; (2) jeopardize the continued existence of species proposed for listing; or (3) adversely modify proposed critical habitat (Per 50 CFR Part 02).

Bird/Animal Aircraft Strike Hazard (BASH) Prevention Program. An integrated program, based on a BASH Plan, to support the Navy's flying mission. This program promotes land management practices to minimize bird and other animal attractants, and safety procedures to recognize, control, and avoid hazardous bird concentrations. Due to the potential impact on natural resources by a command's BASH Program, natural resources managers shall provide biological expertise to assist naval air installations, air operations, and aviation safety officers in preparing and implementing BASH plans where necessary. BASH plans should be reviewed to ensure consistency and compliance with installation INRMPs and applicable natural resources laws and regulations (OPNAV M-5090.1, Chapter 12).

Candidate species. Plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA (16 U. S. C. 1531 *et seq.*), but for which development of a listing regulation is precluded by other higher-priority listing activities. The most current list of candidate species can be found at <http://endangered.fws.gov/candidates/index.html> (Section 4 of the ESA (16 U. S. C. 1531 *et seq.*)).

Coastal zone. The coastal zone is the coastal waters (including lands lying in coastal waters and submerged there under and adjacent shore lands) within the meaning of section 304(1) of reference (a) and as more fully defined and described in each coastal state's federally approved CMP. Excluded from the coastal zone is any Navy facility or real estate owned, held in trust, or used by Navy in performance of its mission (OPNAV M-5090.1, Chapter 14).

Conservation. Conservation is the planned management, use, and protection of natural resources that best reflect sustainable use and continued benefit for present and future generations, and the prevention of exploitation, destruction, waste, and neglect (OPNAV M-5090.1, Chapter 12).

Consistent to the Maximum Extent Practicable. The Navy is required by the CZMA to ensure its activities affecting any coastal use or resource to the "maximum extent practicable," which is defined in Section 930.32(a)(1) of 15 CFR Part 930.58(a) (2006), as amended, (71 Fed. Reg. 787-831, 828 (January 5, 2006)), "Coastal Zone Management Act Federal Consistency Regulations" as "fully consistent" with the enforceable policies of the CMP unless Navy compliance is prohibited by law.

The Navy action proponent will not use a general claim of lack of funding or insufficient funds or failure to include the cost of being fully consistent in the federal budget and planning process as a basis for not being consistent to the maximum extent practicable with an enforceable policy of a federally approved state CMP. The presidential exemption described in CZMA is the only circumstance in which the Navy action proponent may rely on a lack of funding as a limitation on full consistency with an enforceable policy (OPNAV M-5090.1, Chapter 14).

Consultation under Section 7 of the Endangered Species Act (16 U. S. C. 1531 *et seq.*).

- a) **Formal.** Formal consultation is a process between the USFWS or NMFS and the Federal agency that commences with the Federal agency's written request for consultation under Section 7(a) (2) of the ESA and concludes with the USFWS or NMFS issuance of a Biological Opinion under Section 7(b) (3) of the ESA (50 CFR Part 402).
- b) **Informal.** Informal consultation is an optional process that includes all discussions, correspondence, etc., between the USFWS or NMFS and the Federal agency or the designated non-Federal representative prior to formal consultation, if required (Per 50 CFR Part 402).

Control. Eradicating, suppressing, reducing, or managing invasive species populations, preventing the spread of invasive species from areas where they are present, and taking steps, such as restoration of native species and habitats, to reduce the effects of invasive species and to prevent further invasions (EO 13112, as appropriate).

Cooperative agreement. A cooperative agreement is an assistance vehicle used to acquire goods or services or stimulate an activity undertaken for the public good. Cooperative agreements assume substantial involvement between the Federal agency and recipient during performance of the activity. They may be used to accomplish work identified in the INRMP, and may be entered into with states, local governments, non-governmental organizations, and individuals to provide for the maintenance and improvement of natural resources, or to benefit natural resources research on DoD installations (OPNAV M-5090.1, Chapter 12).

Critical habitat (CH). These are the “(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of Section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species. (B) Critical habitat may be established for those species now listed as threatened or endangered species for which no critical habitat has heretofore been established as set forth in subparagraph (A) of this paragraph. (C) Except in those circumstances determined by the Secretary, critical habitat must not include the entire geographical area that can be occupied by the threatened or endangered species.” (Per ESA (16 U. S. C. 1531 *et seq.*)

DoD Partners in Flight (PIF). DoD lands represent a critical network of habitats for neotropical migratory birds, offering these birds migratory stopover areas for resting and feeding, and suitable sites for nesting and rearing their young. DoD has, therefore, developed a policy to promote and support a partnership role in the protection and conservation of resident and migratory birds by protecting vital habitats, enhancing biodiversity, and maintaining healthy and productive natural systems on our lands consistent with the military mission. See the DoD PIF Strategic Plan at http://www.dodpif.org/strategic_plan/index.htm .

