

**FINAL
ENVIRONMENTAL ASSESSMENT
TILLAMOOK MAJOR MAINTENANCE STUDY
TILLAMOOK COUNTY, OREGON**

1. Introduction

Tillamook Bay is located on the Oregon Coast about 47 miles south of the confluence of the Columbia River with the Pacific Ocean (Figure 1). It is a tidal estuary approximately six miles long, north to south, and a maximum of three miles wide. The total area of the bay is approximately 12 square miles at high water and has a tidal prism of 48,000 acre-feet. Five major rivers, the Kilchis, Wilson, Trask, Tillamook, and Miami, all flow into Tillamook Bay. The ocean entrance to the bay is located at the northern end and is protected by two jetties (Figure 2).

The north jetty was authorized in 1912 and completed in 1917, with the latest repair occurring at the head in 1991. According to field measurements, taken in 2003, the structure has experienced deterioration and has a loss of approximately 384 feet from the authorized end of the project. The south jetty was authorized in 1965 and built in three stages starting in 1969 and completed in 1979, with no repairs since that time. According to field measurements, taken in 2003, the structure has lost almost 666 feet from the end of the jetty (USACE 2003).

The purpose of the jetties was to confine tidal currents to obtain scouring velocities in the bar and entrance channels. The north and south jetties at the entrance to Tillamook Bay have experienced damage to both jetty heads. The erosion of the south jetty head has been more pronounced in the last six or seven years. In addition, erosion of the north shoreline of the north jetty is a major concern in terms of a potential breach at the jetty root or base. The navigation channel at this location has a narrow but deep channel and is an increasing concern.

The erosion of the dune-line at the jetty root from winter storms has produced significant concern from local governments and U.S. Coast Guard (USCG). Continued erosion and deterioration of the jetty itself could result in a possible breach of the north jetty root. A USCG watchtower located adjacent to the north jetty could be lost as a result of waves attacking the tower base as well as a possible jetty root breach. The corps has investigated and determined that there are five primary areas of maintenance concern at the Tillamook project: (1) recession of the north jetty head, (2) recession of the south jetty head, (3) erosion at the root of the north jetty and (4) damages to the trunks of both jetties (USACE 2003).

The North Jetty

The north jetty at Tillamook Bay was constructed between 1913-1917 to a length of 5,400 feet, and extended in 1933 to a total length of 5,700 feet. Since its construction, the north jetty has been repaired in 1946, 1955, 1963 and 1991. The 1917 crest length for the north jetty extends 5,700 feet, 1,800 feet seaward of shoreline, yet stands currently with an approximately 384-foot loss which brings its current length to 5,316 feet.

The South Jetty

The south jetty at Tillamook Bay was constructed between 1969-1979 to a length of 3695 feet. While authorization of the south jetty in 1965 approved a length of 8,000 feet, continued construction in 1974 only added 2,830 feet until materials ran out. Finally, in 1974, the south jetty was extended to its authorized length of 8,000 feet, 3,200 feet seaward of shoreline. Since then, erosion has decreased the length of the south jetty to 7,334 feet.

The primary sand dune at the root of the Tillamook north jetty has been progressively eroding since 1995 (USACE 2002). This dune protects more than 1000 feet of weakened (and reduced crest) jetty, landward of the dune, from direct wave attack and overtopping associated with the present surf zone. If the weakened shoreward area of the jetty were subjected to an active surf zone, the north jetty would be destabilized.

A discussion of the Tillamook jetties and the surrounding environment can be found in the following U.S. Army Corps of Engineers documents:

- a. Operation and Maintenance of Jetties and Dredging Projects in Tillamook Estuary, Oregon, Final EIS, December 1975.
- b. Extension of Tillamook South Jetty, Tillamook Bay, Oregon, Final EIS, January 1978.
- c. Environmental Assessment: Repair of North Jetty at Tillamook Bay, Tillamook County, Oregon, December 1990.
- d. Quality Plan for Draft Tillamook Major Maintenance Study. June 2002.
- e. U.S. Army Corps of Engineers Portland District. Tillamook North and South Jetties, Garibaldi, Oregon, Major Maintenance Report. December 2003.

