



4-COUNTY Cooperative Weed Management Area

2021 Annual Report



Photo by: Clark County Vegetation Management

A Message from Our Chairs

Moving forward amidst continued pandemic challenges

It is difficult to believe we are nearing the close of 2021 and that the global COVID-19 pandemic continues to challenge us, both personally and professionally. It is safe to say that our lives will be forever changed by COVID. What I find inspiring is our collective spirit to persevere, the ability to innovate our approaches to meet the moment, and our willingness to work together inside and outside of our organizations to find ways overcome management challenges despite this public health crisis.

The 4-County CWMA is a collective of professionals that personify this inspiration. While many of us continue to conduct our professional lives mostly at home or in the field, the challenges of connection continue to linger and, in some cases, grow larger. The success of our invasive species management work relies on collaboration, which is difficult without human communication and interaction. Amidst these challenges, the CWMA continues to provide a platform for members to take advantage of resources, information, and opportunities for collaboration.

As recent as two years ago, I recall sitting in CWMA committee meetings, struggling to operate the spaceship-like conference call device, on the off chance that someone wanted to participate remotely. These early attempts at virtual connection pale in comparison to what we have accomplished since the pandemic started in 2020. We now utilize technology to conduct meetings like the annual Pull Together that are entirely remote. The 2021 Pull Together had over 190 participants, which is a record number of registrants for this event and featured eight dynamic topics with twelve different speakers. Two years ago, this is a feat I could not imagine. Throughout the past year, we also continued to offer regular general meetings, trainings, and activities.

CWMA committees pushed forward as well, completing the Integrated Weed Maintenance Calendar for the Portland metro area and finalizing a standardized invasive plant data template to make it easier for partners to share treatment data. Partners began re-design of the website in 2021, with the goal of having an updated and more accessible platform for partner resources, materials, and event communications.

The Steering Committee has also expanded to accommodate more representation from our member organizations.

The CWMA remains committed to providing the means for members to connect, even in these challenging times. My hope is that we hold our final all-virtual meetings in early 2022. Regardless, with such a strong group of partners and a strong collaborative spirit, the CWMA will continue to support partners and innovate to meet the challenges that lie ahead.

Sincerely,



Aaron Shaw

*Director of Natural Resources
Tualatin Soil and Water Conservation District
4-County CWMA Chair*



Sam Leininger

*WeedWise Program Manager
Clackamas Soil and Water Conservation District
4-County CWMA Vice-Chair*

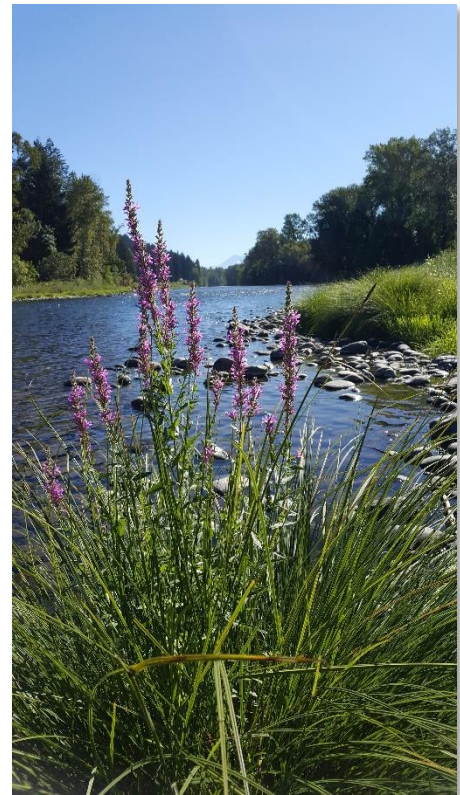


Who Are We?

The *4-County Cooperative Weed Management Area (CWMA)* exists to create and support collaborative weed management among land managers and practitioners within the Portland metropolitan area. Invasive plants extend across multiple ownerships and move around the landscape, making collaboration and partnerships essential for effective management. 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 to enhance available resources and help maximize efficiency and effectiveness of noxious weed management, regardless of political boundaries.

