

U.S. Department of
Homeland Security

United States
Coast Guard



Commanding Officer
United States Coast Guard
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11000
January 30, 2024

Oregon Coastal Management Program
Mr. Jeff Burrigh, State-Federal Relations Coordinator
635 Capitol Street NE, Suite 150
Salem, OR 97301-2540

Dear Mr. Burrigh,

Please find enclosed our Federal Coastal Zone Management Act (CZMA) Consistency Determination for an upcoming U.S. Coast Guard (USCG) Station Siuslaw River construction project located in Florence, Oregon. The USCG is proposing to make landside and waterside improvements at the USCG Station Siuslaw River to increase the resiliency of the existing station for the continued search and rescue, and maritime response and operations in this region. This proposed scope of work includes replacing a boathouse, pier access bridge, and debris screen, and correcting shoreline erosion at the station. Activities associated with the proposed project will occur within areas designated as "Coastal Zone" under the Oregon Coastal Management Program (OCMP).

We have reviewed Oregon's coastal zone enforceable policies as they relate to this project and concluded/determined that the proposed project is consistent, to the maximum extent practicable, with all enforceable policies of the OCMP, pursuant to the requirements of the CZMA. In accordance with the CZMA, we seek your written concurrence with our conclusion.

Thank you for your attention to this matter. If further information is required, please contact Mr. Richard Hylton, at (757) 852 – 3404 or by e-mail at rick.d.hylton@uscg.mil.

Sincerely,

N. E. ARMSTRONG, P.E.
Captain, U. S. Coast Guard
Commanding Officer

Enclosure: (1) CZMA Consistency Determination

ENCLOSURE (1)

Coastal Zone Management Act Consistency Determination:

United States Coast Guard Station Siuslaw River, Florence, OR – Construct Covered Mooring and Correct Shoreline Erosion at Station Siuslaw River

Contract No. 70Z05019DTETRAT07

December 2023



Prepared for the U.S Coast Guard by
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- Appendix A – Enforceable Policies Analysis
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ACRONYMS

BA	Biological Assessment
BMP	Best Management Practice
CZMA	Coastal Zone Management Act
D13	District 13
EA	Environmental Assessment
ESA	Endangered Species Act
FS	Feasibility Study
HMT	Highest Measured Tide
IHA	Incidental Harassment Authorization
JPA	Joint Permit Application
LID	Low Impact Development
MMPA	Marine Mammal Protection Act
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NMFS	National Marine Fisheries Service
OCMP	Oregon Coastal Management Program
ODFW	Oregon Department of Fish and Wildlife
RBS	River Boat Small
RM	River Mile
SHPO	State Historic Preservation Office
USACE	United States Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service

1.0 Authority

The U.S. Coast Guard (USCG), District 13 (D13), is submitting this Consistency Determination for a construction and maintenance project to correct shoreline erosion and upgrade waterside facilities at the Siuslaw River Station in Florence, Oregon in accordance with the federal Coastal Zone Management Act (CZMA) of 1972, as amended, 16 U.S. Code (USC) §1451, *et seq.*

2.0 Project Areas and Activities Subject to Determination

The project is located within areas defined as a “Coastal Zone” by the CZMA. A Coastal Zone is defined in CZMA §304(1) and 15 CFR §930.11(e) as “the area lying between the State of Oregon border with the State of Washington on the north, to the State of Oregon border with the State of California on the south, seaward to the extent of the state's jurisdiction as recognized by federal law, and inland to the crest of the Coast Range Mountains.”

The project would include improvements to the USCG Siuslaw River Station in Florence, Lane County, Oregon to correct shoreline erosion and replace the covered mooring and appurtenant in-water structures at the Station. In 2018, a feasibility study (FS) was completed to compare alternative designs for shoreline correction. The preferred alternative had the least environmental impacts while satisfying the purpose and need for the action. The proposed action includes corrections to shoreline erosion including the installation of a steel interlocking pile wall. Additionally, the existing covered mooring (boathouse), pier bridge, and debris boom would be demolished and reconstructed. The Siuslaw River Station is located on the east side of the Siuslaw River at river mile (RM) 1.5 approximately 3 miles northeast of downtown Florence. In addition to improvements to the station, the USCG would need to temporarily moor two 47’ Motor Lifeboats and one 29’ Response Boat Small (RB-S II) in the City of Florence Marina during Station construction (Figure 2-1).



Figure 2-1. Project Vicinity

3.0 Project Purpose

The purposes of the proposed project are to correct shoreline erosion to improve safety and longevity of the Siuslaw River Station, and to provide facilities for housing and using equipment needed to ensure the USCG can fulfill its mission. A shoreline erosion study revealed that the foundation is threatened by river deepening. Without these shoreline erosion corrections and boathouse replacement actions, the Siuslaw River Station will become inoperable and the USCG safety response will be compromised. If use of the covered mooring at the Station was lost, the Station would need to lease moorings elsewhere upriver which would significantly increase their response time and therefore potentially result in loss of life.

4.0 Project Description

The USCG is proposing to make waterside, shoreline, and landside improvements to the USCG Station at Siuslaw River in Florence Oregon. Proposed waterside improvements include the demolition and replacement of the covered mooring, access pier bridge, and fixed debris screen. Shoreline improvements include installation of a steel interlocking pile wall and slope stabilization. Landside improvements include stormwater infrastructure improvements.

4.1 Landside Improvements

Stormwater improvements will include minor modifications including some Low Impact Development (LID) storm system features that will reduce erosion and sedimentation loss at the project site. No additional impervious surface area will be added as part of the project. The concept is to adjust the existing storm drainage system and convey the stormwater to a single outfall and discharge beyond the new sheet pile wall onto an energy dissipater. Existing drainage structures will be retrofitted with manufactured treatments such as filter inserts for water quality treatment and LID best management practices (BMPs) will be incorporated where feasible to meet the City of Florence stormwater design standards. BMPs included in final designs may include but would not be limited to bioswales with engineered soils/gravel and a subsurface drain to emphasize filtration, storage, and evaporation and transpiration before runoff is conveyed to the outfall. The project will likely result in a slight, net decrease in existing impervious surfaces. The project will include the following onshore stormwater infrastructure improvements:

- Addition of drainage swales with gravel trench drains to redirect runoff from the embankment and to slow down the surface flow and collect groundwater flow. The stormwater in the swale will discharge into the triangular soil nail wall catchment area prior to outfalling through a controlled outlet structure.
- Addition of a trench drain to collect stormwater runoff currently flowing down the pier access driveway and over the embankment. The trench drain will redirect the runoff into a drainage structure which will release runoff at a controlled rate and prevent stormwater discharge onto the steep slope.
- Retrofit or replacement of existing catch basins with water quality filtration unit(s) to treat runoff from impervious surfaces considered to be a significant source of pollutants in stormwater runoff, or pollution generating impervious surfaces (PGIS), before being conveyed and discharged from an outfall at the riprap layer. Filtration units specifically designed to capture specific pollutants such as zinc, copper, and sediments will be installed.

- Reconstruction of drainage outlet structure including water quality filtration inserts.
- A grassy swale underlain by a gravel trench will be installed along the top of the steep slope to collect lawn area surface sheet flows and shallow subsurface flows and convey them to the outfall onsite.
- A surface-mounted storm outfall pipe anchored to the embankment slope will replace the existing outfall. The new outfall will discharge beyond the new sheet pile wall to an energy dissipater to prevent embankment erosion at the upper elevation.
- Minor asphalt pavement repairs in the parking lot where the embankment failure occurred.

Shoreline stabilization including pile walls, a retaining wall and embankment reestablishment with native vegetation as described in the following section.

4.2 Shoreline Stabilization

Shoreline stabilization will be accomplished through construction of an upland, steel interlocking pile wall, with the top of the above-grade portion of the wall above the 50-year calculated extreme tide level (**Error! Reference source not found.**). The wall will run approximately 400 feet along the top of bank from approximately the north property line to the south property line, with approximately 30 foot returns inland and upslope at either end. The wall will implement a long-term solution by adding a rigid structure consisting of steel sheet or pipe piles, with grouted soil tie-back anchors located near the top of the wall, that would retain the slope sands, and mitigate negative scour effects on the soils landward of the wall. A drainage element (e.g., weep hole) through the wall at the elevation of the Paleosol contact with the Upper Dune Sand will allow the free draining retention system, such as a nonwoven geotextile or an open-graded aggregate filter, to relieve groundwater flow and prevent piping (loss) of dune sand material.

