

2023

# Clackamas River Invasive Species Partnership ANNUAL REPORT

*Activities and accomplishments of the Clackamas River Invasive Species Partnership to prioritize and manage invasive species and associated restoration efforts in the Clackamas River Basin*



CLACKAMAS RIVER INVASIVE SPECIES PARTNERSHIP





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## Acknowledgements

The Clackamas River Invasive Species Partnership acknowledges the contributions of its partner and funding organizations, and the efforts of dedicated staff. Their collective efforts are making meaningful progress toward protecting the Clackamas River Basin from the spread of invasive weeds. Thank you!

### Partner Organizations

- 4-County Cooperative Weed Management Area
- Bureau of Land Management- Northwest Oregon District
- Clackamas County Parks
- Clackamas County Water Environment Services
- Clackamas River Basin Council
- Clackamas Soil and Water Conservation District
- Columbia Land Trust
- Metro
- Natural Resources Conservation Service- Clackamas
- North Clackamas Parks and Recreation District
- Oregon Department of Agriculture- Noxious Weed Program
- Oregon Parks and Recreation Department
- Portland General Electric
- United States Forest Service- Mt. Hood National Forest

## Funding Organizations

The following organizations have supplied cash or documented in-kind contributions to support CRISP and implementation of the *Clackamas River Invasive Species Management Plan* in 2023.

- Bureau of Land Management- Northwest Oregon District
- Clackamas River Basin Council
- Clackamas Soil and Water Conservation District
- Columbia Land Trust
- Metro
- Oregon Parks and Recreation Department
- Portland General Electric
- United States Forest Service- Mt. Hood National Forest

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## A Letter from the CRISP Chair

CRISP Partners,

As I reflect on the past year of the CRISP, I have been trying to find words that reflect the many changes and the steady progress of the partnership. Many words like *momentum*, *resilience*, *steadfast* resound when I think of CRISP. Any partnership or organization values these qualities, but they don't fully capture the energy and investment that has inspired CRISP over the last year. Words like *refresh*, *energize*, and *invigorate* come closer to the mark. This past year has marked many notable changes to the CRISP. As a person that relishes routine and regularity, this can feel unsettling.

At the start of 2023, we welcomed Monte Mattsson as our new CRISP Coordinator, and I wasn't sure what to expect. I knew Monte from previous positions to be energetic and capable, but I also recognized that he needed to take some time to settle into his new role. Little did I know Monte had other plans.

Since accepting the responsibility of CRISP coordination, Monte has been able to sustain the high productivity and momentum of the CRISP. This is no small feat after stepping into some big shoes. But Monte has done more than plod along. He has brought new ideas and energy to the CRISP that serves to refresh the CRISP after nine years of effort.

In 2023, we also closed out the second round of grant funding awarded by PGE's Clackamas Habitat Fund. While preparing our grant application and presentation to the review committee, I was struck by how we have been graced by the generous support of our partners in terms of time and resources. It shows how much the CRISP has been valued by our partners. This appreciation was once again rewarded by a generous award from the Clackamas Habitat Fund, which will carry funding into 2029. This level of support and cooperation amongst organizations is truly a rare and wonderful thing. So many thanks to all of you, who have contributed to our ongoing success.

The past year 2023 speaks to new beginnings, new energy, and a steady stride toward meeting our shared goals to improve and enhance the cultural, economic, and ecological health of the Clackamas Basin.

As we advance into the year ahead, I am again struck for a word to describe how I feel about CRISP, and one word stands out...***grateful***.

Many thanks to all of you that have contributed your time and resources over the last year! You provide hope for the year ahead and for the future success of the Clackamas River Invasive Species Partnership.

Sincerely,



**Samuel Leininger**

*CRISP Chair & Clackamas SWCD, WeedWise Manager*

## CRISP Background

The Clackamas River Invasive Species Partnership (CRISP) was formed in 2014 when the Clackamas River Basin Council, the Clackamas Soil and Water Conservation District, and Metro joined together to respond to the steady expansion of invasive plants within the Clackamas River Basin. In order to improve invasive species management and to support associated restoration efforts, these organizations developed the *Clackamas River Invasive Species Management Plan* in 2015 with the following goals:

- Develop and maintain a coalition of federal, state, regional, and local partners to prioritize and coordinate invasive plant control and revegetation efforts throughout the basin.
- Secure new and sustainable sources of funding to implement and maintain these efforts.
- Align local and regional policies to support implementation of plan goals.
- Promote recognition among public and private landowners within the basin of the need to actively manage invasive plants and enhance natural areas.
- Identify and prioritize sub-watersheds, natural areas, and important habitats for protection and enhancement.
- Develop an invasive plant treatment strategy that identifies and prioritizes specific invasive species management actions through the consolidation of existing efforts and resources.
- Prevent the introduction and spread of new invasive species, reduce the distribution and cover of priority invasive species, and restore priority natural areas currently infested with common, priority, or new invasive species.
- Outline a strategy to use limited resources to accomplish measurable, impactful, and lasting improvements within the basin.

The partnership now includes 14 organizations, and their collaborative approach focuses on working cohesively across property lines and jurisdictional boundaries to reduce gaps in management and focus on weed infestations that pose the greatest threat to the watershed. For more information on the partnership and management plan, see <https://weedwise.conservationdistrict.org/partnerships/crisp>.