Ecological risk assessment. Ecological Risk Assessment is an evaluation of whether adverse ecological effects could occur or have occurred from exposure to one or more stressors (OPNAV M-5090.1, Chapter 42).

Ecosystem. An ecosystem is a dynamic and natural complex of living organisms interacting with each other and their associated physical environment (OPNAV M-5090.1, Chapter 12).

Endangered species. Any species in danger of extinction throughout all or a significant portion of its range, other than a species of the Class Insecta determined by the Secretary of the Interior to constitute a pest whose protection under ESA provisions would present an overwhelming and overriding risk to man (ESA (16 U. S. C. 1531 *et seq.*)).

Endangered or Threatened species. A species of fauna or flora that has been listed by USFWS or NMFS for special protection and management under the ESA (16 U. S. C. 1531 *et seq.*).

Environmentally and economically beneficial landscaping. Landscaping, construction, and design practices that support EO 13148, Greening the Government through Leadership in Environmental Management.

Essential fish habitat (EFH). The water and substrates necessary to fish for spawning, feeding, or growth to maturity. (Per the Magnuson-Stevens Fishery Conservation and Management Act (16 USC 1801-1883))

Exotic species (see also Alien species). All species of plants and animals not naturally occurring, either now or historically, in any ecosystem of the United States. (EO 11987) Those species occurring outside their native ranges in a given place as a result of actions by humans. (USDA) “Exotic,” “alien,” “introduced,” “non-indigenous,” and “non-native” are all synonyms for species that humans intentionally or unintentionally introduced into an area outside of a species’ natural range.

Facility. Any building, installation, structure, land, and other property owned or operated by, or constructed or manufactured and leased to, the Federal Government, where the Federal Government is formally accountable for compliance under environmental regulation (e.g., permits, reports/records and/or planning requirements) with requirements pertaining to discharge, emission, release, spill, or management of any waste, contaminant, hazardous chemical, or pollutant. This includes a group of facilities at a single location managed as an integrated operation, as well as Government-owned contractor-operated facilities (EO 13148).

Federal agency. An executive department or agency that does not include independent establishments, as defined by 5 USC 104.

Fish and wildlife. Any member of the animal kingdom, including without limitation any mammal, fish, bird (including migratory, non-migratory, or endangered bird for which protection is also afforded by treaty or other international agreement), amphibian, reptile, mollusk, crustacean, arthropod, or other invertebrate, and any part, product, egg, or offspring, thereof, or the dead body or parts thereof (ESA (16 U. S. C. 1531 *et seq.*)).

Floodplain. The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a 1 - percent or greater chance of flooding in any given year. (EO 11988) (NOTE: This is the 100-year floodplain reference, not the 500-year floodplain.) Adverse impacts on floodplains are avoided when possible. The direct or indirect support of floodplain development must be avoided where there is a practicable alternative (DoD Instruction 4715.03).

Forest products. Forest products are those items produced from a forest such as sawtimber, veneer logs, poles, piles, posts, pulpwood, pine straw, stumpwood, bark and other mulch, cones, seeds, mistletoe, firewood, and wood chips (OPNAV M-5090.1, Chapter 12).

Geographic information system (GIS). GISs are an organized collection of computer hardware, software, and geographic data designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced data (OPNAV M-5090.1, Chapter 12).

Grounds. Grounds are all land areas not occupied by buildings, structures, pavements, and other facilities. Depending on the intensity of management, grounds may be classified as improved (as those near buildings), semi-improved, or unimproved (OPNAV M-5090.1, Chapter 12).

Habitat. Habitat is an area where a plant or animal species lives, grows, and reproduces, and the environment that satisfies its life requirements (OPNAV M-5090.1, Chapter 12).

Introduction. The intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity (EO 13112).

Invasive species. An alien (exotic, non-native, non-indigenous, or introduced) species whose introduction does or is likely to cause economic or environmental harm or harm to human health (EO 13112).

Jeopardize the continued existence (or Jeopardy). To engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR Part 402).

Land management. Land management are programs and techniques to manage lands, wetlands, and water quality, including soil conservation; erosion control and non-point source pollution; surface and subsurface waters; habitat restoration; control of noxious weed and poisonous plants; agricultural outleasing; range management; identification and protection of wetlands, watersheds, floodplains management, landscaping, and grounds maintenance (OPNAV M-5090.1, Chapter 12).