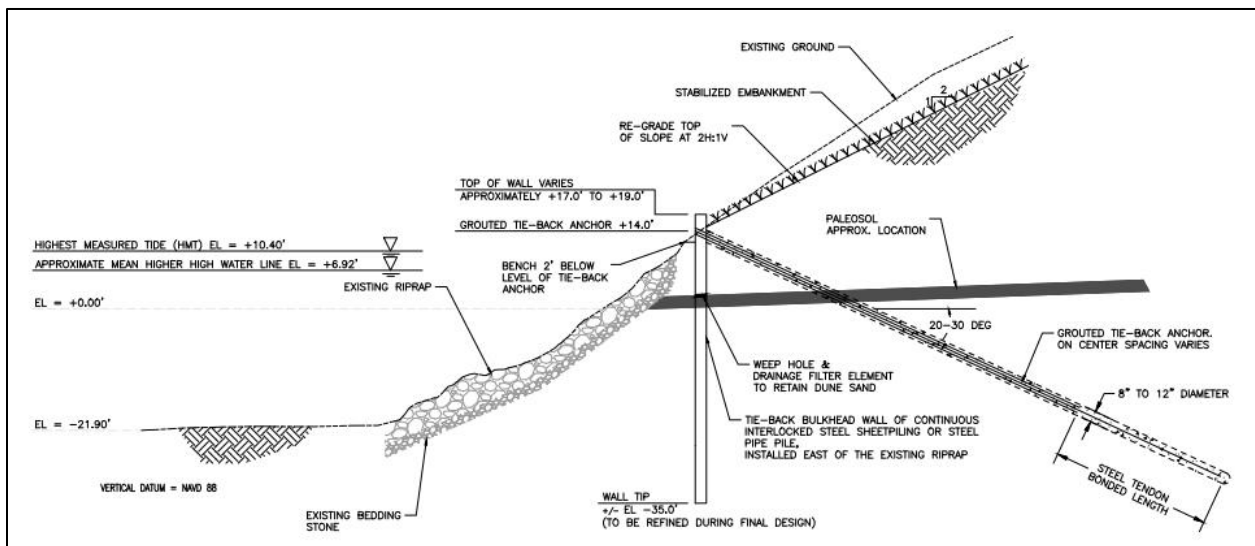


Figure 4-1. Preliminary design of a typical section for the steel interlocking pile wall, with the top of the wall above the 50-year extreme tide level.

Sheet or pipe pile installation would be a combination of auger predrilling and/or hydraulic press-in installation, as opposed to driven or vibratory installation approaches, which were

determined to be less desirable as primary methods of installation, considering the hardness of the Lower Dune Sand layer and the potential for negative impacts to the marginally unstable slope. The wall is planned to be installed above HMT, just upslope of the existing riprap installed in 2016, which will be disturbed as little as possible. It should be noted that scour forces in the river at this location are significant and have changed the depth of the riverbed to a great extent in this location over the last sixty years. It is entirely possible that future scour will remove more bank material and remove or relocate the riprap and leave a more significant wall height exposed on the river side. The wall will be structurally designed for this potential future retained height.

Upslope of the proposed pile wall, protection against seepage-induced erosion and washout of lower sands will be provided to prevent undermining and erosion of the silt layer. The sand slope above the wall will be graded to maximum slope of 2H:1V and stabilized and protected through application of a geocell cellular confinement geotextile, nonwoven geotextile filtration system with granular stone embankment material, biotic soil media planted with native vegetation or a combination thereof. Several surface swales with gravel trench drains will be added to divert surface runoff from sheet-flowing down the embankment and channeling them to the existing underground storm drain system. The existing outfall at the downstream end of the stormwater system will be extended with a pipe that will be placed at-grade with cutoff concrete collars and outfall beyond the new wall.

A second, smaller wall is proposed near the crest of the slope at the edge of the existing parking lot in the southwest corner of the property. This wall will be a cantilevered design, with the pile embedment taking into consideration the regraded slope of 2H:1V.

4.3 Waterside Improvements

The Station's existing covered mooring, bridge, and debris boom will be demolished, and all piles will be removed. Piles supporting the boathouse to be removed include the original timber vertical piles and timber batter piles installed in 1969, and steel H-piles installed in 2008. Demolition debris and materials will be transported to a permitted landfill and/or recycling facility. In total, approximately 71 piles will be removed by vibratory hammer. A conservative estimate for vibratory extraction is 15 minutes per pile. If any timber piles break during removal, the remaining portion of the broken piles will be cut two feet below the mud line. Removed piles will be disposed of in an upland location.

The following new facilities will be constructed: a 4,730 square foot (SF), two-bay covered mooring, including an interior floating dock for two 47' MLBs, a mezzanine and deck space for engineering shop, storage, PPE and HAZMAT; a 1,220 SF pedestrian bridge, including a small marine diesel fueling platform; a 520 SF exterior floating dock; and a vertical debris screen. Total overwater structures will cover approximately 6,500 SF. It is estimated that up to 79 replacement steel piles will be necessary to reconstruct the boathouse, floating docks, bridge, and debris screen. The new piles will be 16-inch to 20-inch steel pipe piles filled with concrete, and/or 14-inch steel H-Piles which will be installed by vibratory driving and driven to the final tip elevation by impact strikes after the initial vibratory set. The exact sizes and quantities of pipe piles used will be determined through the remaining design iterations. The new pier access and debris screen will be constructed in approximately the same footprint as the existing structures to

minimize riverbed soil disturbance and shadowing from overwater structures. The new covered mooring footprint will be approximately 1,800 SF larger than the existing structure. The southeast corner will be placed in the same location but the west end of the structure will extend 30 ft further out into the Siuslaw River to accommodate the two 47 ft MLB's. The existing covered mooring width is insufficient for mooring the two 47 ft MBLs's. This will result in additional shadowing compared to existing conditions.

To mitigate for the additional pilings (approximately eight), and expansion of the covered mooring (approximately 1,800 square feet), the Applicant is proposing to purchase 2,000 square feet of estuarine credits from the Wilbur Island Mitigation Bank, and is currently coordinating with the Oregon Department of State lands on the credit approval and purchase. Estuarine wetlands have historically been degraded and lost in the Siuslaw watershed.

5.0 Federal and State Agency Coordination

The USCG is required to consult with the National Marine Fisheries Service (NMFS) due to the potential effects on Endangered Species Act (ESA)-listed anadromous fish species. The Oregon-Washington Coastal Area Office of NMFS in Lacey, Washington is anticipated to oversee consultation for this project. To remain in compliance with the Marine Mammal Protection Act (MMPA), an Incidental Harassment Authorization (IHA) will be sought from the National Oceanic and Atmospheric Administration (NOAA). Consultation will also take place with the Oregon Department of Fish and Wildlife (ODFW). To meet water quality compliance regulations, coordination with the United States Army Corps of Engineers (USACE) and Oregon Department of State Lands will take place. Coordination with the Oregon State Historic Preservation Office (SHPO) will take place to comply with section 106 of the National Historic Preservation Act (NHPA). The USCG under the proposed action will comply with any monitoring and mitigation measures identified as requirements and any required permits will be acquired prior to the start of construction activities.

The USCG has found the proposed project to be in compliance with all enforceable policies relevant to the CZMA. A detailed list of enforceable policies as well as the project compliance analysis can be found in Appendix A.

6.0 Conclusion

The USCG has determined that the proposed project is consistent to the maximum extent practicable with all enforceable policies of the Oregon Coastal Management Program (OCMP), pursuant to the requirements of the CZMA. While the proposed project could have potential coastal effects, the action is in compliance with all federal and state laws and the USCG will acquire all permits required for these actions to take place. This consistency determination is based on analyses prepared in other environmental regulatory reports including a draft Environmental Assessment (EA), a Biological Assessment (BA), and an MMPA IHA.

Appendix A – Enforceable Policies Analysis



OCMP

Oregon Coastal
Management Program

ENFORCEABLE POLICY REPORT

Generated on 12/7/2023

Project Name: Siuslaw USCG

Project Number: 100-WTR-T42147

Total Enforceable Policies: 39

Local Comprehensive Plan / Land Use Regulations (Statewide Planning Goals 1-18)

Authority & Enforceable Policies	Coastal Effects	How Project Complies
<p>City of Florence Comprehensive Plan</p>	<p>Coastal effects, including effects to natural resources, cultural resources, coastal economies, aesthetics, and recreation/public access, have been addressed in the project Environmental Assessment (EA) and found to be less than significant. Any potential direct and indirect environmental effects during construction such as in-water noise, and increased turbidity will be reduced as much as possible and Best Management Practices (BMPs) will be followed to minimize such effects. These effects will be minor and temporary. No long-term environmental effects are expected.</p>	<p>The proposed project will be consistent with the Comprehensive Plan and local land use regulations of the City of Florence's Residential, Waterfront Marine, Conservation Estuary, and Development Estuary zones. To comply with Chapter 5: Scenic, Historic, and Natural Resources, and to minimize impacts to plants, fish, and wildlife, consultation will take place with the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), and the Oregon Department of Fish and Wildlife (ODFW). All potential biological impacts will be mitigated. To comply with section 7 of the Endangered Species Act (ESA) a Biological Assessment (BA) has been created. The proposed project area does not contain any wetlands and there are no public recreation areas or forests within the proposed project area. The U.S. Coast Guard (USCG) has completed coordination with the OR State Historic Preservation Officer (SHPO) for cultural and historic resources and is in compliance with section 106 of the National Historic Preservation Act (NHPA). The USCG will comply with the Clean Water Act (CWA) and obtain a Section 401 water quality certificate from the Oregon Department of Environmental Quality (DEQ). The USCG will attain authorization under Section of the</p>