## Invasive Plant Prioritization

Since the initial prioritization in 2015, which included 19 plant species, CRISP members have adjusted the priority weed list to its current version, which includes 27 species, listed below:

- *Ailanthus altissima*, tree-of-heaven
- *Alliaria petiolata*, garlic mustard
- *Brachypodium sylvaticum*, slender false brome
- *Carduus pycnocephalus*, Italian thistle
- *Centaurea diffusa*, diffuse knapweed
- *Centaurea solstitialis*, yellow star-thistle
- *Centaurea stoebe*, spotted knapweed
- *Centaurea × moncktonii*, meadow knapweed
- *Daphne laureola*, spurge-laurel
- *Euphorbia oblongata*, oblong spurge
- *Fallopia japonica*, Japanese knotweed
- *Fallopia sachalinensis*, giant knotweed
- *Fallopia × bohémica*, Bohemian knotweed
- *Ulex europaeus*, gorse
- *Galega officinalis*, goatsrue
- *Heracleum mantegazzianum*, giant hogweed
- *Hieracium aurantiacum*, orange hawkweed
- *Hieracium caespitosum*, meadow hawkweed
- *Hieracium pilosella*, mouseear hawkweed
- *Impatiens glandulifera*, policemen's helmet
- *Ludwigia hexapetala*, water primrose
- *Ludwigia peploides*, floating primrose-willow
- *Lythrum salicaria*, purple loosestrife
- *Petasites japonicus*, Japanese butterbur
- *Potentilla recta*, sulfur cinquefoil
- *Silybum marianum*, milk thistle
- *Tribulus terrestris*, puncturevine

## Funding

CRISP partners have continued to support weed control efforts in the Clackamas River Basin through investments in time and resources. Significant grant funds from the PGE *Clackamas River Hydroelectric Project Mitigation and Enhancement Fund (Clackamas Fund)* support implementation of CRISP projects. These funds have allowed the CRISP to address gaps in management. CRISP partnering organizations have also invested significant cash and in-kind contributions over the last year. In total, the CRISP partners reported committing and expending \$718,932<sup>1</sup> in weed control and restoration services in 2023. The total estimated CRISP-related personnel services reported by partners in 2023 totaled 3042<sup>2</sup> hours. In total CRISP partners reported surveying 337 sites and 4063<sup>3</sup> acres of public and private land.

In 2023, the CRISP was fortunate to receive a new Clackamas River Hydroelectric Project Mitigation and Enhancement Fund grant from Portland General Electric (PGE). This award of \$540,000 will support CRISP project work through end-of-calendar-year 2029.

In addition to the PGE funds, our CRISP partners contributed an additional \$204,718 to support CRISP projects and personnel. Clackamas SWCD committed \$79,926 through various agreements, Metro committed \$30,000 for coordination, and the Mt Hood National Forest contributed \$470,372 with a significant amount of Burned Area Emergency Response (BAER), Burn Area Rehabilitation (BAR), and Infrastructure Development funding to support weed control activities on the Mt Hood National Forest. BLM also committed \$5000 to support CRISP sponsored projects and an additional \$9088 in Emergency Stabilization Rehabilitation (ESR) funds to be spent in the Riverside fire burn area. This ongoing support has helped to support CRISP and help with the upper watershed impacted by wildfire.

BUDGET SUMMARY		2023
<b>RESOURCES</b>		
<i>Contracted Services</i>		\$495,246
<i>PGE</i>		\$0
<i>BLM</i>		\$5,000
<i>CSWCD PGE</i>		\$9,158
<i>BLM Riverside ESR</i>		\$10,716
<i>Mt Hood Riverside BAER</i>		\$0
<i>Mt Hood Bull Complex BAER</i>		\$44,005
<i>Mt Hood Infrastructure</i>		\$176,367
<i>Mt Hood BAR</i>		\$250,000
<i>Coordination Services</i>		\$100,768
<i>Metro</i>		\$30,000
<i>CSWCD PGE</i>		\$52,755
<i>CSWCD</i>		\$18,013
<b>TOTAL RESOURCES</b>		<b>\$596,015</b>
<b>EXPENSES</b>		
<i>Contracted Services</i>		\$232,705
<i>CRISP Sponsored Projects</i>		\$179,033
<i>BLM Riverside ESR</i>		\$9,088
<i>Mt Hood Riverside BAER</i>		\$8,041
<i>Mt Hood Bull Complex BAER</i>		\$4,715
<i>Mt Hood Infrastructure</i>		\$0
<i>Mt Hood BAR</i>		\$31,828
<i>Coordination Services</i>		\$100,768
<i>CRISP Specialist</i>		\$100,768
<i>CRBC Services</i>		\$0
<b>TOTAL EXPENSES</b>		<b>\$333,473</b>
<b>IN KIND</b>		
<i>Contracted Services</i>		\$385,459
<i>CLT Contracted Service</i>		\$2,759
<i>CRBC Contracted Services</i>		\$4,200
<i>Metro Contracted Services</i>		\$370,500
<i>OPRD Contracted Services</i>		\$8,000
<i>Personnel Services (hrs)</i>		3,042
<i>CLT Personnel (hrs)</i>		51
<i>CRBC Personnel (hrs)</i>		130
<i>CSWCD Personnel (hrs)</i>		1,811
<i>Metro Personnel (hrs)</i>		800
<i>NCPRD Personnel (hrs)</i>		8
<i>NRCS Personnel (hrs)</i>		112
<i>OPRD Personnel (hrs)</i>		55
<i>CRISP Participation (hrs)</i>		75

*Documented resources and expenses from CRISP partners in 2023. Highlighted values denote restricted funds.*

<sup>1</sup> Includes in-kind resources reported by: CLT, CRBC, Metro, OPRD and CRISP-sponsored projects funded by: BLM, CSWCD, Metro, PGE, USFS

