



## FINDINGS OF FACT STAFF REPORT

Date: August 25, 2004

OPRD Coastal Land Use Coordinator: Steve Williams

OPRD File Number:

BA-592-04

County: Tillamook

Applicants: Tillamook County and  
U.S. Army Corps of Engineers, co-  
applicants

Project Location:

Barview County Park, Tillamook Bay North Jetty  
Tillamook County Assessor's Map #1N-10W, tax lot 4300.

Brief Project Description:

The proposed project involves the construction of a riprap revetment along the shoreline, extending north from the jetty 210 to 370 feet; with additional cobble fill extending approximately 100 feet north of the riprap. Plans indicate the proposed revetment will be approximately 60 feet in width, with the visible portion of the revetment projecting out onto the ocean shore approximately 30 feet. Sand excavated from the toe trench, and additional sand hauled in from an upland site will be placed in front of the revetment, and maintained on an annual basis.

### ADMINISTRATIVE RULE STANDARDS AND RELEVANT FACTS

#### I. GENERAL STANDARDS, OAR 736-020-0010

**Project Need – There shall be adequate justification for a project to occur on and alter the ocean shore area.**

In 2002/2003, the U.S. Army Corps of Engineers (Corps), Portland District conducted a maintenance study on the Tillamook Federal Navigation Project. This study included both the north and south jetties. As part of that study, the root section of the north jetty at the shoreline intersection was found to be vulnerable to overtopping and possible breaching as the adjacent shoreline and foredune continue to erode. Erosion of the dune has increased dramatically since 1997, with 80 feet of dune lost from 2001 to 2003. Remedial action in the form of emergency sandbagging was taken by Tillamook County in 2002; however, the sand bag placement at the jetty root has not been sufficient to control overtopping and continued dune erosion.

The reasons for the accelerated dune erosion, as described by the Corps, include a higher frequency and strength of Pacific storms during the past decade, combined with the gradual reduction in length of the jetty head due to storm related damage.

As described in the permit application, the purpose of the proposed revetment is to protect the foredune and jetty root during high tide and storm conditions. The Corps determined during the maintenance study that a revetment should be constructed adjacent to the north jetty root in order to protect the foredune from further erosion and protect the jetty root from overtopping and eventual breaching until further maintenance along the jetty root could be funded and conducted. Without the revetment, the vulnerable north jetty root could be breached, potentially causing a significant impact to navigation and resulting in higher jetty repair costs, and also higher costs for sand replenishment and dredging.

During recent years there has been increased wave inundation over the adjoining parking area which has caused a threat to the existing Coast Guard observation tower. U.S. Coast Guard officials have indicated that they may be forced to cease operations at the tower if measures are not taken to prevent overtopping and reduce the risk of a jetty breach. In the event of a breach, the Tillamook County Parks Department would likely close this area of Barview County Park to the public, eliminating access to this popular recreation site.

A finding of project need follows the review of all other applicable standards and is included in the findings summary at the end of this report.

***Protection of Public Rights – Public ownership of or use easement rights on the ocean shore shall be adequately protected.***

Based on the project drawings, the proposed riprap will project out onto the ocean shore approximately 47 feet, over a north-south distance of between 210 and 370 feet (final constructed length dependent on construction costs and funding limitations). Plans indicate that the westernmost 20 feet of the structure is to be buried beneath the beach sand level. The northern 100 feet of the project will consist of cobblestone fill, projecting out a similar distance. The presence of the riprap and cobble fill will not affect public ownership or easement rights on the ocean shore, however the encroachment of this material will reduce the beach width for recreation uses. This encroachment will be offset, however, by the placement of between 7,120 and 13,728 cubic yards of sand in front of the revetment. This includes sand excavated from the toe trench plus 3,120 to 7,520 cubic yards hauled in from an upland site (amount is dependent on the length of the revetment constructed). The U.S. Army Corps of Engineers has agreed to monitor the beach profile on an annual basis and add additional sand if necessary to regain the beach profile existing prior to construction of the project.