		<p>Rivers and Harbors Act of 1899, which regulates placement of structures in navigable waters. All permitted uses within Chapter 17: Coastal Shorelands Management Units (MUs) will be followed. The proposed project is in compliance with the City of Florence's Comprehensive Plan.</p>
<p>City of Florence Zoning Code</p>	<p>Coastal effects, including effects to natural resources, cultural resources, coastal economies, aesthetics, and recreation/public access, have been addressed in the EA and found to be less than significant. Any potential direct and indirect environmental effects during construction such as in-water noise and increased turbidity will be reduced as much as possible and BMPs will be followed to minimize such effects. These effects will be minor and temporary. No long-term environmental effects are expected.</p>	<p>The proposed project will be consistent with the Comprehensive Plan and local land use regulations of the City of Florence's Residential, Waterfront Marine, Conservation Estuary, and Development Estuary zones. The project complies with the City of Florence title 10 zoning code, particularly the most relevant chapters, Chapter 10: Residential Districts, Chapter 19: Estuary, Shorelands, and Beaches and Dunes, and Chapter 24: Waterfront-Marine District. If needed, a Resource Capability Assessment will be prepared and submitted to the city to comply with zoning regulations within a Conservation Estuary. This project is in compliance with the City of Florence Zoning Code.</p>
<p>Lane County Land Use and Development Code</p>	<p>Coastal effects, including effects to natural resources, cultural resources, coastal economies, aesthetics, and recreation/public access, have been addressed in the EA and found to be less than significant. Any potential direct and indirect environmental effects during construction such as in-water noise and increased turbidity will be reduced as much as possible and BMPs will be followed to minimize such effects. These effects will be minor and temporary. No long-term environmental effects are expected.</p>	<p>The proposed project is in compliance with the Lane County Code Chapter 16: Land Use and Development Code. The proposed project is within the City of Florence's city limits so zoning regulations are governed by the City of Florence. The proposed project will comply with all permitted uses within the assigned zones. The proposed project is in compliance with the Lane County Land Use and Development Code.</p>
<p>Lane County Rural Comprehensive Plan</p>	<p>Coastal effects, including effects to natural resources, cultural resources, coastal economies, aesthetics, and recreation/public access, have been addressed in the EA and found to be less than significant. Any potential direct and indirect</p>	<p>The proposed project complies with the Lane County Rural Comprehensive Plan especially the most pertinent chapters, Chapter 5: Open Spaces, Scenic and History Areas and Natural Resources, Chapter 6: Air, Water and Land Resources, Chapter 11: Public Facilities and Services, Chapter 16: Estuarine Resources,</p>

	<p>environmental effects during construction such as in-water noise and increased turbidity will be reduced as much as possible and BMPs will be followed to minimize such effects. These effects will be minor and temporary. No long-term environmental effects are expected.</p>	<p>and lastly Chapter 17: Coastal Shorelands. To minimize impacts to plants, fish, and wildlife, consultation will take place with the NMFS, the USFWS, as well as ODFW. All potential biological impacts will be mitigated. To comply with section 7 of the ESA a BA has been created. To protect historic resources, the USCG has completed coordination with the SHPO to comply with section 106 of the NHPA. The project will follow standard BMPs to prevent air quality and water quality impacts. The project will be in compliance with state and federal laws including the CAA and CWA. A section 401 water quality certificate will be obtained from DEQ prior to completing the final design plans, and the USCG will apply for a new or updated NPDES permit, if needed. The USCG will comply with permitted uses within the estuary designations. The proposed project is in compliance with the Lane County Rural Comprehensive Plan.</p>
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State Agency Authorities

Authority & Enforceable Policies	Coastal Effects	How Project Complies
<p>ORS 196: Regulation of Wetlands</p> <ul style="list-style-type: none"> • .687 Regulation of alteration or fill of artificially created wetlands • .816 General permits allowing removal of certain amount of material for maintaining drainage; rules; waiver of fees • .817 General permits; rules • .818 Wetland delineation reports; review by Department of State Lands; fees • .678 Wetland conservation plans; contents; procedure for adopting • .681 Duties of department; standards for approval of plan; conditions for approval; order. • .682 Permits required for removal or fill; conditions on issuance of permit. • .825 Criteria for issuance of permit; conditions; consultation with public bodies; hearing; appeal. • .860 Enforcement powers of director • .865 Revocation, suspension or refusal to renew permit • .870 Abatement proceedings; restraining order; injunction; public compensation • .875 Double and treble damages for destruction of public right of 	<p>There will be no effect on wetlands and there will be no dredging activities or impacts. During in-water construction activities, there is the potential for short-term impacts to water quality however they will be minor and the implementation of standard BMPs will reduce potential impacts.</p>	<p>The proposed project does not contain wetlands and will therefore have no effect on existing wetlands. A wetland delineation field survey and accompanying report have been completed and submitted to the U.S. Army Corps of Engineers (USACE) and Oregon Department of State Lands (OR DSL). There will be no dredging activities. The proposed project is in compliance with ORS 196.</p>

<ul style="list-style-type: none"> navigation, fishery or recreation; costs and attorney fees .890 Civil penalties .895 Imposition of civil penalties .900 Schedule of civil penalties; rules; factors to be considered in imposing civil penalties 		
<p>ORS 468A: Air Quality</p> <ul style="list-style-type: none"> .005 Definitions for air pollution laws .010 Policy .020 Application of air pollution laws .025 Air purity standards; air quality standards; treatment and control of emissions; rules .040 Permits; rules .045 Activities prohibited without permit; limit on activities with permit .050 Classification of air contamination sources; registration and reporting of sources; rules; fees .055 Notice prior to construction of new sources; order authorizing or prohibiting construction; effect of no order; appeal .060 Duty to comply with laws, rules and standards .070 Measurement and testing of contamination sources; rules .075 Variances from air contamination rules and standards; delegation to local governments; notices .350 Definitions for ORS 468A.350 to 468A.400 .355 Legislative findings .363 Purpose of ORS 468A.363, 468A.365, 468A.400 and 815.300 .375 Notice to state agencies concerning certifications .395 Bond or letter of credit; remedy against person licensed under ORS 468A.380; cancellation of license .400 Fees; collection; use .410 Administration and enforcement of rules adopted under ORS 468A.405 .415 Legislative findings .455 Police enforcement .460 Policy .465 Certification requirements for new solid fuel burning devices; rules .485 Definitions for ORS 468A.460 to 468A.515 .490 Residential Solid Fuel Heating Air Quality Improvement Fund; uses .495 Prohibition on installation of used solid fuel burning devices; exceptions; rules .500 Prohibition on sale of noncertified solid fuel burning devices; rules .505 Removal; exceptions; confirmation of removal; rules 	<p>The proposed action was found to have minimal impacts on air quality in the project area.</p>	<p>The project area is located in an attainment area and the proposed project would not affect that designation.</p>

- [.515 Residential solid fuel heating curtailment program requirements; exemptions; rules](#)
- [.625 Definitions for ORS 468A.630 to 468A.645](#)
- [.630 Legislative findings](#)
- [.635 Restrictions on sale, installation and repairing of items containing chlorofluorocarbons and halon; rules](#)
- [.640 Department program to reduce use of and recycle compounds](#)
- [.645 State Fire Marshal; program; halons; guidelines](#)
- [.650 Legislative findings](#)
- [.655 Prohibition on sale or promotion; exemption for medical use](#)
- [.660 Wholesale transactions permitted](#)
- [.700 Definitions for ORS 468A.700 to 468A.760](#)
- [.705 Legislative findings](#)
- [.707 Asbestos abatement program; rules; contractor licensing; worker certification](#)
- [.710 License required for asbestos abatement project](#)
- [.715 Licensed contractor required; exception](#)
- [.720 Qualifications for license; application](#)
- [.725 Grounds for license suspension or revocation](#)
- [.730 Worker certificate required; qualifications; renewal application; suspension or revocation](#)
- [.735 Alternatives to protection requirements; approval](#)
- [.740 Accreditation requirements; rules](#)
- [.745 Rules; variances; training; standards; procedures](#)
- [.750 Fee schedule; waiver; disposition; rules](#)
- [.755 Exemptions](#)
- [.760 Content of bid advertisement](#)
- [.775 Indoor air quality sampling; accreditation and certification programs](#)
- [.780 Schedule of fees; accreditation and certification programs; rules](#)
- [.785 Pilot programs](#)
- [.793 Goal to reduce excess lifetime risk of cancer due to exposure to diesel engine emissions](#)
- [.795 Definitions](#)
- [.796 School buses; retrofitting of engines; replacement](#)
- [.797 Standards for certified cost of qualifying repower or retrofit; rules](#)
- [.799 Standards for qualifying repower of nonroad diesel engine or retrofit of diesel engine; rules](#)
- [.801 Clean Diesel Engine Fund; interest](#)
- [.803 Uses of Clean Diesel Engine Fund; rules](#)

ORS 468: Environmental Quality Generally

The project includes BMPs to minimize air quality and water quality impacts. Any

The proposed project area is within an attainment area and complies with federal and