A summary of the information contained in these documents is included in this assessment.

2. Purpose and Need

The purpose of the action is to repair the north jetty, the south jetty, and protect the foredune and jetty root of the north jetty. This action is necessary to prevent further deterioration and subsequent loss of the jetty heads and trunks, the north jetty root and the United States Coast Guard (USGS) watchtower. Field measurements in 2003 determined a 384-foot loss to the north jetty and a 666-foot loss to the south jetty. Further analysis based on historical recession rates predict that the north jetty will be 475-feet shorter than its authorized length and the south jetty will be 890-feet shorter than its authorized length by 2006. Continued deterioration of both jetty heads and the north jetty root could destabilize the navigation project at Tillamook (USACE 2003).

3. Proposed Action and Alternatives

Proposed Action

With funding available this Fiscal Year (Oct 1 to Sept 30), the Portland District plans to construct the north jetty revetment and will prioritize work to cap the north and south jetty heads and repair the trunks of the north and south jetty, subject to future availability of funding. This proposed alternative addresses the areas of greatest concern in terms of structural stability.

North Jetty Revetment Construction

The proposed action is to protect the north jetty root by constructing a revetment which prohibits further erosion of the fore dune at that location. Although this is the minimum maintenance option to protect the Federal interest, when combined with the capping of the north jetty, it will improve both the structural stability of the entire jetty and increases the life expectancy between future maintenance and repairs. For this reason, constructing only the north jetty revetment is not considered a stand-alone alternative.

The revetment along the north jetty root will be 60-foot wide and depending on funding, the minimum length will be between, 450 feet (250 feet along shoreline) and the maximum length will be 600 feet (400 feet along shoreline), these lengths include wrap-around on both ends and cobble fill on the north end. Once the revetment is constructed, sand fill from local sand and gravel distributors will be used to fill the area in the front of the revetment. The sand fill volume for placement in front of the revetment after its construction to the minimum length will be 2400 cubic yards (cy) and for the maximum length will be 6000 cy.

The height of the revetment will be +23 feet MLLW. The slope will be at 1:2 slope. The revetment will require approximately 8000 to 14000 tons of stones. See Figure 3.

Material will be trucked through the county park via the county road. The county road will be used to bring in the trucks for movement of the jetty stone, transportation of construction material and employee use during the construction timeframe. Prior to construction, the contractor will document the condition of the road and will be responsible for repairing the road to its pre-construction condition upon completion of the construction work. The staging area for revetment construction would be approximately two acres in size and would be located at the near shore parking lot situated adjacent to where the revetment is to be constructed. A chain link fence will block public access to the staging/construction areas and signs will be posted indicating that no public access is allowed. Equipment will be parked and miscellaneous construction material stored in the staging area. There will be no weighing facility erected and no field office established in the staging area, although a small contractor job shack may be located somewhere within the construction staging area. Approximately six campsites are within the staging/construction area and will need to be closed during construction. Equipment needed for the revetment construction will likely be a small bulldozer, a front-end loader, and an excavator. The equipment will probably work from above and below the beach and also on the revetment itself. The cross-section of the revetment is 60 feet wide and the excavator has an effective reach of 22-26 feet. There will be vegetation disturbance in the area of the revetment including some clearing and grubbing work, although the disturbance will be kept to a minimum. The staging area and any other disturbed areas will be restored to the current existing condition upon completion of construction.

Jetty Cap Repair of the North Jetty

The proposed action is to place a 100 foot cap at the end of the north jetty. The contractor will probably establish a barge off-loading platform at a sheltered area along the river channel near the root portion of the north jetty located immediately adjacent to and landward of the ocean shoreline. The contractor will have two options for getting the jetty stone to the site. They can either use a barge off-loading platform or a temporary off-loading platform. The barge off-loading platform would be used to unload barges delivering jetty stones to the project. The barge off-loading platform would consist of piles or dolphins driven into the deep-water channel adjacent to the deteriorated jetty root. Barges would be secured by attachment to the piles/dolphins and by mooring lines that would extend riverward of the barge to the channel bottom. Little or no fill would be required. The dolphins used for the off-loading structure would use natural wood pilings and would be removed at the end of construction. Floats marking the mooring lines will mark the line to prevent marine traffic from hitting the lines. Temporary navigation lights would be installed on the mooring dolphins. The Corps and the Port of Garibaldi would send notice to Mariners addressing navigational restrictions in the channel.