***Public Laws – The applicant shall comply with federal, state, and local laws and regulations affecting the project.***

The Tillamook County Department of Community Development has certified that the project is in compliance with the Tillamook County Comprehensive Plan and Land Use Code. The Oregon Department of Environmental Quality has issued a Section 401 Water Quality Certification. Other State of Oregon regulations are being addressed under the review of this permit.

***Alterations and Project Modifications – There are no reasonable alternatives to the proposed activity or project modifications that would better protect the public rights, reduce or eliminate the detrimental affects on the ocean shore, or avoid long-term cost to the public.***

Other alternatives considered in the application included: 1) extension of the north jetty head (\$7.0 million), 2) rehabilitation of the jetty root (\$6.6 million), and 3) sediment replenishment of the beach area. The first two options were not considered practical due to the high cost and unavailability of funding. Sediment replenishment, using large amounts of sand in lieu of riprap armoring, was not considered as a viable alternative due to high cost (Tillamook Bay is not regularly dredged, therefore a source for large quantities of sand is not readily available) and reduced reliability for short-term protection of the jetty root.

The purpose of the project is to protect the low-crested section of the north jetty root. While hazard avoidance may be a viable option in cases where development can be moved or located further away from the erosion hazard, the vulnerable section of the jetty is a fixed piece of infrastructure that cannot be relocated. Hazard avoidance in this case is not a viable option.

Considering the above factors, the proposed revetment constitutes the most reasonable option as a first step in protecting the jetty and navigational interests associated with Tillamook Bay

***Public Costs – There are no reasonable special measures which might reduce or eliminate significant public costs. Prior to submission of the application, the applicant shall consider alternatives such as nonstructural solutions, provision for ultimate removal responsibility for structures when no longer needed, reclamation of excavation pits, mitigation of project damages to public interests, or a time limit on project life to allow for changes in public interest.***

Alternative shore protection methods other than the proposed project have been discussed above. These alternatives are not considered reasonable special measures, based on prohibitive cost and/or reduced levels of protection provided. The revetment constitutes the first step towards rehabilitation of the Tillamook Navigational Project, and although additional work on the jetties is planned, the revetment is intended to serve as a long term structure, rather than a temporary structure to be removed.

***Compliance with LCDC Goals – The proposed project shall be evaluated against the applicable criteria included within Statewide Planning Goals administered by the Department of Land Conservation and Development.***

OPRD determines goal compliance for ocean shore alteration permit applications by using the Type II Procedure required under its State Agency Coordination Rule OAR 736-070-0040(3)(b)(A). This rule states that the Department shall make its own compatibility determination based on information and findings supplied by the applicant confirming that the affected local government has determined that the Department's land use action is compatible with the local jurisdiction's acknowledged comprehensive plan and land use regulations.

Tillamook County has certified that the project is in compliance with the Tillamook County Comprehensive Plan and Land Use Code, which are acknowledged by LCDC as meeting the Statewide Planning Goal requirements. In certifying the consistency with the local plan and Statewide Planning Goals, the County determined that the Corps met the substantive requirements for a Goal 18 exception, which is required for this project. This finding was based on the federal consistency determination and exceptions analysis prepared by the Corps in its Environmental Assessment, dated April 7, 2004.

## **II. SCENIC STANDARDS, OAR 736-020-0015**

*Projects on the ocean shore shall be designed to minimize damage to the scenic attraction of the ocean shore area.*

***Natural Features – The project shall retain the scenic attraction of key natural features, for example, beaches, headlands cliffs, sea stacks, streams, tide pools, bedrock formations, fossil beds and ancient forest remains.***

The existing beach adjoins the Tillamook North Jetty, which extends out approximately 2,000 feet into the ocean. The jetty is the predominant feature of the area, and serves as a central focus for recreational uses such as fishing, surfing, and sightseeing. In addition to the jetty, the area is characterized by a large parking area, consisting of compacted gravel and sand adjacent to the jetty, and fronting most of the area for the proposed revetment.