Our Members

- Cascade Pacific—Resource Conservation and Development
- City of Gresham
- City of Lake Oswego—Lake Oswego Parks and Recreation
- City of Portland—Bureau of Environmental Services
- City of Portland—Portland Water Bureau
- Clackamas Soil and Water Conservation District
- Clark Conservation District
- Clark County Vegetation Management
- Clark Public Utilities
- Columbia Land Trust
- Columbia Slough Watershed Council
- East Multnomah Soil and Water Conservation District
- Metro
- Oregon Department of Agriculture—Noxious Weed Program
- Oregon State Parks—Oregon Parks and Recreation Department
- Portland State University—Institute for Natural Resources
- Port of Portland
- Sandy River Watershed Council
- Tualatin Hills Park and Recreation District
- Tualatin River Watershed Council
- Tualatin Soil and Water Conservation District
- U.S. Department of Agriculture—Natural Resources Conservation Service; Clackamas County and Multnomah County
- U.S. Forest Service—Mt. Hood National Forest
- West Multnomah Soil & Water Conservation District



Purple loosestrife at a Metro property along the Clackamas River.

Photo by: Kristina Prosser

Featured Partner Projects

Our work would not be possible without our incredible partners!

Which is why we are highlighting the great, collaborative work our partner organizations accomplished this year.

Clackamas SWCD Prevents Weeds from Spreading like Wildfire

Lindsey Karr (Clackamas Soil and Water Conservation District)

The 2020 Riverside Wildfire burned 138,054 acres, dramatically altering the landscape in the upper Clackamas Watershed. With federal funds from the Burned Area Emergency Response, and help from contractors and partners, Lindsey Karr with the Clackamas Soil and Water Conservation District worked to prevent invasive weeds from also spreading like wildfire.

Beginning in spring of 2021, Lindsey worked with two contractors, Green Banks, LLC and Mosaic Ecology, to treat weeds in the fire perimeter. They targeted several areas including the 45-road system, along 4610 (which also became a fire suppression line), on trails, and in many campgrounds. They treated false brome, diffuse and spotted knapweed, common and European hawkweed, blackberry, shiny and Robert’s geranium, sulfur cinquefoil, reed canary grass, and several other weeds. In addition to these weed treatments, Lindsey and Justin Cooley, also with Clackamas SWCD, spread native California brome and blue wild rye grass seed on 5 miles of the



Kristina Prosser and Chris Hagel help Lindsey Karr with weed surveys in the LaDee Flats area.

4610 roadside that was disturbed to create a fire suppression line. These treatments will help prevent weeds from taking advantage of the extra sunlight and will reduce the competition so native plants can reestablish themselves after the fire.

Surveys have also been an important part of this work! Green Banks, Mosaic Ecology, Lindsey, Forest Service staff, Metro staff Kristina Prosser and Chris Hagel, and a Portland State Master’s student, Rebecca Sinichko, have all helped with this effort. Together they surveyed 110 miles of roads and trails! The data they collected will help inform future decisions and weed control efforts.



Lindsey Karr and Justin Cooley spread native grass seed along the 4610 roadside.



Collaborative Columbia Slough Invasive Macrophyte Surveys and Treatment

Alex Staunch (Mosaic Ecology), Dominic Maze (City of Portland—Bureau of Environmental Services), and Brian Eberhardt (Multnomah County Drainage District)

The 2021 macrophyte survey represented the seventh year that vegetation monitoring was conducted in the Middle and Upper Columbia Sloughs. Funding and administration for the project came from The City of Portland’s Bureau of Environmental Services (BES) and Multnomah County Drainage District (MCDD), who also contributed



Mosaic Ecology technicians measure the wetted width of a monitoring plot.

to project goals and design in collaboration with Mosaic Ecology LLC. The monitoring effort consisted of both exploratory and descriptive survey strategies to provide insight on the aquatic plant communities and locations of specific non-natives by Mosaic Ecology. Findings will contribute to the characterization of watershed health, help inform management strategies for targeted non-native macrophytes, and support future restoration projects. Over 12.8 miles of waterway and 370 acres of aquatic, wetland, and riparian habitat were surveyed in July and August.

treatments. This included quickly addressing a population of *Ludwigia peploides* observed in the Middle Slough mainstem; a species that has the potential to impact waterway conveyance and directly affect multiple ecosystem functions. The population was manually treated multiple times and was no longer observed as of September 2021. Besides EDRR treatments being applied as needed, a containment strategy was implemented to prevent the spread of *Myriophyllum aquaticum*, *M. spicatum*, and *Nymphaea odorata* within sections of the watershed where high quality habitat does not yet contain the listed targeted non-native plants. Vegetation data collected from 33 plots across 11 discrete segments of the slough system will be analyzed and compared to other datasets to help characterize the important and complex Columbia Slough.

