



FINDINGS OF FACT STAFF REPORT

Date: March 10, 2011

OPRD Ocean Shores Coordinator: Tony Stein

OPRD File Number: BA # 671-11 County: Lincoln Applicant: Dave Fajer et al

Project Location: 7305, 7315, and 7325 Neptune Ave., Gleneden Beach
Lincoln County Assessor's Map #8S-11W-9 DD, Tax Lots 5100 (Norris Residence), 5000 (Labuhn Residence), 4900 (Fajer Residence), 4800 (Smith Residence) and 4700 (Vacant Lot, Elmore).

Brief Project Description: The proposed project involves the construction of a riprap revetment along 210 feet of shoreline fronting individual Tax Lots 4800, 4900, and 5000. The applicant indicates that due to bluff erosion and bank retreat, the riprap and fill material required to stabilize the bluff beneath the subject homes will extend onto adjacent tax lot 4700 in the north, and tax lot 5100 in the south. Plans call for armor rock 1.4 to 6.0 feet in diameter, keyed into the beach sand and placed in an interlocking state approximately 25 feet in height above beach level, with a slope of 2H to 1V. The area above the riprap revetment would be backfilled with pit run material and sand at a 1.5H: 1V slope to provide lateral bank stability to elevations of approximately 40-50 feet to protect the home structures. A two-foot thick layer of sand would be placed over the face of the revetment and planted with beach grass. The proposed riprap revetment would project approximately 50 feet onto the ocean shore and tie into the existing riprap revetment to the south (BA# 666-10) of the subject properties.

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.

During the winter of 2009 and 2010, strong storms removed the beach sand and eroded bluff material from the lower slope of the subject properties. Active rip embayments along this stretch of beach have been continuously observed and have caused large and rapid changes in the nearshore processes and beach profiles that control bluff erosion. The subject properties have experienced erosion of the lower bluff face from beach level up to an elevation estimated at 40 feet or the halfway point of the 80 foot high bluff. A well vegetated bluff face exists from the 40 foot elevation up to the top of the bluff.

According to the permit application and the accompanying geologic report, Ash Creek and Associates, Inc., June 30th, 2010, recommends “that the bluff should be stabilized from the beach level up to approximately El.40 to lend enough lateral stability to keep the houses from sliding off the bluff or being undercut by normal slope adjustment processes that allow the slopes to reach their natural angle of repose of approximately 32 degrees. To mitigate for future ocean wave erosion along the bluff, the report recommends a riprap revetment constructed along the base of the bluff west of the subject lots”.

In the Ash Creek report (Figure 8), a drawing illustrates the varying distances of home foundations to the edge of the bluff are estimated at 13 feet for TL 4800 (Smith), 32 feet at TL 4900 (Fajer), and 30 feet at TL 5000 (Labuhn). West of the top of the bluff there is significant surface area and established vegetation which extends down the slope to the top edge of the mid-bluff vertical scarp (El .40). The total distance from the top of the mid-scarp to the home foundations are estimated to be 50 feet for the north corner of the Norris residence (TL 5100), 60 feet for Labuhn (TL 5000), 75 feet for Fajer (TL 4900), and 80 feet for Smith (TL 4800). Using the mid-scarp area as a measuring point, there remains a significant portion of the upper vegetated bluff that currently protects the homes. Based on the DOGAMI erosion rate estimate of 0.61 feet per year, higher erosion rates can occur in conjunction with large rip embayments and significant storm events, or during cycles of El Niño or La Nina weather patterns. There remains some uncertainty as to predicting future erosion rates on the beach profile and bluff face. The current distance from the Labuhn (TL 5000) and Fajer (TL 4900) house foundations to the top of the bluff edge (30-to 32 feet) are within the setback restrictions for several other homes built within the vicinity of the subject properties. Two of these houses were approved with recommendations from registered geologists. These building sites, identified on map 8-11-9 DD, as tax lots 4600 (Elmore) and 5100 Norris), are both located adjacent to the subject properties and were approved with setbacks of 35 feet and 29 feet from the bluff edge, respectively. Prior to the recent erosion, these properties had similar bluff conditions to the subject properties.

Ash Creek also states that bluff retreat rates are not consistent year to year and are considered long term averages because erosion occurs in cycles. Some erosion of the bluff is likely to occur over time without some form of mitigation, however, the current distance from the subject residences to the mid-scarp edge appears adequate in the short term, and does not appear to create an immediate critical need for the riprap project.