<sup>2</sup> Reporting organizations: CLT, CRBC, CSWCD, Metro, NCPRD, NRCS, OPRD, CRISP Participants

<sup>3</sup> Reporting organizations: CRBC, CSWCD, Metro, NRCS, ODA, OPRD, PGE, USFS

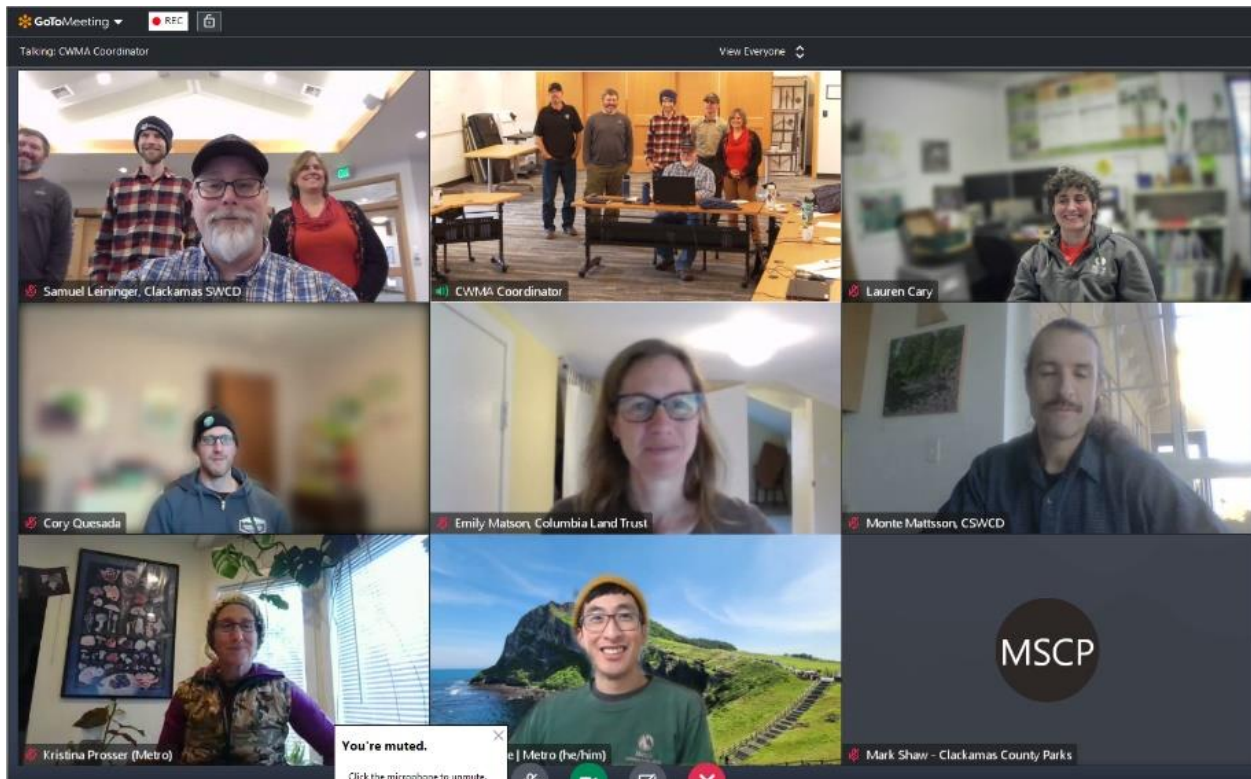


## Partner Meetings

Every year, the CRISP partners gather in July and December to discuss CRISP partner activities. In 2023, the summer hybrid meeting had 14 representatives from 9 partner organizations while the winter 2023 hybrid meeting had 11 attendees from 8 organizations.

The big news this year is that the CRISP received additional funding from the PGE Clackamas Habitat Fund, providing critical support for six additional years of operations and implementation! This is an exciting achievement, and we are thankful for all the support and effort by partners leading to this award. A pulse of funding such as the Clackamas Habitat Fund compels partners to think strategically about how to best allocate these funds across space and time. After some back-and-forth discussion, it was decided that project funding would be front-loaded in the first couple of years of the funding cycle, followed by diminishing investments in the latter part of the cycle.

Such decisions force project managers to weigh the trade-offs between overall reduction in invasive plant densities as projects progress, with the seemingly inevitable expansion of project areas as time goes on.



*The 2023 Summer and Winter CRISP meetings were hybrid (mix of virtual and in-person).*

With new funding comes newfound momentum for outreach. As such, partners discussed joining forces among outreach teams in 2024 to issue a press release across multiple media platforms, including local newspapers, agency newsletters, social media, signage and boot-brushes at natural areas and trailheads, and volunteer weed removal events along the River. We look forward to seeing how these efforts play out in the next year!



During the meetings partners shared their activities in the Clackamas River Basin. In contrast to recent years, the spring weather reflected a more *typical* rainfall pattern, providing ample opportunity for spring weed control. Partner updates were full of great project accomplishments this year, which are highlighted within the partner updates below.

In addition to the many accomplishments there were some notable problematic species and challenges that needed to be discussed. False brome (*Brachypodium sylvaticum*) is unfortunately enjoying continued expansion in the Clackamas River basin, and some folks reported seeing dramatic spikes in occurrence this year.