Listed species. Any species of a fish, wildlife, or plant that has been determined to be endangered or threatened under Section 4 of the ESA (16 U. S. C. 1531 *et seq.*) (50 FR Prt 402) Listed species are found in 50 CFR 17.11-17.12.

Marine environment. Areas of coastal and ocean waters, the Great Lakes, and their connecting waters, and submerged lands there under, over which the United States exercises jurisdiction, consistent with international law (EO 13158).

Migratory bird. A bird with a seasonal and somewhat predictable pattern of movement. (A general definition.) Any bird, whatever its origin and whether or not raised in captivity, which belongs to a species listed in 50 CFR 10.13, or which is a mutation or a hybrid of any such species, including any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof. (The Migratory Bird Treaty Act (16 U. S. C. 703 *et seq.*) Any of the over 800 species listed in 50 CFR 10.13, including many common ones like Canada geese, barn swallows, and two kinds of starling (EO 13186).

Migratory bird resources. Migratory birds and the habitats upon which they depend (EO 13186).

Mitigation. Lessening the adverse effects an undertaking may cause relative to natural or cultural resources. Mitigation can include limiting the magnitude of the action; repairing, rehabilitating, or restoring the affected resource; avoiding the effect altogether; reducing or eliminating the effect over time by preservation and maintenance operations during the life of the action; and/or compensating for the effect by providing substitute resources or environments (DoD Instruction 4715.03).

Mitigation banking, Actions taken to compensate for future adverse effects of undertakings by providing substitute resources or environments in advance of any specific undertaking (DoD Instruction 4715.03).

Native species. All species of plants and animals naturally occurring, either currently or historically, in any U.S. ecosystem (EO 11987). With respect to a particular ecosystem, species that other than as a result of an introduction historically occurred or currently occurs in that ecosystem (EO 13112).

Natural resources. Natural resources are all elements of nature and their environments of soils, sediments, air, and water. They consist of earth resources (nonliving resources such as minerals and soil components) and biological resources (living resources such as plants and animals) (OPNAV M-5090.1, Chapter 12).

Natural Resources Manager/Coordinator. A natural resources manager is an individual assigned the responsibility of managing installation natural resources on a regular basis and who keeps the chain of command informed of natural resources issues (OPNAV M-5090.1, Chapter 12).

No net loss of military mission. Each INRMP must, to the extent appropriate and applicable, and consistent with the use of the installation to ensure the preparedness of the Armed Forces, provide for “no net loss in the capability of military installation lands to support the military mission of the installation.” (Per Section 101(b)(1)(I) of the SAIA). INRMPs are intended principally to help installation commanders manage natural resources more effectively so as to ensure that installation lands remain available and in good condition to support the installation’s military mission, i.e., ensure “no net loss in the capability of military installation lands to support the military mission of the installation.” Furthermore, appropriate management objectives to protect mission capabilities of installation lands should be clearly articulated in the planning process and should be high in INRMP resourcing priorities. Mission requirements and priorities identified in the INRMP will, where applicable, be integrated in other environmental programs and policies. It is not the intent that natural resources are to be consumed by mission requirements, but sustained for the use of mission requirements. To achieve this, environmental programs and policies must have the goal of preserving the environment for the purpose of the mission (Deputy Under Secretary of

Defense (I&E) Memorandum, 10 October 2002, Implementation of Sikes Act Improvement Act: Updated Guidance).

Noxious weeds. Noxious weeds are plant species identified by Federal or state agencies as requiring control or eradication (OPNAV M-5090.1, Chapter 12).

Outdoor recreation. Outdoor recreation is a program, activity, or opportunity dependent on the natural environment, including picnicking, bird-watching, hiking, wild and scenic river use, hunting, fishing, and primitive camping that will not impair or degrade natural resources (OPNAV M-5090.1, Chapter 12).

Plant. Any member of the plant kingdom, including seeds, roots, and other parts thereof (ESA (16 U. S. C. 1531 *et seq.*)).

Proposed species. Any species of fish, wildlife, or plant proposed in the Federal Register to be listed under Section 4 of the ESA (16 U. S. C. 1531 *et seq.*).

Recovery of a listed species. The improvement in the status of a listed species to the point at which listing is no longer appropriate under the criteria set out in Section 4(a)(1) of the ESA (16 U. S. C. 1531 *et seq.*) (50 CFR Part 402).

