



**DEPARTMENT OF PLANNING AND DEVELOPMENT**

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TO: Lincoln County Planning Commission

FROM: Onno Husing, Director of Planning and Development

RE: Code Amendment, Bayshore Dune Management Plan (BDMP)

On March 15, 2017 the Lincoln County Board of Commissioners adopted Resolution 17-15-3B (attached). The resolution initiated a potential code amendment to the Bayshore Dune Management Plan (BDMP). The code amendment, if adopted, would change the location of the eastern boundary of Management Units 5-7. Under the proposed code amendment, the eastern boundary line of the three subject management units would move eighty feet west from the **east** right-of-way border along NW Oceania Drive to the **west** side of NW Oceania Drive, coterminous with the western edge of the right-of-way.

**1. BACKGROUND**

During the 1960's developers platted and developed the peninsula on the north side of Alsea Bay at the mouth of the Alsea River. The development, named Bayshore, was intended mostly for single family houses.

Today, Bayshore is an unincorporated community zoned mostly R-1 (Single-family residential). A small portion of Bayshore on the bay side of the peninsula was annexed into the City of Waldport.

Most of the lower elevation areas of Bayshore are located on a sand spit. Sand spits are by nature highly dynamic. During the late 1880s, a dairy farm was established at the subdivisions of Sandpiper Village/Sandpiper Shores of today. Overgrazing by cattle denuded the lush vegetation. During the 1960s, developers graded the peninsula flat and excavated a network of canals to prepare the peninsula for development. This ecosystem became unstabilized and much more dynamic.

In recent decades, sand has been accumulating in Bayshore at the lower portions/southern end of the peninsula. These sand dunes, as they grew and moved inland, created a host of problems for the residential development. Houses, streets and public infrastructure became inundated. As a highly dynamic system, during strong El Niño events (about once every twenty years), the ocean pulls huge volumes of sand off the peninsula, and mouth of the river migrates northward toward the homes in Bayshore.



Figure 1. Sand inundation at oceanfront home in Bayshore (Photo credit: Jason Durrett)

In 1984, the first major El Niño post-Bayshore development caused severe erosion. This extreme weather event necessitated the installation of emergency riprap on oceanfront properties. During 1998, a second severe El Niño erosion event occurred, exposing rip rap installed during 1984.



Figure 2. El Niño erosion event 1998, exposing rip-rap installed during 1984.

Since 1998, as sand accumulated on the peninsula, the Planning Department facilitated community discussions about establishing a dune management program. Alas, these discussions did not gain traction in the community.

Then, during 2011, a \$25,000 grant from the Department of Land Conservation and Development (DLCD) became available to prepare a dune management plan for Bayshore. Lincoln County administered the grant. Property owners in Bayshore provided \$10,000 cash match. A Steering Committee was formed to guide the plan development process. A geologist from Gold Beach, Ron Sunnevil (Terra Firma Geological Services, Inc.) was hired to prepare the dune management plan.

At the conclusion of the planning process, on August 8, 2012, the Lincoln County Board of Commissioners (BOC) adopted: (1) the “Bayshore Dune Management Plan Background Report” (BDMP) and (2) implementing ordinances in the Lincoln County Code (LCC 1.1385).

The BDMP and the implementing ordinances – in addition to creating a framework to manage sand at Bayshore – attempts to align federal, state and local laws/regulations into a seamless process which in theory, if implemented, provides a regulatory path to encourage/expedite dune management activities in Bayshore.

## 2. DRAWING LINES IN THE SAND

As noted above, the sand inundation challenge in Bayshore is concentrated at the southern end of the peninsula. Under the BDMP, the eastern boundary of the management system at the south end, encompassing Management Units 5, 6 and 7, was established on the **east side** of NW Oceania.

Under Oregon law, Statewide Planning Goal 18, Beaches and Dunes (OAR 660-015-0010(3)), beach sand is deemed an important resource for the following three reasons. First, sand protects the homes from ocean flooding. Second, sandy beaches support public recreation activities. Third, sand spits are coastal ecosystems worthy of protection. Before Goal 18 was enacted, beach sand was mined for fill material on the Oregon Coast without regulatory oversight.

Before adoption of the BDMP, a local construction company, at no cost to property owners, would regularly remove beach sand encroaching onto NW Oceania Drive for fill material. Naturally, property owners in Bayshore embraced what they saw as a “win-win” arrangement.

It should be recognized the Bayshore Road District and the Bayshore Homeowners Association (HOA), over the years, have chosen to **not** assume the responsibility for sand removal. Both entities claim it’s not their responsibility under their charters. And, both organizations have declined to amend their charters to assume that responsibility.

The adoption of the BDMP during August 2012 was a game-changer. The plan ended the practice of no-cost removal of the sand because the sand had to go back on the beach. The BDMP also required people to secure Infrastructure Grading permits by the County per Lincoln County Code 1.1385(8) and a “Drive on the Beach Permit” from

Oregon Parks and Recreation Department (OPRD) per Oregon Administrative Rule 736-24-0025(3).

The establishment of the boundary line on the east side of the right-of-way on NW Oceania Drive sparked controversy. The fixing of the boundary also begs a larger/important/difficult question. Where *is* the proper location(s) for the boundary of “the sand system” at Bayshore? Sand spits, by their very nature, are dynamic. For that reason, fixing a static perimeter for an ever changing system is challenging.