The proposed revetment, which will extend up to 370 feet off of the north jetty, will be subordinate in scale to the jetty itself, and therefore will be in keeping with the existing dominant features of the north jetty.

***Shoreline Vegetation – The project shall retain or restore existing vegetation on the ocean shore when vital to scenic values.***

Some existing vegetation along the foredune will be disturbed during the project. This vegetation consists of primarily European beach grass and other native shrubs and grasses. This low-lying vegetation is not vital to scenic views considering the predominance of the jetty and extensive parking area adjacent to the jetty.

***View Obstruction – The project shall avoid or minimize obstruction of existing views of the ocean and beaches from adjacent properties.***

The riprap will not affect existing views from upland properties.

***Compatibility with Surroundings – The project shall blend in with the existing shoreline scenery (type of construction, color, etc.).***

As described earlier, the revetment will be built within the presence of the jetty, which is a dominant feature and which attracts much of the recreational use at this site. Being of similar construction and materials, but on a much smaller scale, the revetment will blend in visually with the existing jetty and not create a visual blight to the area.

### **III. RECREATION USE STANDARDS, OAR 736-020-0020**

***Recreation Use – The project shall not be a detriment to public recreation use opportunities within the ocean shore area except in those cases where it is determined necessary to protect sensitive biological resources such as state or federally listed species.***

The riprap will occupy some beach area, however, additional sand will be brought in which will help to maintain adequate beach width for recreational purposes. The jetty provides recreational opportunities, particularly by protecting the navigational channel and enabling passage of recreational fishing vessels. Although the Corps may discourage recreational use on jetty structures, the jetty is also a focal point for sightseeing, fishing, and bird watching. By helping to protect the jetty, the proposed project is helping to preserve these recreational uses.

Surfing is another recreational use that is provided by the presence of the jetty. The jetty provides protection from south winds, allowing for smoother surface conditions and better wave quality during the wintertime when the predominant wind direction is from the south. The jetty also helps to form a favorable sandbar and a rip current channel along the jetty that makes this a popular, if not widely publicized surf spot. Surfers from the local community and nationwide have raised concerns that the proposed project could disrupt the sand conditions and cause excessive scouring in front of the riprap. Their specific concerns are that this could potentially impact the consistency or quality of the surfing conditions, cause the beach area to be reduced, and allow larger swells to come in unimpeded and break onto the revetment or the jetty. This issue has been addressed by the Corps with their proposal to add between 3,120 and 7,520 cubic yards of sand to the beach area at the base of the revetment (amount dependent on the length of revetment actually constructed). This sand would be trucked in from an upland source, and used to supplement the beach in addition to the sand excavated out of the toe trench, which will also be placed in front of the revetment. This sand added to the beach fronting the riprap will increase the beach elevation by 6 to 8 feet in front of the riprap for a seaward distance of approximately 135 feet. This will lessen inundation from wave run-up, and help to offset the

encroachment onto the beach from the revetment. Additionally, placement of sand will help to maintain the structural integrity of the revetment. The proposal from the Corps includes yearly monitoring and replenishment of sand in front of the revetment to maintain the beach profile existing prior to construction of the project. Although the dynamics of beach sand and current patterns are impossible to predict, the maintenance of a healthy beach profile will hopefully eliminate any adverse impacts to surfing, and with luck may actually enhance conditions by maintaining adequate offshore sand bars.

***Recreation Access – The project shall avoid blocking off or obstructing public access routes within the ocean shore area except in those cases where it is determined necessary to protect sensitive biological resources such as state or federally listed species.***

The revetment will project out onto the beach, but the additional sand added to the beach in front of the revetment and maintenance of the beach profile on an annual basis will help mitigate for the encroachment. During high-tide storm events in the winter months, there will continue to be times when high water covers the entire beach, however during these times the beach and even the adjacent parking areas are not safe for recreational uses.

