



## FINDINGS OF FACT STAFF REPORT

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Date: October 25, 2007      OPRD Coastal Land Use Coordinator: Tony Stein

OPRD File Number: BA-625-07      County: Tillamook      Applicants: Peter Birch (Breakers Condominiums); Robert Wulf; Patricia Gazeley; Dave and Shirley Twining; and Carol Strader.

Project Location: The properties are located at 48060, 47980, 47880, 47785, Tax Lot 1000 Breakers Blvd and Mt. Angel Street, Neskowin. Tillamook County Assessor's Map T5S, R11W, Section 25 BC and CB, Tax Lots 92401-92412, Mt Angel Street (No TL# ),1700, 1200, 1100 and 1000.

Brief Project Description: The project seeks to convert three separate Emergency Riprap Permits issued during the period of January to March, 2006, to permanent shoreline protection structures. The permits were issued to Robert Wulf (BA 605-06), Breakers Condominiums (BA 604-06), and Patricia Gazeley, Dave Twining and Carol Strader (BA 607-06), respectively. The project does not include 3 properties located between the Wulf and Gazeley properties which were previously riprapped and required repairs. Another component of this project is the construction of a riprap ramp at the Mt. Angel Street beach access.

The total length of riprap placed on the ocean shore, including Mt. Angel Street is 338 feet. Riprap rock will be 3 to 6 foot in diameter and use smaller pit run rock and Mirafi 700x fabric material underneath as structure backing. The slope of the structure will be 1:5H to 1V, and the revetment will extend approximately 18 feet above beach level. In front of Mt. Angel Street, the applicants have proposed a rock ramp (Option # 3) for beach access, incorporated into the adjacent riprap structures. The proposed riprap ramp will be 14 foot in width and constructed at a 15% slope with interlocking flat rocks, 3 to 6 feet in diameter, over a stabilized layer of small pit run rock and Mirafi 700x fabric. The interstices of the flat surface rocks will be filled with a controlled density fill substance to remove voids and create a smooth and safe surface.

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### GENERAL STANDARDS EVALUATED, OAR 736-020-0010

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

In recent years, particularly during the 1998/1999 winter, many areas of Neskowin have experienced critical erosion. Active dunes receded, and beach sand levels were dramatically lowered. In the geologic report, it states that during the early to mid 1990's, the western edge of the foredune was located approximately 140 to 150 feet west of the subject homes, with significant erosion beginning in the late 1990's. The geologic report also states that during 2006, the distance from the west side of the houses to the active beach area had decreased approximately 70 feet, for an average annual loss of approximately 6 feet between 1994 and 2006.

During December, 2005 and January, 2006, ocean storms and high surf have caused accelerated erosion and scouring of the sand dune fronting the Wulf property, Mt. Angel Street road access, and at the existing northeast flank of the Breakers Condominiums riprap revetment. This revetment protects the northeast corner of the Breakers Condominiums and ocean erosion has caused the riprap to unravel from the structure. The Wulf residence and the Breakers Condominiums are the north and south lots adjacent to the Mt. Angel Street beach access, which is under Tillamook County jurisdiction. The exposed area on the east end of the Breakers Condominiums riprap was 20 feet long by 15 feet deep and eroded within 23 feet of Breakers Unit #9. Erosion at the Mt. Angel Street beach access resulted in an exposed cut bank with a near vertical drop of 15 feet. At the time of the geologic report, the foundation of the Wulf residence was 37 feet from the top of the bluff.

To the north, adjacent properties also experienced high rates of foredune erosion during the same period. Three adjacent properties north of the Wulf property and to the south of the Gazeley property (Tax lots 1500, 1400 and 1300) were found to be previously riprapped and OPRD Repair Permits were issued to avoid loss of structures. At the Gazeley, Twining and Strader properties, the near vertical sand escarpment was approximately 16 feet in height, with the top edge of the bluff located between 37 to 42 feet from the Gazeley and Twining homes and the Strader property (vacant lot), as measured on February 5<sup>th</sup>, 2006.

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

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

The proposed riprap will extend out onto the beach from 25 to 35 feet from the existing dune escarpment, occupying up to 9,126 square feet of existing beach area at the toe of the slope. The revetment will be tapered at the north end of the riprap and into the dune to reduce the occupation of beach area.

