

# Oregon Dunes Cooperative Weed Management Area: Management Plan

## Purpose

The impacts of invasive weeds and the importance of their management and control has become apparent to a wide variety of organizations. After habitat loss, invasive species have been recognized as the second largest danger to threatened and endangered species (*Precious Heritage: The status of biodiversity in the United States*, TNC). Invasive weeds alter ecosystem structure, function and processes. Invasive weeds have been estimated to cause annual economic losses to Oregon of over \$83 million per year for 25 selected state-listed species (*Oregon Noxious Weed Strategic Plan*, ODA, 2014). Because weeds extend across multiple ownerships and travel over the landscape, collaboration and partnerships are essential for effective management. In addition, partnerships can access new sources of funding and increase implementation efficiency.

The Oregon Dunes CWMA exists to create and support collaborative weed management among land managers and owners within its area. It promotes weed education/outreach, weed inventory and prevention, and weed control activities.

## Description

Wedged between the storms and tides of the Pacific Ocean and the towering forests of the Coast Range mountains exists an area unique in its composition – the Oregon Dunes. Sculpted by seasonal winds channeled between the sea and the mountains, the ever shifting dunes can reach heights of 500 feet, towering over the landscape. Stretching like a seaside Sahara for 40 miles along the coast, the Oregon Dunes are the largest expanse of coastal dunes in North America and are associated with three coastal Oregon Counties: Lane, Douglas and Coos. The current area of the Oregon Dunes CWMA is 31,566 acres.

Integral to the Oregon Dunes are scores of unique ecosystems: sparsely vegetated shifting sand; the north-south foredune ridge hugging the beach; hummocks -- nob-like mounds where vegetation is surrounded by walls of sand; deflation plains -- wind-scoured wet sand that hosts vegetation found only in such places; tree islands -- old forests surrounded by sand; estuaries, seasonal marshes, and even coastal freshwater lakes-created by streams dammed by sand. The Oregon Dunes geology brings a wealth of unique flora and fauna that have adapted to this unusual and ever changing environment.

The Oregon Dunes are host to a number of threatened and endangered (T&E), and rare species including western snowy plover and pink sand verbena, as well as seaside hoary elfin and coastal greenish-blue butterflies. While many factors conspire to negatively impact rare species and the over-all functioning of the dunes' ecosystem, it is the spread of invasive plants that is the most telling. European beachgrass and Scotch broom planted in the early 20<sup>th</sup> century to stabilize drifting sand and protect roads and jetties was certainly successful in achieving that objective, but since establishment, these and other non-native plants have rapidly spread and become

invasive. As a result, processes that maintained the dunes for thousands of years have been altered and unique habitats transformed into a simplified landscape dominated by non-native species.

Fortunately, invasive plants are also the threat that can -- given proper planning and organization -- be controlled. The Siuslaw National Forest (SNF), as the managing unit for the Oregon Dunes National Recreation Area (ODNRA), recognizes the need for collaboration with surrounding agencies, landowners, and stakeholders as it strives to find a way to preserve the integrity of this special ecosystem. With Oregon Parks and Recreation, the Bureau of Land Management, County government, local and regional natural resource management agencies, and interested user groups, the SNF formed a Dune Restoration Collaborative Group in 2014. To date over 100 individuals contribute to this group. The group has recently identified priority areas for restoration, implemented pilot restoration projects, and is in the final phase of completing a strategic restoration plan for the ODNRA.

Anticipated CWMA partners include, but are not limited to: US Forest Service - Siuslaw National Forest and Oregon Dunes National Recreational Area; Gorse Action Group; Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw; Lane County Commissioners; Bureau of Land Management – Coos Bay District; Oregon Parks and Recreation; US Army Corps of Engineers; Oregon Wild; Cascadia Wildlands; Institute for Applied Ecology; Oregon Center for Biological Diversity; U.S. Fish & Wildlife Service; Smith River Watershed Council; Travel lane County; Siuslaw Watershed Council; Oregon Department of Transportation, Oregon Department of Agriculture; Coos Watershed Association; Sol Coast Consulting & Design; Coos County Commissioners; and Siuslaw Soil and Water Conservation District.