The off-loading platform will require a 60-foot long by 50-foot wide off-loading structure made from sheet pile and back filled with approximately 3,500 cubic yard of fill. The fill material will consist of shot rock (quarry waste). This material will be placed after placement of the sheet pile to minimize turbidity impacts. Upon completion of the project, the material will be removed prior to the removal of the sheet piles to ensure that no excess material is left at the off-loading site. The contractor will be responsible for proper disposal of the excess material in accordance with local, state and federal laws. The north side off-loading platform is necessary for a land based crawler crane that can reach the off-load pad on top of the jetty. The crane would be used to lift stones from barges to the swale between the jetty and the bank. This swale would be used for a temporary storage area for the jetty stones. Construction of the north jetty may require the stone to be temporarily stock piled for up to one year, dependent upon future availability of funding.

The near shore county park parking area would be used for a staging area where equipment would be parked, a stone weighing facility erected, a field office established, and a storage area provided for other miscellaneous construction materials. The contractor may construct a haul road from the staging area to the jetty by blading and smoothing the existing near-beach material and then will construct a haul road along the top of the jetty using quarry waste materials to fill in the large voids between the jetty stones. Stone would be transported from the staging area to the work area at the oceanward end of the jetty by off-road trucks traveling along the haul road. The stone will be placed on the jetty one at a time using a large placement crane. Imported quarry waste material (small crushed rock) for the jetty road will likely be stored within the staging area and later placed onto the jetty using off-road. A chain link fence will block public access to the construction area and signs will be posted indicating that no public access is allowed. The off-loading facility will be removed and the staging area restored to original condition upon completion of construction. The total impacts to stage, store and construct the north jetty repairs will take approximately 10 months. The first six months would be used to quarry, transport, and stockpile stone. Placement of jetty stone will consist of approximately 800

tons of stone being placed per day. Actual construction of the north jetty cap would take from two to four months.

Jetty Cap Repair of the South Jetty

The proposed action is to place 100 feet of jetty stone at the end of the south jetty. The south jetty will require a 50-foot long by 50-foot wide off-loading structure and back filled with approximately 5,000 cubic yard of material. The barge off-loading platform will be placed at a sheltered area along Tillamook River at the root portion of the jetty a short distance eastward of the shoreline. The barge off-loading facility would be used to unload barges delivering stone to the project site. The barge off-loading platform would consist of a sheet pile wall driven adjacent to the toe of the jetty with embankment material placed between the jetty slope and the wall to provide for a working surface. Dolphin piles may also be installed for anchoring the barge against the wall. The dolphins used for the off-loading structure would use natural wood pilings and would be removed at the end of construction. The off-loading facility will be removed and the staging area restored to its prior condition upon completion of construction.

The selected area for barge off-loading facility is naturally deep but some minor dredging may be required to provide adequate draft for stone delivery barges. Twenty feet of draft at low tide is needed to keep a loaded barge afloat. The area next to the barge off-loading facility would be used for a staging area where stone would be stored, equipment parked, a stone weighing facility erected, a field office established, and a storage area provided for other miscellaneous construction materials. Some leveling and stripping of the staging area is required.

The contractor may construct a haul road from the staging area to the jetty by blading and smoothing the existing near-beach material and then will construct a haul road along the top of the jetty using quarry waste materials to fill in the large voids between the jetty stones. Stone would be transported from the staging area to the work area at the oceanward end of the jetty using off-road trucks traveling along the haul road. The stone will be placed on the jetty one at a time using a large crane. Imported quarry waste material for the jetty road will likely be loaded into off-road trucks and placed onto the jetty operating from the staging area or near shore area. A loader or small dozer would then spread the road materials to cap the road surface completing the haul road construction.

