

Clackamas, Clark, Multnomah, Washington County 4-County Cooperative Weed Management Area (CWMA)

Management Plan

Appendices:

- A) 2019 CWMA Operations Plan/Work Plans
- B) Current CWMA Partners (*updated November 20, 2018*)

Goal: Prevent the introduction and control the spread of harmful invasive plants in the CWMA region by facilitating cooperative management among all willing land managers.

Local Context

The harmful effects of invasive weeds and the importance of their management are 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). According to a study commissioned by the Oregon Department of Agriculture, 25 state-listed noxious weeds alone cause economic losses to Oregon of over \$83.5 million per year, with a potential loss of \$1.8 billion if no action is taken. (Economic Impact From Selected Noxious Weeds in Oregon, The Research Group, LLC., 2014). Economic impacts include loss of revenue in the nursery, farming, and timber industries, and an increase in roadside, power line and drainage ditch maintenance costs.

Invasive plant infestations can lead to a range of impacts, though, beyond economic costs. The ecological impacts of invasive species result in degradation of water quality, loss of wildlife habitat, and replacement of native plants in our natural areas and open spaces. Invasive species can also adversely impact how people interact with natural areas and limit the social benefits of parks and greenspaces, as well as negatively impact human health.

The Clackamas, Clark, Multnomah, & Washington County CWMA (informally known as the 4-County CWMA) exists to create and support collaborative weed management among land managers and owners within these four counties. Private lands include residential areas within incorporated cities and subdivisions, commercial and industrial properties, crop-producing farms and container nurseries. Invasive plants extend across multiple ownerships and move around the landscape, making collaboration and partnerships essential for effective management. Partnerships can access new sources of funding and increase implementation efficiency. The 4-County CWMA promotes weed education and outreach, weed inventory and prevention, and weed control activities. The intention of the 4-County CWMA is to foster partnerships amongst local organizations and land managers to enhance available resources and help maximize efficiency and effectiveness of noxious weed management, regardless of political boundaries.

The 4-County CWMA includes 3727 square miles of land within its boundary. The CWMA has a total population of 2,300,142 and includes the major urban and suburban areas of Portland-Vancouver Metropolitan Region which includes many other towns and municipalities (World Population Review, 2019).

The 4-County CWMA contains extensive rural agricultural lands as well as important natural areas. The economy of the CWMA is diverse, including manufacturing, retail sales, import/export, government agencies, education, agriculture, forestry, recreation and tourism. Industrial areas are concentrated around the confluence of the Willamette and Columbia Rivers and in the Columbia Slough Watershed. River drainages in the area include the Columbia, Clackamas, Lewis, Molalla, Pudding, Sandy, Salmon, Santiam, Tualatin, Trask, Washougal, and Willamette Rivers.

The CWMA also has a diverse range of plants, wildlife, and habitats. They include conifer and mixed conifer forests; oak woodlands; oak savannas, prairies and grasslands; aquatic and riparian habitats; and wetlands. Within these ecosystems habitat loss, invasive species, pollution, and hydrologic alterations are the greatest factors contributing to the listing of federal and state Sensitive, Threatened and Endangered Species.

Management Principles and the National Overview

In developing management plans, the 4-County CWMA, like its member organizations, follows a 5-plank strategy: Prevention, Early Detection/Rapid Response (ED/RR), Control & Management, Restoration, and Organizational Collaboration. These are described briefly here, with excerpts from the National Invasives Species Council's 2016-2018 Management Plan (full text available online at <https://www.doi.gov/invasivespecies/management-plan>).

Prevention

“Preventing the introduction of potentially harmful organisms is not only the first line of defense for minimizing the spread and impact of invasive alien species, it is also the most cost effective strategy.”

Prevention is frequently cited as a leading strategy for managing invasive species. The Oregon Department of Agriculture (ODA) estimates that prevention programs have a benefit to cost ratio of 34 to one. (Economic Impact From Selected Noxious Weeds in Oregon, The Research Group, LLC. 2014).

Early Detection/Rapid Response

“When harmful non-native species breach prevention systems, it is important to quickly detect, contain (if necessary), and eradicate these organisms (if feasible) before they have the opportunity to establish in a new location and cause harm. This process is generally referred to as “early detection and rapid response” or ‘EDRR’.”

Many, if not most, 4-County CWMA partner organizations are conducting EDRR programs. Though target species vary across the region, partners share the understanding that comprehensive management at an early phase of invasion is also very cost-effective.