Property owners in Bayshore (including officers of the HOA and the Bayshore Road District) have been voicing deep frustration over the location of the eastern boundary line of Management Units 5 to 7. They’ve urged the Planning Department and the BOC to move the boundary line from the **east side** of NW Oceania at the lower end of Bayshore to the **west side** of NW Oceania Drive. The main complaint has been that the logistics and costs of removing the sand from the road back to the beach have created a public safety crisis. After winter storms, thousands of cubic yards of sand bury the street, houses and infrastructure. Public safety officials concur emergency vehicles cannot access the lower portions of the community when this happens.

### **3. NEW INSIGHTS: ASPHALT ON THE BEACH**

During a visit to Bayshore in August 2015, Jay Sennewald, OPRD Ocean Shores Coordinator, observed considerable amounts of asphalt and other foreign materials on the beach. These foreign materials were placed on the beach because of sand removals from the road, right of ways, and driveways. Sennewald classifies these materials, in effect, as pollutants on the beach. As such, the placement of these materials on the beach constitutes a violation of ORPD regulations. Sennewald indicated to the Planning Department he may not have the authority to issue OPRD drive on the beach permits to place sand from NW Oceania back on the beach because of these foreign materials.

This precipitated a Catch 22. Goal 18 requires taking the sand back to the beach. OPRD regulations prohibit the discharge of foreign materials on the beach. Because thousands of cubic yards of sand blow into the road after a single storm and become contaminated, it is nearly logistically impossible to strain these enormous volumes of sand to remove these foreign materials before placing the sand back on the beach.

This Catch 22 re-started the dialogue about moving the eastern boundary of the management system from the **east side** of the border of the right of way to the **west side** of the border of the right-of-way. Moving the line would, as proposed, allow sand to be removed off NW Oceania Drive and the adjacent right-of-ways without permits and without the requirements of putting the sand back on the beach. That’s because the road and the right-of-ways would lie outside the management system and thus not bound by BDMP requirements.

It is worth noting that among coastal geologists, there is substantial disagreement about where the “system boundary” line should be located within Bayshore. According to one view, the boundary of the system should be moved far up the Alsea Bay to encompass the entire lower Alsea Bay Estuary. Another view sees the proper location for the sand system on the oceanside of the oceanfront homes along NW Oceania Drive due to the presence of rip-rap. The reason is that the beach sand that blows inland past the houses

is no longer part of the system because that sand will not return to “the system” unless people, with heavy equipment, bring it back to the beach.

For the purposes of this code amendment process, the “system boundary” should be understood as a regulatory construct informed by scientific knowledge. As with most policy decisions, practical considerations must play a role in making difficult management decisions.

A central objective of Goal 18 was to put an end to the practice of commercial-scale mining on Oregon’s beaches. A case can be made that moving the boundary line as proposed, would **not** constitute a return to unregulated commercial-scale beach sand mining.

If the code amendment is adopted, the volume of sand anticipated to be removed from the roadway, per year, is somewhere between 5,000 and 10,000 cubic yards. That’s a *de minimus* amount of sand. The sand system, after all, extends far offshore and encompasses many square miles.

#### **4. CLOSING OBSERVATIONS ON DUNE MANAGEMENT IN BAYSHORE**

The BDMP has been in place for over five years. The BDMP has already been amended several times to “fix” requirements that proved to be impractical. The proposal now before the Planning Commission to amend the code to move the boundary line of the management system can be seen as yet another step towards making the BDMP in Bayshore a viable/practical dune management plan and consistent with Goal 18.

The BDMP is a work in progress. The great majority of properties in Bayshore -- dune areas in front of the oceanfront homes -- remain un-managed. Not long ago the Oregon Legislature established the authority to form sand management districts as special districts. Thus far, people in Bayshore have declined to form a sand management district.

Doing sand management in a comprehensive way is best for several reasons. One can take advantage of economies of scale and reduce costs. In addition, managing an entire dune system will benefit from coordinated actions. The goal, under the BDMP, is to establish a robust vegetated/managed dune around the entire lower perimeter of Bayshore. In any event, dune management in Bayshore is likely to happen over time on an incremental basis.

Until recently, many property owners in Bayshore used Remedial Sand Grading Permits **not** just to remove sand away from their houses (the intent of the ordinance) but also to grade dunes in front of their homes to restore views of the beach **without** sand management/stabilization efforts. That practice, grading for view without stabilization is unlawful and counterproductive. The cumulative impact of individual grading activities – without stabilization -- has made an already unstable dune area even more dynamic.

However, a year or so ago, Lincoln County and OPRD began to enforce, with rigor, the Remedial Sand Grading Permit requirements. That was an important step. Almost overnight, bulldozing dunes without stabilization in Bayshore ended.

We are now seeing, in Bayshore, the first signs of recovery. By enforcing the BDMP and by stopping dune grading without dune stabilization, the dune system is slowly beginning to repair itself.



Figure 3. Looking south, background: undisturbed beach grass recolonizes and re-establishes dunes. Foreground: recent remedial dune grading.

In addition, at the south end of Bayshore, property owners collaborated to undertake a lawful dune management effort, involving the planting of beach grass. They are experiencing success. The vegetated dune in front of their homes is trapping and storing sand. They've restored and retained their views of the ocean. They are experiencing less sand inundation. And, their neighbors, who originally declined to participate in their program, are now joining in and they are enlarging the effort.



Figure 4. Successful beach grass plantings at the south end of Bayshore.

Dealing with sand inundation problems in parts of Bayshore will always be challenging. But, I think we are now headed in the right direction.