<ul style="list-style-type: none"> • .936 Unlawful air pollution in the second degree • .939 Unlawful air pollution in the first degree • .941 Determination of number of punishable offenses under ORS 468.936 and 468.939 • .942 Unlawful water pollution in the second degree • .946 Unlawful water pollution in the first degree • .949 Determination of number of punishable offenses under ORS 468.943 and 468.946 • .951 Environmental endangerment 	<p>environmental quality impact would be minor and would not affect Lane County's air quality attainment status.</p>	<p>state air quality standards and water quality standards. BMPs are in place to prevent and minimize any air quality and water quality impacts. A Section 401 water quality certificate will be obtained from the DEQ prior to project construction, as well as an NPDES permit, if needed. The USCG will comply with all federal and state requirements related to water and air pollution.</p>
<p>ORS 465: Hazardous Waste and Materials</p> <ul style="list-style-type: none"> • .003 - .037 Reduction of use of toxic substances and hazardous waste generation • .101 - .108 Bulk petroleum product withdrawal regulation • .200 - .455 Removal or remedial action (generally) • .475 - .482 Removal or remedial action (Oregon environmental cleanup assistance) • .500 - .555 Removal or remedial action (cleanup of contamination resulting from dry cleaning facilities) • .900 - .992 Civil penalties 	<p>The Proposed Action was found to have minimal impacts associated with hazardous waste and materials. There is potential for short term impacts during construction activities but these will be minor and BMPs will be followed to avoid these.</p>	<p>The USCG will develop a Spill Prevention and Response Plan (SPRP) and comply with all federal and state regulations for storing, using, and transporting hazardous materials including creating and maintaining an emergency response plan in case of accidental release.</p>
<p>ORS 454: Sewage Treatment and Disposal Systems</p> <ul style="list-style-type: none"> • .605 Definitions for ORS 454.605 to 454.755 • .607 Policy • .610 Regulation of gray water discharge; permit; rules • .655 Permit required for construction; application; time limit; special application procedure for septic tank installation on parcel of 10 acres or more • .657 Variance from subsurface sewage disposal system rules or standards; conditions; hearing 	<p>There will be no impact to sewage infrastructure.</p>	<p>There will be no effects to the existing sewage infrastructure within the project area. Facilities used during temporary staff relocation to the Florence City Pier will discharge into existing sewage infrastructure and will not require new infrastructure. The proposed project is in compliance with ORS 454.</p>
<p>ORS 468b: Water Quality</p> <ul style="list-style-type: none"> • .005 Definitions for water pollution control laws • .015 Policy • .020 Prevention of pollution • .025 Prohibited activities • .040 Certification of hydroelectric power project; comments of affected state agencies • .045 Certification of change to hydroelectric power project; notification of federal agency • .046 Reauthorization of hydroelectric project not to limit authority of department related to certification of project for water quality purposes • .048 Rules for standards of quality and purity; factors to be considered; meeting standards • .050 Water quality permit; issuance by rule or order; rules 	<p>No dredging activities will occur in the proposed project. In-water construction activities have the potential to cause short-term minor water quality impacts. BMPs will be followed to reduce water quality impacts. There will be no long-term impacts to water quality.</p>	<p>The project will follow standard BMPs to prevent water quality impacts. The project will be in compliance with state and federal laws including the CWA. A section 401 water quality certificate will be obtained from DEQ prior to completing the final design plans, and the USCG will apply for a new or updated NPDES permit, if needed.</p>

- [.052 Fees for water quality permit to operate suction dredge](#)
- [.055 Plans and specifications for disposal, treatment and sewerage systems](#)
- [.060 Liability for damage to fish or wildlife or habitat; agency to which damages payable](#)
- [.070 Prohibited activities for certain municipalities](#)
- [.075 Definitions for 468B.080](#)
- [.080 Prohibitions for relating to garbage or sewage dumping into waters of the state](#)
- [.083 When motor vehicle parts may be placed in waters of state; rules](#)
- [.085 Depositing vehicles or manufactured structures into water prohibited](#)
- [.090 Permit authorized for discharge of shrimp and crab processing byproducts; conditions](#)
- [.093 General permit for discharge of geothermal spring water to surface water](#)
- [.095 Use of sludge on agricultural, horticultural or silvicultural land; rules](#)
- [.120 Definitions for 468B.120 to 468B.135](#)
- [.125 Policy to reduce phosphorous pollution](#)
- [.130 Prohibition on sale or distribution of cleaning agents containing phosphorous; rules](#)
- [.135 Exemptions](#)
- [.150 Definitions for 468B.150 to 468B.190](#)
- [.155 State goal to prevent ground water contamination](#)
- [.160 Ground water management and use policy](#)
- [.300 Definitions for 468B.300 to 468B.500](#)
- [.305 Entry of oil into waters of state prohibited; exceptions](#)
- [.310 Liability for violation of 468B.305; exceptions](#)
- [.315 Duty to collect and remove oil; dispersal of oil](#)
- [.320 Action by state; liability for state expense; order; appeal](#)
- [.337 Liquefied natural gas](#)
- [.345 Oil spill contingency plan required to operate facility or covered vessel in state or state waters; exceptions](#)
- [.350 Standards for contingency plans; oil spill response zones; rules](#)
- [.355 Contingency plans; participation in maritime association; lien; liability of maritime association; exemption from liability](#)
- [.360 Review of contingency plan](#)
- [.365 Plan approval; change affecting plan; certificate of approval](#)
- [.370 Determination of adequacy of plan; practice drills; rules](#)
- [.375 Inspection of facilities and vessels; coordination with State of Washington](#)
- [.380 Tank vessel inspection program; rules](#)

<ul style="list-style-type: none"> • .385 Modification of approval of contingency plan; revocation of approval; violation • .390 Compliance with federal Oil Pollution Act of 1990; proof of financial responsibility • .450 Willful or negligent discharge of oil; civil penalty; authority of director to mitigate • .460 Rules • .475 Legislative finding; need for evidence of financial assurance for ships transporting oil • .485 Methods of establishing financial assurance 		
<p>Statewide Planning Goal 2: Land Use Planning</p> <ul style="list-style-type: none"> • Guidelines 	<p>There will be no impact on land use since the land use designation will not change.</p>	<p>To comply with statewide planning goal 2, the proposed action will be consistent with local land use guidelines and the allowed uses of the City of Florence's Residential, Waterfront Marine, Conservation Estuary, and Development Estuary zones. The project also complies with land use guidelines for the proposed project management units set forth in the City of Florence comprehensive plan. The proposed project will remain consistent with previous USCG land use activities.</p>
<p>Statewide Planning Goal 6: Air, Water, and Land Resources Quality</p> <ul style="list-style-type: none"> • Guidelines 	<p>No dredging activities will occur in the proposed project. In-water construction activities may cause short-term minor impacts associated with turbidity. BMPs will be followed to reduce water quality impacts. There will be no long-term impacts to water quality. The proposed project was found to have minimal impacts on air quality. The proposed project will continue to use the space under the same previous land use designation. There will be no impact to land resources.</p>	<p>The project will follow standard BMPs to prevent water quality, and air quality impacts. The project will remain in compliance with state and federal laws such as the CWA and CAA. A section 401 water quality certificate will be obtained from the DEQ. The proposed project is in compliance with statewide planning goal 6.</p>
<p>Statewide Planning Goal 8: Recreational Needs</p> <ul style="list-style-type: none"> • Definitions 	<p>Short-term impacts to recreation will be minor as recreational activities within the vicinity of the project area will be limited during construction. There will be no long-term impacts to recreational activities.</p>	<p>There are no public recreational areas within the proposed project area. The waterway adjacent to the project area is subject to occasional in-water recreational activities such as personal watercraft use, fishing, bird watching and more. The proposed project will have no effect on recreational needs of the community.</p>
<p>Statewide Planning Goal 17: Coastal Shorelands</p> <ul style="list-style-type: none"> • Identification of Coastal Shorelands • Coastal Shoreland Uses • Permissible Nonwater-Dependent Uses 	<p>There will be minimal to no impact to coastal shorelands since the land use designation will remain the same. There will be little to no impacts to water quality,</p>	<p>The proposed project will remain consistent with previous land use and will continue to comply with federal and state laws. Consultation with agencies (NMFS, USFWS,</p>

<ul style="list-style-type: none"> • Implementation Requirements • Examples of Incidental Uses 	<p>economic resources, recreation and aesthetics. There is the potential for minor impacts to aquatic life, but the necessary permits will be acquired to address this prior to construction activities and any impacts will be minimized.</p>	<p>and ODFW) and an ESA consultation will be conducted prior to construction activities to ensure compliance. A BA will be submitted to comply with section 7 of the ESA and an Incidental Harassment Authorization (IHA) will be acquired to comply with the Marine Mammal Protection Act (MMPA). Any permits necessary will be obtained prior to construction activities.</p>
<p>Statewide Planning Goal 16: Estuarine Resources</p> <ul style="list-style-type: none"> • Pg. 1 Column 2 • Management Units • Implementation Requirements 	<p>The land use designation for this project, as previously stated, will not change indicating that there will be no change in environmental, or social effects within the project area. There will be beneficial short-term socioeconomic impacts within the area due to an increase in employment and local spending associated with the proposed project. There would be no long-term socioeconomic impact.</p>	<p>The land use designation for this project, as previously stated, will not change so any environmental, economic, and social values of the Siuslaw River Estuary will remain the same. There are also no identified wetlands within the project area.</p>
<p>OAR 660-015: Land Conservation and Development Commission</p> <ul style="list-style-type: none"> • 0010(4) Definitions 	<p>There will be minimal to no impact to coastal shorelands and estuarine resources since the land use designation will remain the same and the project area is already designated for maritime use. There will be little to no impacts to water quality, recreation and aesthetics. There is the potential for minor impacts to aquatic life, but the necessary permits will be acquired to address these prior to construction activities, and any impacts will be minimized. The NEPA process for the proposed project will involve the public in the decision making process so the public will be made aware of any and all impacts.</p>	<p>The proposed project is in compliance with statewide planning goals 16-19 (see statewide planning goal 16 and 17). The project area does not contain beaches or dunes and does not take place in the ocean (statewide goals 18 and 19). The proposed project land use designation will not change from its established land use designation and therefore does not involve a land use change plan. The proposed project also involves a public scoping process and will allow the public to submit comments and concerns. The project's EA will be made publicly available for citizen involvement.</p>
<p>OAR 660-035: Land Conservation and Development Commission</p> <ul style="list-style-type: none"> • 0030 Consistency for Federal Agency Activities • 0000 Purpose • 0005 Conformance with Federal Consistency Review Rules • 0010 Definitions • 0015 Activities Subject to Review • 0020 Federal Consistency with the OCMF • 0050 Consistency for Activities Requiring a Federal License or Permit • 0060 Consistency for Outer Continental Shelf Activities 	<p>There will be minimal to no impact to coastal shorelands since the land use designation will remain the same. There will be little to no impacts to water quality, recreation and aesthetics. There is the potential for minor impacts to aquatic life, however the necessary permits will be acquired to address this prior to construction activities and any impacts will be minimized. For more information, see attached coastal effects evaluation for an</p>	<p>This consistency determination document fulfills the requirements for OAR 660-035 and ensures that the proposed project meets all federal consistency requirements.</p>