Preliminary findings helped contribute to Early Detection and Rapid Response (EDRR)

With multiple funders and entities providing input and resources, the Columbia Slough Invasive Macrophyte Surveys direct energy and funding into the overall health and conservation of the Columbia Slough Watershed. It is our hope that data collection efforts continue to contribute valuable information to on-the-ground projects that will enhance riparian buffers, increase canopy cover, and decrease nutrient concentrations within the Columbia Slough.



*Botanist Jess Shamek collects *Iris pseudocorus* for pressing and preservation.*



Planting along East Fork Lewis River

Clark County Vegetation Management Staff

After a long season of battling non-native plant species in Clark County parks and natural areas, Clark County Vegetation Management is switching gears this fall. In an effort to restore ecological site conditions on the East Fork Lewis River, we will plant over 16,000 native trees and shrubs on 13.5 acres and cover 3,600 feet of shoreline. The project is located on the south bank of the river, southeast of La Center, and is split into two phases, the first of which is being planted this fall.

Historically, the East Fork Lewis supported an extremely healthy population of steelhead, Coho, Chinook, and Chum salmon, but alterations to historic conditions have led to declining populations. One of the most likely factors adversely affecting salmon are increases in stream temperature due to native riparian habitat being altered and/or replaced with non-native weeds. Recent



Clark County Vegetation Management staff ready to start planting!

temperature studies on the East Fork Lewis show the river flowing through the project area to be cooler than up or downstream. Smaller creeks that feed the river are often significantly cooler than the river itself. Several creeks meet the river on the north side providing significant cold groundwater exchange, so the idea is to help the river stay cooler further downriver.



Container plants and freshly dug auger holes... a dynamic duo!

Besides salmon, this project will also greatly benefit other wildlife that prefer the native plant communities they've adapted to. This section of the river has an extremely healthy population of Western painted turtles and migrating waterfowl, as well as river otters, beavers, bald eagles, and short eared owls, to name a few.

Thanks to Clark County Clean Water and Washington Department of Ecology for funding and making it happen!



A Retirement Tribute to Elaine Stewart

Goodbye to a true friend of native plants

Jonathan Soll (Metro)

For most of us, work on invasive species is not because we hate weeds, but because we love the unique biodiversity of our region, and the often small secrets that weeds threaten. That is certainly true for Elaine Stewart. Her 25 years of service to the natural world in the Portland Metro region is ongoing testimony to her passion for the often unseen, unrecognized and un(der)appreciated.

Back when we worked in an office, Elaine was the one with the dissecting scope on her desk and the person most likely to have her face in a dichotomous key to answer that essential question – what is that? But more than just taxonomy, Elaine has pondered ecological process and what supports or diminishes diversity. This, plus her intelligence and determination mean that over her long career she accumulated a lot of knowledge, knowledge that she has put to use since the inception of our CWMA to figure out what plants need attention now, which to watch carefully, and which can be ignored. There is no replacing the lessons of time and experience, and our group will miss both Elaine’s knowledge, judgment and her courage to speak up for what she believes.

Thank you, Elaine. Best wishes on your next adventures, hope to see you in the field.