Soil. A natural body comprised of solids (minerals and organic matter), liquid, and gases that occurs on the land surface, occupies space, and is characterized by one or both of the following; horizons, or layers, that are distinguishable from the initial material as a result of additions, losses, transfers, and transformations of energy and matter or the ability to support rooted plants in the natural environment (As defined in *Soil Taxonomy, A Basic System of Soil Classification for Making and Interpreting Soil Surveys* (USDA, Natural Resources Conservation Service, 1999

Species. A group of organisms, all of which have a high degree of physical and genetic similarity, generally interbreed only among themselves, and show persistent differences from members of allied groups of organisms (EO 13112).

Species of concern. Species listed in the periodic report, "Migratory Nongame Birds of Management Concern in the United States," priority migratory bird species as documented by established plans (such as Bird Conservation Regions in the North American Bird Conservation Initiative or Partners in Flight physiographic areas), and those species listed in 50 C.F.R. 17.11 (EO 13186).

State or Territory Listed Species. A state or territory listed species is any species of fish, wildlife, or plant protected by an appropriate state agency as issued in a state's or U.S. territory's endangered species law and other pertinent regulations (OPNAV M-5090.1, Chapter 12).

Stewardship. Stewardship is the responsibility to inventory, manage, conserve, protect, and enhance the natural resources entrusted to one's care in a way that enhances the resources and their benefits for present and future generations (OPNAV M-5090.1, Chapter 12).

Submerged Aquatic Vegetation Areas. "Rooted, vascular, flowering plants that, except for some flowering structures, which live and grow below the water surface. Because of their requirements for

sufficient sunlight, seagrasses are found in coastal areas of all Atlantic coast states, with the exception of Georgia and South Carolina, where freshwater inflow, high turbidity, and tidal amplitude combine to inhibit their growth.” (The Atlantic States Marine Fisheries Commission, *Submerged Aquatic Vegetation Policy*, June 1997).

Sustainable yield. Sustainable yield is managing renewable natural resources to provide an annual or periodic yield of goods, services, and direct and indirect benefits into perpetuity. This may include, but is not limited to, maintaining economic benefits, ecological processes and functions, and biodiversity. (OPNAV M-5090.1, Chapter 12).

Synoptic. The synoptic scale (also known as large scale or cyclonic scale) in meteorology is a horizontal length scale on the order of 1000 kilometers (620 miles) or more.

Take of listed species. To harass, hunt, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct, per the ESA (16 U. S. C. 1531 *et seq.*), of which Section 9 prohibits “take.”

- a) *Harass*, in the definition of “take,” means an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering.
- b) *Harm*, in the definition of “take,” means an act that actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering.

Taking, killing, or possessing migratory birds. It is unlawful to pursue, hunt, take, capture, kill; attempt to take, capture, or kill; possess, offer for sale, sell offer to barter, barter offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported; deliver for transportation, transport, or cause to be transported; carry or cause to be carried; or receive for shipment, transportation, carriage, or export any migratory bird, any part, nest, or egg of any such bird or any part, nest or egg, thereof. To “take” is to pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt to pursue, hunt, shoot, wound kill, trap, capture, or collect (Migratory Bird Treaty Act (16 USC 706 *et seq.*). Furthermore, both “intentional” and “unintentional” take are defined in 50 CFR 10.12:

Intentional take. Take that is the purpose of the activity in question. (As defined in EO 13186.)

Unintentional take. Take that results from, but is not the purpose of, the activity in question (As defined in EO 13186). The list of migratory birds protected under the Migratory Bird Treaty Act can be found in 50 CFR Section 10.13. Violations can result in a misdemeanor conviction and a fine up to \$15,000.

Threatened species. Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (Per the ESA (16 U. S. C. 1531 *et seq.*).

Watershed. A watershed is a geographic area of land, water, and biota within the confines of a drainage divide (OPNAV M-5090.1, Chapter 12).

Wetlands. Wetlands are those areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions, such as swamps, marshes, and bogs. Jurisdictional wetlands are those that meet criteria established by the U.S. Environmental Protection Agency regulations and U.S. EPA and Department of the Army guidance (OPNAV M-5090.1, Chapter 12).