<ul style="list-style-type: none"> • 0070 Consistency for Federal Assistance to State and Local Governments 	in-depth analysis of overall coastal effects.	
<p>ORS 520: Conservation of Gas and Oil</p> <ul style="list-style-type: none"> • .005 Definitions • .025 Permit for drilling well or using well; extension; annual report; grounds for granting or denying permit • .035 Waste of oil or gas prohibited • .095 Rules and orders; bond 	No oil or gas drilling will occur within the proposed project area so there will be no coastal impact associated with this policy.	The proposed project will not involve the drilling or using of an oil well so this law does not apply.
<p>ORS 517: Mining and Mining Claims</p> <ul style="list-style-type: none"> • .005 Definitions 	No mining activity will occur within the proposed project area so there will be no coastal impact associated with this policy.	The proposed project does not entail any mining activities so this law does not apply.
<p>ORS 273: State Lands Generally</p> <ul style="list-style-type: none"> • .775 Definitions for ORS 273.775 to 273.790 • .780 Retention of mineral and geothermal resource rights by state; exploration permit or lease; sale or exchange; exception • .785 Application of ORS 273.551 to 273.775 to 273.790; rules 	The proposed project will not be mining, selling or exchanging mineral or geothermal resources so there will be no coastal impact associated with this policy.	The proposed project will not be mining, selling or exchanging mineral or geothermal resources; this law does not apply.
<p>ORS 273: State Lands Generally</p> <ul style="list-style-type: none"> • .551 Mining and drilling leases on state lands; fee • .553 South Slough National Estuarine Research Reserve; agreement between Oregon and federal government; rules • .554 South Slough National Estuarine Research Reserve Management Commission; powers; rules; fees; membership; procedures; expenses 	The proposed project will not require a mining or drilling lease and the project does not take place within the South Slough so there will be no coastal impacts associated with this policy.	The proposed project will not require a mining or drilling lease and the project does not take place within the South Slough so this law does not apply.
<p>ORS 274: Submersible and Submerged Lands</p> <ul style="list-style-type: none"> • .043 Exemptions from leasing requirements; rules; registration; use without charge; use with charge; indemnification • .430 State ownership of meandered lakes; status as navigable and public waters • .005 Definitions • .015 Determination of ordinary high and low water • .025 Jurisdiction over submersible and submerged lands generally • .040 Sale or lease of submersible lands; easements; occupation of submerged and submersible lands for water works • .060 Regulation of harbor improvements; oyster beds; public easement in submerged and submersible lands • .400 Definition for ORS 274.400 to 274.412 • .402 Exclusive jurisdiction to assert title to submerged or submersible lands in navigable waterway • .425 Definition for ORS 274.430 to 274.520 • .440 Acquisition of future rights to meandered lakes denied; extension of riparian ownership; lands overflowed by high water 	There will be no dredging or highly disturbing activities occurring on submerged lands within the project vicinity. Construction BMPs will be followed to reduce all potential effects to submerged lands.	The proposed project is in compliance with ORS 274. The USCG is applying to OR DSL for a permit to replace existing piles and install new piles in submerged lands.

- [.525 City use of stream bed material](#)
- [.530 Lease or license of stream beds for removal of material; rules for measurement of volume removed](#)
- [.550 Removal of material without payment of royalties; eligible material and uses](#)
- [.560 Lease terms; bond or security; prohibited lease or purchase option; monthly reports and payments; rules](#)
- [.705 Definitions for ORS 274.705 to 274.860](#)
- [.710 Jurisdiction of department over tidal submerged lands; easements; leases for oil, gas and sulfur](#)
- [.715 Sulfur leases](#)
- [.725 Scope of leases and permits; persons ineligible](#)
- [.735 Application for survey permit; effect of permit; rules](#)
- [.740 Issuance of survey permit; renewal; reports](#)
- [.745 Drilling logs and records](#)
- [.760 Considerations involved in granting lease or easement](#)
- [.770 Prohibited drilling requirements](#)
- [.790 Royalties](#)
- [.805 Drill sites](#)
- [.810 Commencement of drilling; operational requirements](#)
- [.820 Water contamination or pollution](#)
- [.825 Nonconflicting use of leased lands](#)
- [.830 Protecting lands from drainage](#)
- [.835 Conformance to laws and regulations; periodic negotiations](#)
- [.840 Continuation of lease after cessation of production](#)
- [.850 Cancellation of lease; partial retention of leasehold; removal of equipment](#)
- [.855 Restoration of leasehold to original condition](#)
- [.860 Protection of location of filled lands](#)
- [.867 Wave energy; financial assurance; rules](#)
- [.885 Lease of kelp fields](#)
- [.890 Time allowed lessee for survey and erection of plant; filing copy of survey with department](#)
- [.895 Removing kelp without lease](#)
- [.905 Definitions for ORS 274.905 to 274.940](#)
- [.920 Creation of new lands upon submersible or submerged lands](#)
- [.940 Reservation of new lands](#)

ORS 527: Forest Practices

- [.620 Definitions for ORS527.610 to 527.770](#)
- [.630 Policy](#)
- [.660 Committees to review rules](#)
- [.670 Commencement of operations; when notice and written plan required; notice of chemical application; appeal of plan](#)
- [.700 Appeals from order of State Forester; hearings procedure;](#)

There is a forested natural area north of the proposed project area but this area will be avoided and not disturbed. A small number of trees (less than 5) may be removed during construction of shoreline features, but will be replaced as part of a revegetation plan to be prepared as part of the construction plans.

The proposed project does not take place within a forested area, and the project will not result in the use of chemicals, but there is the potential for some tree removal along the shoreline in the project area. Any trees removed in this area are stand-alone and are not part of a larger state forested area and pitch will not be extracted so this proposed

<ul style="list-style-type: none"> stay of operation .710 Duties and powers of board; rules to protect resources; inventory for resource protection; consultation with other agencies .722 Restrictions on local government adoption of rules regulating forest operations; exceptions .990 Criminal penalties 		<p>action is in compliance with this law.</p>
<p>OAR 340-41: Water Quality Standards</p> <ul style="list-style-type: none"> 0002 Definitions 0004 Antidegradation 0007 Statewide Narrative Criteria 0009 Bacteria 0011 Biocriteria 0016 Dissolved Oxygen 0021 pH 0028 Temperature 0031 Total Dissolved Gas 0032 Total Dissolved Solids (TDS) 0033 Toxic Substances 0036 Turbidity 0061 Other Implementation of Water Quality Criteria 0104 Basin-Specific Criteria (Main Stem Columbia River): Water Quality Standards and Policies Specific to the Main Stem Columbia River 0225 Basin-Specific Criteria (Mid Coast Basin): Water Quality Standards and Policies for this Basin 0235 Basin-Specific Criteria (North Coast): Water Quality Standards and Policies for this Basin 00275 Basin-Specific Criteria (Rogue): Water Quality Standards and Policies for this Basin 0305 Water Quality Standards and Policies for South Coast Basin 0326 Basin-Specific Criteria (Umpqua Basin): Water Quality Standards and Policies for this Basin 	<p>No dredging activities will occur in the proposed project. In-water construction activities have the potential to cause short-term minor impacts. BMPs will be followed to reduce water quality impacts. There will be no long-term impacts to water quality.</p>	<p>The proposed project will comply with federal regulations under the CWA and will follow construction BMPs to reduce any potential water quality impacts. The USCG will obtain a 401 water quality certificate and, if needed, an NPDES permit. To minimize impacts to fish, USCG is consulting with NMFS and USFWS under the ESA, and with ODFW for fish passage approval. All potential biological impacts will be mitigated.</p>
<p>OAR 635-412: Fish Passage</p> <ul style="list-style-type: none"> 0005 Definitions 0015 Prioritization 0020 Fish Passage Approval 0025 Fish Passage Waivers and Exemptions 0035 Fish Passage Criteria 0040 Mitigation Criteria 	<p>The proposed project has the potential to impact native fish and marine mammals during in-water construction work, but these impacts will be minor and short term. Impacts to anadromous fish and marine mammals would result from in-water noise and a temporary reduction in habitat quality, and are being addressed in formal consultation with NMFS and USFWS. In addition to a fish passage permit, an IHA under the MMPA will be acquired. No long-term impacts are expected.</p>	<p>The proposed project will not have long-term impacts on fish passage in the Siuslaw River. The USCG will coordinate with ODFW.</p>

