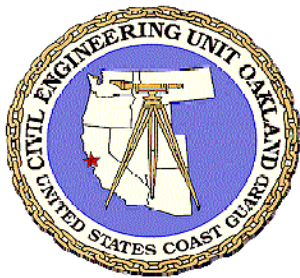




**Draft Environmental Assessment**  
For  
**Shoreline Stabilization**  
**At Station Siuslaw River**  
**Florence, Oregon**

February 2012



U.S. Coast Guard  
Civil Engineering Unit Oakland  
Environmental Division  
2000 Embarcadero, Suite 200  
Oakland, CA 94606

*Prepared For:*

**U.S. Coast Guard**  
Civil Engineering Unit Oakland  
Environmental Division  
2000 Embarcadero, Suite 200  
Oakland, CA 94606

*Prepared By:*

**CDM  
Smith**  
14432 SE Eastgate Way, Suite 100  
Bellevue, Washington 98007

Contract Number: HSCG82-11-R-PQQ120

USCG  
ENVIRONMENTAL ASSESSMENT  
FOR  
SHORELINE STABILIZATION AT  
STATION SIUSLAW RIVER  
FLORENCE, OREGON

This USCG environmental assessment was prepared in accordance with Commandant's Manual Instruction M16475.1D and is in compliance with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Council of Environmental Quality Regulations dated 28 November 1978 (40 CFR Parts 1500-1508).

This environmental assessment serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an environmental impact statement or a finding of no significant impact.

This environmental assessment (EA) concisely describes the proposed action, the need for the proposal, the alternatives, and the environmental impacts of the proposal and alternatives. This environmental assessment also contains a comparative analysis of the action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during EA preparation.

_____	_____	_____
Date	Preparer/Environmental Project Manager	Title/Position

_____	_____	_____
Date	Environmental Reviewer	Title/Position

In reaching my decision/recommendation on the USCG's proposed action, I have considered the information contained in this EA on the potential for environmental impacts.

_____	_____	_____
Date	Responsible Official	Title/Position

USCG  
FINDING OF NO SIGNIFICANT IMPACT  
FOR  
SHORELINE STABILIZATION AT  
STATION SIUSLAW RIVER  
FLORENCE, OREGON

This project has been thoroughly reviewed by the USCG and it has been determined, by the undersigned, that this project will have no significant impact on the human environment.

This finding of no significant impact is based on the attached contractor-prepared environmental assessment and biological assessment which has been independently evaluated by the USCG and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project and provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The USCG takes full responsibility for the accuracy, scope, and content of the attached environmental assessment.

Date	Environmental Reviewer	Title/Position
------	------------------------	----------------

I have considered the information contained in the EA, which is the basis for this finding of no significant impact (FONSI). Based on the information in the EA and this FONSI document, I agree that the proposed action as described above, and in the EA, will have no significant impact on the environment.

Date	Responsible Official	Title/Position
------	----------------------	----------------



# Contents

Acronyms.....	viii
<b>Section 1 Introduction.....</b>	<b>1-1</b>
1.1 Location and Site Description.....	1-1
1.2 Background .....	1-1
1.3 Purpose and Need .....	1-4
1.4 Public Involvement .....	1-9
<b>Section 2 Proposed Action and Action Alternatives .....</b>	<b>2-1</b>
2.1 No Action Alternative.....	2-1
2.2 Proposed Action: Construct a Riprap Revetment.....	2-1
2.3 Action Alternative 1: Construct Groins with Gravel Shoreline .....	2-5
2.4 Action Alternative 2: Construct a Riprap Revetment with Scour Allowance in Toe.....	2-7
2.5 Alternatives Considered but Eliminated.....	2-8
2.5.1 Relocate Boathouse .....	2-8
<b>Section 3 Affected Environment and Potential Effects of Proposed Action .....</b>	<b>3-1</b>
3.1 Air Quality.....	3-2
3.2 Climate Change.....	3-3
3.3 Biological Resources.....	3-4
3.3.1 Vegetation .....	3-4
3.3.2 Fish and Wildlife .....	3-6
3.3.3 Threatened and Endangered Species and Critical Habitat .....	3-8
3.4 Historic and Cultural Resources .....	3-9
3.5 Coastal Resources .....	3-11
3.6 Water Resources .....	3-13
3.6.1 Water Quality .....	3-13
3.6.2 Wetlands.....	3-14
3.6.3 Floodplains.....	3-15
3.7 Geology and Soils .....	3-16
3.8 Hazardous Materials.....	3-16
3.9 Aesthetics and Visual Resources .....	3-17
3.10 Noise.....	3-19
3.11 Recreation .....	3-20
3.12 Transportation and Navigation.....	3-21
3.13 Socioeconomic and Land Use .....	3-22
3.14 Construction.....	3-22
3.15 Cumulative Impacts .....	3-24

**Section 4 Comparative Analysis ..... 4-1**

    4.1 No Action Alternative..... 4-1

    4.2 Action Alternative 1 ..... 4-1

    4.3 Action Alternative 2 ..... 4-1

**Section 5 Project Conditions and Mitigation Measures ..... 5-1**

**Section 6 Environmental Significance of the Proposed Action ..... 6-1**

**Section 7 List of Persons and Agencies Contacted ..... 7-1**

**Section 8 References ..... 8-1**

**Section 9 List of Preparers ..... 9-1**

**Figures**

Figure 1 Vicinity Map ..... 1-2

Figure 2 USCG Station Siuslaw River Site Map ..... 1-3

Figure 3 Eroding Shoreline is Visible at Low Tide ..... 1-5

Figure 4 Cross-section of Walkway and Boathouse Showing  
Mudline Elevation over Time..... 1-6

Figure 5 Bathymetry of the Project Area ..... 1-7

Figure 6 Erosion of Sand Bluff is Visible as a Patch of Exposed Sand ..... 1-8

Figure 7 Proposed Action - Construct Riprap Revetment ..... 2-2

Figure 8 Proposed Action - Riprap Revetment Cross Sections ..... 2-4

Figure 9 Action Alternative 1 - Construct Groins with Gravel Shoreline..... 2-6

Figure 10 Action Alternative 1 - Conceptual Cross-section of Groin and Gravel  
Shoreline..... 2-7

Figure 11 Action Alternative 2 - Conceptual Cross-section of Riprap Revetment  
with Scour Allowance Toe..... 2-8

Figure 12 USCG Station Siuslaw River Equipment Building..... 3-10

Figure 13 Residential Development and the Sand Bluff within the  
Residential Development Shoreline Coastal Designation..... 3-12

Figure 14 View of Project Area from Top of Bluff ..... 3-18

Figure 15 Groins on West Bank of Siuslaw River in Vicinity of the Project Area .. 3-19

## **Appendices**

*Appendix A* Site Photographs

*Appendix B* Comment Letters Received During Scoping

# Acronyms

AST	Aboveground Storage Tank
ATON	Aid to Navigation
BA	Biological Assessment
BMPs	best management practices
CWA	Clean Water Act
CBRA	Coastal Barrier Resource Act
cy	cubic yards
CZMA	Coastal Zone Management Act
DPS	Distinct Population Segment
EA	Environmental Assessment
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
MHHW	Mean Higher High Water
MLLW	Mean Lower Low Water
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NM	Nautical Miles
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NOx	Nitrogen oxides
NRCS	Natural Resource Conservation Service
NTU	Nephelometric Turbidity Units
NWI	National Wetlands Inventory
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
OPRD	Oregon Parks and Recreation Department
PM	Particulate matter
SHPO	State Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USCG	United States Coast Guard
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

# Section 1

## Introduction

This Environmental Assessment (EA) summarizes the potential environmental impacts of the Proposed Action and its alternatives including the No Action Alternative. This EA is prepared in compliance with the National Environmental Policy Act of 1969 (NEPA) (P.L. 91-190) and in accordance with the Commandant's Instruction Manual M16475.1D and the Council of Environmental Quality Regulations dated 28 November 1978 (40 CFR Parts 1500-1508). The United States Coast Guard (USCG) will use the findings of this EA to determine whether an Environmental Impact Statement is required or whether a Finding of No Significant Impact (FONSI) will be issued.

### 1.1 Location and Site Description

USCG operates Station Siuslaw River three miles northwest of Florence, Oregon (Figure 1). Station Siuslaw River is located on the east side (right bank) of the Siuslaw River along the Federal Navigation Channel. The Station is located approximately 2 miles upstream from the mouth of the river (Latitude 44° 00'08" N, Longitude 124° 07'20" W; HUC 17100206) (Figure 1).

Waterfront structures at Station Siuslaw River include a boathouse, walkway, floating docks, a debris screen (or shear boom), and navigational aids. The Station's upland facilities are located at the top of a sand bluff and include an access road, walkway, and a fuel storage in aboveground storage tanks (AST) and utility services area (Figure 2). General photographs of the site are provided in Appendix A.

### 1.2 Background

USCG is one of the five armed forces of the United States and the only military organization within the Department of Homeland Security. Since 1790, USCG has safeguarded our Nation's maritime interests and environment around the world. USCG District 13 includes the Pacific Northwest and its mission includes law enforcement, search and rescue, maritime law enforcement of federal fisheries, environmental protection, and vessel safety laws, and recreational and commercial boating safety.

USCG Station Siuslaw River was established on the Siuslaw River in 1917 near Florence, Oregon. The Siuslaw River entrance breaks nearly every day of the year because of silting and river runoff. The entrance is quite narrow and can make for difficult bar crossings. The Siuslaw watchtower is located three miles from the Station, set back on the North Jetty. Station Siuslaw River became a sub-unit of Station Umpqua River in 1997.

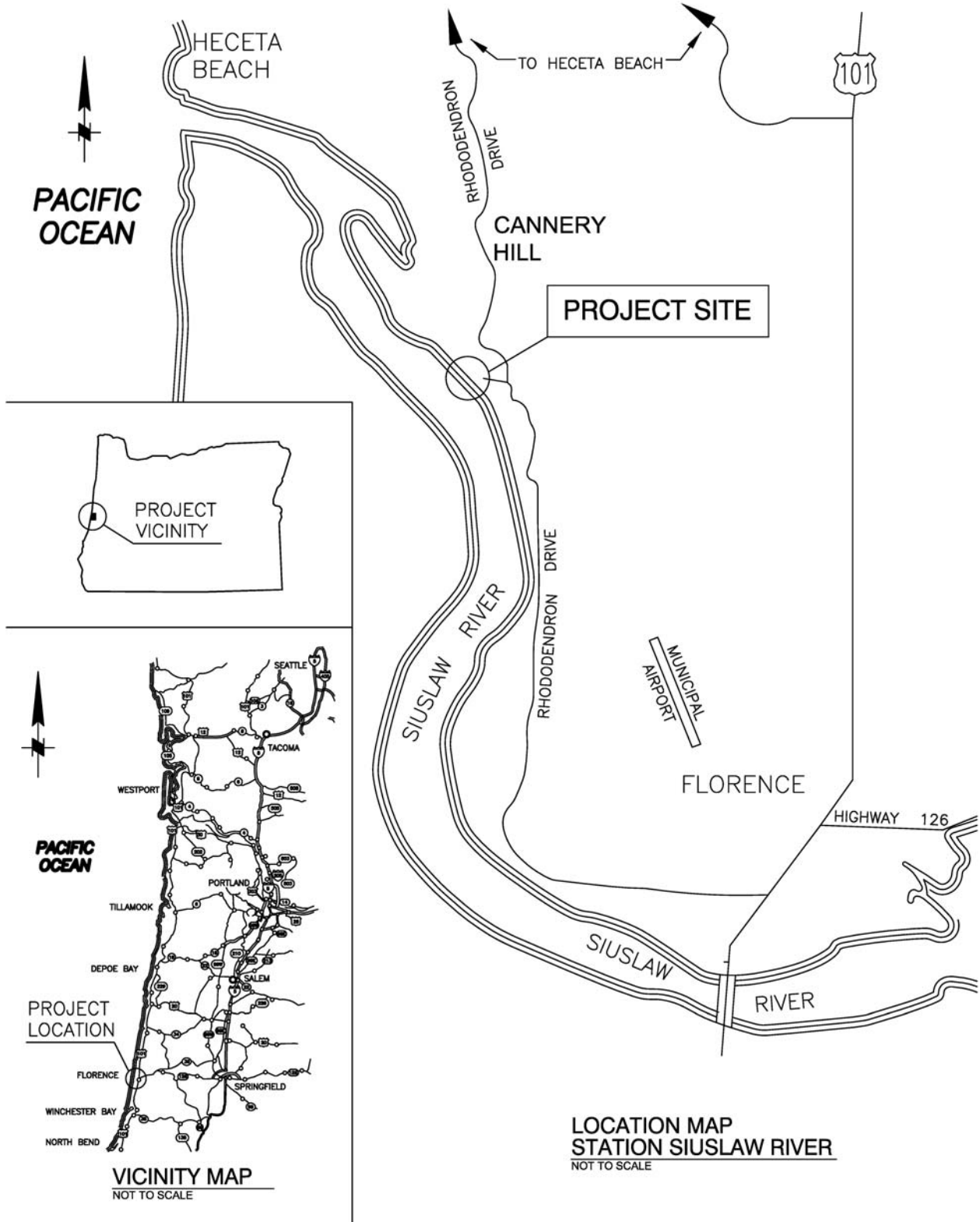


Figure 1. Vicinity Map

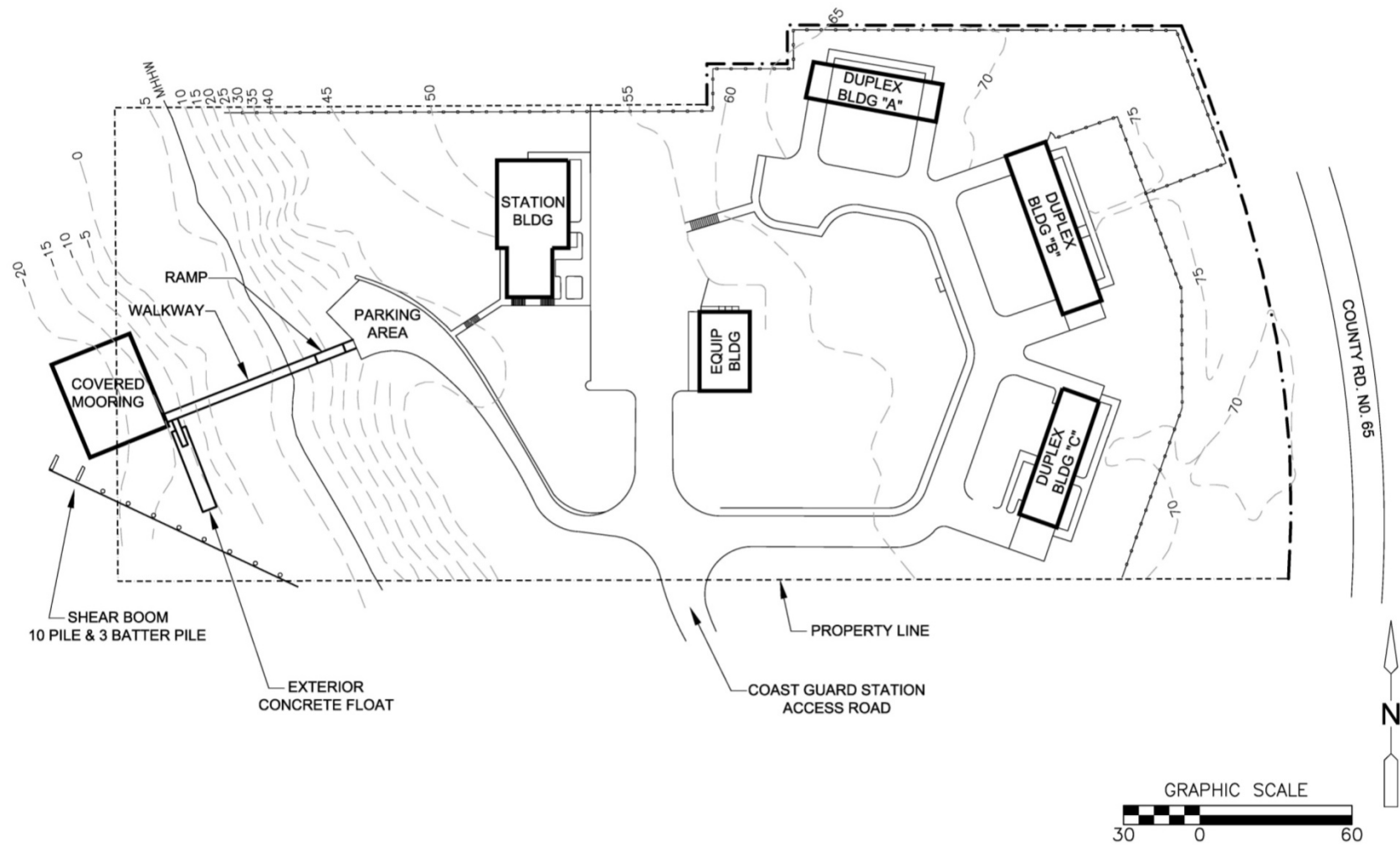


Figure 2. USCG Station Siuslaw River Site Map

The Station's primary mission is to provide search and rescue to commercial mariners, recreational boaters, and surfers. The Station also supports other USCG missions including escorting fishing vessels across the bar, marine environmental protection, fisheries conservation enforcement, towing, and enforcing boating regulations (USCG 2003). The Station houses maritime Law Enforcement, Marine Environmental Protection, Recreational Boating Safety, Short Range Aid to Navigation (ATON), Public Affairs, and Living Marine Resources Protection.

The Station's area of responsibility extends north from the Siuslaw River entrance 15.3 Nautical Miles (NM) to Cape Perpetua and South 8.7 NM to the Silt Coos River, and seaward 50 NM. The area of responsibility extends upriver to the Mapleton Bridge; approximately 20 NM from the river entrance. The Station conducted 42 search and rescue missions in 2010.

Waterfront structures at Station Siuslaw River include a boathouse, walkway, floating docks, a debris screen, and navigational aids. The Station's upland facilities are located at the top of a sand bluff and include an access drive, walkway, and a fuel storage and utility services area (Figure 2). The Station has 33 men and women assigned to operate two 47' Motor Lifeboats and one 25' Response Boat Small 24 hours a day, 365 days a year.

### **1.3 Purpose and Need**

The purpose of the project is to stabilize the eroding shoreline to maintain operational functionality of the Station infrastructure to allow USCG to meet its mission responsibilities. Erosion of the shoreline is causing both a loss of bottom material (river bottom retreat) and loss of the embankment (shoreline retreat) (Figure 3).