CWMA Highlights

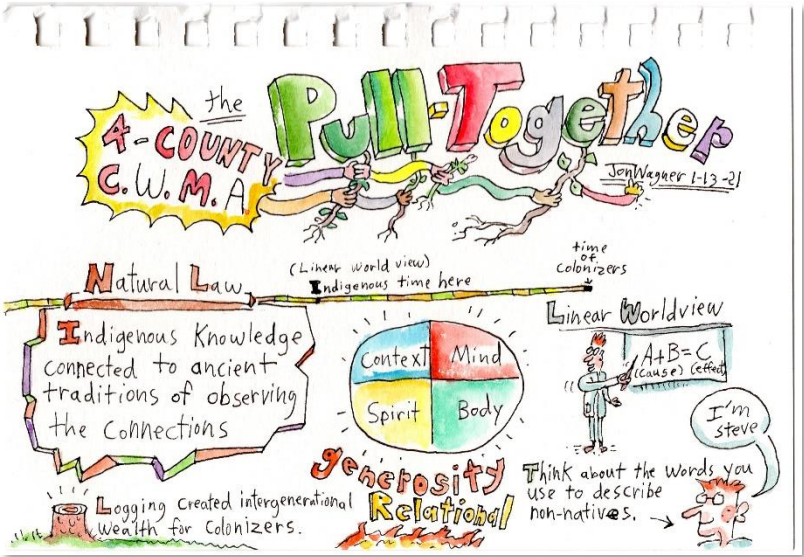
12th Annual Pull Together

We can all agree that COVID-19 put a damper on just about everything it possibly could...including our annual weed symposium, the Pull Together. Instead of postponing the event until it was safe to host it in person, our planners quickly pivoted to the virtual side of things, hoping the event would go off without a hitch. To our shock, it did, with a couple of unexpected surprises along the way.

Despite this very different take on our signature event, the virtual Pull Together brought in our highest attendance ever. We had just over 190 participants ranging from various backgrounds, including local, state, and federal governments; universities; restoration contractors; urban and rural land managers; non-profit organizations; private landowners; and more. Our event is directed towards individuals who are interested in learning about invasive species management. With very little overhead costs, our admission fees were much more affordable, and we granted numerous free scholarships to lighten any financial burdens. We also offered continuing education credits from Oregon Department of Agriculture and Washington State Department of Agriculture for our attendees.

Since traveling was not needed for the event, we were able to invite speakers from beyond our CWMA boundaries. We provided a diverse group of speakers from across the nation who delved into a variety of topics surrounding trait variation of garlic mustard; physiological responses of trees in warming climates; potential impacts of the emerald ash borer; incorporation of equity, diversity, and social justice in conservation; among others. Our keynote speaker, Gabe Sheoships (Executive Director of the Friends of Tryon Creek) gave a moving presentation on decolonizing sustainability through community building, environmental stewardship, and the protection of the natural world. As our tradition stands, our dear friend and talented artist, Jon Wagner (East Multnomah Soil and Water Conservation District), produced some fantastic illustrations showcasing highlights from the event. You will find Jon’s comics and a full summary of the [2021 Pull Together](#) featured on our website.

For next year’s event, scheduled for January 19th, 2022, our Education & Outreach Committee has decided to hold a webinar-style conference once again. Our committee members and planners are working hard on a great lineup of speakers which will be as engaging and informative as you have come to expect from our annual event.



A snippet of Jon Wagner’s fantastic comics portraying the event.



Knotweed growing along Clear Creek in Metzler Park.

Photo by: Lindsey Karr

Clackamas County Virtual Field Day

Each year, the 4-County CWMA hosts an annual field day event. The field days are a much-anticipated opportunity for practitioners to come together at field sites across the region to share their knowledge and experiences in a real-world context with each other.

In 2020, Field Day was scheduled to occur in Clackamas County. Due to COVID-19, Field Day was canceled last year and we had hoped to resume the event in 2021. The Clackamas Soil and Water Conservation District WeedWise Program had been planning field day activities and was in discussions with several partner organizations in Clackamas County to host a field day.

Unfortunately, due to the delta surge our plans for an in-person field day were once again thwarted.

In response, the WeedWise Program staff adapted to the situation and pivoted to a virtual, self-guided Field Day. The WeedWise staff filmed and edited several videos highlighting District and partner-led work at several locations across the county. Partners involved in the highlighted work included the Bureau of Land Management, Bonneville Power Administration, Clackamas County, Clackamas Soil and Water Conservation District, Green Banks LLC, J Franco Restoration, Inc., Metro, Mosaic Ecology LLC, Oregon Department of Agriculture, Oregon Department of Transportation, Portland Water Bureau, Sound Native Plants, the United States Forest Service, and Willamette Valley Tree Clearing, Inc.

Even though we would have preferred being in the field and sharing with others face-to-face, we are pleased with the outcome of our efforts. Please join us by participating in this year's [4-County CWMA Virtual Field Day!](#)

Steering Committee

The Steering Committee continued to adapt CWMA operations and technology to provide an accessible remote platform for information, communication, and collaboration. Meetings are now held entirely online, and we expect upcoming events to continue in this digital format for the foreseeable future. To better meet the needs of partners, Steering officially took up the project of updating and modernizing the CWMA website. Steering members, with the help of committees continue to review and update content in preparation for the re-design.