Beach armoring, the dynamic nature of beach foredune erosion and long-term changes in sea level over the next 100 years may result in a gradual narrowing of the beach, due to the fixed nature of the shoreline. The possibility of long-term responses to beach armoring and easement rights on the ocean shore raises broader policy issues that are not appropriately addressed in this individual permit decision.

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

Tillamook County Department of Community Development has indicated that compliance with the Tillamook County Comprehensive Plan and Land Use Code cannot be determined until the County approves a development permit for the project. The applicants are aware of this requirement, and have filed a permit application with Tillamook County. Any work authorized under the OPRD permit will require certification that all applicable County permits have been approved.

State laws and regulations are being addressed through this permit review. A condition of approval will require that the applicant be responsible for obtaining any required permit approvals from the U.S. Army Corps of Engineers.

**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 (GeoScience, Inc., January 18, 2007) does not address non-structural solutions for protecting the Breakers Condominiums and the homes, such as dynamic revetments, sand bags, gravel mounds, logs or composite revetments. Other geologic reports on nearby properties have concluded that these techniques would not be effective due to the high-energy wave environment along this section of the coastline coupled with the loose nature of the sand. Vegetative stabilization and sand alteration would not be sufficient to substantially slow or halt erosion. Geoscience does report on several alternatives for the Mt. Angel beach access such as a sand placement, a gravel ramp design, and a gravel ramp stabilized with betonite material. The geologist recommends Option #3, with the riprap ramp using flat individually placed stones as the most viable option.

Relocating the homes would not provide protection to the residences and would not avoid the need for placing riprap or other material on the ocean shore. The buildings are currently occupying much of the usable land at the top of the bluff, and would still be in danger even if they were to be moved to the east property line. Although there may be some room for relocating the houses on some of properties, shoreline protection would still be justified on all properties. By protecting all of the lots, the riprap can be made continuous from the existing riprap to the south, and extended enough to the north to reduce the threat of erosion from around the end of the revetment. Extending the riprap across the Strader property will also allow the structure to be tapered into the dune, which may help lessen the chance of flank scour (increased erosion caused by an abrupt end protrusion).

**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.**

Public costs associated with the proposed riprap will be the loss of approximately 9,126 square feet of upper beach area. Alternative shore protection methods other than riprap have been discussed above. These alternatives are not considered reasonable special measures, as they would fail to provide the needed long-term protection for the property. Public costs of the riprap also include the loss of recreational beach area, heavy equipment activity on the beach during construction, and the visual presence of additional riprap. These costs can be reduced through careful and efficient construction practices.

There will be no public costs to maintain the rip rap structure and the Mt. Angel Street ramp access, as maintenance and needed repairs are the responsibility of the upland property owners.

**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.**

Statewide Planning Goal 18 requires that permits for beachfront protective structures be issued only where development existed on January 1, 1977. Development is defined as houses, commercial and industrial buildings, and vacant subdivision lots which are physically improved through construction of streets and provision of utilities to the lots. The subject properties meet the criteria. The properties were developed with streets and infrastructure as part of the original Neskowin Subdivision, which was platted in 1909. The Tillamook County Comprehensive Plan includes a Goal 18 exception for the Neskowin Community, recognizing that the lots were developed prior to 1977.

## **SCENIC Standards Evaluated, 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 riprap project will result in some changes to the lower dune bluff profile and will occupy some beach area. However, the scenic attraction of the beach will not be significantly affected, considering the predominance of existing riprap structures already existing along the southern section of Neskowin beach.

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

The project will not affect vegetation that is vital to scenic values. Very little vegetation remains on the dune face due to the dramatic erosion that has occurred during the past several winters.

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

The riprap revetment will not affect or obstruct ocean or beach viewing opportunities from adjacent properties.

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

The riprap revetment will be visually consistent with other riprap revetment projects on adjoining properties, and the many similar structures in the Neskowin area.

## **RECREATION USE STANDARDS EVALUATED, 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 of federally listed species.**

The proposed riprap will only occupy a small percentage of available beach area, and should not affect typical recreation uses such as sunbathing, surfing, kite flying, sandcastle building, walking, or beachcombing.