#### **IV. SAFETY STANDARDS, OAR 736-020-0030**

The project shall be designed to avoid or minimize safety hazards to the public and shoreline properties. The following safety standards shall be applied, where applicable, to each application for an ocean shore permit.

***Structural Safety – The project shall not be a safety hazard to the public due to inadequate structural foundations, lack of bank stability, or the use of weak materials subject to rapid ocean damage.***

The riprap revetment design indicates that the project will be built to higher standards than the typical riprap revetment design, with increased width, lower slope (2H:1V), a thicker layer of armor stone, and a wider toe trench. This design will ensure that the revetment will withstand ocean forces during storm conditions, and not constitute a safety hazard. In addition, the placement of additional sand in front of the structure will contribute to the safety of the structure by helping to maintain its stability.

***Obstructional Hazards – the project shall minimize obstructions to pedestrians or vehicles going onto or along the ocean shore area.***

The proposed revetment will take up some beach area, but in order to help reduce this impact, the Corps has proposed adding sand (between 7,120 and 13,604 cubic yards, depending on the length of the revetment) in front of the revetment. In addition to protecting the revetment, this will help to reduce the frequency of wave run-up across the full width of the beach by increasing the height of the beach profile, and reducing the frequency when the riprap revetment will obstruct pedestrians or other recreational uses on the beach.

Within the area for the proposed revetment, there are two unimproved routes most commonly used for beach access over the low dune embankment, one adjacent to the jetty, and another pathway through the vegetation approximately 200 feet north of the jetty. These areas will be covered with the proposed revetment, making access to the beach more difficult at these locations. As part of the project, an access route for equipment will be constructed at the north end of the revetment. This access to the beach will be left in place for use as a pedestrian beach access. Beach goers will then have the option of crossing over the revetment, which will be constructed with a fairly modest slope of 2H:1V, or walking north to the end of the revetment to gain access onto the beach. Although these options may increase the difficulty of gaining access onto the beach, access to the beach will not be blocked or prohibited by the proposed revetment.

***Neighboring Properties – The project shall be designed to avoid or minimize ocean erosion or safety problems for neighboring properties.***

The nearest adjacent property is located over 1,600 feet from the proposed revetment, and the proposed revetment is not likely to cause adverse impacts to property separated by that distance. To help reduce flank erosion at the north end of the revetment, and to provide a transition from the rock revetment structure into the unprotected dune, the Corps has included a 100-foot length of cobble fill that will act as a “softer”, more dynamic revetment, and that will absorb wave energy and reflection off of the harder revetment, thereby reducing the risk of increased erosion around the north end of the revetment.

***Property Protection – Beachfront property protection projects shall be designed to accomplish a reasonable degree of increased safety for the on-shore property to be protected.***

The proposed revetment will increase the safety for the upland property (Barview County Park) and for users of the property, by preventing further erosion of the dune and reducing the potential for a breach of the jetty.

**V. NATURAL AND CULTURAL RESOURCE STANDARDS, OAR 736-020-0030**

*Projects on the ocean shore shall avoid or minimize damage to the following natural resources, habitat, or ocean shore conditions, and where applicable, shall not violate state standards:*

***Fish and wildlife resources including rare, threatened or endangered species and fish and wildlife habitats.***

There are no reported fish and wildlife resources that will be impacted by the proposed project.

***Estuarine values and navigation interests.***

The project is intended to protect navigation interests, by preventing a catastrophic breach of the jetty that could result in closure of the navigational channel. Although adjacent to the estuary, the project is separated from the estuary by the jetty; therefore there will be no adverse affects from the project on the water quality or marine habitat within the estuary.

***Historic, cultural and archeological sites.***

Notice of the application was provided to the State Historic Preservation Office, and to the Confederated Tribes of Siletz and the Confederated Tribes of Grand Ronde. There were no reports of historic, cultural, or archeological sites at this location.

***Natural areas (vegetation or aquatic features).***

There is no existing significant vegetation or aquatic features that will be impacted by the proposed riprap.