During the placement of riprap and pit run material for Emergency Permit (BA# 666-10) south and adjacent to the proposed project, a small amount of pit run material was placed at the toe of the bluff slope on each of the subject properties. This amount of material provided some measure of temporary protection for controlling toe erosion during the remainder of the winter and spring 2010 storm season. By the spring of 2010, the material was completely buried by sand as the upper beach level accreted by an estimated 6 feet. In addition, final work to complete a sand blanket over the top of the completed revetment structure on BA # 666-10 pushed sand fill at the base of the bluff north up to TL 4900. The amount of material placed by these two activities is estimated to be less than 50 cubic yards for each property and no fill permit was required. Since the winter and fall of 2010, and into early 2011, the pit run material has not been exposed, as the upper beach sand level has remained stable.

This is an area of Gleneden Beach that has extremely steep, tall, eroding bluffs, and houses are built close to the bluff edge. The subject properties are several of the remaining unprotected properties along a contiguous

line of shoreline structures. However, in this specific location, the homes are set back a reasonable distance from the existing bluff escarpment, and there is currently no immediate threat to the residences.

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.

The proposed riprap structure would extend out onto the ocean shore approximately 50 feet from the base of the bluff and would occupy approximately 10,500 square feet of beach. This width is required to achieve a 2 to 1 slope for the riprap revetment and a 1:5 to 1 slope for the fill structure above it. A similar but larger structure (BA #666-10) is adjacent to the subject site and another is within the general area. The presence of the riprap would not affect public ownership or easement rights on the ocean shore; however, the encroachment would reduce the amount of usable beach area, and could even cause access to be blocked during winter high water events. In evaluating similar riprap projects, OPRD has found this amount of encroachment to be acceptable when the need for the project was considered justified. For this project, however, the need has not been adequately justified; therefore any encroachment onto the beach may be unnecessary at this time.

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

The Lincoln County Planning Division has certified that the project is in compliance with the Lincoln County Comprehensive Plan and Land Use Code. State of Oregon regulations are being addressed under the review of this permit. Federal regulations could potentially involve a U.S. Army Corps of Engineers permit; however a Corps permit is usually not required for this type of project.

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.

The geologic report rules out non-structural methods of shore protection, including vegetative stabilization, sand nourishment, and dynamic revetments, primarily based on the high energy wave environment, steep beach slopes, and the presence of rip embayments offshore along this section of coastline. Vegetative stabilization or sand alteration would not be sufficient to substantially slow or halt erosion, or stabilize the steep bluff slope. Dynamic revetments are not recommended for the site due to the frequent exposure to wave attack. The geologic report recommends a riprap revetment and bank stabilization structure as the appropriate measure to protect the property. In this specific circumstance, OPRD has allowed the placement of less than 50 cubic yards of fill materials on each of the subject properties as an interim and reasonable alternative to reduce erosion.

Ash Creek also states that because of the size (TL4900) and basement configurations (TLs 4900 and 5000) of the structures, it would not be practical and potentially not cost effective to move them. Even if the houses were moved, they would still be within the High Risk Zone and subject to damage through bluff retreat over their design life". No home relocation costs were submitted in the application.

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.

Alternatives and special measures to the proposed riprap shore protection have been discussed above. The non-structural fill activity that has occurred from adjacent construction to the south may provide a measure of short-term protection for the properties.

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.

The Lincoln County Department of Planning and Development (LCDPD) have determined that the subject properties are eligible for shoreline protection based on the date of construction. LCDPD has also determined that it is necessary to extend the proposed revetment to the south of TL 5000 (Labuhn) into TL 5100 (Norris) and that this incidental action would be required to adequately protect the eligible parcels.

The Labuhn property has a home built prior to January 1, 1977, and meets the Statewide Planning Goal 18 requirement for shoreline protection. The Norris residence (TL 5100) does not meet the requirements of the Lincoln County Comprehensive Code (LCCP), for allowing beachfront protective structures where development did not exist on January 1, 1977. In February, 2010, OPRD issued Emergency Permit BA# 660-10 to protect the Heidt residence (TL 5200), and the revetment extended into the southern half of the Norris property in order to adequately protect the eligible Heidt residence. The application proposes to construct a contiguous revetment which would include the northern half of the Norris property, across the Labuhn, Fajer, and Smith properties and the southern half of the vacant Elmore property (TL 4700).

LCDPD has certified that the project is in compliance with the Lincoln County Comprehensive Plan and Land Use Code, which are acknowledged by LCDC as meeting the Statewide Planning Goal requirements. However, extension of a revetment to areas not eligible for shoreline protection must be the minimum necessary to protect the eligible development. Based on the submitted engineering geologic report, the LCDPD has determined that active shoreline erosion threatens the eligible Goal 18 properties and the proposed project is necessary to protect development that existed on January 1, 1977.

