Cannon Beach City Council

ZO18-01: FOREDUNE MANAGEMENT PLAN UPDATE

Agenda Date: September 11, 2019  
Prepared By:  
Jeff Adams, Community Development Director
Denise Lofman, CREST

Introduction

The City is in the process of updating its Foredune Management Plan. The Cannon Beach Planning Commission recommended changes at its November regular meeting.

The proposed Foredune Management Plan update has four components:

- A 2018 report prepared by the Oregon Department of Geology and Mineral Industries (DOGAMI) entitled *Beach and Shoreline Dynamics in the Cannon Beach Littoral Cell; Implications for Dune Management*.
- A 2018 document recommended by the Planning Commission to City Council entitled *Foredune Management Plan*.
- Comprehensive Plan policy amendments.
- Zoning Ordinance amendments.

Dune Management

Foredune management plans are not required under Goal 18. Cannon Beach is one of nine coastal cities with a Foredune Management Plan; Cannon Beach did not permit foredune grading until 1997. Cannon Beach established a process to allow foredune grading for preservation of ocean views in 1998. This was implemented first at Breakers Point, and later (2001) in the Presidential Streets. In 2016 the City Council directed that the planning documents, policies, and implementation measures for foredune grading be updated.

When grading does occur, it is important to consider the natural cycle of the dunes. The Cannon Beach littoral cell has a net gain of approximately 253,600 yard$^3$ between 1997 and 2016, with areas of erosion and accretion in the cell (Allen, et al., 2017, p.34-35). Anderson and Ruggiero (2015) found decadal oscillations in the position of the shoreline between 1950 and 2010; this is influenced by factors including El Nino/La Nina and Pacific Decadal Oscillation (PDO). Allen predicts that we will continue to see the current pattern for the foreseeable future, until we see a return to a more dominant north-westerly wind and wave pattern. This would help drive sand back to the south, where erosion is happening. One option for foredune management is to accept these cycles and let them manage themselves.

If the City is interested in continuing a foredune management plan, the following substantive issues should be considered.

Process

Starting on September 11th the Cannon Beach City Council will be meeting and taking testimony regarding our Foredune Management policies.
The initial meeting will take place on September 11th @ 5:30 at and will include comments regarding the process from the City’s land use attorney, Bill Kabeiseman, a presentation by Dr. Sally Hacker who will be speaking on the impact of dune grasses on dune formation and Denise Lofman from the Columbia River Estuary Study Taskforce (CREST) who will present information regarding the scientific considerations for dune management. At this point staff recommends that public comments be held until the public hearings scheduled to start on September 12th.

This meeting will be followed by 5 Public Hearing opportunities for people to provide testimony to the City Council regarding the City’s Codes regarding Dune Grading or any aspect of Dune Management on which they wish to comment. Individuals are also invited to provide written testimony for consideration until the close of public comment.

The dates of the Public Hearings are:

- September 12th @ 5:30: first Public Hearing
- September 14th @ 9:00: second Public Hearing
- September 14th @ 6:00: third Public Hearing
- September 17th @ 5:30: fourth Public Hearing
- October 7th @5:30: fifth and final Public Hearing

On October 7th at 3:00 p.m. Council is scheduled for a site visit tour of the Presidential Streets, Breaker’s Point and any other management areas. The purpose of the site visit is for the City Council to personally view features and issues that have been presented during the Public Hearing process. Council will need to decide if individuals will be able to have conversations with Councilors during the site visit.

On October 7th @ 5:30 Council are scheduled to conduct the fifth and final Public Hearing if one is necessary. Once Council determines that the Public Hearing process is complete, they will commence their deliberations regarding Foredune Management.

Council will consider scheduling additional discussions regarding Foredune Management as part of the October 7th meeting. The schedule for follow up meetings will be published once it is available.

Criteria

The proposed Comprehensive Plan and Zoning Ordinance amendments are subject to the following criteria:

- Municipal Code section 17.86.070.A;
- Applicable policies in the Comprehensive Plan;
- Statewide Planning Goals, especially goal 18, Beaches and Dunes.

These criteria are excerpted below.

17.86.070.A: Before an amendment to the text of the ordinance codified in this title is approved, findings will be made that the following criteria are satisfied: 1. The amendment is consistent with the comprehensive plan; 2. The amendment will not adversely affect the ability of the city to satisfy land and water use needs.

Cannon Beach’s ability to satisfy land use needs depends on a sufficient supply of land for housing and commerce. The proposed amendments do not add to or subtract from land zoned for residential use or commercial use; nor do the amendments affect the buildability of this land.
**Comprehensive Plan Policies:** The following policies from the “Sand Dune Construction Policies” section of the Comprehensive Plan may be applicable to the proposed amendments:

1. The City shall prohibit residential development and commercial and industrial buildings on beaches, active foredunes, on other foredunes which are conditionally stable and are subject to ocean undercutting or wave overtopping, and on interdune areas (deflation plains) that are subject to ocean flooding. Permitted uses in these areas shall be those which are of very low intensity (such as raised wooden walkways), uses which do not cause the removal of sand or vegetation, and which could be easily removed in the event of ocean flooding, erosion or other hazard.

2. Before a building permit is issued for construction involving the removal of vegetation in areas with sand soils, a satisfactory wind erosion prevention plan will be submitted which provides for temporary and permanent sand stabilization and maintenance of new and existing vegetation. The vegetation program shall return the area to its original level of stability.

3. Removal of vegetation during construction in any sand area shall be kept to the minimum required for building placement or other valid purpose. Removal of vegetation should not occur more than 30 days prior to construction. Permanent revegetation shall be started on the site as soon as practical after construction, final grading or utility placement. Storage of sand or other materials should not suffocate vegetation.