*Tutsan (Hypericum androsaemum)*

Another emergent problem identified is Tutsan (*Hypericum androsaemum*), a species closely related to St. Johnswort. This plant is expanding along Clear Creek, with additional sightings in Milo McIver State Park and lower portions of mainstem Clackamas. Tutsan has disrupted the pastures, forests, and conservation areas of New Zealand for decades. This relative newcomer is one to keep an eye on and consider performing risk assessments in our region and begin enhanced management.



*Purple loosestrife (Lythrum salicaria)*

Purple loosestrife (*Lythrum salicaria*) is an aggressive, water-loving species and no stranger to noxious weed lists across the United States. Until recently, however, it was quite rare along the Clackamas, but is now causing concern due to increasing observations. Luckily, there are abundant Best Management Practices available for managers eager to get ahead of this species' expansion.

Partners also shared detailed updates about the program and project budgets, contractors, implementation updates, and agreements.

At the December meeting, attendees reviewed and approved 15 projects for implementation in 2023.

Ongoing projects utilizing restricted funds in the upper watershed would also continue without additional consideration by CRISP partners.

## Partnership Projects

The 2023 field season marked the seventh full year of implementation of the CRISP Management Plan utilizing the CRISP annual project proposal and approval process. The partnership has grown and adapted over the years, but the partnership’s momentum continues to build. In 2023, CRISP partners approved and completed 15 partnership projects.

The proposed partner projects would positively impact all sub-basins within the Clackamas. A particular focus is within the priority sub-basins identified in the CRISP Management Plan. Projects were selected to manage priority species, to target primary vector pathways, and to address known gaps in management.

Project proposals were submitted by six partnering organizations with implementation occurring across hundreds of sites across the watershed. The highlighted projects in the table below represent only a small portion of the immense amount of work being carried out by CRISP partners in the Clackamas River Basin.

<b>Project</b>	<b>Sub-Basin</b>	<b>Proposing/Managing Organization</b>	<b>Amount Spent</b>
Contractor and Partner Training	All	CSWCD	\$2,180
Barton Park	Rock Creek/Lower Clack	Metro/CSWCD	\$2,026
Calcagno	Rock Creek/Lower Clack	CRBC	\$4,751
Clackamas County Recreation Sites	Rock Creek/Lower Clack, Dubois Creek/Clack, Upper Clear	Clackamas County Parks/CSWCD	\$6,364
Clackamas River Community Co-op	Rock Creek/Lower Clack	CRBC	\$3,481
Dahl Beach	Rock Creek/Lower Clack	CRBC	\$1,854
Deep Creek	Deep Creek	CRBC	\$8,329
Estacada Rock	Dubois Creek/ Clack	CSWCD	\$4,444
Garlic Mustard and EDRR	Rock Creek/Lower Clack, Dubois Creek/Clack, Clack Basin	CSWCD	\$59,396
Knotweed Treatment & Survey	Rock Creek/Lower Clack, Dubois Creek/Clack, Clack Basin	CSWCD	\$51,392
McGahan	Dubois Creek/ Clack	Columbia LT	\$3,089
Milo McIver	Dubois Creek/ Clack	OPRD	\$12,368
Skourtes	Rock Creek/Lower Clack	CRBC	\$3,535
Upper Feldheimer	Dubois Creek/ Clack	CRBC	\$1,735
Upper Watershed Treatments	Upper Watershed	CSWCD	\$16,269
			<b>\$181,214</b>

## CRISP Partner Summary Statistics

Over the last year, the CRISP partners have accomplished a significant amount of weed control and restoration work. Although reported metrics often differ among organizations, we want to demonstrate the collective amount of work accomplished in 2023. Although impressive, the accomplishments listed below represent only a portion of the data reported from our 14 CRISP partners and should be considered conservative estimates.

- Maintained permissions for over 737 public and private properties<sup>4</sup>, representing an estimated 3,828 parcels<sup>5</sup>;
- 337 sites and 4063 acres surveyed<sup>6</sup>;
- Treated weeds on over 544 sites<sup>7</sup> totaling over 4463 gross acres<sup>8</sup>;
- Planted 66,245 native plants<sup>9</sup> and 744 lbs. of native seeds<sup>10</sup> at over 17 project sites<sup>11</sup>;
- Spent over 3042 staff hours<sup>12</sup> on CRISP-related work;
- Spent \$385,459 on in-kind contracted weed control and restoration services<sup>13</sup>;
- Spent \$232,705 on contracted services for CRISP-sponsored projects, and upper watershed projects with restricted funds<sup>14</sup>.

## Project and Collaboration Highlights

### Invasive Hawkweed Management at Milo McIver State Park

Meadow hawkweed (*Hieracium caespitosum*) and mouse-ear hawkweed (*H. pilosella*) are state-listed noxious weeds that aggressively spread and degrade meadows, wetlands and forests by outcompeting and excluding native species, as well as reducing pasture forage quantity and quality. Mouse-ear hawkweed is particularly concerning, as it is an Oregon-listed Class A noxious weed with only a handful of known occurrences in Clackamas County, making it an ideal candidate for the Clackamas SWCD WeedWise Program’s Early Detection & Rapid Response program initiative.

