

Upper Willamette Cooperative Weed Management Area Multi-year Management Plan

Purpose and description

The impacts of invasive weeds and the importance of their management are becoming 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*, The Nature Conservancy). Invasive weeds have also been estimated to cause annual economic losses to Oregon of over \$83.5 million per year for 25 state-listed species (Economic Impact from Selected Noxious Weeds in Oregon, Oregon Department of Agriculture report, 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 Upper Willamette CWMA exists to create and support collaborative weed management among land managers and owners within its area. It promotes weed education/outreach, weed inventory/prevention, and control activities.

The Upper Willamette Cooperative Weed Management Area includes 6,024 square miles of land which is the entirety of Linn and Benton Counties and the eastern portion of Lane County defined by the East Lane SWCD boundary which roughly follows the crest of the Coast Range. It includes the communities of Horton, Triangle Lake and Lorane which are technically in the Siuslaw watershed region but are socio-economically more similar to the Willamette Valley than to the communities along the coast. Within this combined area, the topography varies from rugged steep mountains of the eastern slopes of the Oregon Coast Range and the western slope of the Cascades to the valley floors and floodplains of the Willamette Valley and its tributaries. Watersheds within the CWMA include: North Santiam, South Santiam, McKenzie, Coast Fork Willamette, Middle Fork Willamette, Upper Siuslaw, Upper Lake Creek, Alsea, Jackson-Frazier, Upper Luckiamute, Marys, Long Tom, and Calapooia. Some of these watersheds are not completely contained in the Upper Willamette CWMA.

There are at least six distinct ecosystem types: cold, high elevation noble fir forests, wet western hemlock forests, mixed pine and fir forests, oak woodlands, valley grassland or prairie, and riparian communities. Within these ecosystems there are 57 endangered or threatened fish, wildlife and plant species along with many unique and special places. The population of the CWMA is approximately 488,000. The economy of the CWMA has its basis in agriculture, education, forest products, manufacturing, retail trade, government, food processing, and tourism (*2001 County Business Patterns for OR counties*, U.S. Census, 2003.)

CWMA partners include: Benton Soil and Water Conservation District; City of Eugene Parks and Open Spaces; Willamette National Forest; Linn Soil and Water Conservation District; Calapooia Watershed Council; Oregon Department of Transportation; Oregon Department of Agriculture; United States Army Corps of Engineers; Bureau of Land Management - Salem District; Bureau of Land Management - Eugene District; Cascade Pacific Resource Conservation and Development, Inc.; Long Tom Watershed Council; Benton County Department of Public Works; Middle Fork Willamette Watershed Council; Marys River Watershed Council; Lane County Public Works; McKenzie River Trust; Oregon Department of Forestry; Oregon Parks and Recreation Department; Coast Fork

Willamette Watershed Council; Upper Willamette Soil and Water Conservation District; Eugene Water and Electric Board; Salix Associates; The Nature Conservancy – Oregon Chapter

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 copies a wildfire/weed management model explained in a Utah State U. Extension brochure (Dewey) 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 biocontrols when available.
- 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

Facilitate the prevention and control of harmful invasive plant species in the CWMA region through education and cooperative among willing land managers.

Objectives and activities

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

Activities

- a) Hold annual CWMA meetings.
- b) Use the Willamette Weed list-serve
- c) Hold workshops / field trips.
- d) Support and cooperate with other regional CWMA's and other vegetation management organizations.
- e) Serve as a information conduit for local events and area vegetation management news.

- 2) *Detect new invaders*

Activities

- a) Continually update species list as a reference for cooperators.
- b) Serve as a local network to disseminate information of significant weed discoveries.

- 3) *Encourage effective inventory, treatment/restoration and monitoring projects.*

Activities

- a) Through yearly meetings encourage cooperative projects encompassing a broader range of cooperators than otherwise possible if groups worked in isolation.
- b) Encourage information sharing of activities and outcomes through annual meetings.

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

Activities

- a) Use newsletters, news releases, field trips, workshops, displays at county fairs and garden shows and finally landowner outreach highlighting projects, weed threats and success to educate and stimulate continued support and involvement at a local level.
- b) Contribute information to the Northwest regional CWMA's for the development and upgrading of Integrated Pest Management matrixes used by cooperators in their yearly activities.

Modifications and term

The Management Plan and Weeds of Concern list are living documents and will be revised as needed by CWMA members during annual meetings.

WEEDS OF CONCERN: Upper Willamette Cooperative Weed Management Area 2014

¹UWCWMA status: 1=New invaders; 2=locally established; 3=widely established; W=watch list