As of 2021, 24 member organizations signed or re-signed the CWMA Memorandum of Understanding, and we will encourage new organizations to sign on in the coming year. While financial commitments have kept pace with the current operational need, our goal is to expand capacity of the CWMA Coordinator from a quarter-time shared position with the Columbia Gorge CWMA to a full-time position. Doing so will help the CWMA provide a broader range of services in support of partner weed-management efforts. Accomplishing this goal will involve expanding the 4-County CWMA membership, and Steering Committee members will play a large role in that effort in the coming years.

Technical & Scientific Review Committee

The Technical and Scientific Review Committee tracks plant species of potential concern, reviews new research publications, discusses management concerns, shares training opportunities, and provides a variety of technical insights from across the Portland region. We also develop informational resources to assist land management professionals and cooperators in using the most effective, efficient, and least harmful management strategies.

In the past year we have:

- Conducted annual review, revision and update of the [Integrated Weed Maintenance Calendar](#) to best capture the most up-to-date management practices that the 4-County CWMA partners utilize and recommend. Western Invasives Network and Samara Group developed the content of this calendar into a much more mobile friendly and customizable format.
- Hosted a “Look and Learn” workshop to identify several carrot family species in the field, including Torilis species (*T. arvensis* and *T. japonica*), rough chervil (*Chaerophyllum temulum*) and wild chervil (*Anthriscus sylvestris*). Observed ecological impacts and potential management methods were also shared and discussed.
- Reviewed latest herbicide technologies, studies, and application recommendations, including discussion and review of the following:
 - metasulfuron methyl trials for *Arum italicum* control
 - indaziflam trials/studies
 - clopyralid for fall applications including those focused on weeds in the *Asteraceae*, *Fabaceae*, *Polygonaceae*, and *Solanaceae* families
- Reviewed surfactant rates—Generally rates higher than 1% are not needed (including on ivy treatments); however, 1% for spot treatment still falls well under thresholds of recommended labeled rates. Competitor, AgriDex, LI700, Syltac, were all reported to be used by partners. Some surfactants require application rates than 1%, such as Syltac EA, which needs only a 0.3-0.4% rate.
- Coordinating ODA Noxious Weed Nominations for review by Oregon State Weed Board and provided support for ODA Noxious Weed Program.
- Discussion and coordination of *Ludwigia* survey, control and management activities in the Lower Willamette, Multnomah Channel, Columbia Slough and at Smith-Bybee Wetlands.

Stay up to date by joining the 4-County Technical and Scientific Review Committee listserv (send request to info@4countycwma.org).



Cover of the Integrated Weed Maintenance Calendar featured on our website.

Education & Outreach Committee

No surprise - 2021 was another strange year for outreach and education. In the absence of face-to-face opportunities, our efforts have felt a little closer-to-home. For one thing, discussions have re-focused on equity and service. We continue exploring how the 4-County CWMA can support the outreach efforts of partners, but particularly to communities we have yet to reach.

The lack of in-person outreach has also highlighted a need to update and revise our website. While that process is being led by its own group, the Education & Outreach Committee has been making substantial contributions to those efforts.



A patch of multiflora rose growing along Richardson Creek.

Photo by: Kristina Prosser

Finally, the 2021 Pull Together had a record number of participants, with over 190 people attending a full day of online presentations. Since we are spending this winter working on the website, and with an eye towards video fatigue, the 2022 Pull Together will be a little bit shorter, but just as interesting!

Thanks to everyone who has chipped in this past year, and to Tualatin SWCD's Andrew Felton, our able vice-chair. Particular thanks go to my predecessor, Chelsea White-Brainard, for her years of leading the committee. Big shoes to fill...

Mapping & Data Committee

The Mapping and Data (M&D) Committee seeks to promote the understanding of the region's invasive plant threats through data management, data analyses, mapping, and information sharing. In 2021, Tyler Pedersen (Chair) and Jeffrey Lee (Vice Chair) completed their second year on the Mapping and Data Committee. The Committee updated the FY22 work plan and the CWMA's 2021 Call-for-Data list with four species and implemented various outreach strategies to encourage region-wide reporting for these species—this included an announcement at the Pull Together in January 2021, a data sharing contest, and regular committee meeting updates.