<p>OAR 635-415: Fish and Wildlife Habitat Mitigation Policy</p> <ul style="list-style-type: none"> • 0005 Definitions • 0010 Fish and Wildlife Habitat Mitigation Policy • 0020 Implementation of Department Habitat Mitigation Requirements (*excluding Policies #6-7) • 0025 Implementation of Department Habitat Mitigation Recommendations 	<p>The proposed project has the potential to impact native fish and marine mammals during in-water construction work, but these impacts will be minor and short term. Impacts to anadromous fish and marine mammals would result from in-water noise and a temporary reduction in habitat quality, and are being addressed in formal consultation with NMFS and USFWS. In addition to a fish passage permit, an IHA under the MMPA will be acquired, and a BA will be submitted to comply with section 7 of the ESA. No long-term impacts are expected.</p>	<p>The USCG has been in coordination with ODFW since the start of the project to ensure compliance</p>
<p>OAR 635-425: In-Water Blasting Permits</p> <ul style="list-style-type: none"> • 0005 Applicability • 0010 Definitions • 0015 Fish and Wildlife In-Water Blasting Permit Policy • 0020 Application Requirements • 0035 Permit Conditions • 0040 Notification Requirements 	<p>There will be no coastal effects in association with in-water blasting for the proposed project.</p>	<p>There will be no in-water blasting occurring in the proposed project, so this law does not apply.</p>
<p>ORS 358: Archaeological Objects and Sites</p> <ul style="list-style-type: none"> • .905 Archaeological Objects and Sites: Definitions • .910 Archaeological Objects and Sites: Policy • .920 Archaeological Objects and Sites: Prohibited Conduct • .945 Archaeological Objects and Sites: Notice required upon finding of object • .950 Archaeological Objects and Sites: When notice to Indian tribe required 	<p>The equipment building at the USCG Station Siuslaw is eligible for listing in the National Register of Historical Places (NRHP) however, no proposed upgrades would occur at this facility. No other archaeological significant objects or sites were identified within the project area. Construction BMPs will be followed to prevent impacts to the equipment building. There will be no impact to archaeological objects or sites.</p>	<p>The USCG has completed surveys for cultural and historical resources and has coordinated with the SHPO and Tribal interests throughout the project as necessary to ensure protection of archeological resources.</p>
<p>OAR 736-051: Archaeological Permits</p> <ul style="list-style-type: none"> • 0080(1) Archaeological Permits - Process for Applying for an Archaeological Permit on Public Lands: Circumstances requiring Archaeological Permits. • 0090(1) Archaeological Permits - Process for Applying for an Archaeological Permit on Private Lands: Circumstances requiring Archaeological Permits 	<p>The equipment building at the USCG Station Siuslaw is eligible for listing in the NRHP however, no proposed upgrades would occur at this facility. No other significant archaeological objects or sites were identified within the project area. Archaeological permits would not be required for this project. There will be no impact to archaeological objects or sites.</p>	<p>The USCG has coordinated with SHPO and Tribal interests throughout the project to ensure protection of archeological resources. No archaeological permits are required for the proposed project.</p>
<p>ORS 390: Archaeological Resource Protection Policies</p> <ul style="list-style-type: none"> • .235 Permits and conditions for excavation or removal of archaeological or historical material; rules; criminal penalty • .237 Removal without permit; exceptions 	<p>The equipment building at the USCG Station Siuslaw is eligible for listing in the NRHP however, no proposed upgrades would occur at this facility. No other</p>	<p>The USCG has coordinated with SHPO and Tribal interests throughout the project as necessary to ensure protection of archeological resources. An Inadvertent</p>

	<p>archaeological significant objects or sites were identified within the project area. Construction BMPs will be followed to prevent impacts to the equipment building or discovered archaeological resources. There will be no impact to archaeological objects or sites.</p>	<p>Discovery Plan (IDP) will be created and followed by the construction contractor in case of accidental discovery of archaeological resources.</p>
<p>ORS 97: Rights and Duties Relating to Cemeteries, Human Bodies and Anatomical Gifts</p> <ul style="list-style-type: none"> • .740 Rights and Duties Relating to Cemeteries, Human Bodies and Anatomical Gifts: Definitions • .745 Rights and Duties Relating to Cemeteries, Human Bodies and Anatomical Gifts: Prohibited Acts • .750 Rights and Duties Relating to Cemeteries, Human Bodies and Anatomical Gifts: Permitted Acts 	<p>No archaeological significant objects or sites were identified within the project area. Construction BMPs such as an IDP will be followed to prevent archaeological impacts or in case of accidental discovery of archaeological resources. There will be no impact to archaeological objects or sites.</p>	<p>The USCG has coordinated with SHPO and Tribal interests throughout the project as necessary to ensure protection of archeological resources. An IDP will be created and followed by the construction contractor in case of accidental discovery of cemeteries, human bodies and anatomical gifts.</p>
<p>ORS 496: Wildlife Administration</p> <ul style="list-style-type: none"> • .004 Definitions • .007 "Game bird" defined • .009 "Game fish" defined • .012 Wildlife policy • .162 Establishing seasons, amounts and manner of taking wildlife; rules • .171 Definitions for ORS 496.171 to 496.182; applicability date • .182 Protection and conservation programs; compliance by state agencies; rules 	<p>The proposed project has the potential to impact native fish and marine mammals during in-water construction work, but these impacts will be minor and short term. Impacts to anadromous fish and marine mammals would result from in-water noise and a temporary reduction in habitat quality, and are being addressed in formal consultation with NMFS and USFWS. In addition to a fish passage permit, an IHA under the MMPA will be acquired, and a BA will be submitted to comply with section 7 of the ESA. No long-term impacts are expected.</p>	<p>To minimize impacts to fish and wildlife, consultation will take place with NMFS, as well as ODFW. All potential biological impacts will be mitigated. An IHA will be obtained from NMFS to comply with the MMPA and a BA will be submitted to comply with section 7 of the ESA. Potential in-water disruptive activities such as impact pile driving will occur in an ODFW-approved in-water work window. In-water work that will affect anadromous fish is being coordinated with NMFS.</p>
<p>ORS 498: Hunting, Angling, and Wildlife; Screening</p> <ul style="list-style-type: none"> • .306 Screening or by-pass devices for water diversions; fees; costs • .316 Exemption from screening or by-pass devices • .301 Policy 	<p>The proposed project will not divert water. Temporary exclusion screens may be installed to keep fish out of the area during in-water construction, but will be removed after completion of the project. There will be no coastal impacts associated with this policy.</p>	<p>The proposed project will not divert water. Temporary exclusion screens may be installed to keep fish out of the area during in-water construction, but will be removed after completion of the project. The use of the exclusion screens and resulting protection of fish will ensure the proposed project will be in compliance with this policy.</p>
<p>ORS 506: Commercial Fishing and Fisheries</p> <ul style="list-style-type: none"> • .006 General definitions • .011 Types of marine life defined • .016 "Salmon" defined • .025 "Unlawful to buy" defined • .028 "Conservation" defined • .109 Food fish management policy 	<p>There will be no coastal impact in relation to commercial fishing.</p>	<p>The proposed project does not involve commercial fishing however, it will involve temporary closing of waters within the project vicinity during construction activities. To comply with ORS 506.220, the closed area will be visibly marked.</p>

<ul style="list-style-type: none"> • .220 Erecting markers of closed waters; interference with markers • .450 Definitions for ORS 506.450 to 506.465; rules • .455 Policy • .610 When possession prima facie evidence of taking fish unlawfully 		
<p>ORS 509: Additional Fishery Requirements</p> <ul style="list-style-type: none"> • .001 Definitions • .112 Wasting food fish • .115 Placing in waters fish harmful to food fish • .120 Using electricity to disturb food fish • .122 Definitions for ORS 509.125 to 509.155 • .125 Placing substances in water to drive fish from closed areas • .130 Placing substances in water or using explosives to take or destroy food fish • .140 Placing explosives or harmful substances in waters in course of lawful work; permit • .505 Placing in water matter injurious to shellfish • .510 Taking shellfish from marked beds without permission; disturbing beds • .580 Definitions for ORS 509.580 to 509.590, 509.600 to 509.645 and 509.10; rules • .585 Fish passage required for artificial obstructions; statewide inventory; waiver of requirement by commission; rules; exemptions • .600 Destroying, injuring or taking fish near fishway; permits to take fish • .610 Maintenance of fish passage required • .625 Power of department to inspect artificial obstructions and have fish passage constructed or remove obstruction 	<p>The proposed project has the potential to impact native fish and marine mammals during in-water construction work, but these impacts will be minor and short term. Impacts to anadromous fish and marine mammals would result from in-water noise and a minor reduction in habitat quality and are being addressed in formal consultation with NMFS and USFWS. In addition to a fish passage permit, an IHA under the MMPA will be acquired, and a BA will be submitted to comply with section 7 of the ESA. No long-term impacts are expected.</p>	<p>The proposed project does not involve commercial fishing but the project has the potential to impact anadromous fish. The USCG is consulting with NMFS, and ODFW to document and minimize impacts to fish and marine wildlife.</p>
<p>ORS 564: Threatened or Endangered Plants</p> <ul style="list-style-type: none"> • .100 Definitions for ORS 564.100 to 564.135 • .115 Protection and conservation programs; action by state agencies; alternatives; findings required if agency fails to adopt alternatives • .120 Transactions in threatened or endangered species; restrictions; prohibition 	<p>Surveys were performed by qualified biologists, who determined that there are no threatened or endangered plants in the project area; therefore, there will be no coastal impacts associated with this policy.</p>	<p>There are no threatened or endangered plants within the project area. Surveys confirmed the absence of threatened or endangered plants. This law does not apply.</p>
<p>ORS 536: Water Resources Administration</p> <ul style="list-style-type: none"> • .220 Policy on water resources generally; integrated state water resources strategy • .700 Drainage basin"" defined • .710 Policy 	<p>Short-term impacts to water resources could result during in-water construction activities. BMPs will be followed to reduce all potential impacts. There will be minimal to no long-term impact to water resources.</p>	<p>The proposed project will remain consistent with previous land use and water resource utilization will not change. There will be no economic or general welfare impact to the public in terms of water resource use.</p>
<p>ORS 537: Appropriation of Water</p> <ul style="list-style-type: none"> • .400 Reservoir permits 	<p>There will be no coastal impact to water rights.</p>	<p>The proposed project will connect to an existing water supply system maintained by</p>