The total impacts to stage, store and construct the south jetty repairs will take approximately 10 months. The first six months would be used to quarry, transport, and stockpile stone at the staging area. Placement of jetty stone will consist of approximately 800 tons of stone being placed per day. Actual construction of the south jetty cap would take from two to four months.

The Corps will be responsible for the signage that will notify the public of the construction activities.

Critical and Routine Trunk Repairs of the North and South Jetty

This proposed action includes critical and routine trunk repairs to the south and north jetty. The amount of jetty stone needed for the routine repairs of the south jetty are approximately 8000

tons and for the critical repair the approximate amount will be 37,000 tons. The south jetty will require a 50-foot long by 50-foot wide off loading structure made from sheet pile and back filled with approximately 5,000 cubic yard of material and a dolphin tie-off eastward along the shore.

The amount of jetty stone needed for the routine repairs of the north jetty are approximately 30,000 tons and for the critical repair the approximate amount will be 78,000 tons. The north side will require a 60-foot long by 50-foot wide off-loading structure made from sheet pile and back-filled with approximately 3,500 cubic yard of fill. The fill material will consist of shot rock (quarry waste). This material will be placed after placement of the sheet pile to minimize turbidity impacts. Upon completion of the project, the material will be removed prior to the removal of the sheet piles to ensure that no excess material is left at the off-loading site. The contractor will be responsible for proper disposal of the excess material in accordance with local, state and federal laws. The north side off-loading structure is necessary for a land based crawler crane that can reach the off-load pad. The dolphins used for the off-loading structure would use natural wood pilings and would be removed at the end of construction.

Alternatives

Due to projected limited funding to repair the entire project, two different capping lengths were estimated, 50 feet and 100 feet. A 100 foot head repair has been standard repair practice in the Portland District and provides for a more reliable longer term fix in the presently increasing wave environment of the Pacific Ocean. History has shown that Portland District's normal O&M practices for our coastal jetties involves, at the minimum, stabilizing the jetty head, or capping. The four alternatives are as follows:

Alternative 1 – Jetty Caps and Revetment

The plan includes 100 foot caps at the ends of the north and south jetties, and a revetment at the root of the north jetty. The 100 foot caps on the ends of the north and south jetties would leave the jetties 375 feet and 790 feet shorter than the authorized lengths.

Alternative 2 – Jetty Caps, Revetment, and Critical Trunk Repairs

This alternative is the same as the proposed action with the exception of routine trunk repairs to both the north and south jetties.

Alternative 3 – Alternative Jetty Lengths, Revetment, and Critical and Routine Trunk Repairs

This alternative is the same as the preferred alternative except for the additions of alternative jetty lengths which includes a 200-foot extension of the north jetty and a 360-foot extension of the south jetty.

Alternative 4 – No Action

The no action alternative was reviewed for this study and was determined to be unacceptable due to the danger and risk of jeopardizing the integrity of both jetties. To allow the jetties to

continue to deteriorate will eventually lead to an increase in shoaling at the channel entrance. As more of the jetties deteriorate, waves will move further into the navigation channel increasing boating hazards and further de-stabilizing the inner portion of the jetties.

4. Affected Environment

Tillamook Bay is 6 miles long (north to south), and a maximum of 3 miles wide. It is located about 50 miles south of the Columbia River and covers an area of 12 square miles. The bay is surrounded by uplands to the northeast and southwest, and to the southeast by a broad floodplain formed by the Kilchis, Trask, Wilson, and Tillamook Rivers. The Miami River, located to the north, also flows into the bay near the town of Garibaldi. The bar channel has been maintained naturally since the extension of the south jetty in 1971 (TBNEP 1998).

Agricultural lands are dominant east of Tillamook Bay. Natural upland consists of conifer and deciduous forest stands and meadow, marsh, and sandy beach and dune plant communities. The most commercially important and widely distributed tree species in Tillamook Bay is Douglas-fir. Older stands include Western-red cedar, Sitka spruce, and Western hemlock. Upland beach and dune communities may be classified as bare sand, grass-forb, or shrub communities. Beachgrass occurs behind most of the bare sandy areas with Scotch broom as the dominant species elsewhere. These plants are most extensive in accreted lands behind the north and south jetty sites (TBNEP 1998).