Troy Abercrombie (Coordinator, Western Invasives Network) continued to host the regional Priority Species ArcGIS Online map and purchased two ArcGIS Online licenses for the Mapping and Data Committee. This map was shared with seven partnering groups who have ArcGIS Online organizational accounts. The committee developed privacy/use agreements for the CWMA's public and confidential data layers, which is available to anyone who is interested in sharing or contributing data. Tyler and Jeffrey are currently in the process of migrating the Priority Species map to their new accounts.

To increase overall interest in data sharing in the larger region, the M&D Committee hosted the second year of the Data Sharing Contest. This year, they were able to offer prizes for the top three contestants with the most

Priority and Call-for-Data species reports. Despite sharing quarterly reminders about the contest on multiple email listservs, there continues to be low participation. The committee hopes to see more interest and participation with the finalization of the data standardization template, as well as with greater capacity to safely engage with folks one-on-one in the face of COVID-19.

In mid-2021, Jeffrey and Tyler finalized the standardized data template fields and definitions in Google Sheets. Further progress was made on developing the survey template, and Committee feedback will be incorporated after the November 2021 meeting. The survey template to be finalized by the end of 2021 and the control template finalized by April 2022. The goal of this high-priority work plan item is to provide CWMA partners with a standardized template that can integrate observation and treatment data across different data collection platforms like ArcGIS Online, Survey123, and iMapInvasives.

General Meetings

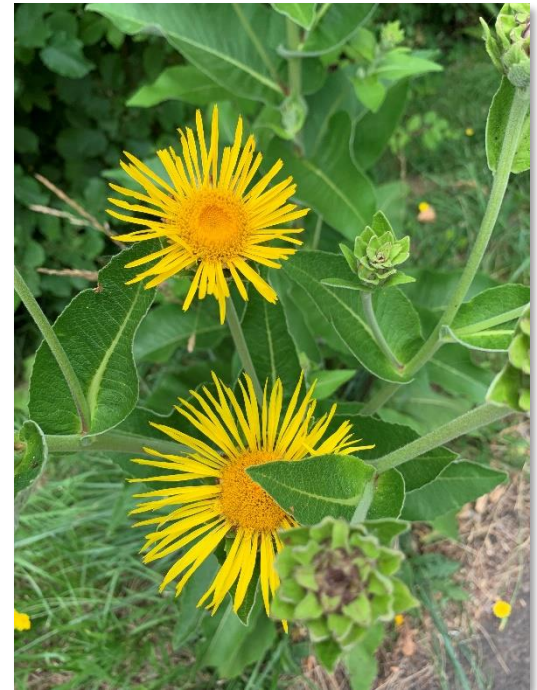
Our General Meetings allow our partners to discuss the latest news in weed management and share updates on their respective programs to keep our members engaged in regional efforts. Each meeting is hosted in a different county of the CWMA to allow equal participation among our members. This year, we had a total of 99 attendees participate in our three quarterly General Meetings. To maintain social distancing among our partners during COVID-19, the CWMA hosted all of our meetings virtually with our GoToMeeting platform.

In March, our Multnomah County partners, City of Portland and West Multnomah Soil & Water Conservation District, hosted our first General Meeting of the year. We received an overview of Portland Parks & Recreation's Integrated Pest Management Program and had an engaging partner discussion surrounding equity and the term "invasive." We also had an election for our open Steering Committee positions, which resulted in new members joining our efforts.

Our partners with Clark County Vegetation Management and Clark Conservation District took the stage at our August meeting. We heard updates from various programs highlighting a recent discovery of elecampane (*Inula helenium*), a large variable-leaf milfoil infestation on Vancouver Lake, results from indaziflam treatments on false brome, and an overview of Clark Conservation District's Poop Smart Clark program.

To wrap up this year's General Meetings, Tualatin Soil and Water Conservation District brought it home with some very diverse topics including an update on their Invasive Species Program; an overview of Oregon Department of Agriculture's tansy ragwort eradication program, aquatic invasive invertebrates and macrophytes threatening our region, and herbicide considerations in hot and dry weather.

