SAND DUNE CONSTRUCTION POLICIES

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.

Grading or sand movement 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, plus an additional one vertical foot safety buffer for predicted sea level rise.;

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.

FOREDUNE MANAGEMENT POLICIES

1. Foredune Breaching: 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.

2. Foredune Grading for Structures: Grading or sand movement 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 approved for managing foredune grading. The City’s foredune management plan covers all foredunes, from the south city limits to the north city limits. The plan allows grading to maintain the health, safety of the community and integrity of the natural resources in the Cannon Beach littoral cell.

3. Foredune Grading Plan: 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, patterns of accretion and erosion (including wind erosion), and effects of beachfront protective structures and jetties.
4. **Foredune Vegetation**: Revegetation of graded areas is mandatory. Maintaining a stable, vegetated dune system is essential in those areas where coastal properties have been built either on or immediately landward of the dune.

5. **Foredune Management Policy**: Due to our uncertainty in the processes that enable and contribute toward dune formation, including their periodic destruction, managing a dynamic dune system at a range of spatial and temporal scales requires an adaptive management approach that is based on sound scientific knowledge of coastal dune processes and grounded by systematic, accurate monitoring. Because of uncertainty in the forces that both sustain and erode beaches and dunes on the Oregon coast, especially over longer time scales (10 to 30 years), an adaptive management approach based on a sound knowledge of beach and dune processes, guided by systematic monitoring and evaluation of the system as a whole, is essential. The Planning Commission shall evaluate its dune management program after adoption and make changes to the management regime in response to the results of monitoring and other available information.

6. **Foredune Management Objectives**: Foredune management is founded on four important objectives. First, to ensure the dunes sustain an adequate sand volume in order to withstand the erosional effects of (an) extreme storm(s) and to minimize any potential for wave overtopping and inundation (flooding) of backshore. Second, to strengthen weak points in the dune system (e.g. adjacent to trails), by repairing areas subject to localized blowouts from wind or waves in order to maintain the dune buffer from erosion and potentially being breached during a storm. Third, to maintain valuable habitat for a wide range of plants and animals, such as shellfish, including razor clams, and in some cases rare species. Fourth, to maintain the integrity and natural beauty of the dunes.

7. **Foredune Management Standards**: To ensure that an adequate sand volume remains to withstand erosional effects of extreme storms and to minimize any potential for wave overtopping and inundation of the backshore, the City of Cannon Beach requires standards above and beyond the accepted federal base flood elevations.

8. **Foredune Management**: Graded sand must be retained within the littoral system.

9. **Monitoring**: Monitoring of a Conditional Use Foredune Grading permit is mandatory. Monitoring shall be the responsibility of the permit holder through the contracting of third-party professionals.

10. **Foredune Grading Permits**: Grading activities are permitted under an active Preservation Grading Conditional Use Permit, or Remedial Grading Permit in the Cannon Beach in the Oceanfront Management zone and may include:

    - additional plantings or if necessary, certified organic fertilizer applications, in areas where plantings performed poorly,
    - grading or sand removal to maintain established public access routes, as identified on Exhibit A, Cannon Beach Public Access Points, where accretion has occurred, and
    - foreslope shaping.
11. **Foredune Management Plan**: The City shall complete a Plan Monitoring Report after the fifth year following adoption and approval of the Management Plan. The completed report shall be submitted to the Planning Commission and City Council.

12. **Preservation Grading**: “Preservation grading” is grading or sand movement necessary to repair blow-outs, erosion or maintain public access.

13. **Remedial Dune Grading**: “Remedial grading” is the clearing of sand necessary to maintain the function of a structure and is permitted in the Cannon Beach littoral cell without regards to an active Foredune Grading Conditional Use Permit.
EXHIBIT A: Cannon Beach Public Access Points

City of Cannon Beach: Parks and Trails Master Plan, p. 17-25.
SAND DUNE CONSTRUCTION POLICIES

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.

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 plus an additional one vertical foot safety buffer for predicted sea level rise;
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.

FOREDUNE MANAGEMENT POLICIES

1. Foredune Breaching: 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.

2. Foredune Grading for Structures: Grading or sand movement 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 approved for managing foredune grading. The City’s foredune management plan covers all foredunes, from the south city limits to the north city limits. The plan allows grading to maintain the health, safety of the community and integrity of the natural resources in the Cannon Beach littoral cell.

3. Foredune Grading Plan: 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, patterns of accretion and erosion (including wind erosion), and effects of beachfront protective structures and jetties.

4. Foredune Vegetation: Revegetation of graded areas is mandatory. Maintaining a stable, vegetated dune system is essential in those areas where coastal properties have been built either on or immediately landward of the dune.

5. Foredune Management Policy: Due to our uncertainty in the processes that enable and contribute toward dune formation, including their periodic destruction, managing a dynamic dune system at a range of spatial and temporal scales requires an adaptive management approach that is based on sound scientific knowledge of coastal dune processes and grounded by systematic, accurate monitoring. Because of uncertainty in the forces that both sustain and erode beaches and dunes on the Oregon coast, especially over longer time scales (10 to 30 years), an adaptive management approach based on a sound knowledge of beach and dune processes, guided by systematic monitoring and evaluation of the system as a whole, is essential. The Planning Commission shall evaluate its dune management program after adoption and make changes to the management regime in response to the results of monitoring and other available information.

6. Foredune Management Objectives: Foredune management is founded on four important objectives. First, to ensure the dunes sustain an adequate sand volume in order to withstand the erosional effects of (an) extreme storm(s) and to minimize any potential for wave overtopping and inundation (flooding) of backshore. Second, to strengthen weak points in the dune system (e.g. adjacent to trails), by repairing areas subject to localized blowouts from wind or waves in order to maintain the dune buffer from erosion and potentially being breached during a storm. Third, to maintain valuable habitat for a wide range of plants and animals, such as shellfish, including razor clams, and in some cases rare species. Fourth, to maintain the integrity and natural beauty of the dunes.

7. Foredune Management Standards: To ensure that an adequate sand volume remains to withstand erosional effects of extreme storms and to minimize any potential for wave overtopping and inundation of the backshore, the City of Cannon Beach requires standards above and beyond the accepted federal base flood elevations.

8. Foredune Management: Graded sand must be retained within the littoral system.

9. Monitoring: Monitoring of a Conditional Use Foredune Grading permit is mandatory. Monitoring shall be the responsibility of the permit holder through the contracting of third-party professionals.

10. Foredune Grading Permits: Grading activities are permitted under an active Preservation Grading Conditional Use Permit, or Remedial Grading Permit in the Cannon Beach in the Oceanfront Management zone and may include:

    - additional plantings or if necessary, certified organic fertilizer applications, in areas where plantings performed poorly,
    - grading or sand removal to maintain established public access routes, as identified on Exhibit A, Cannon Beach Public Access Points, where accretion has occurred, and
    - foreslope shaping.
11. **Foredune Management Plan**: The City shall complete a Plan Monitoring Report after the fifth year following adoption and approval of the Management Plan. The completed report shall be submitted to the Planning Commission and City Council.

12. **Preservation Grading**: “Preservation grading” is grading or sand movement necessary to repair blow-outs, erosion or maintain public access.

13. **Remedial Dune Grading**: “Remedial grading” is the clearing of sand necessary to maintain the function of a structure and is permitted in the Cannon Beach littoral cell without regards to an active Foredune Grading Conditional Use Permit.
EXHIBIT A: Cannon Beach Public Access Points

City of Cannon Beach: Parks and Trails Master Plan, p. 17-25.