In 2011, USCG prepared an erosion study, titled *Final Preliminary Erosion Control Study*, to identify causes and possible solutions to the coastal erosion that is affecting Station Siuslaw River (USCG 2011a). The findings of the Study indicate that erosion is primarily part of a natural meandering process that has been accelerated by alterations of the shoreline in the vicinity, including groins constructed on the opposite shoreline in 1974, the waterfront structures at the Coast Guard Station, and other stabilization improvements made in the vicinity of the site.

The shoreline retreat that is resulting from the stream erosion will continue to cut into the bluff toe and undercut the base of the embankment, resulting in sloughing and possibly a rotational failure of the hillside, negatively impacting station operations. It is expected that significant erosion will continue to occur for the foreseeable future unless mitigation is constructed (USCG 2011a).





**Figure 3. Eroding Shoreline is Visible at Low Tide** (*looking east toward shoreline under base of walkway*).

Loss of river bottom material has resulted in insufficient embedment of the piles supporting the boathouse, walkways and floating docks (Figures 4 and 5). The original piles for the boathouse were driven to approximately elevation -48 feet. By 2006 the boathouse piles had lost from 25% to 50% of the original embedment and the boathouse structure had considerable movement. In 2008, 8 steel (“I-beam”) piles were driven along the boathouse sidewalls (4 each side) and tied to the superstructure to add lateral support. These piles were driven to depths ranging from -48 to -53 feet (USCG 2011a).

The boathouse walkway was originally constructed in 1961. In 2002, two of the support piles for the walkway were completely undercut due to scour. At that time a new walkway was constructed with new piles that provided 30 feet of embedment (USCG 2011a).

The floating docks were constructed in 1974 and 1997, with piles driven to a tip elevation of approximately -37 feet. Since then, the floating dock piles have lost approximately 3 feet or 15% of the original embedment. The debris boom was constructed in 1994 and the pile depths are unknown (USCG 2011a).

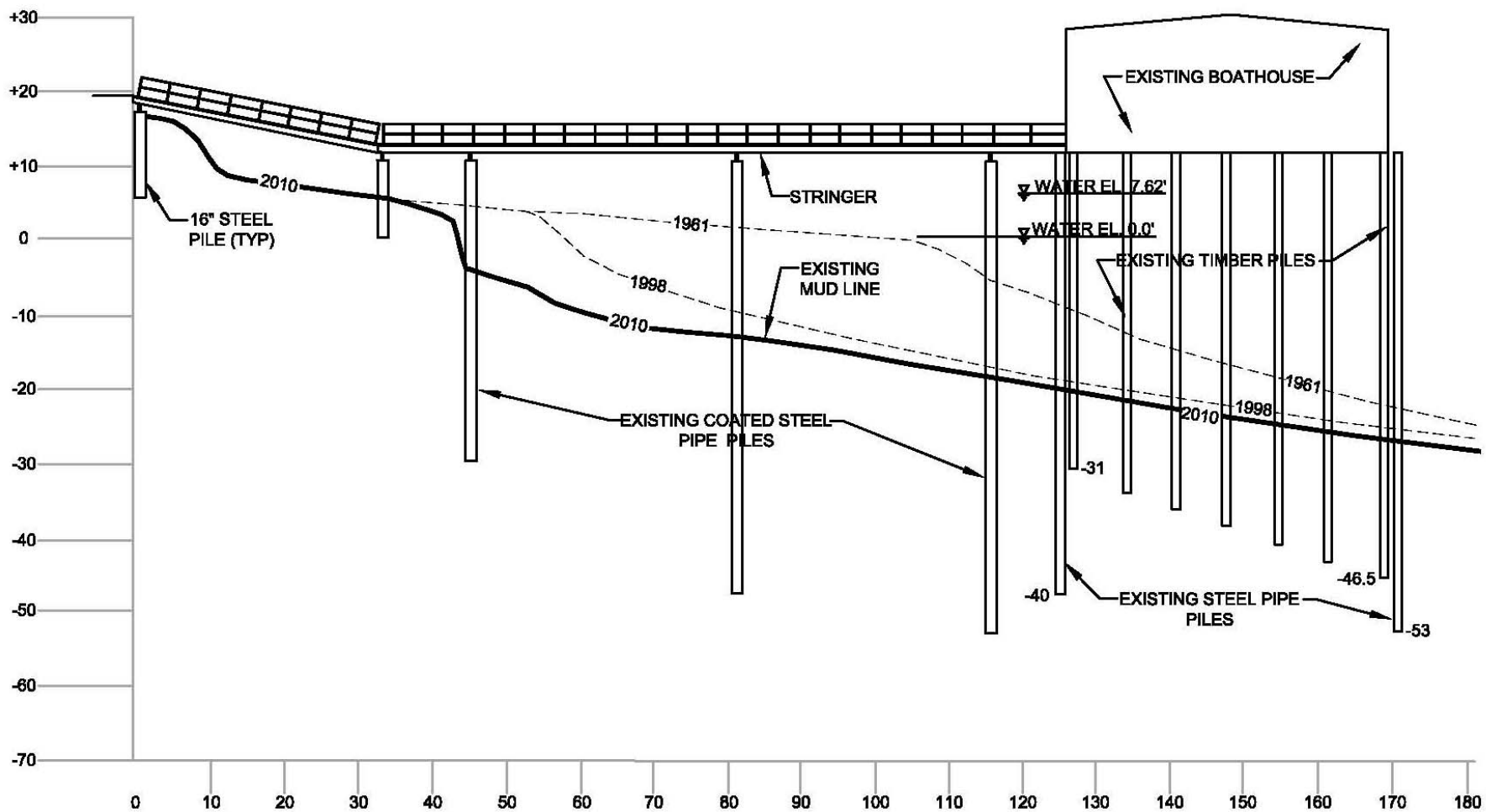


Figure 4. Cross-section of Walkway and Boathouse Showing Mudline Elevation over Time.



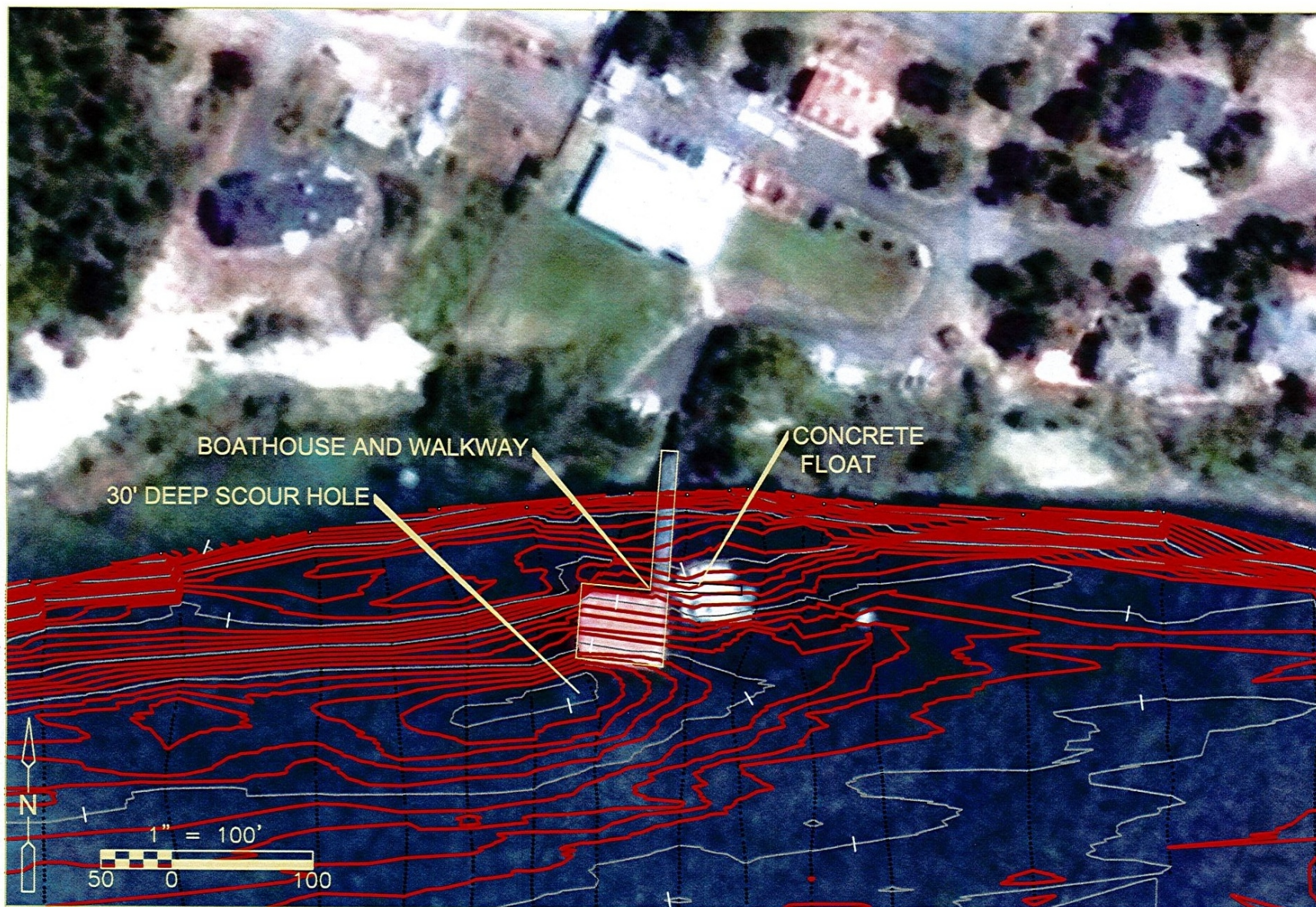


Figure 5. Bathymetry of the Project Area.



The upland facilities, which include administration and operations spaces, housing units, service buildings, and fuel storage in AST, are located above a sand bluff that slopes up steeply from the shoreline. The sand bluff has some evidence of shallow sloughing (Figure 6). Based on the erosion study (USCG 2011a), the underlying sedimentary rock base is eroding at an approximate rate of 1 to 2 feet per year and the vertical face of the rock has approached the toe of the bluff. As the toe erodes, significant sloughing of the sand bluff is expected (USCG 2011a). Continued erosion is expected to cause the toe of the sand bluff to be significantly undercut, resulting in sloughing. At a minimum, this will disrupt access to the waterfront structures and upland operations.

The Station's infrastructure both on- and off-shore is essential to continued operations and mission readiness. Shoreline erosion threatens both access to and stability of the waterside facilities and the potential for failure of the sand bluff threatens the stability of landside infrastructure such as the AST at the top of the bluff.



**Figure 6. Erosion of Sand Bluff is Visible as a Patch of Exposed Sand** (*looking east toward shoreline during high tide – bare patch to the right of conifer tree approximately 72 square feet*).

## 1.4 Public Involvement

On December 30, 2011, the USCG initiated a public scoping comment period. Public agencies, tribes, adjacent landowners, and potentially interested parties were notified of the USCG intent to prepare an EA and invited to comment. The public scoping comment period closed on February 6, 2012. Responses were received from six agencies, two adjacent landowners, and one fishing charter company. Agencies either had no comment or notified USCG of permit and consultation requirements. One adjacent landowner was concerned about potential effects of construction on their recently installed riprap shoreline protection. The fishing charter company expressed support for the Coast Guard mission on the Siuslaw River.

The Draft EA and the Draft FONSI will be made available to all interested Federal, State, and local agencies and the general public for a 30-day comment and review period in compliance with policies regarding open decision-making. The USCG will publish a Notification of Availability (NOA) for the Draft EA/FONSI in the local newspaper. The Draft EA is also being made available by mailing copies to interested parties, agencies, and the library in Florence, Oregon for public review during the comment period. A review copy is also available at Station Siuslaw River. All comment letters should be postmarked by April 2, 2012 which is within 30 days of the publication of the NOA. Comments may be submitted to:

Kate Stenberg, Ph.D.  
14432 SE Eastgate Way, Suite 100  
Bellevue, Washington 98007  
Fax: (425) 746-0197  
Email: [stenbergkj@cdmsmith.com](mailto:stenbergkj@cdmsmith.com)

## **Section 2**

# **Proposed Action and Action Alternatives**

A number of alternatives were evaluated during the development of the proposed project. These alternatives included a No Action Alternative, construct a riprap revetment (the Proposed Action), construct groins with a gravel shoreline (Action Alternative 1), and construct a riprap revetment with scour allowance in the toe (Action Alternative 2). The alternatives were evaluated for their ability to meet the purpose and need for the project. Alternatives that were determined to not meet the purpose and need are described under Section 2.5, Alternatives Considered but Eliminated.

### **2.1 No Action Alternative**

Under the No Action Alternative, no shoreline stabilization activities would occur. Ongoing erosion would continue, caused by a combination of natural and manmade factors including natural channel meandering and impacts from prior alterations along the river. Erosion is expected to continue at historical rates for the foreseeable future. Loss of material at the bluff toe would continue and is expected to result in significant sloughing which has the potential to destabilize the AST and utility services located at the top of the bluff and access to the boathouse.

Continued loss of shoreline material at the toe of the bluff also has the potential to result in a sudden rotational failure of the sand bluff above. A rotational failure would result in a rapid and unpredictable loss of a large amount of material. If a rotational failure occurred, upland facilities including the AST and associated fuel lines, utilities, and the gangway to the boathouse could be significantly damaged or lost, and personnel could be injured if they are nearby during such an event.

### **2.2 Proposed Action: Construct a Riprap Revetment**

The Proposed Action is to stabilize the shoreline at Station Siuslaw River by constructing a riprap revetment along the shoreline of the Station property (Figure 7). Activities would occur along the shoreline both above and below Mean Higher High Water (MHHW). Adjacent property owners have installed riprap revetments upstream and downstream of the facility to slow the rate of shoreline retreat. In the subtidal area some fill would be required to replace eroded material and create a stable slope. Above MHHW, riprap would be placed to stabilize the bank.