Control & Management

“Control programs are necessary when populations of invasive species become so well-established that eradication is no longer logistically or economically feasible. They are, however, costly in terms of time, money, and, often, socio-political will. Integrated approaches to invasive species control have proven particularly effective when invasive species have infested large areas.”

Effective management is a critical piece of, and follow up to, rapid response. Control & management encompasses a wide array of possible activities, which range according to species as well as by plant life cycle. Ongoing discussions about best management practices is an important function of the 4-County CWMA.

Restoration

“Invasive species tend to thrive in disturbed and otherwise degraded landscapes, and the act of removing invasive species can, in and of itself, be an ecological disturbance. It is imperative, therefore, that the factors leading to habitat degradation are addressed and habitats are restored in order to build resistance to further invasion.”

Sometimes even the most effective treatments are not enough to stabilize an invaded ecosystem. Restoration/replanting is sometimes necessary to prevent a new invasion or another type of ecological harm (i.e. erosion). Many CWMA partners count restoration as a key piece of their program.

Organizational Collaboration

“Awareness raising, education, human and institutional capacity building, regulatory and legal frameworks, information management, scientific research, economic assessment, technological innovation, and multi-stakeholder cooperation need to be integrated into every aspect of a comprehensive strategy to address invasive species.”

Each partner organization brings its own skills and capacities, which can be sufficient for the jurisdiction. Invasive weeds, however, frequently cross jurisdictional lines, requiring a more collaborative, multi-agency approach.

Integrated Weed Management (IWM)

The 4-County CWMA has blended the five goals, keeping in mind a particular emphasis on Integrated Weed Management. Those practices are based on the following principles:

- New infestations are addressed through a combination of surveying, monitoring, and collaboration amongst members.

- 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 management' model 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 appropriate and available.
- Control projects are designed after 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 once the weeds are controlled.
- Education and outreach activities are targeted to specific audiences, with clearly defined desired outcomes.

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.

Committee Roles

Several standing committees work on various aspects of the CWMA's efforts. These committees [Steering, Mapping & Data, Education & Outreach, and Technical & Scientific Review] are described below. The roles described are intended to apply generally because, in reality, various facets of a given task may end up on multiple committees' work plans. Additional detail is shown in the Operations Plan in Appendix A. Annual work plans and specific upcoming activities are pulled from the Operations Plan and reviewed at each committee's end-of-year meeting.

Steering

- Ensure smooth operations of the CWMA
- Seek stable, adequate funds, staff and other resources to carry out CWMA priority tasks and programs

- Assist committees in carrying out their work to advance CWMA initiatives

Mapping & Data

- Facilitates species location data collection & sharing across member boundaries
- Assesses spatial distributions for relevant management implications
- Provides support for data collection and management to member organizations
- Prioritizes & outlines types and quality of data for collection
- Shares information on new data technologies

Technical & Scientific Review

- Develops, reviews and updates CWMA invasive species lists
- Provides best management practice information
- Researches, discusses, and informs members of emerging scientific issues
- Advises planning committees on event planning topics and speakers

Outreach & Education

- Facilitates information sharing outside the CWMA, with respect to new findings about priority, location or treatment of invasive species
- Creates online and print materials
- Establishes and staffs public outreach events
- Supports Coordinator in creating agenda/content for events

Subcommittees

For specific projects or tasks, *ad hoc* groups will be formed which can exist for a short time or indefinitely. Subcommittees will elect a chair or co-chairs from their ranks to lead meetings and prepare agendas; the coordinator will record minutes if time allows, otherwise, subcommittees will appoint a secretary to record meeting minutes. Minutes will be submitted to the CWMA Coordinator for distribution to CWMA members and partners. Officers serve at-will and elections will be held biennially, with no enforced term limits. Subcommittees will be structured around a set of goals and objectives to direct the activities of the group. Goals will be in line with the goals of the CWMA, and objectives will provide the structure for accomplishing those goals. Goals and objectives of the subcommittees will be revisited biennially and submitted to the coordinator for posting on the website.

Operations Plan/Work Plans

The CWMA Operations Plan (Appendix A) is composed of each committee's annual Work Plans, which are based in the management concepts described in the Introduction. They are the group's response to this strategic document (the Management Plan), identifying the objectives and activities necessary to reach stated goals. These activities are both short- and long-term, and will be reviewed every five years by the Steering Committee for presentation to and approval by the CWMA membership.

In addition, committees will review their Work Plans annually, revisiting the priority of each activity and adjusting the list of activities as appropriate. Annual review ensures that each committee is keeping up with and staying within the boundaries of the Management Plan.