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<sup>4</sup> Reporting organizations: BLM, Clackamas County, CLT, CSWCD, Metro, MHNH, NCPRD, OPRD, PGE, WES

<sup>5</sup> Reporting organizations: BLM, Clackamas County, CLT, CSWCD, Metro, MHNH, NCPRD, OPRD, PGE, WES

<sup>6</sup> Reporting organizations: CLT, CRBC, CSWCD, Metro, NRCS, ODA, OPRD, PGE, USFS

<sup>7</sup> Reporting organizations: Clack Co. Parks, CLT, CRBC, CSWCD, Metro, NCPRD, NRCS, ODA, OPRD, PGE, USFS

<sup>8</sup> Reporting organizations: Clack Co. Parks, OPRD, CLT, Metro, PGE, CSWCD, USFS

<sup>9</sup> Reporting organizations: Clack Co. Parks, CSWCD, CRBC, Metro, NCPRD, NRCS, OPRD, PGE

<sup>10</sup> Reporting organizations: Clack Co. Parks, CSWCD, CRBC, Metro, OPRD, PGE, USFS

<sup>11</sup> Reporting organizations: Clack Co. Parks, CSWCD, CRBC, NCPRD, Metro, OPRD, PGE

<sup>12</sup> Reporting organizations: CLT, CRBC, CSWCD, Metro, NCPRD, NRCS, OPRD, CRISP Participants

<sup>13</sup> Reporting organizations: CLT, CRBC, Metro, OPRD

<sup>14</sup> Reporting organizations: BLM, CC Parks, CLT, CRBC, CSWCD, Metro, OPRD, USFS



Infestations of meadow and mouse-ear hawkweeds have been treated for the past few years at the Vortex Meadow located at Milo McIver State Park. However, up to now the management strategy has been spot-spraying with backpack sprayers, wherein a crew of applicators would grid the site 1-2 times per year while plants were flowering, typically between June and August. Despite these management efforts, populations of both species have expanded, presumptively due to challenges with detectability of diminutive plants. Bloom times can vary, allowing plants to remain hidden and are left untreated.

WeedWise and Oregon Parks and Recreation Department decided to rethink the management strategy. Instead of spot spraying, management instead focused on a fall broadcast treatment using a UTV-mounted boom sprayer to affect better control and coverage. Broadcast applications are much less selective than spot spraying, which increases potential impacts to non-target native species. Discussions were held and partners decided that tolerating the impacts to non-target species (both native and non-native) in the treatment area was preferable to letting the hawkweeds continue to expand.



*Hawkweed treatment area at Vortex Meadow, Milo McIver State Park. The smaller, central polygon is the general area of the Mouse-Ear Hawkweed patch (~1.5 acres). The larger polygon is a close estimation of the extent of the Meadow Hawkweed (~12 acres).*

Implementation began with a Fall 2023 broadcast application, and the management plan is to follow-up with mowing and brush clearing in Spring 2024, followed by both Spring and Fall 2024 broadcast sprays, as well as spot sprays in the forest-to-meadow transition areas where trees make UTV usage difficult to impossible. The project will be reassessed in Spring 2025 to inform future management decisions. In the absence of more aggressive management, seeds and other reproductive plant parts will continue to move offsite through both wind and human-assisted dispersal, leading to broader impacts across the county and beyond.

The treatment area for meadow hawkweed includes a 12-acre area occupying the entire eastern half of the meadow, and the treatment area for mouse-ear hawkweed remains relatively small at 1.5 acres.

To document the treatment process, WeedWise collaborated with the CSWCD Conservation Specialist, Drew Donahue, to utilize the District’s aerial drone to video and photograph treatment activities. The fall broadcast application and drone documentation effort occurred October 19-20, 2023.



(A) Aerial photo over Vortex Meadow treatment area looking south, showing UTV sprayer indicated by red arrow. (b) Vortex Meadow, looking north, (C) UTV sprayer with mounted boom.

## Priority Species Projects

### *Giant Knotweed in Eagle Creek Watershed*

When it comes to weeds, “An ounce of prevention is worth a pound of cure”. Indeed, one of the key priorities identified in the *Clackamas River Invasive Species Management Plan* was *prevention* of invasive weeds into pristine areas such as the Eagle Creek Sub-watershed, located within the Clackamas River Sub-basin. In August 2023, a private landowner located in the Eagle Creek Sub-watershed reached out to the WeedWise Program requesting assistance in dealing with an infestation of giant knotweed (*Reynoutria sachalinensis*) on his property. Giant knotweed is prone to forming tall dense stands, and reproduces by seed and by vegetative fragments that disperse along waterways. Like many frustrated



landowners working to manage knotweed, this landowner had tried manual control methods such as digging and mulching, to little effect. Unfortunately, the invasive knotweeds develop expansive and robust underground root systems that can extend several meters while sprouting new shoots, rendering cutting, digging, and mulching virtually ineffective. WeedWise personnel were able to visit the site, confirm the species identification, and use a foliar herbicide application to treat the 1500 ft<sup>2</sup> patch in early October 2023. Autumn is the most effective time of year to treat invasive knotweeds with herbicides because plants are transporting resources from the leaves into their roots for winter storage. Herbicides effectively hijack this process and are more easily transported to the roots, killing the entirety of plant. WeedWise staff will need to return and retreat for several years to eradicate the infestation. A big thanks to the thoughtful homeowner for reporting and helping keep the Eagle Creek Sub-basin free of this harmful plant!



*Giant knotweed (Reynoutria sachalinensis)*

#### ***Gorse Along Right-Of-Way in Clackamas County***

Like many of our most problematic weeds, gorse (*Ulex europaeus*) was intentionally introduced as an ornamental shrub, similar to its pea-family cousin Scotch broom (*Cytisus scoparius*). Unfortunately, gorse rapidly forms dense colonies and reduces species diversity, by acidifying the soil as it drops its leaves. Gorse is also incredibly thorny, forming nearly impenetrable stands that pose a threat to human health and property, and limit use by wildlife. Gorse also contains concentrations of flammable oils, posing serious fire risk that has caused entire towns to burn down, along with catastrophic loss of life and infrastructure.