Wildlife resources are abundant. Freshwater species using the estuary include mink, otter, beaver, raccoon and muskrat. Marine mammals using the estuary include the harbor seal, northern fur seal, California sea lion, northern sea lion, and occasionally killer whales (Green et al. 1992)(per personal communication with David Nuzem, Biologist, Oregon Department of Fish and Wildlife, Tillamook Field Office, August 2002). Seals and sea lions haul out of the water onto the rocky beaches and offshore rocks to rest. Harbor seals commonly use sandflats in lower Tillamook Bay as haul out areas (Bonnell et al. 1992). Other mammals that use habitats near the bay include black-tailed deer, black bear, and brush rabbits. Upland game birds, such as the blue grouse, mountain quail, and ruffed grouse occur on adjacent lands (per personal communication with Chris Knutsen of ODFW, Assistant District Fish Biologist, Tillamook, Oregon, March 3, 2004).

Fishery resources within Tillamook Bay include both migratory and resident species. Among the most common estuarine inhabitants are white sturgeon, northern anchovy, surf smelt, shiner surfperch, Pacific herring, English sole, starry flounder, and rockfish. Salmonids found in the estuary are chinook, chum and coho salmon, steelhead and cutthroat trout (TBNEP 1998).

Pacific herring, starry flounder, and English sole prefer the sandy shoreline habitat. Cobble beaches are inhabited by rockfish, chinook salmon, and surf smelt. Shiner perch and white sturgeon are found in deeper water habitat (Pacific Fishery Management Council, 1998a,1998b,1999).

As mentioned in the 1990 Environmental Assessment for the repair of the north jetty at Tillamook Bay, principal shellfish species include oysters, several species of shrimp and clam, and Dungeness crab. Clam digging is very popular on the intertidal flats. Cockles, gapers, butter, and littleneck clams predominate in the northern portion of the bay; softshell clams are more numerous in the southern portion (Pacific Fishery Management Council, 1998a, 1998b, 1999).

Threatened and endangered species which may occur in the project area include the following: marbled murrelet; bald eagle; brown pelican; western snowy plover; gray, humpback, blue, fin, sei, right, and sperm whales; leatherback sea turtles; Oregon Coast ESU coho salmon; and northern (Steller) sea lion. Steelhead, a candidate species, may also occur in the area (TBNEP 1998) (Briggs et al. 1992).

Rehabilitation of the Tillamook north and south jetties and north jetty revetment will impact EFH for salmon, coastal pelagic and ground fish species, however, the impact is anticipated to be minimal. The impacts will occur to migratory as well as the rocky habitat provided by the jetties. Construction activities as well as support areas will impact EFH; however, these impacts will be limited in space and time and the areas will be restored to original condition following project completion.

A charter boat and private boat sport fishery for salmon, and bottom fish occurs in offshore waters. Within Tillamook Bay, fish and shellfish are harvested from open waters, jetties, shoreline areas, and tideflats. The county park will be used during construction for hauling and storing. This closure has been coordinated with Tillamook County.

5. Environmental Effects

Revetment Construction

The environmental impacts associated with the proposed action would be minor. The north jetty revetment will occur outside the original footprint (400 feet). Some short-term loss of habitat will occur during the construction period but will be replaced once the project is completed and stabilized by the placement of rocks, sand, and native plantings. Placement of the north jetty revetment along the high water mark and dune face may impact some wildlife over the short-term. The revetment may provide some nesting habitat in the long-term. The jetty capping and the critical and routine repair of jetty is to an existing structure within a limited area within the original footprint and though there will be impacts to the benthic habitat it will quickly recolonize after construction.

Repair of the North and South Jetty

The proposed activities are expected to have minimal effects on fish and wildlife species in the area. An increase in suspended sediments in the water column is expected during the construction period; however, this impact is expected to stay within acceptable levels for fish and wildlife species of concern. Avoidance of the area may occur throughout the construction period

as a result of the increased activities and noise, but all species would be expected to return following project completion. The work will be conducted during the months of September and November. No adverse affects on any listed/candidate threatened or endangered species are anticipated. Based on the analysis of the affects and consideration of conservation measures that would be implemented to avoid and reduce affects, the Corps has determined that the proposed project actions “may affect, but is not likely to adversely” affect with regard to the species or habitat in the local area.