Annual Operating Plan

The parties to this Management Plan will cooperatively prepare an Annual Operating Plan based on the framework specified in the Management Plan and anticipated available funding. For any given year, the Annual Operating Plan will identify a schedule of cooperative activities and projects, specifying responsible parties and the financial and material resources needed and available to complete the tasks.

Governance of the CWMA

Structure of the Steering Committee

Representatives will be comprised of MOU signatories but the meetings will be open to all interested people. The Steering Committee will convene as needed to administer CWMA tasks, but will meet a minimum of four times a year. Consensus will be sought, but decisions will be made by a majority vote of the Steering Committee if needed.

The Steering Committee shall consist of 9 voting members

- 4 County representatives (1 from each county)
- At-Large Representative
- Fiscal Admin Representative
- Technical and Scientific Review Committee Chair
- Education and Outreach Committee Chair
- Mapping and Data Committee Chair

The Fiscal Administration representative will be an *ex officio* representative to inform Steering Committee business and CWMA administration. Additional Steering Committee members are voluntary. Members will be voted upon by the CWMA membership during general meetings. Steering Committee members will elect a chair and/or co-chairs from amongst Steering Committee members. Interim appointments may be made by majority of the Steering Committee members to fill vacant positions, but must be voted on by all members at the next general meeting. County Representatives may be replaced by an additional At-Large Representative as needed, if desired participation within a particular county is lacking amongst member organizations. A quorum of 4 members must be reached to conduct CWMA business. Non-voting Associate members may be added at the discretion of the Steering Committee.

Steering Committee members will serve two year terms. Every year, half of the Steering Committee members will be nominated and voted upon by the CWMA signatories at the general meeting. Consensus will be sought, but decisions will be made by a majority of the Steering Committee. There is no term limit for participation on the Steering Committee, although the CWMA encourages new members to participate.

Administration of CWMA

a) Signing Authority

The Steering Committee Chair and/or Co-Chair will sign all agreements and documents pertaining to the operation and administration of the CWMA when authorized by a majority of the Steering Committee.

b) CWMA Coordinator

This is a staff position to help coordinate the CWMA and its related events, raise funds, manage projects, provide administrative support and deal with public relations related to the CWMA as a whole.

c) Meeting Management

The Coordinator and Chair are responsible for agenda and other meeting preparation tasks. The Chair shall facilitate Steering Committee meetings and General meetings. Committee chairs are responsible for scheduling, agenda development and meeting management for their respective committees.

d) 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.

e) Planning

The Steering Committee, in collaboration with other committees, will prepare an Operating Plan which specifies activities, responsible parties, deadlines for completion, and resources available to accomplish activities.

Disclaimer

Views and opinions expressed by the 4-County CWMA leadership represent a majority view of the organization and may not always represent those held by individual participants or member organizations. Individual members may not always agree with aspects of the 4-County CWMA's view or opinion, but recognize the official actions and position statements adopted by the organization.

Modifications and term

The Management Plan is a living document and will be revised as needed by the Steering Committee. The Plan will be reviewed on a biennial basis and the Weed List adjusted as necessary.

Appendix A: 2019 CWMA Operations Plan/Work Plans

Steering Committee 2019 Work Plan			
Goal: Manage the 4-County CWMA through information sharing and relationship building. This work is both strategic and day-to-day.			
Governance			
<i>Objective: Ensure smooth operations of the CWMA</i>			
Activity	Priority	Lead	Deadline
Manage the CWMA's Memorandum of Understanding (MOU)	Ongoing	Chair	Ongoing (5-Year Cycles)
Conduct regular meetings that are open & inclusive to all	Ongoing	Coordinator	Ongoing
Strengthen coordination with other CWMAs & partner organizations	Ongoing	Coordinator	Ongoing
Develop and maintain the Management Plan	Ongoing	Chair	Ongoing (Yearly)
Approve the Annual Calendar	High	Coordinator	Each November
Verify that committee Operations Plans are current	High	Chair	Each November
Support of the CWMA			
<i>Objective: Seek stable, adequate funding, staff, & other resources to achieve CWMA priorities</i>			
Activity	Priority	Lead	Deadline
Request funding from member organizations	High	Fiscal Agent Rep./Chair	Each October
Prioritize coordinator's work	Ongoing	Chair	Ongoing
Identify CWMA needs & seek resources for top priorities	Ongoing	Members	Ongoing
Provide public comment when appropriate	Ongoing	Chair	Ongoing
Communicate with Western Invasives Network (WIN), Washington Invasive Species Council (WISC) & Oregon Invasives Species Council (OISC) on behalf of the CWMA	Ongoing	Chair/Michelle	Ongoing
Support grants & other resource request from members & committees to leverage partnerships & improve weed management	Ongoing	Members	Ongoing