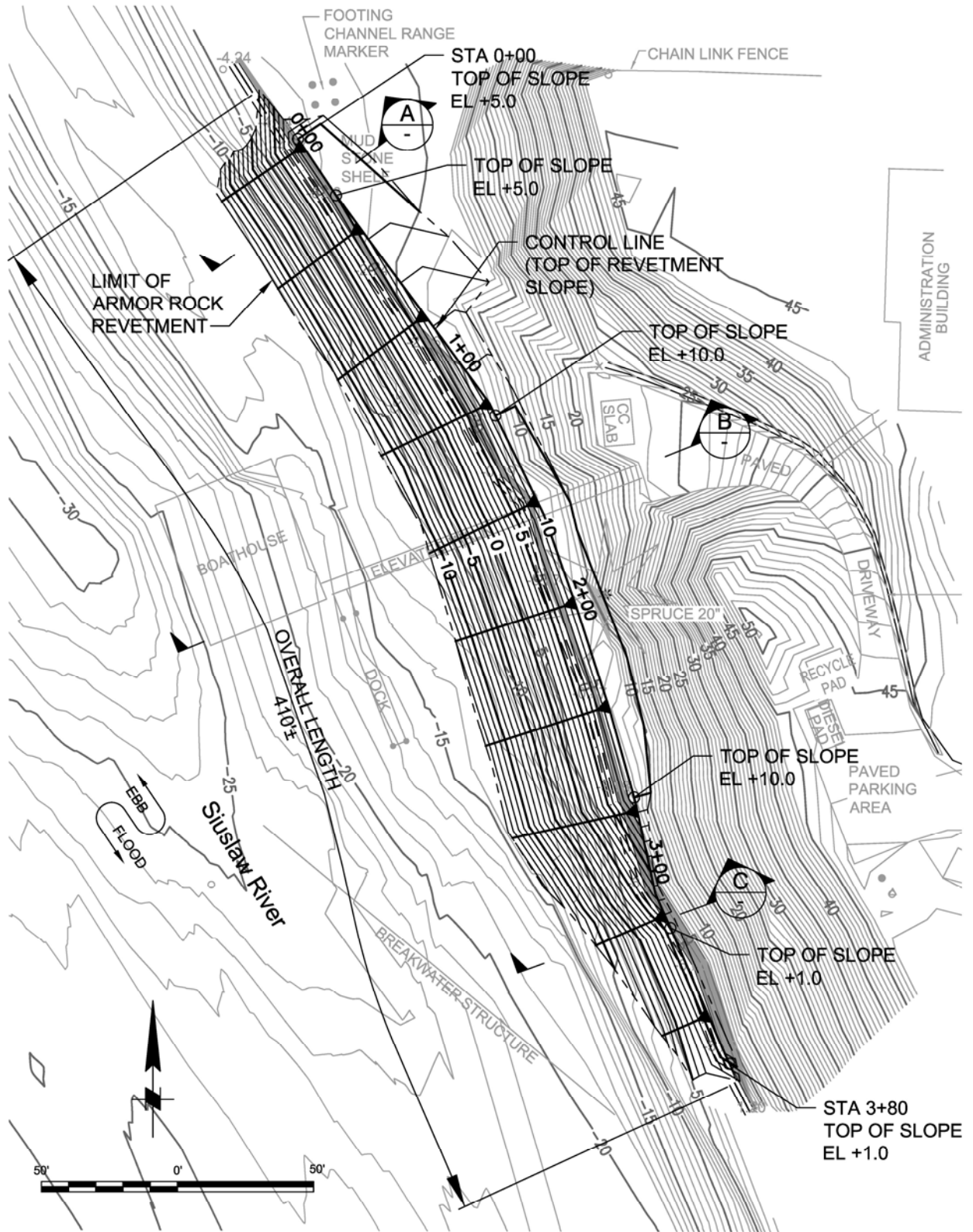


Figure 7. Proposed Action - Construct Riprap Revetment

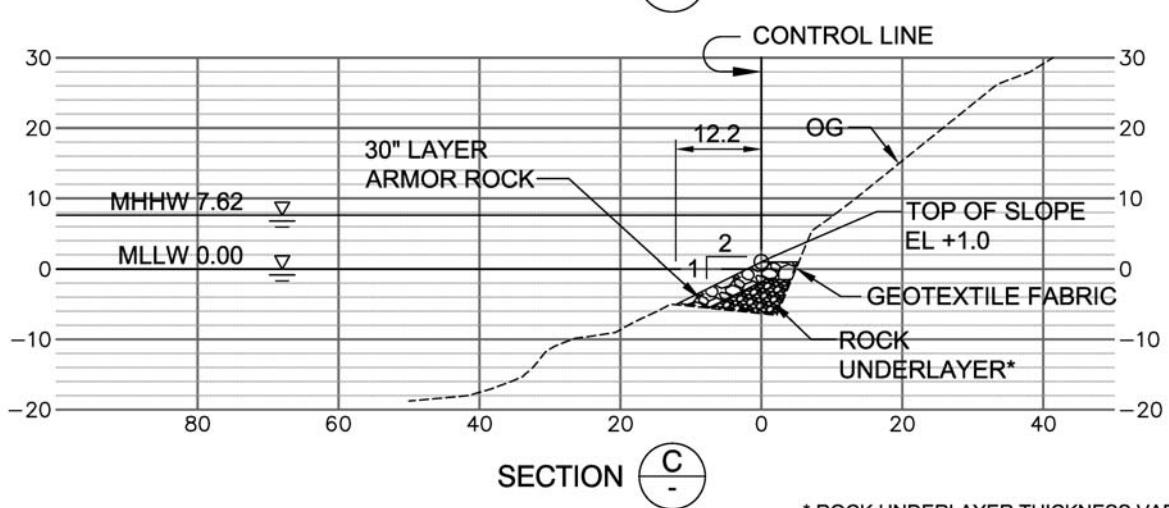
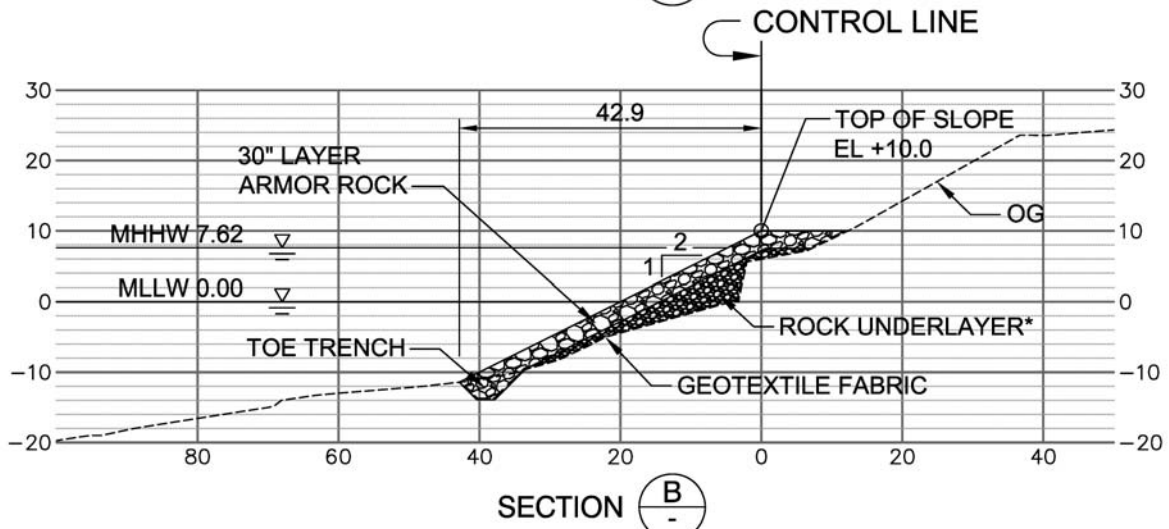
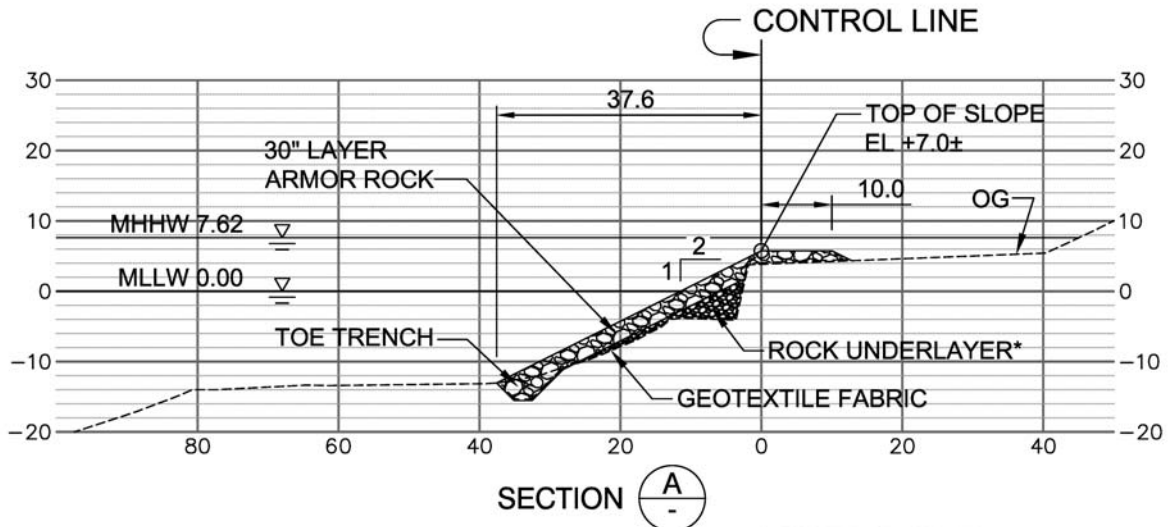
The riprap revetment would be installed along the shoreline behind the boathouse with an approximate length of up to 410 feet (Figure 7). The riprap would be laid over a rock underlayer that provides an even slope. The slope of the revetment would be 1V:2H (USCG 2011b). The top of the revetment would be up to 10 feet above the mean lower low water (MLLW). The width of the revetment would vary between approximately 12 feet and 45 feet, and would be 30 inches thick over a rock underlayer (Figure 8). Half-ton riprap and rock underlayer material (gravel and on-site material composed primarily of sand) would be placed below MHHW, which is 7.62 feet above MLLW at this location. The amount of material required to be placed below MHHW will be dependent on the actual bathymetry of the project area at the time of construction but is estimated to be up to 5,000 cubic yards (cy).

It is expected that the revetment would be sufficient to stabilize the shoreline in the short term without having to install a scour allowance at the toe to replace materials that will be lost through future erosion (USCG 2011b). However, depending on the rate of erosion and the projected operational life of the facility, it is possible that additional riprap would be required to protect against future scour. It is estimated that an additional 3,000 cy of riprap may be needed for the scour allowance in the long term (see Action Alternative 2 below).

Shoreline and in-water work would be completed from a barge either anchored along the shoreline or fixed to the river bottom with spuds. Due to river currents and the constraints of working around the existing structures, construction could take 11 weeks and would be done between October 1 and February 15. The majority of work would be conducted during the approved in-water work period for the Siuslaw River estuary; November 1- February 15. The USCG would request an exemption to the approved in-water work period from the National Marine Fisheries Service (NMFS) and the Oregon Department of Fish and Wildlife (ODFW) to allow work to commence on October 1 due to weather considerations.

Construction during the winter months can often take longer due to inclement weather. In addition, getting construction equipment into position may be difficult during winter months due to the challenges of transporting equipment and materials via barge across the river bar. In an effort to reduce the necessary construction duration and avoid winter storms that may prevent the work from proceeding, USCG would request an exemption to the approved in-water work period as described above.





\* ROCK UNDERLAYER THICKNESS VARIES

Figure 8. Proposed Action - Riprap Revetment Cross Sections

## 2.3 Action Alternative 1: Construct Groins with Gravel Shoreline

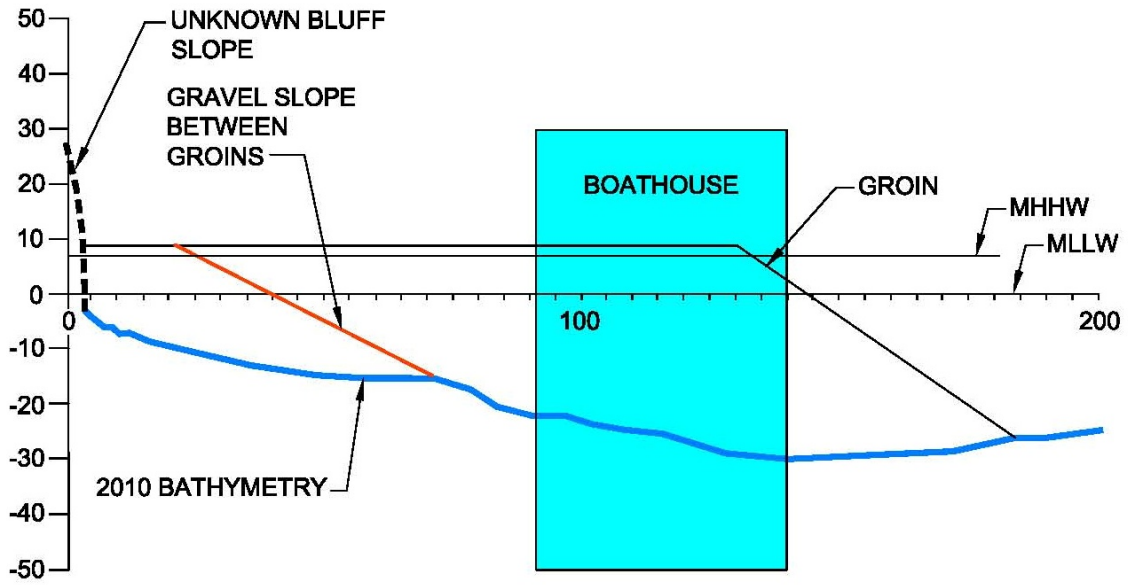
Action Alternative 1 would construct two groins, one upstream and one downstream of the project site, and fill the space between the groins with loose gravel material (Figure 9). The groins would redirect river flow, control river meandering, and provide wave protection to protect the shoreline and reduce erosion. The groins would also confine the gravel material and create a deposition zone between them which would help stabilize the piling supports for the dock and boathouse. The gravel material would form a beach that would protect the slope from scour. The gravel fill may also be designed to act as a buttress to prevent rotational failure. The groins would be designed to minimize downstream effects to the adjacent shoreline.

Based on the conceptual design, the groins would be approximately 130 feet long on the upper edge, extending to approximately 180 feet along the lower edge (Figure 10). The top of the groins would be approximately 5 feet above MHHW and would extend to the bottom which is approximately 30 feet below MLLW where the river bottom is lowest. It is assumed that the groins would be approximately 10 feet wide at the top. Approximately 26,000 cy of material below MHHW would be required to construct both groins. Approximately 12,000 cy of gravel material would be required below MHHW to fill between the groins.

Shoreline and in-water work would be completed from a barge either anchored along the shoreline or fixed to the river bottom with spuds. Due to river currents and the constraints of working around the existing structures, construction could take 11 weeks and would be done between October 1 and February 15. The majority of work would be conducted during the approved in-water work period for the Siuslaw River estuary; November 1- February 15. The USCG would request an exemption to the approved in-water work period from NMFS and ODFW to allow work to commence on October 1 due to weather considerations.



Figure 9. Action Alternative 1 - Construct Groins with Gravel Shoreline.



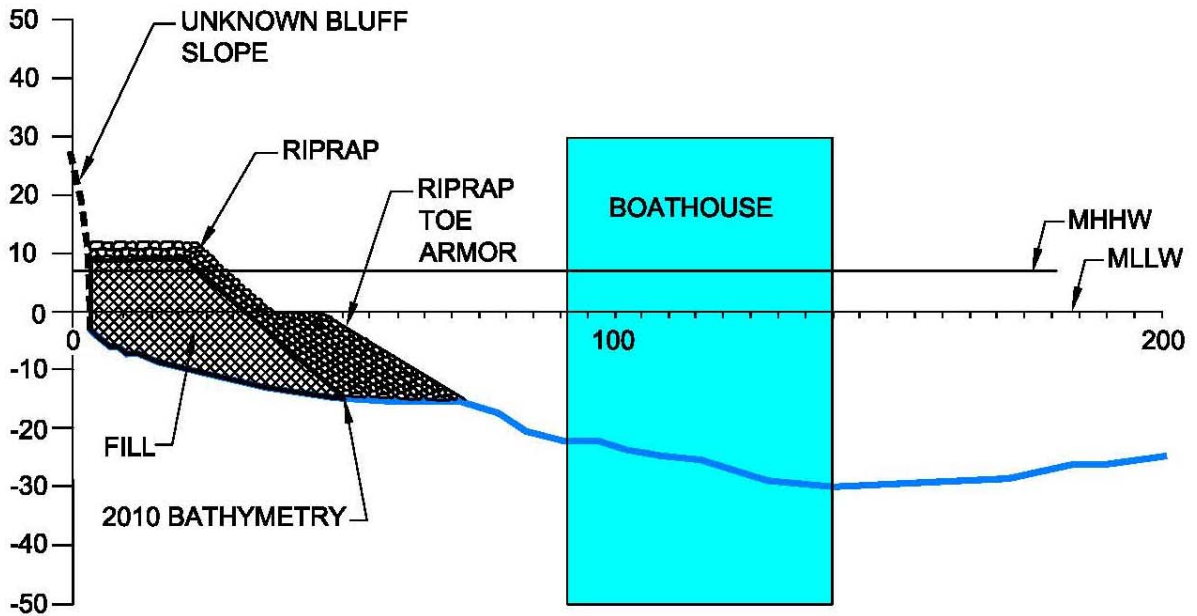
Note: Not to Scale  
Units are in Feet

**Figure 10. Action Alternative 1 - Conceptual Cross-section of Groin and Gravel Shoreline**

## **2.4 Action Alternative 2: Construct a Riprap Revetment with Scour Allowance in Toe**

Action Alternative 2 would construct a riprap revetment similar to the Proposed Action except that it would be constructed with an extended toe to withstand long-term deepening of the river bottom (Figure 11). The riprap revetment would be constructed in the same manner as described for the Proposed Action with the placement of additional riprap at the toe of the slope. The amount of fill material is anticipated to be the same as under the Proposed Action, but there would be more riprap placed at the toe of the revetment slope below MHHW. Under Action Alternative 2 the amount of rock that would be placed is estimated to be approximately 10,000 cy.

Similar to the other alternatives, the shoreline and in-water work would be completed from a barge either anchored along the shoreline or fixed to the river bottom with spuds. Due to river currents and the constraints of working around the existing structures, construction could take 11 weeks and would be done between October 1 and February 15. The majority of work would be conducted during the approved in-water work period for the Siuslaw River estuary; November 1- February 15. The USCG would request an exemption to the approved in-water work period from NMFS and ODFW to allow work to commence on October 1 due to weather considerations.



Note: Not to Scale  
Units are in Feet

**Figure 11. Action Alternative 2 – Conceptual Cross-section of Riprap Revetment with Scour Allowance Toe.**

## 2.5 Alternatives Considered but Eliminated

An additional alternative was considered but it was determined to not meet the purpose and need. This alternative is summarized here but is not considered further in the analysis.

### 2.5.1 Relocate Boathouse

This alternative would entail relocating the station and boathouse upriver to a location where the river bank and bed are more stable. This alternative would require the acquisition of new property and an investment in construction of new facilities. The significant investment that has been made in the current structures and facilities (including landside facilities as well as the dock and boathouse) would be lost. Moreover, relocating the station and boathouse upriver would increase emergency response times and could compromise the Station's mission effectiveness. For these reasons, this alternative was considered to be infeasible and was eliminated from further analysis.

## Section 3

# Affected Environment and Potential Effects

The project area occurs in the Siuslaw River estuary, approximately two miles upstream of the river mouth. The coastal zone in this region consists of a 1- to 2-mile-wide plain covered by active and stabilized sand dunes backed by the mature upland topography of the Coast Range. The lower portion of the Siuslaw River is bordered by broad alluvial flats (USACE and USEPA 2010).

The project area is located along the east (right) bank of the estuary. At the Station, the shoreline is steep and densely vegetated with both deciduous and evergreen trees and shrubs. The shoreline slopes up a sandy bluff to the Station buildings, fuel tanks, and other facilities located at the top. The shoreline is highly eroded in this area, resulting in undercut and steep banks. Just downstream of the Station, the shoreline consists of a wide bedrock shelf that is underwater in high tide, sloping up to steep sandy bluff above. Upstream of the Station, the shoreline is steeply sloped and vegetated (see Appendix A for photographs of the project site and vicinity).

The west (left) bank of the estuary near the project area is bordered by undeveloped park lands that form the northernmost extent of the Oregon Dunes National Recreation Area. Vegetation adjacent to the west bank consists of dune grass with upland stands of conifers. Four groins were built to stabilize the shoreline in 1974 directly across from the project action area. The groins have resulted in stabilization and accretion of the shoreline on the west bank of the estuary, while shifting the main course of the river towards the opposite bank, in the location of the project area (USCG 2011b).

For each resource category, the impact analysis follows the same approach in terms of impact findings. When possible, quantitative information is provided to establish impacts. Indirect effects will be described as appropriate. Qualitatively, impacts will be measured as outlined below:

**None/Negligible:** The resource area would not be affected, or changes would be either non-detectable or if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.

**Minor:** Changes to the resource would be measurable, although the changes would be small and localized. Impacts would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.

**Moderate:** Changes to the resource would be measurable and have both localized and regional scale impacts. Impacts would be within or below regulatory standards, but historical conditions are being altered on a short-term basis. Mitigation measures would be necessary and the measures would reduce any potential adverse effects.

**Major:** Changes would be readily measurable and would have substantial consequences on a local and regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, though long-term changes to the resource would be expected.

### **3.1 Air Quality**

The Federal Clean Air Act requires the U.S. Environmental Protection Agency (USEPA) to establish and maintain standards for common air pollutants. These standards are used to manage air quality across the country.

Florence, Oregon is not within either a USEPA-designated Nonattainment or Maintenance Area for air quality (USEPA 2011).

#### **No Action Alternative**

Under the No Action Alternative, there would be no construction and no changes to existing conditions at the project site. As such, there would be no impacts related to air quality.

#### **Proposed Action - Construct Riprap Revetment**

Under the Proposed Action, impacts on air quality could result from the use of construction equipment powered by diesel fuel, including a crane, generator, and the barge engine. Emissions from this equipment would consist of various byproducts of the combustion of fossil fuel, such as nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Emissions would be temporary and limited to the duration of construction. Due to the short duration of this potential air quality effect, this impact would be minor. Federal and state air quality attainment levels would not be exceeded. The completed project would not result in any air emissions.

The project area experiences moderate to strong winds, particularly during the fall/winter construction season, that would be expected to disperse emissions from the localized construction area. Therefore, emissions would not be expected to exceed national ambient air quality standards. Mitigation measures would not be required.

#### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

Under Action Alternative 1 there could be impacts on air quality during construction from the operation of diesel-powered construction equipment similar to activities described under the Proposed Action. Similar construction equipment would be used as for the Proposed Action; however, Action Alternative 1 would require a much larger amount of material to be moved and placed. It is likely that the construction duration for Action Alternative 1 would be somewhat longer than for the Proposed Action. While emissions would be greater than for the Proposed Action, they would not be expected to exceed national ambient air quality standards. Mitigation measures would not be required.



### **Action Alternative 2 – Construct Riprap Revetment with Scour Allowance in Toe**

Construction of Action Alternative 2 would require the same equipment as the Proposed Action although the construction duration could be slightly longer. Therefore, impacts on air quality would be similar to that for the Proposed Action and would not exceed national ambient air quality standards. Mitigation measures would not be required.

## **3.2 Climate Change**

Florence, Oregon is located on the Oregon Coast and receives an average of 67 inches of rainfall per year. Like much of the Pacific Northwest, the weather is characterized by sunny summers and wet winters. In the warmest months, the average high temperature is 72 degrees Fahrenheit. In the winter months, high temperatures usually hover around 51 degrees Fahrenheit.

Projected changes in climate conditions are expected to result in a wide variety of effects in the Pacific Northwest, including increased temperatures, changes in seasonal precipitation, earlier and higher spring stream flows and lower late summer stream flows, and increased frequency and severity of flooding (USGCRP 2009). Sea level along the Oregon Coast is expected to rise by several inches in the next century. A recent report concluded that sea level could rise on the Washington coast between three and four feet by 2100 (Ecology 2006) and similar effects may be expected along the Oregon coast. Sea level rise would generate increased tidal heights in estuaries and coastal rivers that are affected by tides.

### **No Action Alternative**

Under the No Action Alternative, there would be no construction and no emissions of green house gases. Therefore, there would be no effect on climate change.

However, under the No Action Alternative, the shoreline would continue to erode. With predicted increases in tide levels and higher spring flows due to climate change, erosion would be expected to increase, further destabilizing USCG facilities at the Station.

### **Proposed Action - Construct Riprap Revetment**

Construction of the riprap revetment under the Proposed Action would have the potential to contribute greenhouse gases that result in climate change. Use of typical construction equipment would entail the use of gasoline and diesel fuels that would contribute minor amounts of greenhouse gases to the atmosphere.

Construction of riprap revetment would reduce the predicted effects of climate change; particularly those associated with higher tides and increased river flows, as compared to existing conditions. The riprap would be designed with consideration of the predicted increases in tide levels to ensure the height and other dimensions of the proposed improvements are sufficient to stabilize the shoreline over the expected life of the project.



### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

Similar to the Proposed Action, construction of Action Alternative 1 would have the potential to contribute greenhouse gases that result in climate change. Due to the greater amount of material to be placed, the construction duration would be expected to be slightly longer than under the Proposed Action resulting in slightly greater greenhouse gas releases.

Of the action alternatives evaluated in this EA, Action Alternative 1 would reduce erosion within the project area the most and best stabilize the piling supports for the dock and boathouse. As compared to the Proposed Action, Action Alternative 1 would better protect the shoreline from predicted effects of climate change; particularly those associated with higher tides and increased river flows.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

Construction of Action Alternative 2 would require the same equipment as the Proposed Action. Therefore, impacts on greenhouse gas emissions and climate change would be similar to that for the Proposed Action.

As compared to the Proposed Action, Action Alternative 2 would be expected to afford better long-term protection of the shoreline with regard to predicted effects of climate change described above.

## **3.3 Biological Resources**

### **3.3.1 Vegetation**

Upland vegetation within the vicinity of the project area consists of coniferous forests dominated by Douglas-fir (*Pseudotsuga menziesii*), lodgepole or shore pine (*Pinus contorta*) and Sitka spruce (*Picea sitchensis*). In riparian areas, deciduous trees and shrubs include willows (*Salix* sp.), red-osier dogwood (*Cornus sericea*), Pacific ninebark (*Physocarpus capitatus*), Himalayan blackberry (*Rubus armeniacus*), and evergreen huckleberry (*Vaccinium ovatum*). Marram grass or European beach grass (*Ammophila arenaria*) occurs on the coastal dune deflation plane along the western bank of the Siuslaw River estuary.

Aquatic vegetation within the estuary includes eelgrass (*Zostera marina*), *Spartina* (sp.) tufted hairgrass (*Deschampsia caespitosa*), sedges (*Carex* sp.), pickleweed (*Salicornia virginica*), Pacific silverweed (*Potentilla anserina*), and sea arrow-grass (*Triglochin maritimum*).

The upland habitats of the project area have been highly altered by clearing and development of the Station facilities. The steep slope of the bluff supports a mix of native species including willows, red osier dogwood, salal (*Gaultheria shallon*), and non-native species such as evergreen huckleberry, Himalayan blackberry, and ivy. Most of the existing riparian vegetation (particularly shrubs) occurs above MHHW line. Due to the severe erosion of the bank below the MHHW line, the bank is very

steep and quickly drops to depths of -10 feet or greater. There is no aquatic vegetation present within the project area.

### **No Action Alternative**

Under the No Action Alternative, there would be no construction and no changes to existing conditions at the project site. As such, there would be no impacts related to vegetation.

### **Proposed Action - Construct Riprap Revetment**

Under the Proposed Action, some shoreline vegetation, consisting of willow, dogwood, and other riparian shrubs, would be removed through burial by rock and fill material during construction of the riprap revetment. Vegetation on the steep slope above the revetment would not be cleared and only vegetation within the revetment footprint would be affected. Only a portion of the revetment would extend above MHHW and in those locations it would not extend more than three feet above MHHW; therefore, approximately 0.01 acres above MHHW would be affected. There is minimal vegetation within this area; consisting primarily of grasses and willows. The vegetation on the bank above the riprap would not be disturbed. No eelgrass is known to occur within the project area, so there would be no loss or disturbance of this important aquatic vegetation type that provides nursery habitat for fish and other aquatic species. Potential impacts to vegetation would be minor and mitigation measures would not be required.

### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

Although the footprint of the groins and gravel shoreline would be greater than the project footprint under the Proposed Action, most of it would be below the MHHW line and would not affect vegetation. The groins and gravel shoreline would also create a depositional zone between the groins that could eventually result in greater area above MHHW that could support vegetation. The increased stability below MHHW could also eventually result in the establishment of some aquatic vegetation. However, groins could have the potential to alter erosion and deposition patterns up and downstream of the project area resulting in losses of vegetation outside of the project area. While the direct impacts would be minor, off-site indirect impacts could be greater. The potential for increased erosion downstream would represent a shift of the current deep scour hole condition to another portion of the river which could affect downstream riparian vegetation. The beneficial effects of the depositional area between the groins would partially offset this effect. The overall impact of Action Alternative 1 would be less than significant.

As with the Proposed Action, no eelgrass is known to occur within the construction area for Action Alternative 1 and there would be no effect on this habitat type.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

With Action Alternative 2, impacts to vegetation would be the same as under the Proposed Action.

### 3.3.2 Fish and Wildlife

Fall-run Chinook salmon (*Oncorhynchus tshawytscha*), winter steelhead (*Oncorhynchus mykiss*), and coastal cutthroat trout (*Oncorhynchus clarkii clarkia*) are important fisheries in the Siuslaw River. Surfperch, rockfish, and clams also occur in the estuary.

The Siuslaw River estuary has been designated an Important Bird Area by the Audubon Society, providing habitat for more than 1,000 migrating shorebirds (National Audubon Society 2011). The estuary provides important wintering habitat for tundra swan (*Cygnus columbianus*). Other birds utilizing the project area include gulls (*Larus* sp.), scoters (*Melanitta* sp.), cormorants (*Phalacrocorax* sp.), great blue heron (*Ardea herodias*), and great egret (*Ardea alba*).

The vegetation on the steep bank in the project area would provide habitat for birds such as song sparrow (*Melospiza melodia*) and small rodents.

Marine mammals commonly observed in the project area include harbor seal (*Phoca vitulina*) and California sea lion (*Zalophus californianus*). Large mammals including black-tailed deer (*Odocoileus hemionus*) and elk (*Cervus canadensis*) utilize upland forested areas and meadows near the project area.

#### No Action Alternative

Under the No Action Alternative, there would be no construction and no changes to existing conditions at the project site. As such, there would be no direct impacts to fish or wildlife.

However, the No Action Alternative would not address the shoreline erosion that is threatening the stability of the walkway and boathouse or the potential for slope sloughing or sudden rotational failure. Failure of the sand bluff could threaten the AST at the top of the bluff. If the walkway or the bluff failed, fuel could be spilled into the river resulting in impacts to water quality. These effects would be expected to be relatively short-term as USCG would respond rapidly to clean up any such spills.

#### Proposed Action - Construct Riprap Revetment

Construction of the Proposed Action could result in impacts to fish from loss of habitat, harassment/displacement from disturbance caused by construction activities, increased turbidity, and decreased prey base by removing or burying benthic invertebrate prey populations. The approved in-water construction period for the Siuslaw River estuary is November 1 to February 15. If an extension is obtained, work could begin one month earlier on October 1. During this period, the most vulnerable life stages of fish would not be present in the project area as most juvenile fishes are present from late winter to spring or summer.

The construction footprint for the Proposed Action is relatively small; approximately 0.5 acres. Existing shallow water habitat for juvenile fish is limited and there are

virtually no refugia such as woody debris or submerged aquatic vegetation present within the project area. Adult fish would be able to move out of the area during construction activities. Therefore, impacts on fish from loss of habitat or harassment/displacement would not be significant.

Sediments within the project area are primarily sand and larger particles which would settle back out relatively quickly and are not likely to remain suspended long enough to reduce light penetration or result in fish injury. To reduce the potential for water quality impacts, all construction equipment would be operated and maintained in a manner consistent with an approved spill prevention and pollution control plan. Therefore, impacts on fish from increased turbidity or other water quality effects would not be significant.

Recolonization of benthic invertebrates is expected to occur relatively quickly, and prey is more readily available in other portions of the estuary where eelgrass and other submerged vegetation occur. Therefore, impacts to fish from loss of habitat or prey base would not be significant.

The upland vegetation above the MHHW line provides habitat for birds such as song sparrow (*Melospiza melodia*) and small rodents. The Proposed Action would result in the loss of approximately 0.01 acres of this habitat. The loss of this small amount of habitat would be a minor impact.

Impacts to wildlife such as nesting birds would not occur, since construction would be conducted outside of the bird nesting season. The loss of a small amount of vegetation along the shoreline would not be a significant impact on wildlife.

### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

Construction of Action Alternative 1 would have a larger underwater footprint than the Proposed Action; therefore, it would likely result in more turbidity with associated potential effects on fish. Due to river currents and the constraints of working around the existing structures, construction could also take 11 weeks and will be done between October 1 and February 15. The majority of work would be conducted during the approved in-water work period for the Siuslaw River estuary; November 1- February 15. The USCG would request an exemption to the approved in-water work period from NMFS and ODFW to allow work to commence on October 1 due to weather considerations. As with the Proposed Action, impacts on fish from habitat loss or loss of prey would not be significant.

The lower velocity depositional area created between the groins could result in beneficial effects on fish habitat as the gravel shoreline could provide some shallow water habitat. However, groins could have the potential to alter erosion and deposition patterns up and downstream of the project area resulting in increased erosion and loss of shallow water habitat, shoreline, and upland habitat outside of the project area. The potential for increased erosion downstream would represent a shift of the current deep scour hole condition to another portion of the river while the

beneficial effects of the depositional area between the groins would partially offset this effect. The overall impact of Action Alternative 1 would be less than significant.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

Construction of Action Alternative 2 would have the same impacts on fish and wildlife as the Proposed Action and impacts would not be significant.

### **3.3.3 Threatened and Endangered Species and Critical Habitat**

The Endangered Species Act (ESA) requires federal agencies to coordinate with the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) on potential effects to listed species and designated critical habitat.

Several threatened and endangered species may occur in the project area. Oregon Coast coho salmon (*Oncorhynchus kisutch*), a threatened species, and two other threatened fish species, green sturgeon (*Acipenser medirostris*) and eulachon (*Thaleichthys pacificus*), may occur within the project area. Federally listed bird species that may occur in the project area include marbled murrelet (*Brachyramphus marmoratus*), a threatened species which utilizes near-shore waters for foraging and old-growth forests for nesting, and western snowy plover (*Charadrius alexandrinus nivosus*), a threatened species which inhabits nearby beaches including Heceta Beach. The northern spotted owl (*Strix occidentalis caurina*) inhabits upland forest habitats within the Siuslaw National Forest, east of the project area.

The endangered killer whale (*Orcinus orca*) has been observed in the estuary in the summer, and Steller sea lions (*Eumetopias jubatus*), a threatened species, could also occur in the estuary.

The project area is located within designated critical habitat for the Oregon Coast coho salmon. Designated critical habitat for marbled murrelet and northern spotted owl is located within the Siuslaw National Forest, approximately five and seven miles east, respectively, from the project area. Designated critical habitat for western snowy plover is located approximately four miles north of the project area at Heceta Beach.

The Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with NMFS on activities that may adversely affect essential fish habitat (EFH). EFH has been defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

The project area is designated EFH for coho and Chinook salmon (PFMC 2000), coastal pelagic species (PFMC 1998), and groundfish species (PFMC 2006) by the Pacific Fishery Management Council (PFMC).

### **No Action Alternative**

Under the No Action Alternative, there would be no construction and no changes to existing conditions at the project site. As such, there would be no impacts related to threatened or endangered species, critical habitat, or EFH.

### **Proposed Action - Construct Riprap Revetment**

A biological assessment is being prepared in accordance with Section 7(c) of the ESA to address the potential effects of the proposed project on federally-listed fish and wildlife species and their habitats as well as EFH. With an October 1 start day, the implementation of conservation measures and best management practices, impacts to federally-listed fish (Oregon coast coho, green sturgeon, and eulachon) or critical habitat would not be significant. The effects determination under ESA is “*may affect, not likely to adversely affect.*” There would be no effects to other federally-listed species, including marbled murrelet and marine mammals, as they would not be expected to occur in the project area during construction. The same mitigation measures would reduce the potentially adverse effects on EFH to a less than significant level.

### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

With implementation of the conservation measures described above for the Proposed Action, impacts on federally-listed fish, designated critical habitat, or EFH would not be significant. Action Alternative 1 has the potential to alter erosion patterns immediately up and downstream of the project area. It is possible that the groins could result in the scour that is currently occurring at the USCG dock shifting downstream to affect a different part of the river. The shallow habitat and depositional area created between the groins may offset this effect. Therefore, the net effect would be less than significant. As with the Proposed Action, there would be no effects to other federally-listed species, as they would not be expected to occur in the project area during construction.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

With implementation of the conservation measures described above for the Proposed Action, construction of Action Alternative 2 would have the same impacts on listed species, critical habitat, and EFH as the Proposed Action and impacts would not be significant.

## **3.4 Historic and Cultural Resources**

The National Historic Preservation Act of 1966 as amended (16 U.S.C. 470, et seq.) requires federal agencies to determine whether a project has the potential to affect historic resources and identify potentially affected historic resources. If a project has the potential to affect historic resources there are additional requirements to consult with the state historic preservation officer and tribes and to seek input from the public.

There are no known sites of historical or archeological significance, including tribal cultural or religious sites, within the project area. The USCG is coordinating with the the Confederated Tribes of the Siletz Indians of Oregon and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians. The Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians use the Siuslaw River for its fisheries resources. There are no other known Indian Trust Assets in or near the project area and it does not provide habitat for shellfish, waterfowl, or wildlife that might be used by tribal members.

Sea level rise at the end of the last glacial melting has likely buried or drowned sites older than 3000 years (Siuslaw Watershed Council 2002). In addition, the project area is located at the base of a steep bluff which would not provide a suitable site for occupation. There are no known prehistoric sites within the project area.

There is a historic resource near the project area. The equipment building at the top of the bluff within the Station is registered on the National Register of Historic Places and is in active use by USCG (Figure 12).



**Figure 12. USCG Station Siuslaw River Equipment Building**

### **No Action Alternative**

Under the No Action Alternative, the shoreline erosion would continue and the potential for a sudden, large rotational failure of the sand bluff would remain. A rotational failure would result in a rapid and unpredictable loss of a large amount of material that could affect the integrity of the historic equipment building. This impact could be significant.

### **Proposed Action – Construct Riprap Revetment**

Construction of a riprap revetment would not affect any cultural or historic resources and would stabilize the bank reducing the potential for a sudden rotational failure of the sand bluff. The placement of riprap would not remove or disturb any cultural resources that may be present and through shoreline stabilization would effectively protect any materials in place. A determination of no effect on cultural resources would be confirmed through coordination with the Oregon Department of Parks and Recreation Heritage Program, the Confederated Tribes of the Siletz Indians of Oregon and the Confederated Tribes of Coos, Umpqua, and Siuslaw Indians.

### **Action Alternative 1 – Construct Groins with Gravel Shoreline**

Action Alternative 1 also place riprap and fill materials within the project area to stabilize the shoreline and would have no effect cultural or historic resources.

### **Action Alternative 2 – Construct Riprap Revetment with Scour Allowance in Toe**

Similar to the Proposed Action, Action Alternative 2 would have no effect on cultural or historic resources.

## **3.5 Coastal Resources**

The Coastal Zone Management Act of 1972 (CZMA) (Public Law 92-583) as implemented by 15 CFR Part 930 requires federal agencies to determine whether proposed activities that affect any land or water use or natural resource within the coastal zone shall be carried out in a manner that is consistent to the maximum extent practicable with the enforceable policies of approved state management programs. Although the consistency requirement does not apply to federal lands, it does apply to activities that may affect coastal zone resources adjacent to the federal lands.

USCG Station Siuslaw River is within the coastal zone of the State of Oregon. The Oregon Department of Land Conservation and Development administers the CZMA for the protection and restoration of coastal communities and resources during planning and development. Zoning in Oregon is delegated to the county and city level. The project area is within the city limits of Florence, Oregon. The estuary is designated a “Shallow Draft Development Estuary” and policies are in place to balance the natural and economic uses of the estuary including its function as a transportation corridor. The river within the project area is designated as Conservation Estuary and the shoreland within the project area is designated as Residential Development Management Unit #1.



The Conservation Estuary designation allows riprap to be installed if necessary to protect an existing use. The Residential Development shoreland designation recognizes the instability of the sand bluff and encourages structures to be set back from the edge while also recognizing that the area is developed and allowing activities that provide for water dependent uses (Figure 13). The Station's dock and boathouse are existing water dependent uses.