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Appendix G: Natural Resources Manager Designation Letter



DEPARTMENT OF THE NAVY
NAVAL STATION EVERETT
2000 WEST MARINE VIEW DRIVE
EVERETT, WA 98207-5001

IN REPLY REFER TO:

5090
N4
5 Nov 14

From: Commanding Officer, Naval Station Everett
To: Ms. Linda J. Wagoner

Subj: APPOINTMENT AS INSTALLATION NATURAL RESOURCES MANAGER

Ref: (a) OPNAVINST 5090.1C
(b) OPNAV M-5090.1

1. Per reference (a), you are hereby designated as the Installation Natural Resources Manager for all facilities and special areas covered by the Naval Station Everett Area of Responsibility (AOR). You will familiarize yourself with the policies and procedures of references (a) and (b) in the performance of your duties.

2. This designation remains in effect until rescinded in writing or upon your transfer from this command, whichever occurs first.

A handwritten signature in black ink, appearing to be "M. J. Coury", is written above the printed name.

M. J. COURY

Copy to:
NAVSTA Everett (N4)

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7 ANNEXES

Annex A	Naval Station Everett Instruction 5450.1A
Annex B	In-Water Work Windows – Freshwater (Extract)
Annex C	In-Water Work Windows – Marine (Extract)
Annex D	City of Everett SMP (Extract)
Annex E	Reserved– 2015 NR Metrics
Annex F	Reserved– 2016 NR Metrics and INRMP Increment
Annex G	Reserved– 2017 NR Metrics and INRMP Increment
Annex H	Reserved– 2018 NR Metrics and INRMP Increment
Annex I	Reserved– 2019 NR Metrics and INRMP Increment
Annex J	Reserved– FONSI and NEPA Documentation

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Annex A: Naval Station Everett Instruction 5450.1A

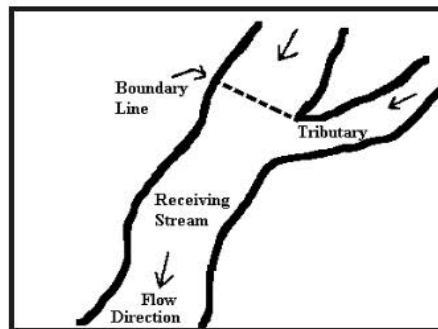
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Annex B: In-Water Work Windows– Fresh Water (Extract)

**APPROVED WORK WINDOWS FOR FISH PROTECTION FOR
ALL FRESHWATERS *excluding* WATERS WITHIN NATIONAL PARK BOUNDARIES,
COLUMBIA RIVER, SNAKE RIVER, AND LAKES
BY COUNTY AND SPECIFIC WATERCOURSE**

- (1) The general work window for a county applies to all streams within that county, unless otherwise indicated under specific stream and tributary work windows.
- (2) The work window for a listed stream applies to all its tributaries, unless otherwise indicated. Some streams flow through multiple counties. Check the listing for the county in which work is to be conducted to determine the work window for that stream.
- (3) Where a tributary is listed as a boundary, that boundary shall be the line perpendicular to the receiving stream that is projected from the most upstream point of the tributary mouth to the opposite bank of the receiving stream. (See Figure 1)

Figure 1. Stream boundary line



- (4) Work within two hundred (200) feet landward of the State's ordinary high water line in waters of the U.S. listed as "submit application" or "closed" is not authorized by the Washington State Department of Fish and Wildlife (WDFW). Site review and a specific written authorization (and State HPA) are required for these state waters.
- (5) Lakes do not include impoundments of the Columbia or Snake Rivers.
- (6) For rivers and creeks entering marine areas (coastal watercourses) other than the Columbia River and its tributaries, the marine work window will apply to marine and estuarine areas, the freshwater work window will apply to riverine and palustrine areas. Marine, estuarine, riverine, and palustrine zones are defined based on *Classification of Wetlands and Deepwaters Habitats of the United States* published by the U.S. Department of Interior, Fish and Wildlife Service (USFWS). The boundaries between marine/estuarine and riverine/palustrine areas of coastal watercourses (other than the Columbia River and its tributaries) can be found on the National Wetland Inventory maps published by

the USFWS (<http://www.nwi.fws.gov/>). These maps do not represent the actual boundaries of the jurisdictional area for any particular project but they can be used to determine the relative location of marine/estuarine and riverine/palustrine zones of coastal watercourses. In Table D-1, for all coastal watercourses except the Columbia River (see Table D-2) and its tributaries, the mouth (including associated sloughs or channel in the river delta) is defined as the boundary between marine/estuarine and riverine/palustrine zones.

(7) These "approved work windows" are based on best available information as of the date of the Services' concurrence with this informal consultation. They may be amended or deleted in the future as new information is obtained. The Corps will use the most current version of these windows when the authorizing projects for which conformance with the ESA is, in part, based on the windows in this programmatic consultation.