- [.010 Definition of "Water Rights Act](#)
- [.110 Public ownership of waters](#)
- [.120 Right of appropriation; vested rights protected](#)
- [.130 Permit to appropriate water required; notification to owner of certain land](#)
- [.135 Permit required to appropriate water for recharging ground water sources; minimum perennial streamflow required for permit; exception](#)
- [.140 Application for permit; contents; maps and drawings](#)
- [.150 Filing of application; determination of completeness; initial review; preliminary determination; notice; public comments; fees](#)
- [.160 Approval for beneficial use; agreement authorizing use of ditch for waste or seepage water](#)
- [.170 Contested case hearing on application; final order; appeal](#)
- [.240 Federal permit; time for obtaining; cancellation; time for beginning and completing work](#)
- [.332 Definitions for ORS 537.332 to 537.360](#)
- [.334 Findings](#)
- [.343 Certificate for in-stream water right](#)
- [.346 Conversion of minimum perennial streamflows to in-stream water rights; special provisions for Willamette Basin](#)
- [.348 Purchase, lease or gift of water right for conversion to in-stream water right; priority dates](#)
- [.349 Processing request for in-stream water right](#)
- [.350 Legal status of in-stream water right](#)
- [.352 Precedence of uses](#)
- [.410 Failure to commence or complete work, or to properly apply water, as grounds for cancellation of permit; irrigation districts, municipalities and public utilities excepted](#)
- [.420 Notice of hearing](#)
- [.440 Cancellation of permit; priorities of other permits](#)
- [.445 Hearing upon proposal to cancel permit or appropriation; cancellation suspended pending review](#)
- [.450 Rules for proof as to work and use of water under permits; noncompliance as evidence in cancellation proceedings](#)
- [.505 Short title](#)
- [.515 Definitions for ORS 537.505 to 537.795 and 537.992](#)
- [.525 Policy](#)
- [.535 Unlawful use or appropriation of ground water, including well construction and operation](#)
- [.545 Exempt uses; map; filing of use; fee; rules](#)
- [.575 Permits granted, approved or pending under former law](#)
- [.585 Beneficial use of ground water prior to August 3, 1955, recognized as right to appropriate water when registered](#)
- [.595 Construction or alteration of well commenced prior to August](#)

the City of Florence. There is no additional need for appropriation of water, so no new federal permits are required. The project is already in compliance with ORS 537.

<ul style="list-style-type: none"> • 3, 1955, recognized as right to appropriate water when registered • .605 Registration of right to appropriate ground water claimed under ORS 537.585 or 537.595; registration statement • .610 Recording of registration statements; issuance of certificate of registration; conclusiveness of certificate • .615 Necessity of permit to acquire new right or enlarge existing appropriation right • .620 Determination of completeness and propriety of application; public notice and comment • .625 Final order; appeal; contents of permit • .630 Time allowed for construction work under permit; certificate of completion; survey; ground water right certificate; requirements for supplemental water right • .635 Assignment of application, certificate of registration or permit • .680 Taking testimony; inspecting evidence; contesting claim • .685 Findings of fact and order of determination • .690 Filing evidence, findings and determinations; court proceedings • .695 Conclusive adjudication • .705 Ground water appurtenant; change in use, place of use or point of appropriate • .730 Designation of critical ground water area; rules; notice • .780 Powers of Water Resources Commission; rules; limitations on authority • .795 ORS 537.505 to 537.795 supplementary 		
<p>ORS 543: Hydroelectric Projects</p> <ul style="list-style-type: none"> • .012 Applicability of chapter to reauthorization of existing hydroelectric project • .014 Exemption for wave energy project; conditions • .015 Policy • .017 Minimum standards for development of hydroelectric power; public interest considerations; rules • .060 Investigations; access to project, maps, books and other project data • .110 Appropriation and use of water for power is governed by this chapter • .120 Water power projects to be in conformity with this chapter • .140 Projects or developments constructed by federal government excepted from law • .150 Municipal corporations and utility districts; applicability of laws; powers of commission respecting districts • .210 Preliminary permits; application; contents; fee • .225 Hearing on application; notice; policy • .250 Permit; duration; transfer; cancellation; priority; terms and conditions; denial 	<p>There will be no coastal effects in association with hydroelectric projects.</p>	<p>The proposed project does not consist of hydroelectric activities, so this law does not apply.</p>

- [.255 Determination of cumulative impacts of proposed hydroelectric power projects; consolidated review; applicability](#)
- [.260 Licenses; duration; terms and conditions; termination; denial of application; preference of municipality or utility district](#)
- [.265 Testing of fish protection measures as condition for hydroelectric project permit or license; scope and cost](#)
- [.270 Preference in granting permit or license; municipal use](#)
- [.280 Fee payments by licensee](#)
- [.290 Filing of maps, plans, estimates and other materials; incorporation as part of license; alteration; further statements and data](#)
- [.300 Conditions governing license; fees; waiver of conditions](#)
- [.410 Construction of project; time for commencement and completion; supply of service; extension of time; nonperformance; termination of license](#)
- [.440 Transfer of license, rights or property; effect](#)
- [.610 Acquisition of project by state or municipality](#)
- [.760 Definition of water right](#)
- [.765 Certificate to use water for hydroelectric purposes; expedited application process; fees](#)

Appendix B – Coastal Effects Evaluation



COASTAL EFFECTS EVALUATION

Developed on 12/7/2023

Project Name: United States Coast Guard Station Siuslaw River, Florence, OR – Construct Covered Mooring and Correct Shoreline Erosion, Station Siuslaw River

Federal Project Number: 13-5067032

Directions: Please provide a description of all reasonably foreseeable coastal effects (15 CFR §930.11(g)) associated with the proposed project. This should include both direct and indirect effects to the environment, recreational/economic uses (e.g., impacting other users or industries), and other coastal resources. If coastal effects are already described in the federal permit/license application or submitted supplemental information you may note it in the description below to avoid duplication of effort.

1.0 Coastal Effects Analysis

1.1 Direct and Indirect Environmental Effects

The upland portion of the project area consists of USCG buildings, a parking lot, a paved access road, and a vegetated slope consisting of invasive and some native species with little to no wildlife habitat. Riparian habitat and coastal upland forested habitat can be found north of the project area and has the potential to provide habitat for migratory birds as well as mammals such as racoons, squirrels, other small mammals and the occasional deer or elk. Under the Proposed Action, the overall extent of vegetation on the upper dune slope would be slightly reduced due to the placement of the pipe pile wall. However, clearing and revegetation efforts on the upper slope would result in a vegetation community with reduced invasive cover and increased native upland and riparian plant abundance. Long-term effects on the mixed upland and riparian vegetation communities from the Proposed Action Alternative would be minor and overall beneficial. No effects will occur to surrounding vegetation communities as no construction activities would occur in these areas.

The marine environment within the project area lies within the lower Siuslaw River estuary. Although the estuary in this reach of the river lacks stream complexity, tidal wetlands, and side channels, it provides productive subtidal and intertidal fish and wildlife habitat. After initial biological assessments, it has been determined that no eelgrass or vegetated wetlands, including tidal fringe wetlands, occur within the project vicinity. One non-wetland water, the Siuslaw River and estuary, occurs and is a tidally influenced waterbody known to be a jurisdictional water of the U.S.

The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) have identified 13 ESA-listed fish and wildlife species, evolutionarily significant units (ESUs), or distinct population segments (DPSs) and one candidate insect species that may occur in or near the action area. The USFWS list of species was obtained from the Information, Planning, and Conservation (IPaC) website and listed fish species were obtained from NMFS ESA listings (USFWS 2022, NMFS 2016). The species with the potential to occur within the project vicinity are identified in Tables 1 and 2. Critical habitat has been designated or proposed for five species; however, no critical habitat occurs for these species in the project area (USFWS 2022). Six ESA-listed populations that include three anadromous fish species and two marine mammal species may occur in or near the project area (Table 2). Critical habitat has been designated for each of the fish species, but only occurs in the project area and Siuslaw River for the OC ESU coho salmon (*Oncorhynchus kisutch*).

Table 1. USFWS ESA-listed species, Lane County, Oregon.

Common Name (<i>Scientific Name</i>)	Status ^a :Listing ^b	Critical Habitat	Species Presence in Action Area
MAMMALS			
Pacific marten (<i>Martes caurina caurina</i>) Coastal DPS	T: 85 FR 63806	Proposed	None
BIRDS			
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	T:57 FR 45328	81 FR 51348	Rare

Northern spotted owl (<i>Strix occidentalis caurina</i>)	T:81 FR 71760	77 FR 71876	None
Western snowy plover (<i>Charadrius nivosus nivosus</i>)	T:58 FR 12864	77 FR 36727	Rare
Pacific Coast DPS			
REPTILES			
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	E:35 FR 8491	77 FR 4170	None
Loggerhead sea turtle (<i>Caretta caretta</i>)	E:76 FR 58867	None	None
North Pacific Ocean DPS			
Olive Ridley sea turtle (<i>Lepidochelys olivacea</i>)	T, E:43 FR 32800	None	None
<p>a. E: Endangered, T: Threatened</p> <p>b. Federal Register Citation</p> <p>Source: USFWS 2022</p>			

Table 2. NMFS ESA-listed fish species likely to occur in the project vicinity.