The Coastal Barrier Resources Act is intended to protect coastal barriers which are land features that protect the mainland from the full force of wind, tides, and waves. Coastal barriers protect coastlines from erosion due to severe storms. There are Pacific Coast units in the coastal barrier resource system at this time. Therefore, none of the alternatives would have an adverse effect on coastal barrier resources.



**Figure 13. Residential Development and the Sand Bluff within the Residential Development Shoreland Coastal Designation** (north of USCG Station Siuslaw River).

### **No Action Alternative**

The No Action Alternative would not alter either the estuary waters or the coastal shorelands and would be in compliance with the CZMA.

### **Proposed Action – Construct Riprap Revetment**

The Proposed Action would install the minimum amount of riprap necessary to stabilize the shoreline and protect the existing dock and boathouse that are essential to the mission of the USCG Station. The Proposed Action would likely be consistent with the CZMA and consistency would be confirmed by the City of Florence at the time of final design and permit application.

### **Action Alternative 1 – Construct Groins with Gravel Shoreline**

The purpose of the Conservation Estuary designation is preservation of long-term use of renewable resources which would not cause major alteration to the estuary. Primary objectives of this designation are to provide for recreational and aesthetic uses of the estuarine resources as well as maintenance and restoration of biological productivity. Riprap and fill to protect existing water dependent uses shall be designed to minimize adverse impacts on water currents, and erosion and accretion patterns. The groin structures under Action Alternative 1 are more likely to affect water currents and erosion and accretion patterns than the riprap under the Proposed Action. Action Alternative 1 would likely be consistent with the CZMA.

### **Action Alternative 2 – Construct Riprap Revetment with Scour Allowance in Toe**

Action Alternative 2 would have similar effects to the Proposed Action and would also be likely to be consistent with the CZMA.

## **3.6 Water Resources**

### **3.6.1 Water Quality**

The mainstem Siuslaw River is on the Oregon Department of Environmental Quality (ODEQ) 303(d) list for dissolved oxygen (River Mile [RM] 5.7-105.9), temperature (RM 0-106), and fecal coliform (RM 5.7-105.9) (ODEQ 2011a). High temperatures are likely a result of the lack of riparian cover and are a stressor to salmonids in the watershed. A Total Maximum Daily Load evaluation has been initiated in the Siuslaw basin and is in the initial scoping and data collection phase (ODEQ 2011b).

Water quality is monitored monthly in the Siuslaw River estuary by the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (Confederated Tribes 2009). Monitoring conducted approximately 7 river miles from the mouth of the Siuslaw River found that average turbidity levels (measured as nephelometric turbidity units or NTUs) in the Siuslaw River estuary during the high flow period were as follows: 3.56 NTU, 6.54 NTU, 13.25 NTU, 6.69 NTU, and 3.22 NTU in October 2007 through February 2008, respectively. Additional data collected from 2004-2011 by the Siuslaw Volunteer Water Quality Monitoring Program indicate that turbidity typically ranges from 1 to 7 NTU in the estuary, with two high data points of 15 NTU and 17 NTU collected in January 2006 and January 2011, respectively (Siuslaw Watershed Council 2011).

ODEQ defines low summer flow as beginning June 1st and ending September 30th, and high seasonal flow as beginning October 1st and ending May 30th. ODEQ recommended that an ambient background standard of 50 NTU be applied to data conducted during high flow periods and 5 NTU be applied to low flow data (Confederated Tribes 2009).

### **No Action Alternative**

Under the No Action Alternative, there would be no construction and no changes to existing conditions at the project site. As such, there would be no direct impacts related to water quality from construction or placement of riprap.

However, the No Action Alternative would not address the shoreline erosion that is threatening the stability of the walkway and boathouse or the potential for slope sloughing or sudden rotational failure. Failure of the sand bluff could threaten the AST at the top of the bluff. If the walkway or the bluff fails, fuel could be spilled into the river resulting in impacts to water quality. These effects would be expected to be relatively short-term as USCG would respond rapidly to clean up any such spills.

### **Proposed Action - Construct Riprap Revetment**

Localized, short-term increases in turbidity would result from construction of the Proposed Action. All construction equipment would be operated and maintained in a manner consistent with an approved spill prevention and pollution control plan, including the following:

- All equipment used for in-water work will be clean and inspected daily prior to use to ensure that the equipment has no fluid leaks. Should a leak develop during use, the leaking equipment will be repaired immediately or removed from the project site immediately and not used again until it has been adequately repaired. At no time will fuels or oils be allowed to enter the river.
- Floating spill containment booms and absorbent booms will be maintained on board equipment to facilitate the cleanup of hazardous material spills. Containment booms and/or absorbent booms will be installed in instances where there is a potential for release of petroleum or other toxic substances.

With the implementation of these measures, impacts on water quality would not be significant.

### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

As with the Proposed Action, measures would be implemented during construction to reduce potential impacts on water quality such that they are less than significant.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

As with the Proposed Action, measures would be implemented during construction to reduce potential impacts on water quality such that they are less than significant.

### **3.6.2 Wetlands**

Executive Order 11990 requires federal agencies to avoid or mitigate impacts to wetlands. The project area is located within estuarine and marine waters as classified by the National Wetlands Inventory (NWI 2011). Based on an on-site evaluation of existing habitat conditions, there is no wetland vegetation present within the construction area of any of the action alternatives. The shoreline at the project site consists of undercut and eroding banks that slope rapidly down to deepwater habitat. The State of Oregon classifies these areas as submerged lands and does not consider them to be wetlands. There are no eelgrass beds or other aquatic vegetation.

Therefore, all of the alternatives, including the No Action Alternative, the Proposed Action, and Action Alternatives 1 and 2, would have no effect on wetland resources.

### **3.6.3 Floodplains**

Federal actions must be in compliance with the provisions of Executive Order 11988, Floodplain Management, and minimize risk of flood hazards and impacts to the natural functions of floodplains.

The Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) classifies the project area as a special flood hazard area. According to the Flood Insurance Rate Map (FIRM) Number 41039C0938F, effective date June 2, 1999, the project area is within Zone AE, which is defined as an area subject to inundation by the 1-percent-annual-chance flood event.

The project area is located along a steep shoreline. Existing structures at the USCG Station and at adjacent properties are situated at the top of the bluff and out of flood risk areas.

#### **No Action Alternative**

Under the No Action Alternative, there would be no construction and no changes to existing conditions at the project site. As such, there would be no impacts on floodplains.

#### **Proposed Action - Construct Riprap Revetment**

Construction of the Proposed Action would entail placement of fill within the floodplain. A riprap revetment would be constructed within a relatively small area and would not change the flow of the river. In addition, the project area is very close to the mouth of the river and downstream areas that are not on bluffs above the floodplain are in park uses. Any potential change in flood elevations as a result of the riprap placement would not affect any existing or potential structures. There would be no change in existing flood hazards. Therefore, impacts on the floodplain would not be significant.

### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

As compared to the Proposed Action, construction of Action Alternative 1 would entail the placement of a much greater amount of material within the floodplain. In addition, the groins would likely alter the flow of the river, potentially resulting in scour or other adverse effects downstream. The groins may result in a minor rise in the flood elevation for a short distance upstream of the structures. However, given that existing structures are located at the top of the bluff above the floodplain, impacts related to the floodplain and flood risks to structures would not be significant.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

The amount and location of riprap placed within the floodplain for construction of Action Alternative 2 would be slightly larger than that of the Proposed Action. However, like the Proposed Action there would be no change to the flow of the river, and impacts on floodplains would not be significant.

## **3.7 Geology and Soils**

The project area is located within the tidally influenced estuary of the Siuslaw River. The river sediments are composed primarily of sand with some larger cobbles. The shoreline and the bluff above are composed of sandy soils that are loosely consolidated. The steep sandy bluff that is being impacted by shoreline erosion is unstable and subject to sudden and unpredictable sloughing and potentially rotational failure.

The Natural Resource Conservation Survey (NRCS) soil survey identifies the project area as containing Dune Land and Waldport fine sand with 12 to 30 percent slopes soil series. These soil types are not considered to be prime farmland (NRCS 2011).

Therefore, all of the alternatives would have no effect on prime farmlands and the Proposed Action would be in compliance with the Farmland Protection Policy Act (7 CFR 658.2(a)).

## **3.8 Hazardous Materials**

There are no known hazardous materials within the project area. The fuel storage tanks are located at the top of the bluff above the project area and fuel lines extend from the tanks down the slope, over the walkway to the boathouse. These fuel lines are above the area that would be affected by project construction and they would not need to be moved or altered under any of the alternatives.

### **No Action Alternative**

The No Action Alternative would not address the shoreline erosion that is threatening the stability of the walkway and boathouse or the potential for slope sloughing or sudden rotational failure. Failure of the sand bluff could threaten the fuel tanks at the top of the bluff. If the walkway or the bluff fails, fuel could be spilled into the river resulting in impacts to water quality and aquatic resources. USCG personnel on-site

are trained to respond to fuel spills on the water and the equipment necessary to clean up potential spills is also located on site which would minimize the potential impact from any such spill. The No Action Alternative has the potential to result in moderate impacts related to hazardous materials.

### **Proposed Action - Construct Riprap Revetment**

Construction of the Proposed Action would not result in the release of hazardous materials. All construction equipment would be operated and maintained in a manner consistent with an approved spill prevention and pollution control plan as described under the Water Quality section.

The Proposed Action would provide shoreline stabilization and reduce the risk of a catastrophic bank failure that could release fuels to the environment from the fuel tanks or lines. The Proposed Action would not have significant effects related to hazardous materials.

### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

The effects of construction of Action Alternative 1 would be similar to those described for the Proposed Action. Since Action Alternative 1 requires the placement of more material it could be expected that the construction duration would be slightly longer than for the Proposed Action. This could slightly increase the risk of a spill of hazardous materials during construction; however, the effects of any such spill would be the same as for the Proposed Action.

Action Alternative 1 would also provide shoreline stabilization that would reduce the potential for a failure of the sand bluff and associated potential for release of fuels into the environment.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

Potential effects related to hazardous materials under Action Alternative 2 would be the same as described for the Proposed Action.

## **3.9 Aesthetics and Visual Resources**

The project area is located at the base of a steep bluff. Due to the vegetation on the slope and the steep topography, the shoreline area is not visible from above (Figure 14). The steep slopes extend up and downstream of the project area and would offer limited visibility of the project area from adjacent parcels. The primary views from the east bank (the bluff side) are of the dunes, beach, and open spaces of the state park lands on the opposite side of the river and of the ocean beyond (Figure 14).

From the opposite shore, views of the project area shoreline would be partially blocked by the existing dock, boathouse and debris screen or shear boom. Views of the project vicinity from the opposite shore include views of adjacent residential development and other shoreline stabilization measures including sections of riprap up and downstream of the project area.



**Figure 14. View of Project Area from Top of Bluff** (*shoreline not visible*).

### **No Action Alternative**

The No Action Alternative would not involve construction of new shoreline stabilization measures and there would be no effect on aesthetics or visual resources.

### **Proposed Action – Construct Riprap Revetment**

The riprap revetment constructed under the Proposed Action would extend approximately three feet above the MHHW so a portion of it would be visible at most tides along the shoreline within the project area. However, east bank views currently include other existing riprap sections along the Siuslaw River and other structures including the USCG boathouse and dock. Therefore, the riprap revetment would not substantially alter the views of the project area.

### **Action Alternative 1 – Construct Groins with Gravel Shoreline**

Action Alternative 1 would include the construction of two groins, one upstream of the boathouse and dock facilities and one downstream. The groins would extend out into the river in a straight line and would be visible at all tides. The gravel shoreline between the groins would largely take on a natural appearance over time and may appear similar to the sandy beaches on the opposite shore. The groins would be visible from both the east and west banks and could be considered to be a greater visual impact than the riprap revetment under the Proposed Action. However, because there are four existing groins that extend from the west bank in the general vicinity of the project area (Figure 15) the change in the overall character of the visual resources would not be significant.





**Figure 15. Groins on West Bank of Siuslaw River in Vicinity of the Project Area (USCG Boathouse is in the foreground).**

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

The additional scour allowance in the toe of the riprap revetment under Action Alternative 2 would also be constructed of riprap. The revetment under Action Alternative 2 would not be visually different from the revetment under the Proposed Action and the potent effects on visual resources would be the same as described for the Proposed Action.

### **3.10 Noise**

The City of Florence noise ordinance prohibits excessive noise between the hours of 10 pm and 7 am. Construction equipment may be operated during the daytime hours. The noise environment of the project area includes the regular alarms, horns, and sirens of vessels leaving the Station docks and of routine drills associated with Station operations. The residential uses on either side of the Station at the top of the bluff may be slightly buffered from noises at water level by the topography. The natural areas on the west bank, across the river, would experience the noise of regular boat traffic on the Siuslaw River as well as the alarms and horns associated with the Station facilities.



### **No Action Alternative**

The No Action Alternative would not involve construction activities and so there would be no impact related to noise.

### **Proposed Action – Construct Riprap Revetment**

Noise effects from the Proposed Action would be entirely related to construction activities. Construction equipment and the placement of large riprap would be expected to generate noise that may be audible from the top of the bluff and the natural areas on the opposite river bank. Construction would not be expected to be louder than the regular loud noises associated with routine Station activities. In addition, construction would be limited to daylight hours within the parameters of the City of Florence noise ordinance. Therefore, noise effects from construction of the Proposed Action would be less than significant.

### **Action Alternative 1 – Construct Groins with Gravel Shoreline**

Noise effects from Action Alternative 1 would also be entirely related to construction activities. Construction of the groins could result in construction equipment operating further away from the shoreline than under the Proposed Action which could make construction related noises more noticeable to receptors on the top of the bluff. In addition, the longer construction duration would increase the potential for noise impacts somewhat. However, construction would be limited to the hours of 7 am to 10 pm in compliance with the City of Florence’s noise ordinance and would not be likely to exceed the regular noises associated with routine Station activities. Therefore, noise effects from construction of Action Alternative 1 would be less than significant.

### **Action Alternative 2 – Construct Riprap Revetment with Scour Allowance in Toe**

Noise effects related to the construction of Action Alternative 2 would be the same as described for the Proposed Action although they might be slightly longer in duration. As with the Proposed Action, construction would be conducted in compliance with local noise ordinance. Noise effects from construction of Action Alternative 2 would be less than significant.

## **3.11 Recreation**

Boating is the major recreational activity in the project area. Motorboats, leisure boats, fishing boats, and sailboats pass through the channel adjacent to the project area. There is no land-based recreation within the project area. Land-based recreation such as walking or picnicking may occur within the public lands on the west bank across the Siuslaw River from the project area.

One of the Station’s primary missions is related to recreation. The USCG provides search and rescue to recreational boaters and surfers, escorts fishing vessels across the bar, conducts fisheries conservation enforcement, offers towing, and enforces boating

regulations (USCG 2003). In 2010, the Station conducted 42 search and rescue missions.

### **No Action Alternative**

The No Action Alternative would not involve construction and would not alter any recreational areas or affect recreational boat use in the Siuslaw River.

Continued erosion under the No Action Alternative could compromise the USCG mission in the Siuslaw River area. While this could have an adverse effect on individual recreationists who may require assistance, it would be unlikely to affect overall recreational uses in the Siuslaw River.

### **Proposed Action – Construct Riprap Revetment**

The Proposed Action would not alter any recreational areas or affect recreational boat use in the Siuslaw River. The Proposed Action would reduce the impact of continued shoreline erosion on the operation of the USCG facilities and reduce the potential for an interruption in service to recreational boaters and surfers.

### **Action Alternative 1 – Construct Groins with Gravel Shoreline**

The potential effects from Action Alternative 1 would be similar to those described for the Proposed Action.

### **Action Alternative 2 – Construct Riprap Revetment with Scour Allowance in Toe**

The potential effects from Action Alternative 2 would be similar to those described for the Proposed Action.

## **3.12 Transportation and Navigation**

The project area is adjacent to the federal navigation channel in the Siuslaw River. The river is an active transportation corridor for recreational and commercial marine traffic, including numerous fishing vessels both commercial and recreational charter. Shoreline and in-water construction work would be completed from a barge either anchored along the shoreline or fixed to the river bottom with spuds. This barge would be located outside of the navigation channel and would not interfere with boat traffic or navigation. Neither the riprap revetments nor the groins would alter the navigation channel. None of the alternatives would result in altered land-based traffic volumes or patterns.

A small number of construction workers would need to travel to the site during construction. This increase in traffic would be temporary and minimal and would be similar for all of the action alternatives. The slightly longer construction duration anticipated for the action alternatives would not result in increased traffic on local road systems. Materials would be delivered to the project area via barge.

Therefore, all of the alternatives, including the No Action Alternative, the Proposed Action, and Action Alternatives 1 and 2, would have no effect on transportation or navigation.

### **3.13 Socioeconomic and Land Use**

Executive Order 12898 requires federal agencies to consider whether their actions would have a disproportionately high and adverse effect on low income or minority populations of an area. Environmental justice is not an issue if a project would not have any significant impacts, would affect all groups equally, or if there are no low income or minority populations affected. A population is considered to be a minority population if it is more than 50% minority or if the minority percentage is meaningfully greater than the minority population percentage in the general population.

The population of Florence in 2010 was 8466. Over 92% of the population considers itself “white” and only 12.7% was below the poverty line (US Census 2012). The Proposed Action does not have any significant impacts and there are no minority or low income populations involved in the project area. Therefore, there would be no environmental justice issues related to any of the alternatives including the No Action Alternative or any of the action alternatives.

Construction workers for the project would likely be hired from the local population and the effects on employment would be insignificant. There would be no effect on local housing resources from any of the alternatives.

None of the alternatives would have any effect on land use. The project would be consistent local zoning and shoreline designations as described under Coastal Resources.

### **3.14 Construction**

Shoreline and in-water work would be completed from a barge either anchored along the shoreline or fixed to the river bottom with spuds. Due to river currents and the constraints of working around the existing structures, construction could take 11 weeks and will be done between October 1 and February 15. The majority of work would be conducted during the approved in-water work period for the Siuslaw River estuary; November 1- February 15. The USCG would request an exemption to the approved in-water work period from NMFS and ODFW to allow work to commence on October 1 due to weather considerations. Construction equipment, such as a crane and a generator would be operated from the barge and materials such as riprap or gravel would be brought to the site via barge. Construction activities would occur during the day between 7 am and 10 pm in compliance with the City of Florence’s noise ordinance.