Public access to the north jetty and adjacent beach (construction of the revetment) will be closed during the construction period. Placement of the staging area near the base of the north jetty will also deter foot traffic in the vicinity of the jetty during the construction period. It is not expected that construction equipment will impact commercial and fishing boat operations using the county park east of the north jetty. Designating another public area within the park for parking and beach access may offset these short-term impacts. The project may require some vegetation planting due to construction access, site preparation, and construction in the area. The entire site will be planted with native vegetation upon completion of the project.

Because the contractor will determine the method of transporting material and equipment to the site, the route taken for road travel will not be known until the contract is awarded. The contractor will, however, be required to comply with all state and local regulations pertaining to the use of those roads.

Impacts to the construction staging area should be minimal. The area is nearly devoid of vegetation and as a result would not require much preparation. The site will be restored, to the extent necessary, following project completion.

Aquatic Life Forms

Listed Marine and Terrestrial Wildlife

It has been determined that there may be an affect, but is not likely to adversely affect Humpback whale, Blue whale, Finback whale, Sei whale, Sperm whale, Leatherback turtle, Loggerhead turtle and Stellar sea lion. A determination was made that the proposed action may affect, but is not likely to adversely affect the western snowy plover, brown pelican, marbled murrelet, the Oregon silverspot Butterfly and the bald eagle.

Listed Anadromous Fish

Based on the review of existing conditions and analysis of likely effects of the proposed project, we believe that a determination of “may effect, but is not likely to adversely affect” is appropriate for the following listed species:

Oregon coastal coho salmon (*Oncorhynchus kisutch*), Threatened

Essential Fish Habitat

The following conclusions can be drawn from the Essential Fish Habitat (EFH) assessment provided to NOAA-Fisheries in a Biological Assessment:

Rehabilitation of the Tillamook north and south jetties and north jetty revetment will impact EFH for salmon, coastal pelagic and ground fish species. The impacts will occur to migratory as well as the rocky habitat provided by the jetties. This impact is anticipated to be small for the following reason:

1. The rehabilitation work will be in limited areas (one site will be repaired at a time) and for relatively short durations at each site. In addition, the impacts are intermittent only occurring for short periods of time while the piles or rocks are being placed. Consequently, it is likely that migratory species such as salmon and some ground fish can easily avoid the impacts from these activities and the short and long term effects would be minimal. Consequently, impacts to migratory EFH are expected to be small.
2. Impacts to the rock habitat on the jetties, though large in the repair areas, are expected to be minimal overall due to the large amount of rock habitat currently available. In addition, the habitat impact during rehabilitation will be replaced with similar habitat that will quickly be re-colonized and provide the same or potentially additional EFH for the species that use rocky habitat.

Construction activities as well as support areas will impact EFH; however, these impacts will be limited in space and time and the areas will be restored to original condition following project completion.

A detailed discussion of EFH for the ground fish is provided in the Final Environmental Assessment/Regulatory Impact Review for Amendment 11 to The Pacific Coast Ground fish Fishery Management Plan [Pacific Fisheries Management Council (PFMC) 1998] and the NMFS (June 15, 1998), Essential Fish Habitat for West Coast Ground fish Appendix. In addition NOAA Fisheries has been conducting ground fish stock assessment studies in the areas offshore of California, Oregon, Washington and Southern British Columbia (Weinberg et al 2002). Two of the sampling areas extends from Cape Blanco in southern Oregon to Cape Flattery in Northern Washington and the Eureka region which extends from Cape Blanco in southern Oregon to Cape Mendocino in northern California. The assessments have been made every three years since the mid 1970's. The assessment done in 2001 was the final in the series and provides some useful information on the distribution of ground fish species in the vicinity of the proposed project.