Common Name (<i>Scientific Name</i>) ESU/DPS	Status ^a :Listing ^b	Critical Habitat	Presence in Action Area
Coho salmon (<i>Oncorhynchus kisutch</i>) Oregon Coast ESU	T:76 FR 35755	73 FR 7816	Known
Pacific Eulachon (<i>Thaleichthys pacificus</i>) Southern DPS	T:75 FR 13012	76 FR 65324	Potential
North American Green sturgeon (<i>Acipenser medirostris</i>) Southern DPS	T:71 FR 17757	74 FR 52300	Potential
Humpback Whale (<i>Megaptera novaeangliae</i>)			
Central America DPS	E:81 FR 62259	86 FR 21082	None
Mexico DPS	T:81 FR 62259	86 FR 21082	None
Killer Whale (<i>Orcinus orca</i>)			
Southern Resident DPS	E:70 FR 69903	86 FR 41668	Rare
<p>a. E: Endangered, T: Threatened</p> <p>b. Federal Register Citation</p> <p>Source: NMFS 2016, NMFS 2022</p>			

Marine mammals such as the Californian sea lion (*Zalophus californianus*), Steller sea lion (*Eumetopias jubatus*), Pacific harbor seal (*Phoca vitulina richardii*), and the harbor porpoise (*Phocoena phocoena*) also have the potential to occur within the project area. A known haul-out area is located near the groin structures on the west bank of the river directly across from the Station Siuslaw and on derelict floating docks just upstream of the temporary mooring area. Killer whales (*Orcinus orca*) may use the lower Siuslaw estuary but are unlikely to be present in the vicinity of the project area. The USCG will comply with the Marine Mammal Protection Act Section 101(a)(5)(D) and will request an Incidental Harassment Authorization for potential in-water construction noise disturbance.

The lower Siuslaw River, including all waters and substrates within the proposed project site to the MHHW level, is designated as composite Essential Fish Habitat (EFH; estuarine) for all Pacific coast groundfish managed under the Pacific Coast Groundfish Fishery Management Plan (FMP). Habitat Areas of Particular Concern (HAPCs), a subset of EFH, includes types or areas of habitat designated by the Pacific Fisheries Management Council that are identified as being ecologically important, sensitive, stressed, or rare and deserving special attention. The lower Siuslaw River is designated as a HAPC for estuary habitat from its mouth to a point approximately 6 miles upstream of the US-101 bridge, including the Station Siuslaw project area and temporary mooring area (NMFS 2022).

In-water work such as pile driving has the potential to create noise disturbance and temporary disturbance to habitat. These actions will be temporary, and no fish or wildlife mortality is expected to occur. No other long-term effects are

expected on marine and estuarine habitat. Potential effects to listed species include 1) effects of elevated in-water sound levels from in-water work, including pile driving, with the potential to injure or illicit behavioral responses from fish, 2) effects related to spills and leaks into the estuary from heavy construction equipment and marine construction vessels, 3) temporary effects of altered water quality from increased turbidity and suspended sediment concentrations in the water column due to disturbance of the aquatic bed from piling removal, and piling installation, 4) effects from temporary reduction in available benthic prey, and 5) effects of temporary disruptions to free migration. Conservation measures will be implemented and best management practices (BMPs) will be followed during construction activities to reduce any potential adverse effects. The U.S. Coast Guard (USCG) will comply with the amount or extent of take, reasonable and prudent measures, terms and conditions, and conservation recommendations established by the USFWS and NMFS (the Services) and the project's incidental take statement and biological opinion. Therefore, effects to federally threatened and endangered species and their prey are expected to be moderate and short-term.

Potential adverse effects to the designated composite EFH and the estuary HAPC from pile driving include: 1) temporarily altered aquatic ambient noise levels produced by pile driving, and extraction, 2) temporarily altered water quality from increased turbidity and suspended sediments resulting from in-water work, and 3) potential release of contaminants into the water column or sediments resulting from accidental spills of fuels and/or lubricants from marine vessels, barges, or heavy construction equipment. While there are some environmental benefits derived from the project (e.g., bank stabilization that limits erosion, updating structures that would otherwise fall into disrepair or disuse), there would be some new minor obstructions to free migration of fish or other aquatic biota on the edges of the river or where the new footprint of the Station would occur. Small-scale changes in habitat, including EFH, could result. Given the limited area in the Siuslaw River estuary potentially affected by the new in-water structure, long-term impacts of the new structures to ESA-listed species and EFH would be minimal to moderate. No direct impacts to eelgrass (HAPC) will occur because no eelgrass is present in the project area or immediate vicinity. Water depths and substrate are insufficient to support the growth and establishment of eelgrass beds and proposed modifications will not alter those conditions.

Construction of landside and in-water project area improvements have the potential to impact local water quality through small quantity spills, surface water runoff from upland areas, and turbidity generated by demolition, and pile driving. The project could result in temporary and localized reduction in water quality during pile driving and shoreline stabilization construction activities, which would temporarily elevate levels of suspended sediments. These impacts would be minor and temporary and will cease shortly after construction activities are complete. The USCG will apply for Water Quality Certification under Section 401 of the CWA, which will include measures to ensure that turbidity is monitored and minimized. The project will incorporate numerous BMPs to minimize impacts to water quality, aquatic species, ESA-listed fish, and sediments during pile driving and construction. Construction operations pose a potential source of contaminated stormwater runoff. The construction contractor will prepare a Stormwater Pollution Prevention Plan, which will specify measures to prevent pollution caused by construction actions, reduce contaminated stormwater runoff, and minimize the potential for adverse effects on aquatic organisms. Implementation of standard BMPs (e.g., debris booms, silt curtains, silt fencing, straw bales, etc.) will reduce potential impacts associated with these activities. Impacts on surface waters resulting from construction activities will be short-term.

The interlocking pile wall would likely encounter groundwater however, the wall would be constructed using a combination of auger predrilling and/or hydraulic press-in installation, which are more environmentally friendly than traditional piling methods and eliminate the need for a temporary retaining wall. Thus, the proposed structure would minimize the potential for groundwater contamination during construction. Although interlocking pile wall structures can effectively seal water from flowing through them, a weep or drainage hole would be designed into the proposed structure to allow groundwater flow to pass through the wall at approximately the same elevation as the existing condition; therefore, the structure would not be anticipated to affect groundwater quality, flow, or elevations once constructed. Ship maintenance and cleaning may include underwater hull cleanings, during which small amounts of copper and zinc from the copper ablative anti-fouling coating system can be released into the surrounding water. While underwater hull cleanings are not currently regulated, they will eventually be regulated under the Uniform National Discharge Standards program, and the USCG will comply with these regulations. USCG will comply with all federal and state requirements related to stormwater pollution prevention during construction activities and incorporate City of Florence Development Code requirements to reduce potentially adverse impacts.

To minimize potential adverse environmental effects, in addition to following BMPs, the construction contractor will also prepare and execute a Spill Prevention, Containment, and Countermeasure Plan. The USCG will also comply with state and federal regulations for storing, using, and transporting hazardous materials, including creating and maintaining an emergency response plan in case of accidental release.

2.1 Recreation and Navigation Impacts

Human activities within and around the project area consist primarily of vessel traffic and some recreational boating. The park closest to the project area is Hurd Memorial Park, open year-round and located just north of Station Siuslaw. The South Jetty Beach Five-Day Use Area is less than one mile from Station Siuslaw, directly across the river and vegetated coastal dune backshore. The South Jetty Crab Dock is less than one mile northwest from the project area on the Siuslaw

River west bank. Accessible year-round, these areas are part of the Oregon Dunes National Recreation Area managed by the U.S. Forest Service. Beach use, fishing, hiking, and wildlife viewing are popular activities. Boaters and fishermen use the waters and shorelines of the Siuslaw River year-round, but boating and fishing in the immediate project area are not allowed for Station Siuslaw security reasons. The Port of Siuslaw offers recreational boat moorage, a boat launch, and a recreational vehicle campground with amenities at the Port of Siuslaw Campground and Marina located adjacent to the Siuslaw River in Old Town Florence. There will be moderate short-term impacts to recreation under the proposed action due to the temporary mooring of USCG vessels at the Port of Siuslaw.

The Siuslaw River is a navigable water maintained by the USACE and houses a Federal Navigation Channel (FNC) for small draft tugs and barges as well as commercial and recreational fishing vessels. The project area does not overlap with the FNC and would not have any direct impacts to navigation. During construction, temporary use of barges as work platforms for heavy equipment and materials staging would be needed. No proposed construction actions would occur within the FNC therefore only short-term minor adverse navigation impacts are expected.

3.1 Economic Impacts

The proposed project will remain consistent with established land uses. During construction activities there will be a temporary increase in construction workers that may beneficially affect the local community and temporarily increase local spending. Long term impacts would be none to negligible because project operations would not change under the existing USCG Station, and there would be no increase or decrease in employment or local spending compared to existing conditions.

4.1 Development

The proposed project will remain consistent with its existing land use designation and will be consistent with local land use guidelines and the allowed uses of the City of Florence's Residential, Waterfront Marine, Conservation Estuary, and Development Estuary zones. The proposed project footprint will be similar to existing conditions but the covered mooring will be approximately 1,800 square feet larger than the existing structure to accommodate larger USCG vessels. It is estimated that up to 79 new or replacement steel piles will be needed to support the new covered mooring, access bridge, and fixed debris boom. Aesthetics and visual resources have been considered and the proposed project will not impact aesthetics. Any long-term impacts will be minor.

References

- National Marine Fisheries Service (NMFS). 2016. Status of ESA Listings and Critical Habitat Designations for Coho Salmon. Available at http://www.westcoast.fisheries.noaa.gov/publications/gis_maps/maps/salmon_steelhead/critical_habitat/wcr_salmonid_ch_esa_july2016.pdf. Last accessed May 2022.
- NMFS. 2022. NOAA Fisheries Protected Resources Application. West Coast Region. Available at: <https://www.webapps.nwfsc.noaa.gov/portal/apps/webappviewer/index.html?id=7514c715b8594944a6e468dd25aaacc9>. Accessed March 2022.
- USFWS. 2022. Information for Planning and Consultation (IPAC). Internet website located at: <https://ecos.fws.gov/ipac/>. Accessed May 2022.