### **Management principles**

The CWMA uses integrated weed management with the following principles:

- Projects are designed using an ecosystem management approach based on an understanding of weed biology, weed ecology, and landscape level processes.
- Treatment follows Integrated Pest Management principals with the following priorities:
  - Target sources of spread and isolated populations while protecting high value localities.
  - Determine the perimeter of larger infestations and contain them to the area.
  - Attack larger infestations or widely dispersed weeds using biocontrol when available.
  - Maintain, enhance, and expand on existing and current invasive weed control activities
- Control projects are designed after serious consideration of a range of treatment options so that the control methods are the most effective and appropriate to a given situation.
- Projects include a vision and plan for desired future conditions after the weeds are gone.

- Education and outreach activities are targeted to specific audiences, with clearly defined desired behavioral changes.

#### Definition of management levels:

- Eradicate: the weed species is eliminated from the management area, including all viable seeds and/or vegetative propagules.

- Control: Dispersal is prevented throughout the target patch and the area coverage of the weed is decreased over time. The weed is prevented from dominating the vegetation of the area but low levels are accepted.

- Contain: Weeds are geographically contained and are not increasing beyond the perimeter of the infestation. Treatment within established infestations may be limited, but areas outside are controlled or eradicated.

- Reduce: The density and/or rate of spread of the weed are reduced across a geographic area.

- Custodial: Specific treatment for a particular plant is deferred at this time. Infestations may be treated as a result of other weed priorities. The species may not be inherently invasive, habitats are not susceptible to invasion, or the infestation is not treatable with current technology or resources.

#### **Goal**

Prevent the introduction and control the spread of the most harmful invasive plant species in the CWMA region by facilitating cooperative management among all willing land managers.

#### **Activities**

*1) Share information about member organizations, funding opportunities, contractors, best management practices, and rules and regulations affecting weed control.*

##### Tasks

- a) Hold regular CWMA meetings.
- b) Prepare and revise CWMA management and operating plans.
- c) Participate in Willamette-weed listserv.

*2) Promote detection and prevention of new invaders.*

##### Tasks

- a) Conduct EDRR (**E**arly **D**etection **R**apid **R**esponse) workshops.
- b) Create weed sheets, best management practices checklist, and conduct targeted distribution.
- c) Encourage land managers, landowners and developers to adopt prevention practices.

*3) Sponsor effective and innovative inventory, treatment and monitoring projects.*

##### Tasks

- a) Seek and obtain grant funding for treatment projects.
- b) Conduct working groups, “Pulling together” event(s), field tours, etc..
- c) Contribute new and existing information to a shared weed database

*4) Conduct education and outreach related to objectives 1, 2, and 3 - appropriate to the scale at which the CWMA operates.*

#### Tasks

- a) Prepare an annual report showing accomplishments and distribute to funding sources, media, government, citizen groups, etc.
- b) Conduct outreach/education for public (see 2a and 3b)
- c) Get media coverage in newspapers and newsletters

#### Structure and Process

a) *Subcommittees.* For specific projects or tasks, ad hoc groups will be formed which can exist for a short time or indefinitely. (E. g., Technical, Outreach)

b) *CWMA Chair.* The CWMA Chair helps facilitate the CWMA, manages projects, and coordinates and maintains positive public relations related to the CWMA as a whole.

c) *Funding.* The CWMA will not handle funding directly. Partner organizations will apply for and manage grants themselves. Where resources need to be shared, separate agreements between the relevant parties will be developed.

#### Modifications and term

The Management Plan is a living document and will be revised as needed. The Plan will be reviewed on a yearly basis and the weeds of concern list adjusted as necessary.