A detailed discussion of EFH for Coastal Pelagic species is provided in Amendment 8 to the Coastal Pelagic Species Fishery Management Plan (PFMC 1998). Salmon EFH is discussed in Appendix A of Amendment 14 to the Pacific Coast Salmon Plan (PFMC, 1999). Assessments of the impacts to these species' EFH from the coastal operations and maintenance program are based on this information.

Recreation

Attempts will be made to notify the local recreational fisheries as to when the work on the jetties will be conducted. Coordination of the placement of the rubble stone on the jetties would be scheduled to avoid conflict with the recreational fisheries that operate in Tillamook Bay.

6. Coordination

This Environmental Assessment (EA) is being issued for a 30-day public review. Comments are requested from the following:

U.S. Fish and Wildlife Service
NOAA Fisheries
Environmental Protection Agency
Confederated Tribes of the Grand Ronde Community of Oregon
Siletz Tribal Council
Oregon State Historic Preservation Office
Oregon Department of Land Conservation and Development
Oregon Division of State Lands
Oregon Department of Fish and Wildlife
Oregon Department of Parks and Recreation
City of Tillamook
Tillamook County
Port of Garibaldi
United States Coast Guard

8. Consultation Requirements

a. **Clean Water Act of 1977 (33 U.S.C.):** Part of the proposed action is the repair and maintenance of a currently serviceable structure within the footprint of its authorized length [Section 404(f)(1)(B)] and, therefore, is exempt from the requirements of Section 404 of this act. The proposed dredging and filling required for the barge off-loading sites will require a 404(b)(1) evaluation and Section 401 state water quality certification is required. The construction of the north jetty revetment is within the high water level, a Section 404 evaluation also will be required for this action. The staging area will be over one acre therefore an NPDES permit will be required. The contractor will be required to secure this permit prior to beginning construction of the project.

b. **Coastal Zone Management Act of 1972, as amended:** The proposed project is located within Oregon's coastal zone. Applicable portions of the local land use plans were obtained from the Tillamook County Planning Department for use in preparing the required consistency determination. This determination concluded that the proposed action is consistent with Oregon's Coastal Management Program to the extent practicable. The determination will be provided to the DLCD for concurrence.

c. **Endangered Species Act of 1973, as amended:** In a letter dated June 5, 2002, the U.S. Fish and Wildlife Service (USFWS) listed the marbled murrelet, bald eagle, western snowy plover, and brown pelican as threatened and endangered species which may occur in the project area. The Oregon silverspot butterfly was also listed. Under jurisdiction of the National Marine Fisheries Service, now referred to as National Oceanographic Atmospheric Administration Fisheries (NOAA Fisheries), are included gray, humpback, blue, fin, sei, right, and sperm whales; leatherback sea turtles; Oregon Coastal coho salmon; and northern (Steller) sea lion. Biological Assessments (BA) have been prepared and a determination has been made that the proposed action may affect, but is not likely to adversely affect any listed or candidate species. The BA's have been submitted for concurrence with this determination.

d. **Fish and Wildlife Coordination Act:** In compliance with this act, the proposed action has been coordinated with the USFWS, NOAA, the Oregon Department of Fish and Wildlife. A Fish and Wildlife Coordination Act Report is not required for operations and maintenance work.

e. **Magnuson-Stevens Fishery Conservation and Management Act.** An Essential Fish Habitat (EFH) consultation is necessary. An EFH evaluation has been prepared and submitted to NOAA.

f. **Marine Protection, Research, and Sanctuaries Act of 1972, as amended:** The proposed action does not involve the transportation of dredged material for the purpose of ocean disposal; therefore, this act does not apply.

g. **The National Historic Preservation Act of 1966, as amended through 2000:** The proposed project involves rehabilitation of the north and south jetties at the entrance to Tillamook Bay, Tillamook, Oregon. The project involves adding rock at the contact point of the north jetty and the beach, filling in an eroded pocket near the landward end of the north jetty, and adding large rock at the seaward ends of both jetties. Access to the seaward ends of both jetties for rock placement will be accomplished by restoring the rubble road surface on the top of the jetties. Both of these structures are older than 30 years. No known prehistoric sites have been documented within the rehabilitation areas (these areas are most likely accreted ground) although records indicate prehistoric sites on both sides of the pre-jetty entrance to Tillamook Bay. Coordination with Oregon State Historic Preservation Office (OSHPO), per Section 106 and 110 of the National Historic Preservation Act will be undertaken. Coordination will involve providing the OSHPO with appropriate background information to indicate that the project will have no affect on significant cultural resources. The Corps proposes that repairing the jetties are a necessary public safety measure and that all work will be restoration in kind.