For these and other reasons, the WeedWise program was extremely concerned when it discovered a large gorse plant—one of just a few known in Clackamas County—growing along a busy right-of-way.



*Gorse (Ulex europaeus)*



Luckily, this plant has not spread beyond this localized infestation, and WeedWise was able to treat this site in August 2023 and will conduct follow-up treatments until the infestation has been eradicated.

### *Policeman’s Helmet Along Deep Creek and Tickle Creek*

Policeman’s helmet (*Impatiens glandulifera*) can dominate riparian habitats, forming dense stands reaching heights of 8 feet or more. These towering annual plants impact native species by crowding, shading, and luring pollinating insects that would otherwise visit and pollinate native plants. As an annual plant, policeman’s helmet has shallow economic root growth. When plants senesce in autumn, plants break off, leaving behind exposed bare ground that is highly susceptible to erosion with rising water levels when seasonal rains and run-off arrive.

In 2023, staff from two different CRISP Partner organizations, Monte Mattsson (Clackamas Soil and Water Conservation District) and Eric Butler (Clackamas River Basin Council) scouted private properties along Deep Creek near its confluence with Tickle Creek. Extensive stands of policeman’s helmet were found along Deep Creek, but notably restricted to being located downstream of the Tickle Creek confluence with Deep Creek. This suggests that a source population lies upstream somewhere on Tickle Creek, and seeds are washing down to Deep Creek, ultimately spreading into the mainstem Clackamas and Willamette Rivers.

Outreach efforts are underway to increase awareness to impacted residents, with the hope to ultimately find and treat source populations. In 2023, 15 different treatments of policeman’s helmet occurred across 14 properties, requiring 193 hours for completion. Comprehensive control across Deep Creek and Tickle Creek is anticipated to require significantly more work in the coming years.



*Policeman’s helmet plants within the Clackamas pose a significant threat to riparian areas, where they can compete with native vegetation and increase soil erosion, adversely impacting fish habitat and water quality.*

## Wildfire Recovery Efforts

### *Ongoing Weed Management on the Mt. Hood Riverside Burn Area*

Given the immense area affected by the Riverside Burn, and the subsequent scale of management needed to suppress the invasion of weeds into the Forest’s disturbed interior, the CSWCD WeedWise Program in consultation with Mt Hood National Forest staff developed a strategy to manage high-risk transmission vectors such as roadsides, day use areas, boat access areas, campgrounds, trails, and quarries.

Within this general scope, CSWCD has also prioritized weed management in high quality areas of the national forest with high proportions of native plant and lower densities of noxious weeds. This protection strategy helps to allow natural regeneration in high quality areas and establish a leading edge to create containment and exclusions areas for targeted noxious weeds.

In the case of the Riverside Fire burn area, noxious weed densities generally decrease moving from the western edge of the forest along Highway 224 eastward toward higher elevations. Therefore, a “top down” approach is being implemented, wherein higher elevation areas are prioritized as their current condition allows for relatively rapid control, leaving ample time in the season to also focus efforts onto progressively lower and more degraded areas of the Clackamas River Ranger District.

Notable higher elevation areas that are exceptions to this rule—and therefore warrant prioritization—include the Timber Lake Job Corps site and the Ripplebrook housing area, where Scotch broom (*Cytisus scoparius*) and invasive blackberries (*Rubus armeniacus* and *R. laciniatus*) are abundant and spreading into the surrounding areas.

Treatments and Surveys were undertaken from July to October utilizing the Riverside Burn Area Rehabilitation (BAR) agreement between the Clackamas SWCD, WeedWise Program and the Mt Hood National Forest.

Weeds in the proper life stage for effective control during this part of the season have been spotted knapweed (*Centaurea stoebe*), diffuse knapweed (*Centaurea diffusa*), false brome (*Brachypodium sylvaticum*), invasive knotweeds (*Reynoutria* spp.), Scotch broom (*Cytisus scoparius*), hawkweeds (*Hieracium* spp.), reed canarygrass (*Phalaris arundinacea*), Canada thistle (*Cirsium arvense*), bull thistle (*C. vulgare*), wild carrot (*Daucus carota*), Periwinkle (*Vinca minor*), and weedy vines such as English (*Hedera helix*) and Atlantic ivy (*H. hibernica*).