Source:

http://www.nws.usace.army.mil/Portals/27/docs/regulatory/ESA%20forms%20and%20templates/work_windows%20all_freshwaters_except.pdf
accessed 20 DEC, 2012.

COUNTY	GENERAL WORK WINDOWS	STREAM & ALL TRIBUTARIES	WORK WINDOW
Snohomish*	July 1 - September 30	Sauk River	July 15 - August 15
		-- Suiattle River	July 15 - August 15
		Snohomish River	
		-- mouth* to Highway 9	June 1 - October 31
		-- above Highway 9	July 1 - August 31
		-- Pilchuck River	
		----mouth to city of Snohomish diversion dam	July 1 - August 31
		---- above city of Snohomish diversion dam	July 1 - September 15
		-- Skykomish River	
		---- mouth to forks	July 1 - August 31
		---- North Fork Skykomish River	
		----- mouth to San Juan campground	July 1 - August 31
		----- San Juan campground to Deer Falls	Submit application
		----- above Deer Falls	July 15 - October 31
		---- Salmon Creek	Submit application
		---- South Fork Skykomish River	
		----- mouth to Sunset Falls	July 1 - August 31
		----- Sunset Falls to Alpine Falls	July 1 - September 15
		----- above Alpine Falls	July 15 - October 31
		---- Beckler River	
		----- mouth to Boulder Creek	July 1 - September 15
		----- above Boulder Creek	July 15 - October 31
		---- Rapid River	
		----- mouth to Meadow Creek	July 15 - September 15
		----- above Meadow Creek	July 15 - October 31
		---- Foss River	
		----- mouth to forks	July 15 - September 15
		----- West Fork Foss River	July 15 - October 31
----- East Fork Foss River	Submit application		
---- Miller River			
----- mouth to forks	July 1 - September 15		
----- above forks	July 1 - October 31		
-- Sultan River			

* For all coastal watercourses except the Columbia River (see Table D-2), the mouth (including associated sloughs or channel in the river delta) is defined as the boundary between marine/estuarine and riverine/palustrine zones.

Annex C: In-Water Work Windows– Marine Water (Extract)

APPROVED WORK WINDOWS FOR FISH PROTECTION

IN ALL **MARINE/ESTUARINE** AREAS

excluding THE MOUTH OF THE COLUMBIA RIVER (BAKER BAY)

BY TIDAL REFERENCE AREA

- (1) The general work window is given by Tidal Reference Area. Figure 2 (page 3 of this document) is a map of the tidal reference areas.
- (2) For marine/estuarine areas in the mouth of the Columbia River (Baker Bay) refer to Columbia River watercourse approved work windows in Table D-2.
- (3) The work windows are given by tidal reference area and species.
 - a. Bull trout: For Coastal/Puget Sound bull trout, refer to bull trout work window.
 - b. Salmon: For Puget Sound chinook salmon, Hood Canal chum salmon, or Ozette Lake chinook salmon, refer to the “salmon” restriction for the appropriate Tidal Reference Area.
 - c. Forage species: If forage fish are present in the project area, then the work window is for that species applies.
- (4) It is likely that several work windows may apply for a specific project. The work windows must be combined. The approved work window will be the common days between all approved work windows. For example, if the project is in Hammersley Inlet in Tidal Reference Area 1 and Pacific Sand Lance are present, the work windows would be:

Salmon Work Window	July 2 - March 2
Bull Trout Work Window	July 16 - February 15
Pacific Sand Lance	March 2 - October 14

Taking the days that the approved work windows have in common, the time the project could be constructed is July 16 - October 14.

- (5) For forage fish work windows that state “closed year round”. Work may occur if the restriction is released for a short period of time (typically two weeks) after the Washington State Department of Fish and Wildlife (WDFW) Habitat Biologist has confirmed that not forage fish are spawning on the beach.
- (6) To determine whether your project lies within areas for work windows for “forage species,” contact the Corps.

- (7) Work within two hundred feet landward of the State's ordinary high water line in waters of the U.S. listed as "submit application" or "closed" is not authorized by the Washington State Department of Fish and Wildlife (WDFW). Site review and a specific written authorization (and State HPA) are required for these waters.
- (8) These "approved work windows" are based on best available information as of the date of the Services' concurrence with this informal consultation. They may be amended or deleted in the future as new information is obtained. The Corps will use the most current version of these windows when the authorizing projects for which conformance with the ESA is in part based on the windows in this programmatic consultation.