### **No Action Alternative**

The No Action Alternative would not involve construction and therefore, there would be no construction related impacts.

### **Proposed Action – Construct Riprap Revetment**

Construction activities would result in the use of construction equipment powered by diesel fuel, including a crane, generator, and the barge engine that would result in the release of air pollutants. Air emissions would not be expected to exceed national ambient air quality standards.

Construction activities would include the placement of riprap and gravel fill materials that would disturb aquatic organisms, particularly fish. Construction would also result in increased turbidity in the immediate project vicinity as materials are placed in the water. Construction equipment would also have the potential to impact water quality through leaks or spills of oils, fuels, or other fluids.

The timing of construction would be between October 1 and February 15, rather than the approved in-water work period of November 1 to February 15 in the Siuslaw River estuary. During this period, the most vulnerable life stages of fish would not be present in the project area and potential impacts would therefore be limited. Potential impacts to wildlife such as nesting birds would not occur, since construction would not be conducted during the bird nesting season.

Sediments within the project area are primarily sand and larger particles which would settle back out relatively quickly and are not likely to remain suspended long enough to reduce light penetration or result in fish injury.

All construction equipment would be operated and maintained in a manner consistent with an approved spill prevention and pollution control plan, including the following:

- All equipment used for in-water work will be clean and inspected daily prior to use to ensure that the equipment has no fluid leaks. Should a leak develop during use, the leaking equipment will be repaired immediately or removed from the project site immediately and not used again until it has been adequately repaired. At no time will fuels or oils be allowed to enter the river.
- Floating spill containment booms and absorbent booms will be maintained on board equipment to facilitate the cleanup of hazardous material spills. Containment booms and/or absorbent booms will be installed in instances where there is a potential for release of petroleum or other toxic substances.

Construction equipment and the placement of large riprap would generate noise that could be audible to residential areas at the top of the bluff or to natural park areas across the river. Construction would not be expected to be louder than the regular loud noises associated with routine Station activities. In addition, construction would

be limited to daylight hours between 7 am and 10 pm in compliance with the City of Florence's noise ordinance.

With mitigation, the effects of construction of the Proposed Action would be less than significant.

### **Action Alternative 1 - Construct Groins with Gravel Shoreline**

Construction effects of the Action Alternative 1 would be similar to those described for the Proposed Action although they might be of slightly longer duration. The same construction methods and timing would apply to work under this alternative.

Therefore, the same mitigation measures would be applied and, with mitigation, the effects of construction of Action Alternative 1 would be less than significant.

### **Action Alternative 2 - Construct Riprap Revetment with Scour Allowance in Toe**

Construction effects of the Action Alternative 2 would be similar to those described for the Proposed Action. The same construction methods and timing would apply to work under this alternative. Therefore, the same mitigation measures would be applied and, with mitigation, the effects of construction of Action Alternative 2 would be less than significant.

## **3.15 Cumulative Impacts**

There are no known state, local, or private actions that are reasonably certain to occur near the project area.

Ongoing maintenance dredging of the Siuslaw River navigation channel is conducted annually from April 1 to October 31 by the US Army Corps of Engineers (USACE). The maintenance dredging would be conducted by one of the USACE Portland District's hopper dredges. If an extension is granted to the in-water work window, the Proposed Action would commence on October 1 and could occur concurrently with USACE maintenance dredging during the month of October. With the implementation of mitigation measures, water quality effects from the Proposed Action would be minimal and localized within the action area. Therefore, no cumulative effects when combined with the USACE maintenance dredging would be anticipated.

The Shelter Cove North Bank Shoreline Stabilization project occurred in 2006 downstream of the project area approximately 0.8 miles. This private project placed approximately 1,650 linear feet of riprap at the base of the slope and revegetated the slope to slow erosion and sloughing of the sandy bluff. There are approximately 3.5 miles of shoreline with similar steep bluffs on the east bank of the Siuslaw River. Each of the action alternatives would increase the amount of shoreline stabilization by another 410 feet within this reach of the river. The conservation designation of the estuary throughout this reach would limit future shoreline stabilization to areas that already contain existing developments and thus minimize cumulative effects.

The conservation designation of the estuary, the extensive public park lands on the west bank, and the steep, unstable, erosive slopes on east bank limit development potential near the project area. In addition, the City comprehensive plan discourages the proliferation of individual single-purpose docks and piers in conservation estuary designated areas (Florence 2011). This focus on community and shared facilities would have the effect of reducing the number of potential projects that may result in cumulative effects.

The City of Florence comprehensive plan identifies a few long-term development plans (Florence 2011). The timing of these plans is unknown and likely dependent on many unpredictable factors. Identified projects include:

- Long-term plans for a marina at the North Jetty.
- The Port of Siuslaw has plans to eventually develop a harbor of refuge in the upriver cove when the jetties are extended and/or repaired.
- Local agencies are interested in eventually rebuilding the recreational structure known as the old Rock Dock site located adjacent to the South Jetty.

Since the timing and scope of these plans is speculative, they will not be evaluated further in this EA.



# Section 4

## Comparative Analysis

This section compares the impacts of the No Action Alternative and the Action Alternatives to the impacts of the Proposed Action.

### 4.1 No Action Alternative

The No Action Alternative would have no impacts on the resources of the project area; however, the No Action Alternative would not satisfy the need for the project. Although the No Action Alternative is more environmentally benign than the Proposed Action, the No Action Alternative cannot be selected because it would compromise the ability of the USCG to fulfill its public service mission in the Siuslaw River.

### 4.2 Action Alternative 1

Action Alternative 1 would construct groins and a gravel shoreline which would also provide shoreline stabilization. This alternative would likely provide a greater degree of stability and scour protection in the immediate project vicinity. There would likely be less impact on vegetation as there would be a smaller upland footprint for the groins and the gravel shoreline may form new habitat for plant growth over time. However, a greater amount of material would be placed below MHHW in the estuary with potentially greater impacts on fish and wildlife habitat and floodplains. The groins would likely have a greater impact on aesthetics and on currents and erosion and accretion patterns when compared to the Proposed Action. The greater amount of material would also likely require a somewhat longer construction period increasing the duration of emissions and noise from the use of construction equipment.

### 4.3 Action Alternative 2

Action Alternative 2 would be very similar to the Proposed Action and would likely provide a slightly longer useful life for the riprap revetment. Action Alternative 2 would place a greater amount of material below MHHW resulting in greater impacts to aquatic fish and wildlife. The greater amount of material would also likely require a somewhat longer construction period increasing the duration of emissions and noise from the use of construction equipment.

# Section 5

## Project Conditions and Mitigation Measures

Project conditions and mitigation measures include:

- Conduct construction work between the hours of 7 am and 10 pm in compliance with the City of Florence’s noise ordinance.
- The approved in-water work period for construction is November 1 to February 15. If an extension is obtained work could begin one month earlier on October 1.
- To reduce the potential for water quality impacts, all construction equipment would be operated and maintained in a manner consistent with an approved spill prevention and pollution control plan, including the following:
  - All equipment used for in-water work will be clean and inspected daily prior to use to ensure that the equipment has no fluid leaks. Should a leak develop during use, the leaking equipment will be repaired immediately or removed from the project site immediately and not used again until it has been adequately repaired. At no time will fuels or oils be allowed to enter the river.
  - Floating spill containment booms and absorbent booms will be maintained on board equipment to facilitate the cleanup of hazardous material spills. Containment booms and/or absorbent booms will be installed in instances where there is a potential for release of petroleum or other toxic substances.
- The USCG will coordinate Coastal Zone Management Act requirements with the City of Florence.
- The USCG will coordinate the design with the Oregon State Historic Preservation Officer to confirm that no historic resources would be affected prior to construction.

## Section 6

# Environmental Significance of the Proposed Action

The Proposed Action would affect several resource areas including air quality, biological resources, water quality, aesthetics, and noise. These effects would be considered less than significant. Additionally, the project will be coordinated with and the following federal, tribal, state, and local regulatory agencies: USACE, NMFS, USFWS, the Confederated Tribes of Coos, Umpqua, and Siuslaw Indians, the Confederated Tribes of Siletz Indians of Oregon, the Oregon Department of Parks and Recreation Heritage Program, Oregon Department of State Lands, and the City of Florence.

The purpose of the project is to stabilize the eroding shoreline to maintain operational functionality of the Station infrastructure to allow USCG to meet its mission responsibilities in the Siuslaw River. Erosion of the shoreline is causing both a loss of bottom material (river bottom retreat) and loss of the embankment (shoreline retreat) which threaten the dock, boathouse and slope stability upon which the rest of the station facilities are positioned.

The impact analysis contained in Section 3 provides evidence that the neither the Proposed Action nor the alternatives would cause a significant impact on the environment. In order to complete the NEPA documentation process, a FONSI should be issued for this project.

# Section 7

## List of Persons and Agencies Contacted

The following list of agencies, organizations, and individuals were mailed a scoping notice on December 30, 2011.

<b>Federal Agencies:</b>	
Bureau of Land Management, Eugene District	Federal Emergency Management Agency
US Forest Service	National Park Service
US Fish and Wildlife Service	USDA, Natural Resources Conservation Service
US Army Corps of Engineers	US Geological Survey
National Marine Fisheries Service	US Coast Guard
US Environmental Protection Agency	
<b>Tribal:</b>	
Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw	Confederated Tribes of Siletz
<b>State and Regional Agencies:</b>	
Oregon Watershed Enhancement Board	State Historic Preservation Office (Heritage Programs, Oregon Parks and Recreation Dept.)
Oregon Department of Forestry	Oregon Department of Land Conservation and Development
Oregon Department of Fish and Wildlife	Pacific Fishery Management Council
Oregon Department of Agriculture	Oregon State Parks and Recreation Department
Siuslaw Soil and Water Conservation District	Lane Regional Air Protection Agency
Oregon Department of Environmental Quality	Oregon Coastal Zone Management Association
<b>Local Agencies:</b>	
Siuslaw School District	Lane County Parks, Department of Public Works
City of Florence	Port of Siuslaw
<b>Industry and Private Organizations:</b>	
Bonneville Power Administration	Lane County Audubon Society

Davidson Industries	Siuslaw Watershed Council
Roseburg Forest Products	Oregon Wild
Weyerhaeuser	Ducks Unlimited
Sea Lion Caves	McKenzie River Trust
Fish Tales Guide and Charter Service	Siuslaw Institute
Fresh Wild Tuna Charter Service	Cascade Pacific Resource Conservation and Development
Huntingfish Charters	Pacific Rivers Council
Fishin with Nick	Siuslaw Fisherman's Association
Siuslaw Estuary Partnership	Eco Trust
<b>Adjacent Landowners:</b>	
Robert Contreras	Oreo Corp Thomson Reuters PTS
Michael Graham	Oregon Department of State Lands
Ronald P Benzing and Joni Lesh	Sea Watch Estates Homeowners Association
Sophana Karnchanasorn	JTP Sandpines Resort LLC, Sandpines Resort Corp.
Margaret Opal Ames	Hurst Companies of OR Inc.
Michael A Groat and Lenore Sunnell	Mariners Village Homeowners Association
James I McCoey	

## Section 8

# References

Confederated Tribes. 2009. Water Quality Data Summary (October 2007 to September 2008). Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw Indians Department of Natural Resources. February.

Council on Environmental Quality (CEQ). 1997. Environmental Justice Guidance Under the National Environmental Policy Act. December.

FEMA. 2010. Flood Insurance Rate Maps. Available on-line at:  
<http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>

Florence, City of. 2011. Florence Realization 2020 Comprehensive Plan, Florence, Oregon. April 2011 Update. Available on line at:  
[http://www.ci.florence.or.us/sites/default/files/fileattachments/printable\\_april\\_2011\\_comp\\_plan\\_0.pdf](http://www.ci.florence.or.us/sites/default/files/fileattachments/printable_april_2011_comp_plan_0.pdf)

Natural Resource Conservation Service (NRCS). 2011. Web Soil Survey – Farmland Classification. Accessed at: <http://websoilsurvey.nrcs.usda.gov/app/>.

ODEQ. 2011a. Water Quality Assessment Database. Available on line at:  
<http://www.deq.state.or.us/wq/assessment/rpt0406/search.asp>

ODEQ. 2011b. Water Quality Total Maximum Daily Loads (TMDLs) Program. Oregon Department of Environmental Quality Website:  
<http://www.deq.state.or.us/wq/tmdls/midcoast.htm#siuslaw>

Pacific Fishery Management Council (PFMC). 1998. Amendment 8 to the Coastal Pelagic Species Fishery Management Plan. Pacific Fishery Management Council, Portland, Oregon. December. Available at: <http://www.pcouncil.org/coastal-pelagic-species/fishery-management-plan-and-amendments/amendment-8/>

PFMC. 2000. Amendment 14 to the Pacific Coast Salmon Management Plan, Fishery Management Plan for Commercial and Recreational Salmon Fisheries off the Coasts of Washington, Oregon, and California. Pacific Fishery Management Council, Portland, Oregon. May. Available at: <http://www.pcouncil.org/salmon/fishery-management-plan/adoptedapproved-amendments/amendment-14-to-the-pacific-coast-salmon-plan-1997/>

PFMC. 2006. Amendment 19 to the Pacific Coast Groundfish Fishery Management Plan. Appendix B: Pacific Coast Groundfish Essential Fish Habitat. Pacific Fishery Management Council, Portland, Oregon. May. Available at:  
<http://www.pcouncil.org/groundfish/fishery-management-plan/fmp-amendment-19/>

- Siuslaw Watershed Council. 2002. A Watershed Assessment for the Siuslaw Basin. Available online at:  
[http://oregonexplorer.info/data\\_files/OE\\_location/northcoast/documents/NorthCoastPDFs/siuslaw.pdf](http://oregonexplorer.info/data_files/OE_location/northcoast/documents/NorthCoastPDFs/siuslaw.pdf)
- Siuslaw Watershed Council. 2011. Siuslaw Volunteer Water Quality Monitoring Program. Available online at: <http://www.siuslaw.org/monitoring/>
- USACE and U.S. Environmental Protection Agency (USEPA). 2010. Siuslaw River, Oregon, Ocean Dredged Material Disposal Sites Evaluation Study and Environmental Assessment. U.S. Army Corps of Engineers, Portland District and U.S. Environmental Protection Agency, Region 10. April.
- U.S. Census Bureau. 2012. 2010 State and County Quick Facts. Available on line at: <http://quickfacts.census.gov/qfd/states/41/4126050.html>
- US Coast Guard (USCG). 2011a. Final Preliminary Erosion Control Study, United States Coast Guard Station Siuslaw River, Florence, OR. January 2011.
- USCG. 2011b. Shoreline Erosion Feasibility Study and Recommendations Technical Memorandum. U.S. Coast Guard Station, Siuslaw River, Oregon, prepared by Coast and Harbor Engineering for the USCG. January.
- U.S. Environmental Protection Agency (EPA). 2011. *The Greenbook Non-Attainment Areas for Criteria Pollutants*. Available online at:  
<http://www.epa.gov/oaqps001/greenbk/>
- U.S. Global Change Research Program (USGCRP). 2009. Global Climate Change Impacts in the United States, Thomas R. Karl, Jerry M. Melillo, and Thomas C. Peterson, (eds.). Cambridge University Press. 196pp.
- Washington State Department of Ecology (Ecology). 2006. Impacts of Climate Change on Washington's Economy. A Preliminary Assessment of Risks and Opportunities. Produced by Washington Economic Steering Committee and the Climate Leadership Initiative Institute for a Sustainable Environment, University of Oregon, for Department of Ecology and Department of Community, Trade, and Economic Development, State of Washington. November.



# **Section 9**

## **List of Preparers**

Kate Stenberg, Ph.D., CDM Smith

Jennifer Jones, CDM Smith

Ali Kleyman, CDM Smith

Jamie Jespersen, CDM Smith

Larry Wagner, P.E., Appledore Marine Engineering

Dee Warren, PMP, CDM Smith

**Appendix A**  
**Site Photographs**



Looking west toward boathouse from top of walkway.



Looking east toward shoreline under base of walkway. Eroding shoreline is visible at low tide.





Looking east toward shoreline under base of walkway during high tide.



Looking downstream from walkway during low tide.





Looking downstream from walkway during high tide.





Looking upstream from the walkway during low tide.





Looking upstream from the walkway during high tide.





**Looking east toward shoreline during high tide. Erosion of sand bluff above is visible as a patch of exposed sand.**



**Looking west from walkway along western side of boathouse showing support beams installed in 2008.**





**Looking west along southern side of boathouse.**



Looking south (upstream) toward debris boom.



Looking north toward boathouse from dock.





**Looking west toward boathouse and dock from top of slope.**



**Looking west toward opposite shoreline showing groins along west bank.**



Closer view of west bank showing groins.



**Looking west downslope from fuel tank storage area.**





Looking north showing fuel tank storage area.

**Appendix B**  
**Comment Letters Received During Scoping**

## Stenberg, Kate

---

**From:** Hatton, William E [whatton@blm.gov]  
**Sent:** Friday, January 06, 2012 9:18 AM  
**To:** Stenberg, Kate  
**Subject:** FW: Siuslaw River - Florence - U.S. Coast Guard, Station Siuslaw River - Environmental Assessment for placing a stone revetment along the shoreline.

---

**From:** Hatton, William E  
**Sent:** Friday, January 06, 2012 9:15 AM  
**To:** Fairchild, Charles L; Robbins, Janet L; Carol Heinkel  
**Cc:** Premdas, Sharmila; Poole, Leo M; Steiner, Stephen J; Baitis, Karin E (kbaitis@blm.gov); 'Kate Stenberg'; Corbin, Alan D (acorbin@blm.gov); Hardt, Richard A (rhardt@blm.gov)  
**Subject:** Siuslaw River - Florence - U.S. Coast Guard, Station Siuslaw River - Environmental Assessment for placing a stone revetment along the shoreline.

Chuck, Jan, and Carol,

Yesterday, I received a scoping letter from the U.S. Coast Guard concerning proposed construction of a stone revetment to stabilize the eroding shoreline at the USGS station. Failure to stabilize the site could result in structural damage to the USGS facility.

Minor excavation and removal of existing soil along the shore will occur. Geotextile and stone bedding and riprap will be placed to create a new stone revetment. Construction will be done by waterborne equipment. Proposed construction will begin in 2012.

Comments are due to the USGS by February 6, 2012. The EA is scheduled to be published in early 2012. If requested, the USGS will provide copies of the EA for public comment.