COMMON NAME	SPECIES	List ¹	2014 status	ODA
List 1: New Invaders, potential invaders or eradicated from the Upper Willamette				
Garlic mustard	<i>Alliaria petiolata</i>	1	Eradicated	B
Portuguese broom	<i>Cytisus striatus</i>	1	Eradicated	B
Distaff thistle	<i>Carthamus lanatus</i>	1	Potential	A
Diffuse knapweed	<i>Centaurea diffusa</i>	1	Rare/erad.	B
Yellow starthistle	<i>Centaurea solstitialis</i>	1	Eradicated	B
Patterson's curse	<i>Echium plantagineum</i>	1	Potential	A
Giant hogweed	<i>Heracleum mantegazzianum</i>	1	Eradicated	A
Hawkweed complex	<i>Hieracium aurantiacum, H. floribundum</i>	1	Rare	A
Hydrilla	<i>Hydrilla verticillata</i>	1	Potential	A
Spotted jewelweed	<i>Impatiens capensis</i>	1	Rare/Potential	unlisted
Dyers wood	<i>Isatis tinctoria</i>	1	Rare	A
Yellow archangel	<i>Lamium galeobdolon</i>	1	Stable	B
Water primrose willow	<i>Ludwigia peploides</i>	1	Expanding	B
Yellow floating heart	<i>Nymphoides peltata</i>	1	Eradicated	A
Pokeweed	<i>Phytolacca americana</i>	1	Rare/Potential	unlisted
Sulfur cinquefoil	<i>Potentilla recta</i>	1	Slight exp.	B
Spanish broom	<i>Spartium junceum</i>	1	Rare	B
Puncturevine	<i>Tribulus terrestris</i>	1	Slight exp.	B
Himalayan knotweed	<i>Polygonum polystachyum</i>	1	Rare	B
Coltsfoot	<i>Tussilago farfara</i>	1	Potential	A
Gorse	<i>Ulex europaeus</i>	1	Stable	B

List 2: Locally Established in the Upper Willamette

Tree of Brooklyn	<i>Ailanthus altissima</i>	2	Slightly exp.	B
Malta thistle	<i>Centaurea melitensis</i>	2	Stable	unlisted
Spotted knapweed	<i>Centaurea stoebe</i>	2	Stable	B, T
Old man's beard	<i>Clematis vitalba</i>	2	Increasing	B
Spurge laurel	<i>Daphne laureola</i>	2	Slight exp.	B
Common fennel	<i>Foeniculum vulgare</i>	2	Slight exp.	Unlisted
Policeman's helmet	<i>Impatiens glandulifera</i>	2	Expanding	B
Yellow flag iris	<i>Iris pseudacorus</i>	2	Expanding	B
Italian, slenderflower thistles	<i>Carduus tenuiflora & C. pycnocephala</i>	2	Stable	B
French broom	<i>Genista monspessulana (= Cytisus monspessulanus)</i>	2	Expanding	B
Purple loosestrife	<i>Lythrum salicaria</i>	2	Stable	B, T
Harding grass	<i>Phalaris aquatica</i>	2	???	unlisted
Japanese, giant, hybrid knotweeds	<i>Polygonum cuspidatum*, sachalinense*, X bohemicum</i>	2	Slight exp.	*B, T
Lesser celandine	<i>Ranunculus ficaria</i>	2	Expanding	B
Bladder campion	<i>Silene vulgaris</i>	2	Slight exp.	B
Milk thistle	<i>Silybum marianum</i>	2	Stable	B

List 3: Widely Established in the Upper Willamette

False brome	<i>Brachypodium sylvaticum</i>	3	Increasing	B
Butterfly bush	<i>Buddleja davidii</i>	3	Stable	B
Meadow knapweed	<i>Centaurea pratensis</i>	3	Increasing	B
Canada thistle	<i>Cirsium arvense</i>	3	Fully est.	B

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Bull thistle	<i>Cirsium vulgare</i>	3	Fully est.	B
Poison hemlock	<i>Conium maculatum</i>	3	Fully est.	B
English/single seed hawthorn	<i>Crataegus monogyna</i>	3	Expanding	unlisted
Scotch broom	<i>Cytisus scoparius</i>	3	Fully est.	B
Herb robert	<i>Geranium robertianum</i>	3	Expanding	B
English and Irish ivy	<i>Hedera helix*</i> , <i>hibernica</i>	3	Expanding	*B
English holly	<i>Ilex aquifolium</i>	3	Expanding	unlisted
Perennial peavine	<i>Lathyrus latifolius</i>	3	Expanding	B
Ox-eye daisy	<i>Leucanthemum vulgare</i>	3	Fully est.	unlisted
Reed canary grass	<i>Phalaris arundinacea</i>	3	Expanding	unlisted
Laurel	<i>Prunus laurocerasus</i>	3	Expanding	unlisted
Feral pear	<i>Pyrus communis</i>	3	Expanding	unlisted
Multiflora rose	<i>Rosa multiflora</i>	3	Slight exp.	unlisted
European blackberry	<i>Rubus procerus</i>	3	Expanding	unlisted
Armenian & Evergreen blackberries	<i>Rubus armeniacus</i> (=R. <i>discolor</i>), <i>R. laciniatus</i>	3	Expanding	B
Watch List				
Common bugloss	<i>Anchusa officinalis</i>	W		B, T
Bentgrass (escaped, non-ag pops)	<i>Agrostis capillaris</i> , <i>stolonifera</i> , <i>alba</i> , <i>tenuis</i> ,	W		unlisted
Jubata grass	<i>Cortaderia jubata</i>	W		B
Weeping lovegrass	<i>Eragrostis curvula</i>	W		unlisted
Creeping velvet grass	<i>Holcus mollis</i>	W		unlisted
Thin-leaved pea	<i>Lathyrus sylvestris</i>	W		unlisted
Bristly oxtongue	<i>Picris echioides</i>	W		unlisted
Creepy buttercup	<i>Ranunculus repens</i>	W		unlisted
Brazilian verbena	<i>Verbena bonariensis</i>	W		unlisted
Waxy mannagrass	<i>Glyceria declinata</i>	W		unlisted