Committee Support			
<i>Objective: Assist committees in carrying out their tasks to advance the CWMA's work</i>			
Activity	Priority	Lead	Deadline
Approve funds for committee events & activities	Ongoing	Fiscal Agent Rep.	Ongoing
Review materials referred from committees & make needed decisions	Ongoing	Committee Chairs	Ongoing
Provide resources for improved meeting management	Ongoing	Members	Ongoing
Provide committee oversight	Ongoing	Members	Ongoing

Data & Mapping Committee 2019 Work Plan

Goal: The Data & Mapping Committee seeks to help the CWMA better understand its target species through data analysis and patch mapping

Information Sharing

Objective: Build partnerships and cultivate information sharing concerning the use of field technologies in invasive species detection, management, and related activities

Activity	Priority	Lead	Deadline
Provide forum for information sharing	High	Chair	Ongoing
Share information on workshops & webinars	High	Chair	Ongoing
Contribute to Pull Together, as appropriate	High	Chair	Ongoing
Assist partners in overcoming barriers preventing adoption of technologies	Medium	Chair	Ongoing
Provide forum for discussing citizen science tools like EDDMaps & iNaturalist	Medium	Chair	Ongoing

Improve Data Platform

Objective: Improve relevance of partner data platforms, with a focus to iMapInvasives

Activity	Priority	Lead	Deadline
Promote CWMA members reporting of bugs to dataset managers, esp. iMap 3.0	Medium	Chair	Ongoing
Support partner funding of iMapInvasives	High	Chair	Ongoing
Advocate for cross-state solutions & data exchanges	Medium	Sam L.	Ongoing

Increase Data Contributions			
<i>Objective: Promote public & partner contributions to collective database and improve dataset integration</i>			
Activity	Priority	Lead	Deadline
Demonstrate value of data sharing	High	Chair	Ongoing
Advocate for cross-state solutions & data exchanges	Medium	Sam L.	Ongoing
Support & provide feedback for Oregon Invasive Species Hotline	Low	Chair	Ongoing
Advocate for automated integration of citizen reports into iMapInvasives	Low	Lindsey W.	Complete
Promote academic contributions of data to iMapInvasives	Low	Lindsey W.	Ongoing
Address barriers to CWMA member participation	High	Chair	Ongoing
Promote UUIDs in partner dataset	High	Lindsey W.	Ongoing
Select species and promote documentation of "call for data" species	High	Chair	Ongoing
Promote Data Quality			
<i>Objective: Improve quality of data in collective invasive species datasets</i>			
Activity	Priority	Lead	Deadline
Review highest priority species observations	High	Chair	Ongoing
Promote data collection standards	High	Chair	Ongoing
Promote photo documentation of sightings	Low	Chair	Ongoing

Use the Data			
<i>Objective: Support use of collective dataset for research and management planning</i>			
Activity	Priority	Lead	Deadline
Publish highest priority species maps on CWMA website	High	Chair	Ongoing
Coordinate management of highest priority species infestations	Medium	Chair, Coordinator.	Ongoing
Help other committees with Mapping and Data challenges, esp. regarding iMap	High	Chair	Ongoing
Highlight potentially useful prioritization tools & mapping efforts	Low	Chair	Ongoing
Demonstrate value of data sharing	Medium	Chair	Ongoing
Address complications caused by overlapping observations	Low	Chair	Ongoing

Technical & Scientific Review Committee 2019 Work Plan

Goal: The Technical & Scientific Review Committee is tasked with providing technical expertise and insight on several fronts.

Content Development

Objective: Create content for a variety of CWMA outlets

Task	Priority	Lead	Deadline
Review/revise text for CWMA website	Medium	Mitch	12/31/19
Review/revise text in support of Ed & Out	Medium	TBD	As Needed
Host Pull Together breakout session on new plant species ID	High	Mitch	1/16/19
Herbicide Policy statement development (continuing)	High	Mitch/Michelle	3/31/19
Technical review of Gorge BMPs	Medium	Michelle	12/31/19
Master Contractor List	Medium	Mitch/Michelle	TBD

CWMA Plant List

Objective: Consult with partners on possible changes to the CWMA invasive species plant list