h. **Executive Order 11988, Flood Plain Management, 24 May 1977:** The proposed project would not encourage development in or alter any flood plain areas.

i. **Executive Order 11990, Protection of Wetlands, 24 May 1977:** No wetlands would be affected by this project.

j. **Analysis of Impacts on Prime and Unique Farmlands, CEQ Memorandum 1976:**
No prime or unique farmlands exist within the project area.

k. **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA).** No hazardous, toxic and radioactive waste (HTRW) is known to occur in the proposed project vicinity. Presence of HTRW will be responded to within the requirements of the law and USACE regulations and guidance.

References

Bonnell, M.L., C.E. Bowlby, G.A. Green. 1992. Pinniped Distribution and Abundance off Oregon and Washington, 1989-1990. Final Report for Pacific OCS Region, Minerals and Management Service, USDI, Los Angeles, CA.

Briggs, K.T., D.H. Varoujean, W.W. Williams, R.G. Ford, M.L. Bonnell, and J.L. Casey. 1992. Seabirds of the Oregon and Washington OCS, 1989-1990. Final Report for Pacific OCA Region, Minerals Management Service, USDI, Los Angeles, Calif.

Green, M.L., J.J. Brueggeman, R.A. Groetfendt, C.E. Bowlby, M.L. Bonnell and K.C. Balcomb III. 1991. Cetacean Distribution and Abundance off Oregon and Washington, 1989-1990. Final Report for Pacific OCS Region, Minerals Management Service, USDI, Los Angeles, CA.

Pacific Fishery Management Council. 1998a. The Pacific Coast Groundfish Fishery Management Plan: Final Environmental Assessment/Regulatory Impact Review for Amendment 11. Portland, Oregon. October 1998.

_____. 1998 b. The Coastal Pelagic Species Fishery Management Plan. Amendment 8. Portland, Oregon. December 1998.

_____. 1999. Identification and Description of Essential Fish Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon. Appendix A, Amendment 14 to the Pacific Coast Salmon Plan. Portland, Oregon. August 1999.

Tillamook Bay National Estuary Partnership. 1998. Tillamook Bay Environmental Characterization: A Scientific and Technical Summary. TBNEP, Garibaldi, OR.

Tillamook Department of Community Development. 1983. Tillamook County Land Use Ordinance, County Comprehensive Plan, Tillamook County, OR.

U.S. Army Corps of Engineers, Portland District. 2003. Major Maintenance Report: Tillamook North and South Jetties, Garibaldi, OR.

U.S. Army Corps of Engineers, Portland District. 2004. Biological Assessment for Humpbacked, Blue, Finback, Sei, Right, and Sperm Whales; Leatherback and Loggerhead Sea Turtles; and Steller Sea Lions for the Tillamook Major Maintenance Study, Tillamook County, Oregon.

U.S. Army Corps of Engineers, Portland District. 2004. Biological Assessment for Coho Salmon and EFH for the Tillamook Major Maintenance Study, Tillamook County, Oregon.

U.S. Army Corps of Engineers, Portland District. 2004. Biological Assessment for Bald Eagles, Western Snowy Plovers, Brown Pelicans, Marbled Murrelets, Columbian White-tailed Deer and Oregon Silverspot Butterfly for the Tillamook Major Maintenance Study, Tillamook County, Oregon.

Personal Communications

David Nuzem, Biologist, Oregon Department of Fish and Wildlife, Tillamook, Oregon, February 12, 2003).

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Figures

Figure 1 - Location of Tillamook Bay Jetties, Bayview, Oregon.

Figure 2 - North and South Jetties at mouth of Tillamook Bay.

Figure 3 - The revetment