#### ***Treatments:***

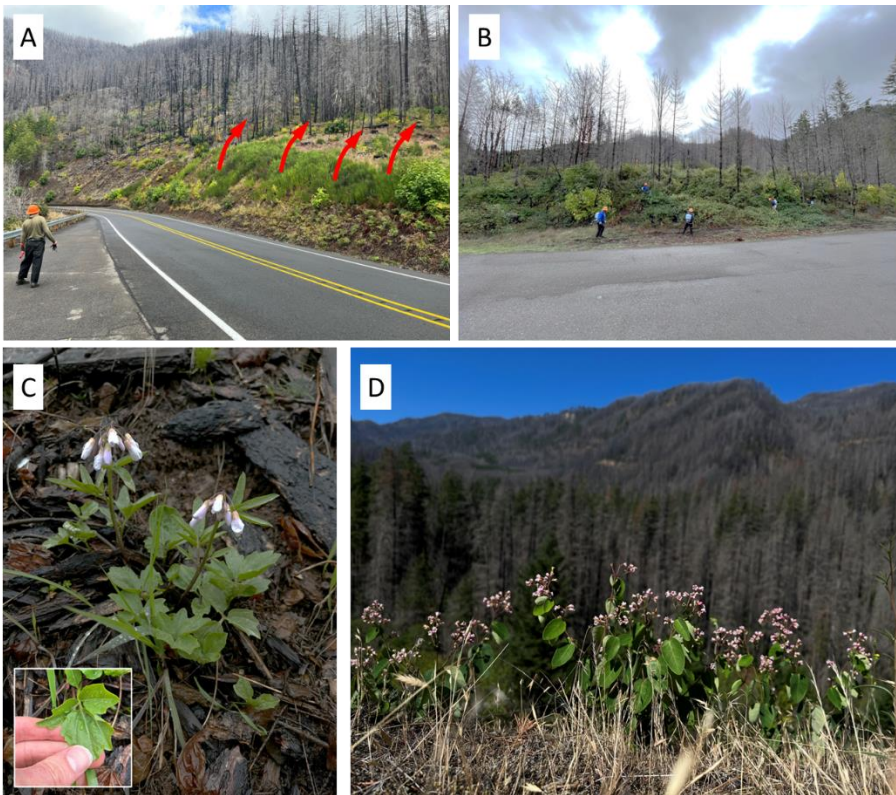
Follow-up treatments on previously treated areas along Abbott Road, La Dee Flats, Memaloose, Hillockburn, Road 45, Fish Creek Road, Rainbow Campground, Road 63, Road 70, Road 6340. Without follow-up treatments there is little chance for long-term weed suppression. Fortunately, some of our noxious weed targets are no longer being found at some known locations. This is great news, showing that management efforts are realizing results.

In addition to follow-up treatments, new treatment areas have also been initiated including roads 4630, 4631, 4635, 4640, 7010, new sections of Road 45, Ripplebrook-Alder Flats Helipad, and the Ripplebrook housing area. Many of these new efforts are focused on large Scotch broom and knapweed patches. Scotch broom thrives in open canopy and therefore quickly invades burned areas, so active control is advised, where feasible.

### Surveys:

Surveying remote areas for satellite populations of noxious weeds is a critical component of weed management. In particular, quarries and recreation areas are relatively high risk for receiving and hosting noxious weeds by the introduction from contaminated equipment, vehicles, clothing, boots, etc. As a result, surveys of the following quarries and recreational sites and their access roads were conducted during 2023:

- *Quarries:* Oz, South Mountain, Helion, Sink, Cripple Creek, Stone Creek, Mistletoe, Line runner, and Lowe Creek.
- *Recreation Areas:* Buck Lake, Hideaway Lake



(A) Rogelio Ibarra from R&R Contracting plans his approach at a site along Hwy 224 where Scotch broom (*Cytisus scoparius*) rapidly invades the forest interior. (B) A management crew at Fish Creek Campground treats a 6-acre patch of invasive blackberries (*Rubus* spp.) and Scotch broom (*Cytisus scoparius*). Native plant species such as Milkmaids (*Cardamine californica*) (C) and Spreading dogbane (*Apocynum androsaemifolium*) (D) provide a welcome reminder of why we manage weeds.



## Participating Organization Activities

Individual organizations within the CRISP continue to accomplish an immense amount of work within the Clackamas Basin to control invasive weeds and restore degraded habitat. Many of the activities reported below have been undertaken independently of the CRISP planning efforts. They are included to illustrate the breadth and volume of work accomplished by CRISP partners to control and prevent the spread of invasive weeds within the Clackamas Basin. We hope these activity reports will increase awareness and continue to facilitate collaboration among CRISP partners.

### 4-County CWMA

The 4-County Cooperative Weed Management Area (CWMA) focuses on support and enhancement of weed management across the Portland Metro region, including the Clackamas Basin. Each year, Clackamas County hosts one 4-County CWMA general meeting. On August 9<sup>th</sup>, 2023, the Clackamas hosted a general meeting for the CWMA. The meeting featured a range of speakers and topics, but the highlights included Emerald Ash Borer trapping efforts from Clackamas SWCD, a presentation about stream shading from Clackamas River Basin Council, and discussion about managing invasive species in the fire affected landscape around the Clackamas River.

The 4-County CWMA also organizes and hosts the annual “Pull Together,” a large event where weed managers learn the latest news on invasive species management. Many CRISP partners and contractors were part of the over 200 people in attendance for the virtual event. Aside from CWMA and committee updates, the presentations of the day focused on the Solve Pest Problems website, methods for harvesting invasive species for multiple uses, and another update on hottest bug in the metro area: Emerald Ash Borer.

The 4-County CWMA Mapping and Data Committee provides support to CRISP partners through the development and maintenance of data collection standards. These standards provide guidance for collecting weed observations and treatment data. Part of the efforts of the committee were in developing a data collection template for invasive species.

The Scientific and Technical Review Committee continued refinement of Best Management Practices which outline control methods for 22 invasive weeds and have been made available to CWMA partners for use within their own organizations.

The 4-County CWMA also completed a redesign of its website in October which allows it to better serve its members, such as CRISP. Website updates and features continued to be implemented, and this process will continue in 2024.



*The unofficial notes of the Pull Together illustrated by Jon Wagner, East Multnomah SWCD*

## Bureau of Land Management- Northwest Oregon District (BLM)

The Bureau of Land Management- Northwest Oregon District has been collaborating with the Clackamas SWCD to treat weeds in the Clackamas Basin for many years. The Labor Day fires of 2020, including the Riverside and Beachie Creek fires, burned across many BLM-owned parcels in the Clackamas Basin and surrounding areas.