***Air and water quality of the ocean shore area.***

The project will take place above the ordinary high tide line, and will not cause foreign materials or pollutants to enter the water. The proposed project will not adversely affect water quality on the ocean shore. The Corps will be required to comply with conditions of the Section 401 Water Quality Certification issued by the Oregon Department of Environmental Quality. Air quality will not be affected, except for a negligible amount of exhaust from the use of heavy equipment during the construction period.

***Areas of geologic interest, fossil beds, ancient forest remnants.***

None of these features have been identified at the site.

***When necessary to protect native plant communities or fish and wildlife habitat on the subject or adjacent properties, only native, non-invasive, plant species shall be used for revegetation.***

There are no known protected native plant communities or fish and wildlife habitat on or adjacent to the subject property.

**VI. PUBLIC COMMENT**

Notice of the proposed project was posted at the site for 30 days in accordance with ORS 390.650. Individual notification and a copy of the application were mailed to government agencies and individuals on OPRD's ocean shore mailing list. OPRD received 11 requests for a public hearing, and a public hearing was held on August 17, 2004. Approximately 136 people attended the hearing. Twenty-seven spoke in favor of the project, and two people testified in opposition.

In addition to the verbal testimony received at the hearing, OPRD received 44 written comments in support of the project, and approximately 100 website-generated email form letters in opposition to the project. These emails were facilitated by the Surfrider Foundation, and described in general terms, potential impacts that could occur from the project. OPRD received a more detailed letter opposing the project from Oregon Field Coordinator of the Surfrider Foundation. This letter addressed a variety of issues, including: potential for scouring of beach sand in front of the revetment, potential for increased dune erosion north of the revetment, possible adverse impacts to surfing and recreational beach use, and the question of available alternatives to the project. These issues have been addressed in this report.

Those expressing support of the project included members of the local fishing and marine-related business community, Tillamook County commissioners, representatives of Oregon congressional districts (Sen. Smith, and congresswoman Darlene Hooley), port commissioners from the Port of Garibaldi, the U.S. Coast Guard, and the Mayor of Garibaldi. Testimony in favor of the project described importance of protecting the viability of the jetty and maintaining a safe navigational channel for commercial and recreational boaters. Many of the comments described how the communities would be severely affected if there were a catastrophic breach of the jetty.

**VII. Findings Summary**

**Project Need** – The proposed revetment as designed by the U.S. Army Corps of Engineers is necessary to control dune erosion to prevent a catastrophic breach of the Tillamook Bay North Jetty. In the event of a breach of the jetty, impacts to navigational, recreation, and economic interests would be extensive. This project will constitute an initial step in protecting and repairing the jetty, as part of a multi-year plan by the Corps to rehabilitate the entire jetty system at Tillamook Bay. In light of the federal funding constraints, the proposed revetment is the most appropriate alternative to provide protection for the jetty structure.

Based on the above considerations, OPRD finds that there is adequate justification for the project to occur on and alter the ocean shore area.

The following checklist summarizes whether the application satisfies the general, scenic, recreation, safety and natural and cultural resource standards as defined in OAR 736-020-0010 through 736-020-0030:

Standard	Yes	No	Standard	Yes	No
Project Need	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Structural Safety	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Protection of Public Rights	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Obstructional Hazards	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public Laws	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Neighboring Properties	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alteration and Project Modifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Property Protection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public Costs	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Fish and Wildlife Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compliance with LCDC Goals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Estuarine Values and Navigation Interests	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Features	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Historic, Cultural and Archeological Sites	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Shoreline Vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Natural Areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>
View Obstruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Air and Water Quality of the ocean shore	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Compatibility with Surroundings	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Areas of Geologic Interest	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recreation Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Use of Native Plant Species when Necessary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Recreation Access	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>

**VIII. STAFF RECOMMENDATION:**

Based on an analysis of the facts and in consideration of the standards evaluated under OAR-736-020-0005 through OAR 736-020-0030, I recommend the following action:

- Approval
- Approval with conditions
- Denial

Steve Williams,  
Coastal Land Use Coordinator