Although these distant times remain strange for our group, we are grateful for the ability to continue collaboration through our remote meetings. We thoroughly enjoyed this year's diverse presentations and look forward to the engaging topics our partners will provide for us in 2022.



A discovery of Inula helenium spotted in Clark County.

Photo by: Clark County Vegetation Management

Financial Update

The 4-County CWMA operates through the generous support of its member organizations. Our member organizations provide both financial and volunteer contributions to support the goals and mission of the CWMA.

In the last few years, the 4-County CWMA has been actively seeking additional funding from our CWMA partners to increase the staff time available for our CWMA Coordinator from a quarter-time to a half-time position. This effort has led to a notable increase in partner funding in recent years including a \$14,473 cash surplus in fiscal year 20-21. Unfortunately, this annual surplus is still shy of the target threshold needed for this transition.

In response to the growing partner support, the 4-County CWMA is investing these funds in infrastructure within the 4-County CWMA to better serve its membership. The 4-County CWMA has launched an effort to enhance the 4-County website to improve information sharing and to increase the services that the CWMA provides its members. The preliminary planning for this effort is nearly complete, and implementation will commence in the coming year. This effort will allow us to continue to increase capacity as we continue moving toward our ultimate goal of increasing our coordinator time.

The monetary resources to fund our coordinator position and other CWMA-led activities in the past fiscal year 2020-2021 were provided by the following member organizations:

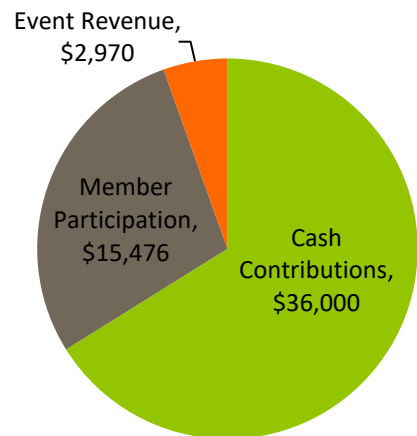
- City of Gresham
- City of Portland—Bureau of Environmental Services
- Clackamas Soil and Water Conservation District
- Clark County Noxious Weed Control Program
- Clark Public Utilities
- Clean Water Services
- East Multnomah Soil and Water Conservation District
- Metro—Natural Areas Program
- North Clackamas Parks and Recreation District
- Port of Portland
- Tualatin Soil and Water Conservation District
- West Multnomah Soil and Water Conservation District

The volunteer participation by CWMA members is also significant and diverse. Despite the many challenges posed by the ongoing threat from COVID-19 and its variants, and the cancellation of in-person events and meetings, the 4-County CWMA members organizations have been able to continue supporting each other through our online and remote collaborative efforts.

In the past year, the 4-County CWMA documented 542 hours of volunteer staff from a multitude of members organizations. Many more hours have also been spent in correspondence, planning events and meeting, and developing projects on behalf of the CWMA went undocumented. The support for the CWMA by its members is significant and much appreciated!

Overall, the 4-County CWMA has a robust and diverse funding base. We are fortunate to have such broad regional support for this organization. Thank you to all of our contributing organizations and members...

Total Contributions: \$54,446



We simply couldn't do it without you!

2021 Steering Committee Members

Steering Committee Chair

Aaron Shaw (Tualatin SWCD)



Steering Committee Vice-Chair/Fiscal Administrator

Sam Leininger (Clackamas SWCD)



Education & Outreach Committee Chair

Mitch Bixby (City of Portland—BES)



Mapping & Data Committee Chair

Tyler Pedersen (Tualatin SWCD)



Technical & Scientific Review Committee Chair

Michelle Delepine (West Multnomah SWCD)



Representatives

Multnomah County

Chris Aldassy (East Multnomah SWCD)

Clark County

Justin Collell (Clark County Vegetation Management)

Clackamas County

Andrea Berkley (Metro)

Washington County

Aaron Shaw (Tualatin SWCD)

At-Large

Ashley Smithers (Clark CD)



Western Invasives Network Coordinator

Troy Abercrombie (WIN)



CWMA Coordinator

Courtney Gattuso (Clackamas SWCD)

503-210-6015

info@4countycwma.org

22055 S Beaver Creek Road, Beaver Creek, OR 97004



This report was collaboratively curated by our Coordinator, Steering Committee, and partners.