**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 of federally listed species.**

During high tides in the winter, wave run-up often reaches the upper areas of the beach, and may cover the entire beach at times. Riprap revetments encroach some distance out from the natural bluff toe, and increase the chance of high water covering the entire beach area. The project is designed to project as little as possible out onto the beach area, while still maintaining a stable slope that will not collapse or become a safety hazard. Access during times of extreme high water is already limited by the presence of riprap on adjoining properties; therefore, the proposed project will not result in any new obstruction to lateral beach access. Permit conditions will also require that the line of riprap be tapered inland at the south end, which will help preserve additional beach area for public use.

### **SAFETY STANDARDS EVALUATED, 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 revetment has been designed by a local contractor to withstand wave attack, and support the steep dune face. Rock size, slope, toe trench, and material specifications appear to be adequate for providing erosion control in this high-energy beach environment.

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

The riprap will project out approximately 27 feet from the toe of the existing dune escarpment. This normally will not affect lateral beach access, except during times of extreme high water. During these periods, however, wave run-up is likely to be hitting the riprap on neighboring properties to the south; therefore the proposed riprap will not create a new obstruction for beach access to the north.

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

Properties to the south are protected with existing riprap and will not be affected by the project. To the north of the Strader vacant lot, properties are unprotected. To minimize the chance of increased erosion on the adjoining property to the north, permit conditions will require that the riprap be tapered into the dune at the north end of the project.

**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 revetment is to provide protection to the upland home structures, and to provide a safe access route to the beach for pedestrians, horses and emergency vehicles.

### **APPLICABLE NATURAL AND CULTURAL RESOURCE STANDARDS EVALUATED, 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 riprap revetment.

**Estuarine values and navigation interests.**

The project is not adjacent to an estuary, and does 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 Indians. There were no reports of historic, cultural, or archeological sites at this location.

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

The riprap will be placed primarily on the exposed dune face that does not contain significant vegetation or aquatic features.

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

Impacts to air quality will be limited to the operation of heavy equipment during the construction process, estimated to take approximately one to two weeks. The project will take place above the ordinary high tide line, and will not affect water quality.

**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 an urban residential area, and is not adjacent to protected native plant communities or fish and wildlife habitat.

**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 10 requests for a public hearing, and held a hearing on September 10, 2007, in Neskowin. Twenty-two people attended the hearing, including the applicant. Six people spoke in favor of the proposal, with two individuals opposing and expressing concerns regarding future erosion and public access to the beach.

During the public comment period, two letters were received in support of the proposal with specific requests. One individual made a request for OPRD to expedite the final decision period because of the upcoming storm season and the potential for erosion at the Mt Angel Street access. The other request was for OPRD to apply maintenance costs for Mt. Angel Street to the adjacent homeowners and not to Tillamook County as a condition for any approved permit.

In response to comments at the public hearing and earlier consultations with the Neskowin Citizen Planning Advisory Committee and Tillamook County Public Works Department, there was complete support for Option # 3 at the Mt. Angel Street access as outlined in the geologic report. Option #3 was selected as the most appropriate design for the beach access ramp, meeting the needs of pedestrian, horse, and emergency vehicle access and shoreline protection for adjacent properties.

## **STAFF FINDINGS**

1. There is a critical need for the proposed project. Strong storms over the past couple of winters have caused significant erosion at this site. Existing structures are located in close proximity to the edge of the dune, and public access is deteriorating and unsafe during winter months. Construction of the proposed riprap revetment from the existing Breakers Condominiums riprap, across Mt. Angel Street, and including all properties north up to the Strader property, will allow for continuous structural shoreline protection across these vulnerable properties.
2. Relocation of structures is not a viable option due to the limited room available on the upland properties. Non-structural alternatives to riprap are not feasible due to the high-energy wave environment along this section of the coastline coupled with the severity of erosion at this site.
3. The project will be consistent with the existing riprap shoreline protection on adjacent properties to the south, and properties within the Neskowin area, and will not create any new obstruction to beach access or recreation uses.
4. The plan to create a rock access ramp that blends into the adjacent properties at Mt. Angel Street will provide for improved pedestrian, horse and emergency vehicle access to the beach while allowing for necessary shore protection.

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