Task	Priority	Lead	Deadline
Adding new local A-ranked species to full CWMA list	Low	Mitch	Ongoing
Discussion of plant list, with full review possibly in 2020	Low	Mitch	12/1/19

Scientific Review

Objective: Provide perspective on emerging issues

Task	Priority	Lead	Deadline
Find, read & critique published articles on both sides of relevant issues (eg herbicide)	Medium	TBD	As Needed
Listing New Species' with ODA	Medium	Mitch/Michelle	12/31/19

Education & Outreach Committee 2019 Work Plan					
Materials					
<i>Objective: Develop outreach materials for partners to distribute among their public audiences</i>					
Activity	Tasks	Audience	Priority	Lead	Deadline
Print translated invasive weed fact sheets	1. Coordinate payment with partners 2. Distribute	Public	High	Chelsea	TBD
Update CWMA trifold	1. Edit existing trifold/redesign 2. Group edit 3. Print	Public	Medium	Chelsea	December, 2019
<i>Objective: Grow online presence</i>					
Activity	Tasks	Audience	Priority	Lead	Deadline
Develop website	1. Create a prioritized plan 2. Post Pull Together presentations 3. Update meeting minutes	All	High	Mitch, Courtney	Ongoing
<i>Objective: Improve partner communication</i>					
Activity	Tasks	Audience	Priority	Lead	Deadline
Develop Google Docs for CWMA use?	Learn and educate members about Docs use	CWMA members	High	Courtney	TBD
Self Promotion					
<i>Objective: Ensure our partners and decision makers are aware of CWMA, its purpose, and it's accomplishments.</i>					
Activity	Tasks	Audience	Priority	Lead	Deadline
CWMA Annual Report		Funders, media, government, citizen groups	High	Courtney	October, 2019

Events					
<i>Objective: Develop awareness, education, and training program for partners and the public</i>					
Activity	Tasks	Audience	Priority	Lead	Deadline
Pull Together/Herbicide Forum	<ol style="list-style-type: none"> 1. Reserve and confirm location and date 2. Prioritize and confirm speakers 3. Prioritize and collect plants for New Weeds 4. Develop agenda 5. Decide on food options 6. Set up registration 7. Recruit attendees 8. Recruit volunteers for day-of 9. Verify all needs are met 10. Communicate with attendees and presenters 11. Follow up with information on website 	Partners, landscape professionals	High	Courtney, Chelsea	January, 2019

<p>4-County CWMA Field Day</p>	<ol style="list-style-type: none"> 1. Recruit partner host 2. Develop agenda, including: <ol style="list-style-type: none"> a. Sites/Theme b. Lunch c. Restrooms d. Transportation e. Refreshments/treats f. Audio needs 3. Reserve and confirm locations and date 4. Prioritize and confirm speakers 5. Set up registration 6. Recruit attendees 7. Order coffee/snacks 	<p>Partners</p>	<p>High</p>	<p>Multnomah County</p>	<p>June, 2019</p>
<p>Tabling events</p>	<ol style="list-style-type: none"> 1. Confirm event locations and dates 2. Register for events 3. Recruit volunteers 4. Provide outreach materials to volunteers including: <ol style="list-style-type: none"> a) Brochures b) Invasive plants c) Tally sheets 5. Recap 	<p>Public</p>	<p>High</p>	<p>Courtney</p>	<p>Ongoing</p>

Appendix B: Current CWMA Partners

- Portland Audubon
- Bureau of Land Management—Northwest Oregon
- Cascade Pacific—Resource Conservation & Development
- City of Gresham
- City of Portland—Bureau of Environmental Services
- Clackamas River Basin Council
- Clackamas Soil and Water Conservation District
- Clark County Noxious Weed Control Board
- Clark Public Utilities
- Clean Water Services
- Columbia Land Trust
- East Multnomah Soil and Water Conservation District
- Johnson Creek Watershed Council
- Metro
- Mt. Hood National Forest
- North Clackamas Parks and Recreation District
- Oregon Department of Transportation
- Portland State University
- Port of Portland
- Sandy River Watershed Council
- The Nature Conservancy
- Tryon Creek Watershed Council
- Tualatin Hills Park and Recreation District
- Tualatin River Watershed Council
- Tualatin Soil and Water Conservation District
- USDA—Natural Resources Conservation Service; Clackamas County
- USDA—Natural Resources Conservation Service; Multnomah County
- USDA—Natural Resources Conservation Service; Washington County
- USFS —Mt. Hood National Forest
- West Multnomah Soil and Water Conservation District

**This is an actively growing list and may be revised as needed.*