The BLM manages no coastal property adjacent to the USGS station. The BLM manages no property that directly interfaces with the Siuslaw estuary and the ocean shoreline. The BLM has no interest in requesting to be a cooperating agency on the project and no reason to comment on the proposed project.

If the public calls the BLM for information, the POC for the USGS is:

Kate Stenberg

CDM

14432 SE Eastgate Way, Suite 100

Bellevue, Washington 98007

[stenbergkj@cdm.com](mailto:stenbergkj@cdm.com)

(425) 746-0197 FAX

Bill Hatton

Siuslaw Resource Area Field Manager

Eugene District, Bureau of Land Management

REC'D JAN 25 2012



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Oregon Coast Habitat Branch  
2900 Stewart Parkway  
ROSEBURG, OREGON 97471

January 20, 2012

Kate Stenberg  
CDM  
14432 SE Eastgate Way, Suite 100  
Bellevue, Washington 98007

Re: Comments on the proposed U.S. Coast Guard Shoreline Stabilization project in the Siuslaw River (6<sup>th</sup> field HUC 171002060804), Lane County, Oregon.

Dear Ms. Stenberg:

On January 3, 2012, the National Marine Fisheries Service (NMFS) received a request from the U. S. Coast Guard (USCG) for comments regarding the proposed shoreline stabilization at the Siuslaw River station in Florence, Lane County, Oregon. This letter is written in response to this request because of the trust resources within NMFS' jurisdiction that will be affected by the proposed project. These trust resources include: (1) Endangered Species Act (ESA)-listed Oregon Coast (OC) coho salmon (*Oncorhynchus kisutch*); (2) OC coho salmon designated critical habitat; (3) ESA-listed southern distinct population segment North American green sturgeon (*Acipenser medirostris*) (hereafter referred to as 'green sturgeon'); (4) southern distinct population segment Pacific eulachon (*Thaleichthys pacificus*) (hereafter referred to as 'eulachon'); and (5) essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act for groundfish, coastal pelagics, and Pacific salmon.

### **Proposed Action**

The USCG proposes to stabilize the shoreline by placing a stone revetment along the existing shoreline of the Siuslaw River. Minor excavation and removal of existing soil along the shore would occur. Subsequently, geotextile, stone bedding, and riprap would be placed to create the new stone revetment. Construction will be done with waterborne equipment. The project is proposed for construction in 2012 depending on the availability of funding.





## **NMFS' Concerns**

***Modification of nearshore habitat.*** Impacts to waterways from riprap revetment installation include: (1) Simplification of stream channels; (2) alteration of hydraulic processes; and (3) prevention of natural channel adjustments that will likely occur at the proposed site on the Siuslaw River. Furthermore, riprap installation halts natural processes that contribute to habitat complexity required by OC coho salmon. Complex habitats that juvenile OC coho salmon use for refuge from predators and foraging are often provided by streambank and riparian vegetation whose growth is prohibited by placement of riprap. Streambank and riparian vegetation provide complexity at the site, which serves as rearing and smoltification habitat, including: refuge from predators, source of nutrients and food organisms, and shelter from swift currents during high flow events. Placement of riprap will prohibit growth and establishment of streambank vegetation at the site. OC coho salmon migrating through and rearing within the action area along the proposed revetment site will be exposed to the aforementioned effects caused by riprap placement for varying durations. Migrating fish will be exposed only for a short duration, while rearing juveniles will suffer longer exposure to these effects.

***Suspended sediments.*** Suspended sediments associated with excavation and soil removal may have adverse affects to OC coho salmon, particularly juveniles which are more susceptible to injury. These adverse effects include: (1) Gill trauma; (2) respiratory stress; (3) changes in territorial behavior; (4) physiological stress; and (5) changes in feeding behaviors. Suspended sediments at higher concentrations can even cause death.

***Chemical contaminants.*** Spills of pollutants (fuels, oil, hydraulic fluids, etc.) from equipment fueling and maintenance activities and small leaks from heavy equipment will likely contribute to water quality degradation of the Siuslaw River. Effects to OC coho salmon from increased concentrations of chemical contaminants include: (1) Reduced growth and survival; (2) physiological stress; (3) increased disease susceptibility; and (4) immunosuppression. Chemical contaminants at higher concentrations can cause death.

## **Recommendations**

The NMFS provides the following recommendations for USCG to consider, as the environmental assessment is prepared:

1. Identify the cause of the erosion (wave erosion, groundwater discharge, lateral erosion from river flow, etc.). Knowing the cause of the erosion will help in determining a final design that will be suitable for bank protection and minimize the impacts to ESA-listed species, their designated critical habitats, and EFH.
2. Incorporate bio-engineering into the revetment design that includes the use of vegetation plantings, erosion control fabrics, large woody debris, coir logs, or a combination of these. Furthermore, NMFS recommends these design criteria when considering bio-engineering as an alternative to riprap stabilization:

- a. Streambank shaping. Without changing the location of the bank toe, restore damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation.
  - b. Soil reinforcement. Complete all soil reinforcement earthwork and excavation in the dry. Use soil layers or lifts that are strengthened with biodegradable fabrics and penetrable by plant roots.
  - c. Large wood. Include large wood to the maximum extent feasible. Large wood must be intact, hard, and undecayed to partly decaying, and should have untrimmed root wads to provide functional refugia habitat for fish. Use of decayed or fragmented wood found lying on the ground or partially sunken in the ground is not acceptable.
  - d. Planting or installing vegetation. Use a diverse assemblage of species native to the action area or region, including trees, shrubs, and herbaceous species. Do not use noxious or invasive species.
  - e. Fertilizer. Do not apply surface fertilizer within 50 feet of any stream channel.
3. Develop and submit an erosion and pollution control plan, commensurate, with the scope of the action, that includes the following information:
    - a. The name, phone number, and address of the person responsible for accomplishing the plan.
    - b. Best management practices to confine vegetation and soil disturbance to the minimum area, and minimum length of time, as necessary to complete the action, and otherwise prevent or minimize erosion associated with the action.
    - c. Best management practices to confine, remove, and dispose of construction waste, including every type of debris, petroleum product, or other hazardous materials generated, used, or stored on-site.
    - d. Steps to cease work under high flows, except for efforts to avoid or minimize resource damage.
  4. All in-water work should be completed during the period when the fewest ESA-listed individuals will be present in the action area. On the Siuslaw River this period is from November 1 to December 31. During this time, green sturgeon and eulachon are unlikely to be present. However, OC coho salmon adults will be migrating through the action area and exposed to project effects during this time. Furthermore, several species with designated EFH will be present at this time as well.
  5. All in-water work should be completed on the low tide, preferably on a minus tide. This will minimize the effects to ESA-listed species, their designated critical habitats, and EFH designated for groundfish, coastal pelagics, and Pacific salmon.

Thank you for the opportunity to review and comment on the proposed project. If you have any questions, please contact Jeff Young, fisheries biologist in the Oregon Coast Habitat Branch of the Oregon State Habitat Office, at 541.957.3389.

Sincerely,



Kenneth W. Phippen  
Branch Chief  
Oregon Coast Habitat Branch  
Oregon State Habitat Office  
Habitat Conservation Division

cc: Teena Monical, USACE



# Oregon

John A. Kitzhaber, MD, Governor

REC'D JAN 17 2012

## Parks and Recreation Department

State Historic Preservation Office

725 Summer St NE, Ste C

Salem, OR 97301-1266

(503) 986-0671

Fax (503) 986-0793

[www.oregonheritage.org](http://www.oregonheritage.org)

January 12, 2012

Ms. Kate Stenberg

CDM

14432 SE Eastgate Wy STE 100

Bellvue, WA 98007

RE: SHPO Case No. 12-0048

USCGA Station Siuslaw River

Enviro assessment initiation

USCG

, Florence, Lincoln County



Dear Ms. Stenberg:

I have recently received a notification that your agency is working on an EA for the project referenced. However, your notification arrived without any details that our office needs to complete a review of the project. Can you please send us a hard copy of the EA so that we are able to assess the potential effect that may occur to cultural resources through the proposed action?

Upon receipt of a hard copy of the EA I will complete my review of your project and get back to you in a timely manner. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

Sincerely,

Dennis Griffin, Ph.D., RPA

State Archaeologist

(503) 986-0674

[dennis.griffin@state.or.us](mailto:dennis.griffin@state.or.us)



## Stenberg, Kate

---

**From:** Jason Kirchner [jason.a.kirchner@state.or.us]  
**Sent:** Thursday, January 05, 2012 10:22 AM  
**To:** Stenberg, Kate  
**Subject:** EA USCG Station Siuslaw River, Florence, Oregon

Hello Kate,

I review permit applications for activities along the mid Oregon coast estuaries. Do you have more information on this project in the Siuslaw? We would be concerned with timing (Nov 1- Feb 15 is the IWWW), impacts of rip rap on riparian vegetation, low tidal salt marsh, tidal floodplain connection, coho habitat, etc.. More information on what will be done would be great along with some photos. I would also be available to meet on site with staff to discuss what the USCG would like to do so that I can have a better understanding of the project. Please contact me at the address below.

Thanks

Jason Kirchner  
Oregon Department of Fish and Wildlife  
Estuary Habitat Protection Biologist  
2040 SE Marine Science Drive  
Newport, OR 97365  
541-867-0300 ext. 281  
541-867-0311 fax

## Stenberg, Kate

---

**From:** KIRYUTA Gloria [gloria.kiryuta@state.or.us]  
**Sent:** Friday, January 06, 2012 8:33 AM  
**To:** Stenberg, Kate  
**Subject:** Waterway bank stabilization at USCG Station Florence OR  
**Attachments:** joint\_permit\_app\_07-09.doc

Hello Kate

I received notice 16475 for stabilization of the banks of the Siuslaw at the USCGS in Florence OR.

The attached application would need to be filled out for the project indicating the volume of material to be removed and filled below the elevation of Highest Measured tide (10.5' in MLLW Datum).

The alternatives analysis does not have to be extensive, as the location is specific and the use is water dependent, however the preferred use of the structural rip rap design does need to be somewhat demonstrated.

I am guessing that more non-structural techniques such as planting and bank sloping would not be effective due to the fact that there is high wave energy and a public safety concern as the Coast Guard needs the maximum protection to be able to ensure to the greatest extent possible the continuation of operations. However, a statement to that effect under alternative designs would be appropriate.

There is no fee needed for this type of application. Just complete all sections of the application, and attach the drawings

Hope this helps

Gloria

Gloria M. Kiryuta  
Natural Resource Coordinator  
Wetlands & Waterways Conservation Division  
Oregon Dept. State Lands  
775 Summer Street NE Suite 100  
Salem, Oregon 97301  
Phone: 503.986.5226  
Fax: 503.378.4844

[Gloria.kiryuta@state.or.us](mailto:Gloria.kiryuta@state.or.us)

[www.oregonstatelands.us](http://www.oregonstatelands.us)



**US Army Corps  
Of Engineers (Portland District)**

# Joint Permit Application Form

DATE STAMP



AGENCIES WILL ASSIGN NUMBERS

Corps Action ID Number

Oregon Department of State Lands No

## SEND ONE SIGNED COPY OF YOUR APPLICATION TO EACH AGENCY

US Army Corps of Engineers:

District Engineer  
ATTN: CENWP-OD-GPPO  
Box 2946  
Portland, OR 97208-2946  
503-808-4373

AND

DSL - West of the Cascades:

State of Oregon  
Department of State Lands  
775 Summer Street, Suite 100  
Salem, OR 97301-1279  
503-986-5200

OR

DSL - East of the Cascades:

State of Oregon  
Department of State Lands  
1645 NE Forbes Road, Suite 112  
Bend, Oregon 97701  
541-388-6112

AND

Send DSL Application Fees to:

State of Oregon  
Department of State Lands  
PO Box 4395, Unit 18  
Portland, OR 97208-4395  
**(Attach a copy of the first page of the application)**

## (1) APPLICANT INFORMATION

Applicant  
Name and Address

Business Phone #  
Home Phone #  
Fax #  
Email

Authorized Agent  
Name and Address

Business Phone #  
Home Phone #  
Fax #  
Email

Check one

Consultant   
Contractor

Property Owner  
Name and Address

If different from above<sup>1</sup>

Business Phone #  
Home Phone #  
Fax #  
Email

## (2) PROJECT LOCATION

Street, Road or Other Descriptive Location

Legal Description (attach [tax lot map](#)\*)

Township

Range

Section

Quarter/Quarter

In or near (City or Town)

County

Tax Map #

Tax Lot #<sup>2</sup>

Wetland/Waterway (pick one)

River Mile (if known)

[Latitude \(in DD.DDDD format\)](#)

[Longitude \(in DD.DDDD format\)](#)

Directions to the site

<sup>1</sup> If applicant is not the property owner, permission to conduct the work must be attached.

<sup>2</sup> Attach a copy of all tax maps with the project area highlighted.

- *Italicized areas are not required by the Corps for a complete application, but may be necessary prior to final permit decision by the Corps.*

### (3) PROPOSED PROJECT INFORMATION

Type:    Fill        Excavation (removal)        In-Water Structure        Maintain/Repair an Existing Structure   

Brief Description:

**Fill**

Riprap        Rock        Gravel        Organics        Sand        Silt        Clay        Other:   

Wetlands	Permanent (cy)	Temporary (cy)				Total cubic yards for project (including outside OHW/wetlands)	
	Impact Area in Acres	Dimensions (feet)					
		L'		W'			
Waters below OHW	Permanent (cy)	Temporary (cy)				Total cubic yards for project (including outside OHW/wetlands)	
	Impact Area in Acres	Dimensions (feet)					
		L'		W'			

**Removal**

Wetlands	Permanent (cy)	Temporary (cy)				Total cubic yards for project (including outside OHW/wetlands)	
	Impact Area in Acres	Dimensions (feet)					
		L'		W'			
Waters below OHW	Permanent (cy)	Temporary (cy)				Total cubic yards for project (including outside OHW/wetlands)	
	Impact Area in Acres	Dimensions (feet)					
		L'		W'			

Total acres of construction related ground disturbance    (If 1 acre or more a [1200-C permit](#) may be required from DEQ)

Is the disposal area upland?    Yes        No        Impervious surface created?    <1 acre        >1 acre?   

Are you aware of any [state](#) or [federally](#) listed species on the project site?  
 Are you aware of any [Cultural/Historic Resources](#) on the project site?  
 Is the project site within a national [Wild & Scenic River](#)?  
*Is the project site within a State Scenic [State Scenic Waterway](#)?*\*

Yes	No

If yes, please explain in the project description (in block 4)

### (4) PROPOSED PROJECT PURPOSE AND DESCRIPTION

**Purpose and Need:**

*Provide a description of the public, social, economic, or environmental benefits of the project along with any supporting formal actions of a public body (e.g. city or county government), as appropriate.\**



**Project Description:**

Please describe in detail the proposed removal and fill activities, including the following information:

- Volumes and acreages of all fill and removal activities in waterway or wetland separately
- Permanent and temporary impacts
- Types of materials (e.g., gravel, silt, clay, etc.)
- How the project will be accomplished (i.e., describe construction methods, equipment, site access)
- *Describe any changes that the project may make to the hydraulic and hydrologic characteristics (e.g., general direction of stream and surface water flow, estimated winter and summer flow volumes.) of the waters of the state, and an explanation of measures taken to avoid or minimize any adverse effects of those changes.*
- Is any of the work already complete?    Yes        No        If yes, please describe the completed work.

**Project Drawings**

State the number of project drawing sheets included with this application:

A complete application must include a location map, site plan, cross-section drawings and recent aerial photo as follows and as applicable to the project:

- **Location map** (must be legible with street names)
  - Site plan including;
  - Entire project site and activity areas
  - Existing and proposed contours
  - Location of ordinary high water, wetland boundaries or other jurisdictional boundaries
  - Identification of temporary and permanent impact areas within waterways or wetlands
  - Map scale or dimensions and north arrow
  - Location of staging areas
  - Location of construction access
  - Location of cross section(s), as applicable
  - Location of mitigation area, if applicable
- **Cross section drawing(s)** including;
  - Existing and proposed elevations
  - Identification of temporary and permanent impact areas within waterways or wetlands
  - Ordinary high water and/or wetland boundary or other jurisdictional boundaries
  - Map scale or dimensions
- **Recent Aerial photo** (1:200, or if not available for your site, [the highest resolution available](#))

Will any construction debris, runoff, etc., enter a wetland or waterway?    Yes        No   

If yes, describe the type of discharge and show the discharge location on the site plan.

Estimated project start date:

Estimated project completion date:

## (5) PROJECT IMPACTS AND ALTERNATIVES

### Alternatives Analysis:

*Describe alternative sites and project designs that were considered to avoid or minimize impacts to the waterway or wetland. (Include alternative design(s) with less impact and reasons why the alternative(s) were not chosen. Reference OAR [141-085-0565](#) (1) through (6) for more information\*).*

### Measures to Minimize Impacts

Describe what measures you will use (before and after construction) to minimize impacts to the waterway or wetland. These may include but are not limited to the following:

- *For projects with ground disturbance include an erosion control plan or description of other best management practices (BMP's) as appropriate. (For more information on erosion control practices see DEQ's Oregon [Sediment and Erosion Control Manual](#))*
- *For work in waterways where fish or flowing water are likely to be present, discuss how the work area will be isolated from the flowing water.*
- *If native migratory fish are present (or were historically present) and you are installing, replacing or abandoning a culvert or other potential obstruction to fish passage, complete and attach a statement of how the [Fish Passage Requirements](#), set by the Oregon Department of Fish and Wildlife will be met.*

**Description of resources in project area**

Ocean  Estuary  River  Lake  Stream  Freshwater Wetland

Describe the existing **physical and biological characteristics** of the wetland/waterway site by area and type of resource (Use separate sheets and photos, if necessary).

**For wetlands**, include, as applicable:

- *Cowardin and Hydrogeomorphic(HGM) wetland class(s)\**
- *Dominant plant species by layer (herb, shrub, tree)\**
- Whether the wetland is freshwater or tidal
- *Assessment of the functional attributes of the wetland to be impacted\**
- Identify any vernal pools, bogs, fens, mature forested wetland, seasonal mudflats, or native wet prairies in or near the project area.)