II. SCENIC STANDARDS, OAR 736-020-0015

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 project would cover the lower half of the bluff face up to the 40 foot elevation which is the current line of vegetation, and would encroach some distance out onto the ocean shore. This level of scenic alteration has been acceptable for other riprap projects where the need for the project has been justified and where alternatives have been adequately considered.

The natural features of the beach in the general vicinity will remain intact, and no significant landforms such as headlands, sea stacks, or streams would be affected by the proposed riprap.

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

There has been loss of vegetation caused by the erosion on the lower bluff, and loss of additional vegetation can be expected if the bluff continues to recede. However, dense vegetation of salal and shore pine exists along the upper bluff of the slope and currently provides a measure of soil protection.

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

The proposed riprap would not affect existing views from adjacent properties.

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

There are existing and contiguous riprap revetments just north of the subject project, and an adjacent riprap revetment to the south. The proposed riprap would be smaller in scale than the existing revetment to the south that adjoins the subject site. It is recognized, however, that other extensive riprap revetments armor the shoreline adjacent to and north of the subject site and have altered the scenery along this shoreline.

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 proposed riprap would occupy some beach area, but would not significantly affect public recreation use opportunities. During storm events or winter high tides, wave run-up could reach the riprap structure. During normal conditions, however, the existence of the riprap would not be a detriment to typical recreation uses.

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 proposed project will not extend out onto the ocean shore to cause an obstruction to public access along the shoreline during normal ocean conditions. According to the geologic report, the shoreline protection structure will have no further impact on the beach by closely maintaining the line of the existing riprap revetment to the south of this property, and, on average, encroaching no further seaward than the base of the bluff prior to the erosion.

IV. SAFETY STANDARDS, OAR 736-020-0030

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 proposed revetment design appears to be structurally safe and not an obstructive hazard. Rocks would be placed individually to form an interlocking structure, as is the standard practice for revetment design.

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

During high water events during the winter, wave run-up can cover the entire beach, washing up to the unprotected bluffs and existing riprap revetments. Any level of encroachment onto the beach would increase the chance of the entire beach being submerged, leaving no room for pedestrians or emergency vehicles. The width of the beach and location of the proposed riprap would allow ample room for pedestrians or vehicle use during normal conditions. The proposed riprap would not affect any public access routes to the beach.

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

In order to minimize the chance of enhanced erosion or flank scour on the adjoining property, the proposed riprap design includes a tapering of the riprap height and width at the north end, to help minimize the possibility of end effects or localized scour. At the south end, the riprap would be tied into the existing riprap structure (BA# 666-10). Based on the above discussion, adverse impacts to the adjoining property to the north may become a future issue, particularly if the lower bluff is under-cut and loss of vegetation occurs.

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 purpose of the proposed revetment is to provide protection to the upland properties.

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

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

No reported rare, threatened, or endangered species and/or fish and wildlife resources are present that will be impacted by the proposed project.

Estuarine values and navigation interests.

The project is not adjacent to an estuary, and would not affect navigable water on the ocean.

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).

The proposed riprap revetment would not cover any existing vegetation or aquatic features.

Air and water quality of the ocean shore area.

The project would take place above the ordinary high tide line, and would not cause foreign materials or pollutants to enter the water.

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.

The site is within a developed residential area, and there are no known protected native plant communities or fish and wildlife habitat on or adjacent to the subject property.

VI. PUBLIC COMMENT

OPRD posted notice of the proposed project at the site for 30 days in accordance with ORS 390.650. OPRD mailed individual notification and a copy of the application to government agencies and individuals on OPRD's ocean shore mailing list.

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 no requests for a public hearing. Oregon Department of Fish and Wildlife (ODFW) provided comments on the application and were uncertain as to predicting the precise impacts of individual shoreline protective structures on physical processes and the biological processes that are strongly influenced by these physical processes. ODFW stated that it does not have enough information to evaluate this permit comprehensively and made several recommendations that are outside the scope of this individual application.

**VII.
FINDINGS SUMMARY**

Project Need – There is not adequate justification and the proposed riprap revetment and pit run fill structure is unnecessary to provide protection from ocean-caused erosion on the sea bluff. The properties have been subjected to a moderate amount of lower bluff erosion, but the upper bluff remains intact. A safe distance currently exists between the house foundations and the edge of the lower vertical bluff, and there is no immediate danger to the home foundations as presented by the applicant.

At the toe of the bluff slope, a small measure of protection for each property parcel was added to slow the rate of erosion in the event of lowering beach profiles and wave attack.

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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 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

Tony Stein
Ocean Shores Coordinator