Source:

[http://www.nws.usace.army.mil/Portals/27/docs/regulatory/ESA%20forms%20and%20templates/work_windows - all marine & estuarine.pdf](http://www.nws.usace.army.mil/Portals/27/docs/regulatory/ESA%20forms%20and%20templates/work_windows_all_marine_&_estuarine.pdf)
accessed 20 DEC, 2012.

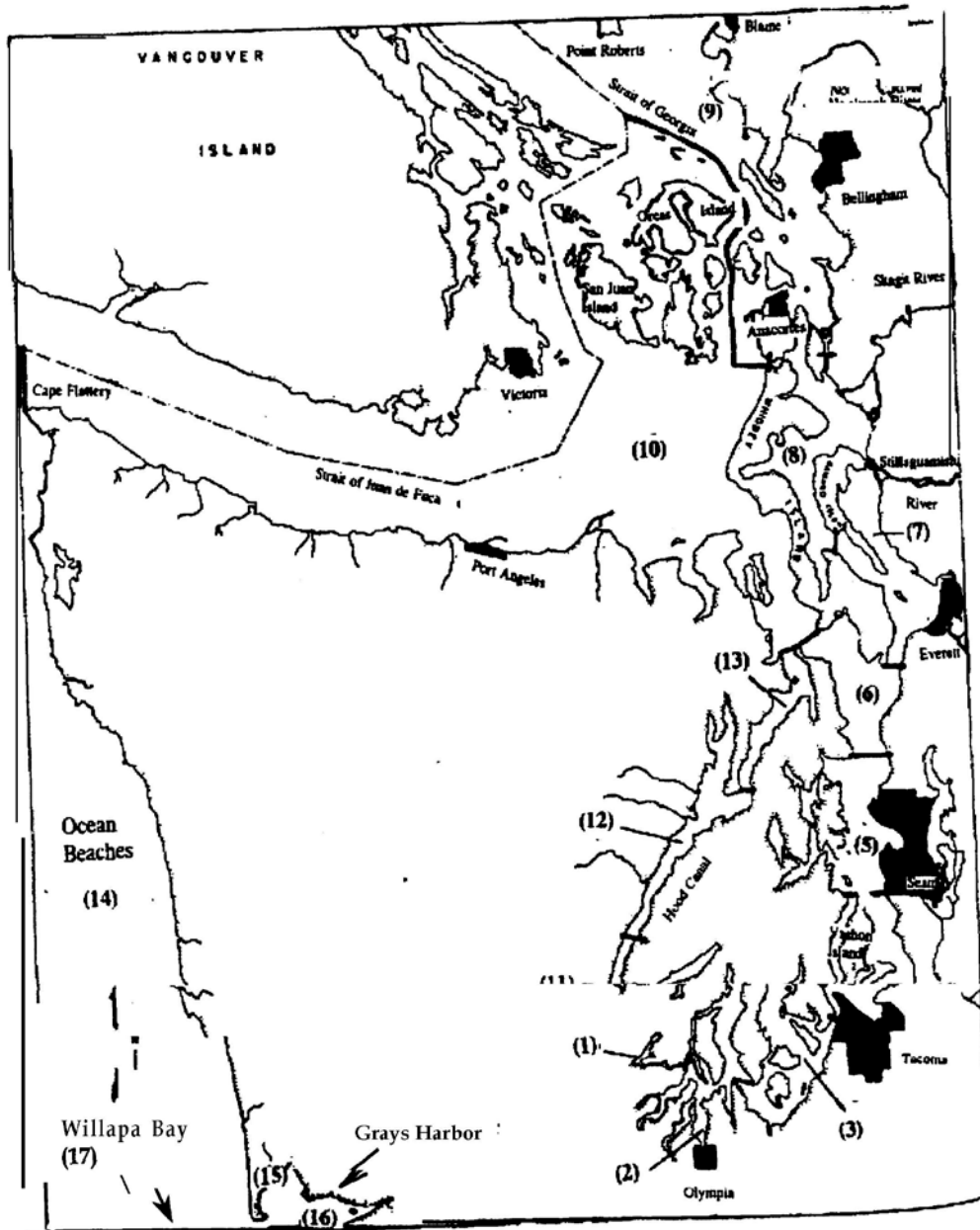


Figure 2: Map of Tidal Reference Areas in Washington State

TABLE D-3: APPROVED WORK WINDOWS FOR ALL MARINE/ESTUARINE AREAS <i>Excluding THE MOUTH OF THE COLUMBIA RIVER (BAKER BAY)</i>				
TIDAL REFERENCE AREA	SALMON WORK WINDOW	BULL TROUT WORK WINDOW	FORAGE SPECIES WORK WINDOWS	
Tidal Reference Area 5 (Seattle): All saltwater areas northerly of a line projected true west and true east across Puget Sound from the northern tip of Vashon Island and southerly of a line projected true east from Point Jefferson-47° 15' N. latitude across Puget Sound. This area includes Port Orchard, Port Madison, and Dyes and Sinclair Inlets.	July 2 - March 2	July 16 - February 15 Duwamish River October 1-February 15	- Surf Smelt Eagle Harbor Sinclair Inlet Pacific Herring Pacific Sand Lance	April 1 - August 31 Year round** Year round** May 1 - January 14 March 2 - October 14
Tidal Reference Area 6 (Edmonds): All saltwater areas northerly of a line projected true east from Point Jefferson at 47° 15' N. latitude across Puget Sound and southerly of a line projected true east from Possession Point to Chenault Beach and from Foulweather Bluff to Double Bluff.	July 2 - March 2	July 16 - February 15	Surf Smelt Pacific Herring Pacific Sand Lance	— —* March 2 - October 14
Tidal Reference Area 7 (Everett): All saltwater areas northerly of a line projected true east from Possession Point to Chenault Beach, easterly of a line projected 5° true from East Point to Lowell Point, and southerly of the Stanwood to Camano Island Highway. This area includes Port Gardner, Port Susan, and parts of Possession Sound and Saratoga Passage.	July 2 - March 2	July 16 - February 15	Surf Smelt Pacific Herring Pacific Sand Lance	Year Round** April 15 - January 31 March 2 - October 14

* "—" under forage species work window means there is no spawning habitat for this species in the tidal reference area, therefore there is no work window restriction.

** "Year Round" under forage species work window means there is potential spawning habitat for surf smelt in the tidal reference area. The Corps will establish a work window that restricts work from occurring during the surf smelt spawning period.

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Annex D: City of Everett SMP (Extract)

CITY OF EVERETT SHORELINE MASTER PROGRAM (3 May, 2011)

Section 4, Shoreline Environmental Designations and Management Policies Page 4-6

4.3 Urban Deep Water Port

Purpose

To provide areas for large scale water-dependent industries, port facilities, and supporting services that require proximity to navigable waters that can accommodate deep draft ocean-going vessels, and to ensure optimum use of shorelines that are presently industrial in nature while protecting and restoring ecological functions.