**For waterways**, include a description of, as applicable:

- *Channel and bank conditions\**
- *Type and condition of riparian vegetation\**
- *Channel morphology (i.e., structure and shape)\**
- *Stream substrate\**
- Fish and wildlife (type, abundance, period of use, significance of site)
- *General hydrological conditions (e.g. stream flow, seasonal fluctuations)\**

*Describe the existing navigation, fishing and recreational use of the waterway or wetland.\**

• *Italicized areas are not required by the Corps for a complete application, but may be necessary prior to final permit decision by the Corps.*

**Site Restoration/Rehabilitation**

- For temporary disturbance of soils and/or vegetation in waterways, wetlands or riparian areas, please discuss how you will restore the site after construction including any monitoring, if necessary\*

**Mitigation**

Describe the reasonably expected adverse effects of the development of this project and how the effects will be mitigated.\*

- For permanent impact to wetlands, complete and attach a Compensatory Wetland Mitigation (CWM) Plan. (See [OAR 141-085-0705](#) for plan requirements)\*
- For permanent impact to waters other than wetlands, complete and attach a Compensatory Non-Wetland Mitigation (CNWM) plan (See [OAR 141-085-0765](#) for plan requirements)\*
- For permanent impact to estuarine wetlands, you must submit a CWM plan.\*

**Mitigation Location Information (Fill out only when mitigation is proposed or required)**

- |  |                          |                    |                     |                          |  |
|--|--------------------------|--------------------|---------------------|--------------------------|--|
| Proposed mitigation<br>(Check all that apply): | <input type="checkbox"/> | Onsite Mitigation  | Type of mitigation: | <input type="checkbox"/> | Wetland Mitigation   |
|  | <input type="checkbox"/> | Offsite Mitigation |                     | <input type="checkbox"/> | Mitigation for impacts to other waters                       |
|  | <input type="checkbox"/> | Mitigation Bank    |                     | <input type="checkbox"/> | Mitigation for impacts to navigation, fishing, or recreation |
|  | <input type="checkbox"/> | Payment to Provide |                     |                          |  |

Street, Road or Other Descriptive Location		Legal Description (attach <a href="#">tax lot map</a> *)			
		Quarter/Quarter	Section	Township	Range
In or near (City or Town)	County	Tax Map #		Tax Lot # <sup>3</sup>	
Wetland/Waterway (pick one)	River Mile (if known)	<a href="#">Latitude (in DD.DDDD format)</a>		<a href="#">Longitude (in DD.DDDD format)</a>	
Name of waterway/watershed/ <a href="#">HUC</a>		Name of mitigation bank (if applicable)			

<sup>3</sup> Attach a copy of all tax maps with the project area highlighted.

- *Italicized areas are not required by the Corps for a complete application, but may be necessary prior to final permit decision by the Corps.*

## (6) ADDITIONAL INFORMATION

Adjacent to R-F Site and Physical Mitigation Site Property Owners and Their Address (*if more than 5, attach printed labels\**)

Has the proposed activity or any related activity received the attention of the Corps of Engineers or the Department of State Lands in the past, e.g., wetland delineation, violation, permit, lease request, etc.?

Yes  No

If yes, what identification number(s) were assigned by the respective agencies:

Corps #

State of Oregon #

*Has a wetland delineation been completed for this site?*

Yes  No

*If yes by whom?\**

*Has the wetland delineation been approved by DSL or the COE?*

Yes  No

*If yes, attach a concurrence letter. \**

• *Italicized areas are not required by the Corps for a complete application, but may be necessary prior to final permit decision by the Corps.*



**(7) CITY/COUNTY PLANNING DEPARTMENT AFFIDAVIT  
(TO BE COMPLETED BY LOCAL PLANNING OFFICIAL) \***

I have reviewed the project outlined in this application and have determined that:

- This project is not regulated by the comprehensive plan and land use regulations.
- This project is consistent with the comprehensive plan and land use regulations.
- This project will be consistent with the comprehensive plan and land use regulations when the following local approval(s) are obtained.
- Conditional Use Approval
- Development Permit
- Other

This project is not consistent with the comprehensive plan. Consistency requires a

- Plan Amendment
- Zone Change
- Other

An application has  has not  been filed for local approvals checked above.

Local planning official name (print)	Signature	Title	City / County	Date

Comments:

**(8) COASTAL ZONE CERTIFICATION \***

If the proposed activity described in your permit application is within the [Oregon coastal zone](#), the following certification is required before your application can be processed. A public notice will be issued with the certification statement, which will be forwarded to the Oregon Department of Land Conservation and Development for its concurrence or objection. For additional information on the Oregon Coastal Zone Management Program, contact the department at 635 Capitol Street NE, Suite 150, Salem, Oregon 97301 or call 503-373-0050.

**CERTIFICATION STATEMENT**

I certify that, to the best of my knowledge and belief, the proposed activity described in this application complies with the approved Oregon Coastal Zone Management Program and will be completed in a manner consistent with the program.

Print /Type Name	Title
Applicant Signature	Date

• *Italicized areas are not required by the Corps for a complete application, but may be necessary prior to final permit decision by the Corps.*

## (9) SIGNATURES FOR JOINT APPLICATION

Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and, to the best of my knowledge and belief, this information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. By signing this application I consent to allow Corps or Dept. of State Lands staff to enter into the above-described property to inspect the project location and to determine compliance with an authorization, if granted. I hereby authorize the person identified in the authorized agent block below to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

I understand that the granting of other permits by local, county, state or federal agencies does not release me from the requirement of obtaining the permits requested before commencing the project. *I understand that payment of the required state processing [fee](#) does not guarantee permit issuance. The fee for the state application must accompany the application for completeness.*

Amount enclosed	\$
-----------------	----

Print /Type Name	Title	Print /Type Name	Title
<b>Applicant Signature</b>	Date	<b>Authorized Agent Signature</b>	Date

***Landowner signatures:*** For projects and /or mitigation work proposed on land not owned by the applicant, including [state-owned submerged and submersible lands](#), please provide signatures below. A signature by the Department of State Lands for activities proposed on state-owned submerged/submersible lands only grants the applicant consent to apply for authorization to conduct removal/fill activities on such lands. This signature for activities on state-owned submerged and submersible lands grants no other authority, express or implied.

Print /Type Name	Title	Print /Type Name	Title
<b>Property Owner Signature</b>	Date	<b>Mitigation Property Owner Signature</b>	Date

• *Italicized areas are not required by the Corps for a complete application, but may be necessary prior to final permit decision by the Corps.*

## Stenberg, Kate

---

**From:** Michelle Pezley [michelle.pezley@ci.florence.or.us]  
**Sent:** Monday, February 06, 2012 5:50 PM  
**To:** Stenberg, Kate  
**Subject:** Environmental Assessment for Florence Coast Guard  
**Attachments:** coast guard.pdf; Phase 1 Site Invest Rpt.pdf

Ms. Stenberg,

Attached is City of Florence comments to the Environmental Assessment UGCG station at the Siuslaw River, Florence, Oregon.

Michelle Pezley

*Michelle K. Pezley*

Assistant Planner

250 Highway 101

Florence, OR 97439

Phone (541) 997-8237

Fax (541) 997-4109

[michelle.pezley@ci.florence.or.us](mailto:michelle.pezley@ci.florence.or.us)



*City of Florence*  
Community Development Department

250 Highway 101  
Florence, OR 97439-7623

PH: (541) 997-8237  
FAX: (541) 997-4109

February 6, 2012

Kate Stenberg  
CDM  
14432 SE Eastgate Way, Suite 100  
Bellevue, Washington 98007  
Email: [stenbergkj@cdm.com](mailto:stenbergkj@cdm.com)

Dear Ms. Stenberg,

Thank you for the opportunity to comment to the public scoping process for the Coast Guard Station located at 4255 Coast Guard Road, Florence, Oregon. This letter is sent to provide you with the City code review for the project.

Background:

The Coast Guard station was annexed into the City after the site was developed. The address changed from a county address to a city address in 1990. The city has very little record of the Coast Guard Station because the site was developed under Lane County jurisdiction.

The Coast Guard Station is zoned Single Family Residential. The Coast Guard Station is allowed conditionally in the Single Family Residential District. The station is also within the Shoreland Residential Overlay District. The Siuslaw River adjacent to the station is zoned Conservation Estuary.

Planning Processes:

The planning process which would be required at the local level (if any) is based on the extent of two items. One is the amount of riprap proposed and if the existing riprap was previously installed in accordance with state and federal regulations and permits. The second item is if there is a hazard on the property and the extent of the hazard.

➤ Item 1: Amount of proposed riprap and passed approval  
Florence City Code (FCC) Title 10, Chapter 19, Section 3-B, allows for maintenance of existing riprap which is currently serviceable and was previously installed in accordance with all local, state and federal regulations and permits. If the riprap falls under this provision, then no city approvals are needed.

FCC 10-19-3-C-2 allows the expansion of existing riprap, provided the riprap shall be necessary to protect an existing use or a use that is permitted outright or with Special Use Permit approval.

The existing riprap must be currently serviceable and previously installed in accordance with all local, state, and federal regulations and permits. A Special Use Permit is an administrative review. Once the city receives a complete application, a notice is mailed to the surrounding property owners allowing them 14 days to comment. A sign is posted in front of the property as well. Once the 14 day comment period is completed, a decision is rendered shortly thereafter.

If the riprap was not installed by all local, state and federal regulations, then a conditional use permit is required. Once the city receives a complete application, a public hearing is scheduled providing 20 days for the public to provide written comment. A public hearing is heard before the Planning Commission giving the public and the applicant an opportunity to present testimony to the record.

➤ Item 2: If a hazard exists

If the amount of riprap requires a Special Use Permit or Conditional Use Permit then the Item 2 also applies.

The City's hazards map shows that this area of the Siuslaw River to have cutback erosion. A Site Investigation Report (SIR) is required with any application. The SIR is a checklist of conditions that may be located on the property. If a hazard is found to exist on the site, then a Site Investigation Report Phase II is required. Please refer to FCC 10-7-4 for requirements for the Phase II report. If a Phase II is required, then the process is a conditional use permit.

If a land use application is required, then a Resource Capability Assessment or Estuarine Impact Assessment is also required. If the Army Corps of Engineers Section 10/404 permit process requires an Environmental Impact Statement (EIS), then a Estuarine Impact Assessment is needed. If an EIS is not required with the 10/404 permit, then a Resource Capability Assessment is needed. Please refer to FCC 10-19-1 for requirements.

The City Code is located on the City's website at [www.ci.florence.or.us](http://www.ci.florence.or.us) under City Code on the right hand menu.

Please note that the DEQ permit requires a Land Use Compatibility Statement. The land use process does not have to be complete prior to the City signing the Land Use Compatibility Statement.

Please let me know if you have any questions. I may be reached at 541.997.8237 or by email at [michelle.pezley@ci.florence.or.us](mailto:michelle.pezley@ci.florence.or.us). I would also like to remain on the mailing list.

Sincerely,



Michelle Pezley  
Assistant Planner

Enclosure: Site Investigation Report Phase I Checklist



**CITY OF FLORENCE  
PHASE I SITE INVESTIGATION REPORT**

Applicant	Date
Proposal or Project	Map No. <span style="float: right;">Tax Lot</span>
Purpose of Proposal or Project (attach additional sheets, as needed)	Comprehensive Plan Designation
Street Address	Zoning District
	Overlay District

Based on submitted information, zoning and comprehensive plan requirements, and the completed Site Investigation Report, this proposal **does / does not** comply with Title 10 of the City Code and the Comprehensive Plan. The proposal **will / will not** achieve the stated purpose. The site and/or building design **will / will not** have adverse impacts and **will / will not** mitigate any adverse impacts.

The completed Site Investigation Report is available at the Planning Department.

This investigation was done by:

	Print
	Signature
	Title

**PHASE I SITE INVESTIGATION  
INITIAL PROPOSED DEVELOPMENT APPLICATION CHECKLIST**

YES	NO	
_____	_____	1. <u>LOCAL ZONING REGULATIONS</u> Does the proposed development site plan conform to City, or County Zoning Regulations regarding setback lines and other code provisions? (Contact the City or County Engineer for details.)
_____	_____	2. <u>COMPREHENSIVE PLAN SETBACK LINE OR DESIGNATION</u>
_____	_____	a. Has a Coastal Construction Setback line (CCSBL) been adopted for this County or city? (Inquire from the County or City Engineer.)
_____	_____	b. If a CCSBL has been adopted for this County or City is the proposed site seaward of the CCSBL?
_____	_____	c. If the proposed site is seaward of the adopted CCSBL, has application for a variance or exception been made to the Planning Commission having jurisdiction?

**PHASE 1 SITE INVESTIGATION  
INITIAL PROPOSED DEVELOPMENT APPLICATION CHECKLIST**

**YES      NO**

3.    DUNAL FORMS

- |                          |                          |  |  |
|--------------------------|--------------------------|--|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  | a. Does the property contain any of the following dune formations? |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 1. Active Dune   |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 2. Newer Stablized Dune  |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 3. Older Stablized Dune  |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 4. Deflation Plan  |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 5. leading Edge of Sand dune                                       |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 6. Foredune  |

3.    IDENTIFIED HAZARDOUS CONDITIONS

- |                          |                          |  |   |
|--------------------------|--------------------------|--|---|
| <input type="checkbox"/> | <input type="checkbox"/> |  | a. Has any portion of the property been identified as being affected by any potential or existing geological hazard? (Contact County or City Planning Departments for information published by the State Department of Geology and Mineral Industries, US Department of Agriculture-Soil Conservation Service, US Geological Survey, US Army Corps of Engineers and other government agencies.) |
| <input type="checkbox"/> | <input type="checkbox"/> |  | b. Are any of the following identified hazards present?   |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 1. foredune   |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 2. Active Dunes   |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 3. Water erosion  |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 4. Flooding   |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 5. Wind erosion   |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 6. Landslide or sluff activity  |
| <input type="checkbox"/> | <input type="checkbox"/> |  | 7. leading edge of active Sand Dune   |
|                          |                          |  | c. Are there records of these hazards ever being present of the site? Describe:   |

4.    EXISTING SITE VEGETATION

- |                          |                          |  |  |
|--------------------------|--------------------------|--|--|
| <input type="checkbox"/> | <input type="checkbox"/> |  | b. Does the vegetation on the site, afford adequate protection against soil erosion from wind and surface water runoff?  |
| <input type="checkbox"/> | <input type="checkbox"/> |  | c. Does the condition of vegetation present constitute a possible fire hazard or contributing factor to slide potential? |
|                          |                          |  | (If answer is Yes, full details and possible remedies will be required.)   |

5.    FISH AND WILDLIFE HABITAT

- |                          |                          |  |   |
|--------------------------|--------------------------|--|---|
| <input type="checkbox"/> | <input type="checkbox"/> |  | a. Does the site contain any identified rare or endangered species or unique habitat (feeding, nesting or resting)?         |
| <input type="checkbox"/> | <input type="checkbox"/> |  | b. Will any significant habitat be adversely affected by the development? (Contact Oregon Department of Fish and Wildlife,) |

6.    HISTORICAL AND ARCHEEOLOGICAL SITES

<input type="checkbox"/>	<input type="checkbox"/>		Are there any identified historical or archaeological sites within the area proposed for development? (Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians.)
--------------------------	--------------------------	--	--

7.    FLOOD PLAIN ELEVATION

- |                          |                          |  |   |
|--------------------------|--------------------------|--|---|
| <input type="checkbox"/> | <input type="checkbox"/> |  | a. If the elevation of the 100 year flood plain or storm tide has been determined, does it exceed the existing ground elevation at the proposed building site? (Contact the Federal Insurance Administration, City or County Planning |
|--------------------------|--------------------------|--|---|



**PHASE 1 SITE INVESTIGATION  
INITIAL PROPOSED DEVELOPMENT APPLICATION CHECKLIST**

**YES      NO**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- 1. Off-road vehicles
- 2. motorcycles
- 3. horses
- f. Has a plan been developed to control or prohibit the uses of off-road vehicles, motorcycles and horses?

11. LCDC COASTAL GOAL REQUIREMENTS

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- a. Have you read the LCDC Goals affecting the site? (contact LCDC, City or County office for copies of Goals.)
- b. Have you identified any possible conflicts between the proposed development and the Goals or acknowledged comprehensive plans? (If so, list them and contact local planning staff for possible resolution.)
- c. Have all federal and state agency consistency requirements been met? (Contact local planning office.)
- d. Has applicant or investigator determined that the development proposal is compatible with the LCDD Beaches and Dunes Goal and other appropriate statewide land use planning laws?

Rev. 4/09

## Stenberg, Kate

---

**From:** sharon mccoe [smccoe@yahoo.com]  
**Sent:** Tuesday, January 03, 2012 3:56 PM  
**To:** Stenberg, Kate  
**Subject:** Florence Oregon Coast Guard

Please send a copy of the EA when completed to 24 Coast Guard Rd. Florence Oregon.

I own the home next door to the proposed work. Can you tell me the scope of the work and what effect it could have (if any) on our property? Your letter says this will disrupt access to the waterfront structures and upland operations. Coast Guard operations? Our property was recently redone (including riprap) I am concerned your work will mess up our newly restored bank. Who can I speak to about this? Thank You for any assistance.

Sincerely;

Sharon McCoey

## Stenberg, Kate

---

**From:** gatthehelm@comcast.net  
**Sent:** Thursday, January 12, 2012 11:17 AM  
**To:** Stenberg, Kate  
**Subject:** Environmental Assessment USCG Station Siuslaw River, Florence, Oregon.

Dear Kate Stenberg,

I have no concerns about the repairs to be done on the Coast Guard Station located on the Siuslaw river. The banks of the river are for the most part sand. I do not know of any environmentally sensitive life forms in the area of concern.

I would be more concerned if the station was not operational as I frequent the waters of the Siuslaw river and ocean under their purview. I am grateful for the watchful eye and service the Siuslaw Coast Guard Station provides.

Gregory Helmer, Capt.  
Fish Tales Guide & Charter Service, LLC  
541-729-0632



REC'D JAN 25 2012

January 20, 2012

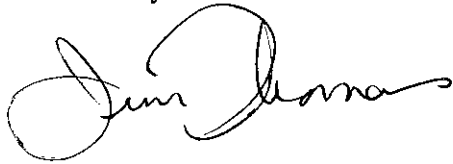
Sea Watch Estates Homeowners Association  
PO Box 741  
Florence, Oregon 97431

Kate Stenberg  
CDM  
14432 SE Eastgate Way, Suite 100  
Bellevue, Washington 98007

Dear Kate,

Thank you for sending the notice about the Coast Guard Station riverbank repair work.  
We wish to stay on the mailing list and to receive a copy of the EA.

Thank you.

A handwritten signature in black ink, appearing to read "Jim Thomas". The signature is fluid and cursive, with a large initial "J" and a long, sweeping tail.

Jim Thomas  
President SWHO