4. Site specific investigations by a registered geologist shall be required prior to issuance of building permits in open sand areas, on hillsides in sand areas regardless of the type of dune or its present stability, and on those conditionally stable dunes not subject to ocean hazard, but which in the view of the Building Official have potential for wind erosion or other damage. Site reports shall be paid for by the developer and the City may submit the reports to State and Federal agencies for evaluation.

5. The developer or party initiating action in sand areas shall be responsible for preventing adverse impacts from wind erosion on adjacent property, City streets, or utilities. Where necessary, the City may cause such impacts to be corrected at the expense of the developer.

6. Foredunes shall be breached only on a temporary basis in an emergency, e.g. fire control, cleaning up oil spills, and alleviating flood hazard. Restoration after breaching shall reestablish, to the maximum extent feasible, the contours and vegetative cover existing on the site prior to the breaching.

7. Grading or sand movement necessary to maintain views or to prevent sand inundation may be allowed for structures in foredune areas only if the area is committed to development or is within an acknowledged urban growth boundary and only as part of an overall plan for managing foredune grading. A foredune grading plan shall include the following elements based on consideration of factors affecting the stability of the shoreline to be managed including sources of sand, ocean flooding, and patterns of accretion and erosion (including wind erosion), and effects of beachfront protective structures and jetties. The plan shall: a. Cover an entire beach and foredune area subject to an accretion problem, including adjacent areas potentially affected by changes in flooding, erosion, or accretion as a result of dune grading; b. Specify minimum dune height and width requirements to be maintained for protection from flooding and erosion. The minimum height for flood protection is 4 feet above the 100 year flood elevation; c. Identify and set priorities for low and narrow dune areas which need to be built up; d. Prescribe standards for redistribution of sand and temporary and permanent stabilization measures including the timing of these activities, and e. Prohibit removal of sand from the beach-foredune system. Before construction can begin, the foredune grading plan must be adopted as an amendment to the Comprehensive Plan.
8. Wells in dune areas shall not be permitted, in order to prevent the drawdown of groundwater and possible destruction of vegetation.

9. The City, through its Zoning Ordinance, shall regulate sand movement or alteration and vegetation control on City lands not identified in the Dune Classification System (the ADBO Zone).

**Statewide Planning Goals**: Comprehensive Plan and zoning ordinance amendments must not take the City’s planning documents out of compliance with the Oregon’s Statewide Planning Goals. Goal 18 is especially applicable to these amendments: *To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune areas; and to reduce the hazard to human life and property from natural or man-induced actions associated with these areas.*

Goal 18 also establishes specific requirements for foredune management plans in Implementation Requirement 7 and Guideline H.

**Implementation Requirement 7.** Grading or sand movement necessary to maintain views or to prevent sand inundation may be allowed for structures in foredune areas only if the area is committed to development or is within an acknowledged urban growth boundary and only as part of an overall plan for managing foredune grading. A foredune grading plan shall include the following elements based on consideration of factors affecting the stability of the shoreline to be managed including sources of sand, ocean flooding, and patterns of accretion and erosion (including wind erosion), and effects of beachfront protective structures and jetties. The plan shall:

(a) Cover an entire beach and foredune area subject to an accretion problem, including adjacent areas potentially affected by changes in flooding, erosion, or accretion as a result of dune grading;

(b) Specify minimum dune height and width requirements to be maintained for protection from flooding and erosion. The minimum height for flood protection is 4 feet above the 100-year flood elevation;

(c) Identify and set priorities for low and narrow dune areas which need to be built up;

(d) Prescribe standards for redistribution of sand and temporary and permanent stabilization measures including the timing of these activities; and

(e) Prohibit removal of sand from the beach-foredune system.

**Guideline H. Foredune Grading Plans.** Plans which allow foredune grading should be based on clear consideration of the fragility and ever-changing nature of the foredune and its importance for protection from flooding and erosion. Foredune grading needs to be planned for on an area-wide basis because the geologic processes of flooding, erosion, sand movement, wind patterns, and littoral drift affect entire stretches of shoreline. Dune grading cannot be carried out effectively on a lot-by-lot basis because of these areawide processes and the off-site effects of changes to the dunes. Plans should also address in detail the findings specified in Implementation Requirement (1) of this Goal with special emphasis placed on the following:

- Identification of appropriate measures for stabilization of graded areas and areas of deposition, including use of fire-resistant vegetation;
- Avoiding or minimizing grading or deposition which could adversely affect surrounding properties by changing wind, ocean erosion, or flooding patterns;
- Identifying appropriate sites for public and emergency access to the beach.

**Procedural Requirements**

The proposal amends the Comprehensive Plan and Zoning Ordinance. Plan and ordinance amendments are made by the City Council based on recommendations from the Planning Commission. The Planning Commission’s recommendations for ordinance amendments and amendments of the Comprehensive Plan
are attached. This application is not subject to the time limits in ORS 227.178 or the continuance rules in ORS 197.763.

**Attachments:**

A: Beach and Shoreline Dynamics in the Cannon Beach Littoral Cell: Implications for Dune Management (2018), Allan, et. al.

B: City of Cannon Beach Foredune Management Plan, Planning Commission’s Recommendations

C: Comprehensive Plan Policy Amendments, Planning Commission’s Recommendations

D: Zoning Ordinance Amendments, Planning Commission’s Recommendations

E: Planning Commission’s Addendum

F: Cannon Beach FMP Notes for City Council, Staff Produced

G: Oregon’s Statewide Planning Goals & Guidelines, Goal 18: Beaches and Dunes, OAR 660-015-0010(3)