Classification Criteria

1. Areas proximate to navigable channels approximately 25' MLLW or greater in depth, with arterial roadway and/or rail services, and with sufficient space to support water-dependent or water-related industrial activities.
2. Areas currently developed with water-dependent and water-related industrial use, military use, and support facilities.

Area Designated

That area beginning at a line perpendicular to the shoreline 200 feet northeast of Pigeon Creek and continuing north to the north boundary of the US Navy base. The waterward boundary is the outer harbor line/pierhead line. The landward boundary is a line 200 feet from the ordinary high water mark.

Vision Statement

This area shall be reserved for water-dependent marine commerce and heavy industry, military use, and supporting activities. Because of the nature of these activities, public access may be provided elsewhere, consistent with the plan for creating a comprehensive system of publicly accessible sites and trails.

Management Policies

1. Use of this land should be for port-related water-dependent uses, water-dependent and water-related industrial uses, water-dependent military use, and accessory supporting facilities and services. New nonwater-dependent/nonwater-related use activities that provide direct support for the water-dependent uses should only be permitted within 200 feet of the ordinary high water

mark when the applicant shows the use is an incidental part of the business, such as an office use, and the location is necessary for proper operation of the business.

2. Encourage expansions and re-development within areas that are already developed. Nonwater-dependent uses should be encouraged to expand outside shoreline jurisdiction when feasible. When expansions of nonwater-dependent uses occur in shoreline jurisdiction, public access and restoration of the shoreline shall be provided where feasible.

3. Encourage landscaping and screening of existing activities which have the potential for adversely affecting nearby properties. Landscaping and screening should be required for new activities which have the potential for adversely affecting nearby properties.

4. Require uses to limit and screen lighting to minimize impacts on views and nearby single family neighborhoods.

5. Encourage continued efforts by public and private industries to improve the quality of air and water.

Annex E: Reserved– 2015 NR Metrics

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Annex F: Reserved– 2016 NR Metrics and INRMP Increment

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Annex G: Reserved– 2017 NR Metrics and INRMP Increment

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Annex H: Reserved– 2018 NR Metrics and INRMP Increment

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Annex I: Reserved– 2019 NR Metrics and INRMP Increment

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Annex J: Reserved– INRMP EA and FONSI Documents

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