



Photo © Bruce Newhouse

Strategy Habitat: Coastal Dunes

Ecoregions:

Coastal dunes are a Strategy Habitat only in the Coast Range ecoregion.

Characteristics:

Coastal dunes include beaches, foredunes, sand spits, and active to stabilizing back dunes. The vegetation varies from sparse to forested, as influenced by sand scour, deposition, movement, and erosion. Species composition is also influenced by salt spray, storm tidal surges, wind abrasion, and substrate stability. Beaches and sandspits are directly influenced by tidal action and are unvegetated. Foredunes generally have unstable sand and sparse to moderate vegetative cover including dunegrass, seashore bluegrass, grey beach peavine, large-headed sedge, beach morning glory, yellow sand-verbena and silver burweed. In dunes with greater sand stability, red fescue, seashore lupine, coastal strawberry, beach knotweed, and yarrow are dominant. With plant succession, dunes convert over time to shrublands dominated by salal and evergreen huckleberry and forests dominated by shore pine, then eventually Sitka spruce, western hemlock, and Douglas-fir.

Conservation Overview:

Coastal dune communities have been altered dramatically through the introduction and spread of non-native European beachgrass, which outcompetes native vegetation and stabilizes foredunes. The stabilized foredunes block movement of sand inland and artificially accelerate plant succession toward shrubland and forest. Dunes artificially stabilized by European beachgrass have contributed to commercial and residential development of sandy habitats that were once naturally active, moving systems.

Species that live in Coastal dune habitats prefer open, sandy habitats with a high degree of disturbance from winds and tides. Strategy Species associated with Coastal dunes include western snowy plover, pink sand-verbena, and Wolf's evening-primrose.

Limiting Factors in Coastal Dunes:

Factor: Beachgrass invasion: European beachgrass stabilizes dunes, resulting in changes in vegetative communities and loss of open sandy habitats.

Approach: Use mechanical and chemical treatment to control European beachgrass in priority areas, such as snowy plover nesting areas and near pink sand-verbena populations. Build on existing restoration efforts to control beachgrass.

Factor: Invasive plants: Stabilized dunes are vulnerable to invasive species such as Pampas grass, Scotch broom and gorse, which displace native plants and animals and accelerate succession.

Approach: Control key invasive plants using site-appropriate tools such as mechanical (mowing, girdling, pulling), chemical, and biocontrol (for gorse) treatments.

Factor: Increasing development: Stabilized dunes are being developed for residential housing.

Approach: Use voluntary cooperative approaches such as financial incentives, Candidate Conservation Agreements with Assurances, and conservation easements to maintain dune habitats. Work with agency partners to support and implement Statewide Land Use Goal 18, Beaches and Dunes.

Factor: Recreational impacts: In some areas, recreational use can cause disturbance to wildlife (e.g., snowy plover nesting areas and seal and sea lion haul-outs). Off-highway vehicles can impact vegetation and disturb wildlife.

Approach: Work with land managers to direct recreational use away from highly sensitive areas. Provide recreational users with information on coastal dune conservation issues and low-impact uses.