Prior to 2023, there had been no known weed treatments conducted along the trail situated on Bureau of Land Management (BLM) property bordering the western side of the North Fork Clackamas River. After receiving a report of false brome (*Brachypodium sylvaticum*) from BLM staff, CSWCD had a management crew survey and treat the site on August 23, 2023. While some false brome was indeed found, luckily, the infestation appears to be quite limited at this time. CSWCD will continue to work with BLM to monitor this infestation annually to reduce the risk of spread both within and beyond this heavily used recreation area.



*False brome (Brachypodium sylvaticum) is an increasingly common noxious weed impacting BLM managed lands*

Other projects on BLM landholdings in the Riverside Fire burn scar include ongoing priority weed treatments along the Road 45 system (also known as Hillockburn Road and Memaloose Road). Species treated were:

- Diffuse knapweed (*Centaurea diffusa*): 4 treatments over 0.0375 net treatment acres;
- Meadow hawkweed (*Hieracium caespitosum*): 4 treatments over 0.0375 net treatment acres;
- Shining geranium (*Geranium lucidum*): 1 treatment over 0.3 net treatment acres.

Abbot Road (Road 4610) passes through BLM landholdings on its way to La Dee Flats, a recreation area that sees heavy ATV traffic and is therefore a hotspot for transmission and proliferation of noxious weeds, especially weeds found more commonly in the lower Clackamas River Watershed. For example, in 2023 we completed 7 treatments across 4.83 acres on species including reed canarygrass (*Phalaris arundinacea*), invasive blackberries (*Rubus* spp.), Canada thistle (*Cirsium arvense*), bull thistle (*C. vulgare*), Scotch broom (*Cytisus scoparius*), and St. John's wort (*Hypericum perforatum*).

## Clackamas County – Parks

Clackamas County Parks routinely manages noxious weeds as part of their standard park maintenance activities. In managing approximately 608 acres of established parks on the Clackamas River, Clackamas County Parks serves at the interface between the public and natural areas, providing opportunities to promote outreach and education efforts to the general public. Due to the heavy use of these areas by the public, they are also threatened by the introduction of invasive species through human-mediated dispersal.

In 2023, Clackamas County Parks planted 350 native plants at Eagle Fern, Barton and Carver Parks. Restoration work at Clackamas County's Department of Transportation and Development (DTD) quarry has started with the planting of 300 native trees and the sowing of native seed. Invasive weed treatments were also carried out in the old DTD quarry with 20 acres of area treated in total. Species planted in these areas include Douglas-fir, incense cedar, western redcedar, western hemlock, ponderosa pine, cascara, nootka rose, snowberry, pacific ninebark, tall Oregon grape, and kinnikinnick.



*Clear Creek runs through Metzler Park, which has just a few patches of knotweed. CRISP work has prevented knotweed from spreading and protects this habitat for salmon and other aquatic life.*

Another milestone was reached at Eagle Fern Park with the removal of a weir, restoration of stream banks with native plant species, and installation of logs for fish habitat further naturalizing the stream with the help of Oregon Department of Fish & Wildlife, Clackamas County, Paul G. Allen Foundation, American Rivers, Resources Legacy Fund, Blount Family Foundation, U.S. Fish & Wildlife Service, Oregon Wildlife Foundation, Portland General Electric, Waterways Consulting, Confluence Consulting & Aquatic Contracting.

At Fisherman's Bend, CSWCD treated garlic mustard to help protect plantings done by CRBC. At Billy Goat Island, a caretaker has been working to clear invasive weeds and revegetate the site, and CSWCD has been contributing to this work through the CRISP. At Madrone Wall, where rocky bluffs are home to nesting peregrine falcons, CSWCD worked to control small patches of sulfur cinquefoil and false brome.



## Clackamas River Basin Council (CRBC)

CRBC is the watershed council operating in the Clackamas Basin and a founding member of CRISP. They perform activities such as fish habitat restoration, invasive species control, revegetation, erosion and sediment control, outreach, teaching workshops, and more. The watershed council also oversees CRISP projects and maintains relationships with private landowners and other entities, and they are well positioned to do so, because they are not government representatives and can build trust with citizens who might otherwise be discouraged from participating in the CRISP program.

After a very wet spring in 2022, much drier conditions this spring allowed for an aggressive push on garlic mustard at several sites; one small population near Carver, detected last spring, was successfully eradicated. We were also able to treat fall rosettes at many of the same sites while treating knotweed.

The warm, dry spring unfortunately accelerated the growth and maturation of policeman’s helmet in lower Deep Creek; by the time of an early August visit, plants were 8’ tall and dropping seeds. Contractors spent several days deadheading and bagging seeds to help reduce next year’s seed load, but this large population will require earlier treatment next year, as well as engaging new landowners on lower Tickle Creek where the source appears to be located.

Fall knotweed treatments went very well along Deep Creek and at multiple restoration sites in the lower watershed. CRBC also used USFS Burned Area Recovery (BAR) funds allocated to the Clackamas SWCD to treat weeds at the South Fork Clackamas restoration site prior to planting in winter 2024.

In 2024, CRBC plans to continue and expand upon these efforts by continuing treatments at several sites, engaging more landowners in the Deep Creek watershed, and helping coordinate a volunteer event to be determined.

### Highlights:

- Garlic mustard treatments on 8 properties
- Policeman’s helmet treatments on 5 properties
- Knotweed treatments on 20 properties
- CRISP treatments in 2023 directly supported 4 CRBC restoration projects in progress.



*Monte Mattsson provides scale for policeman’s helmet at Deep Creek (l), South Fork Confluence restoration site on Mount Hood National Forest (r)*

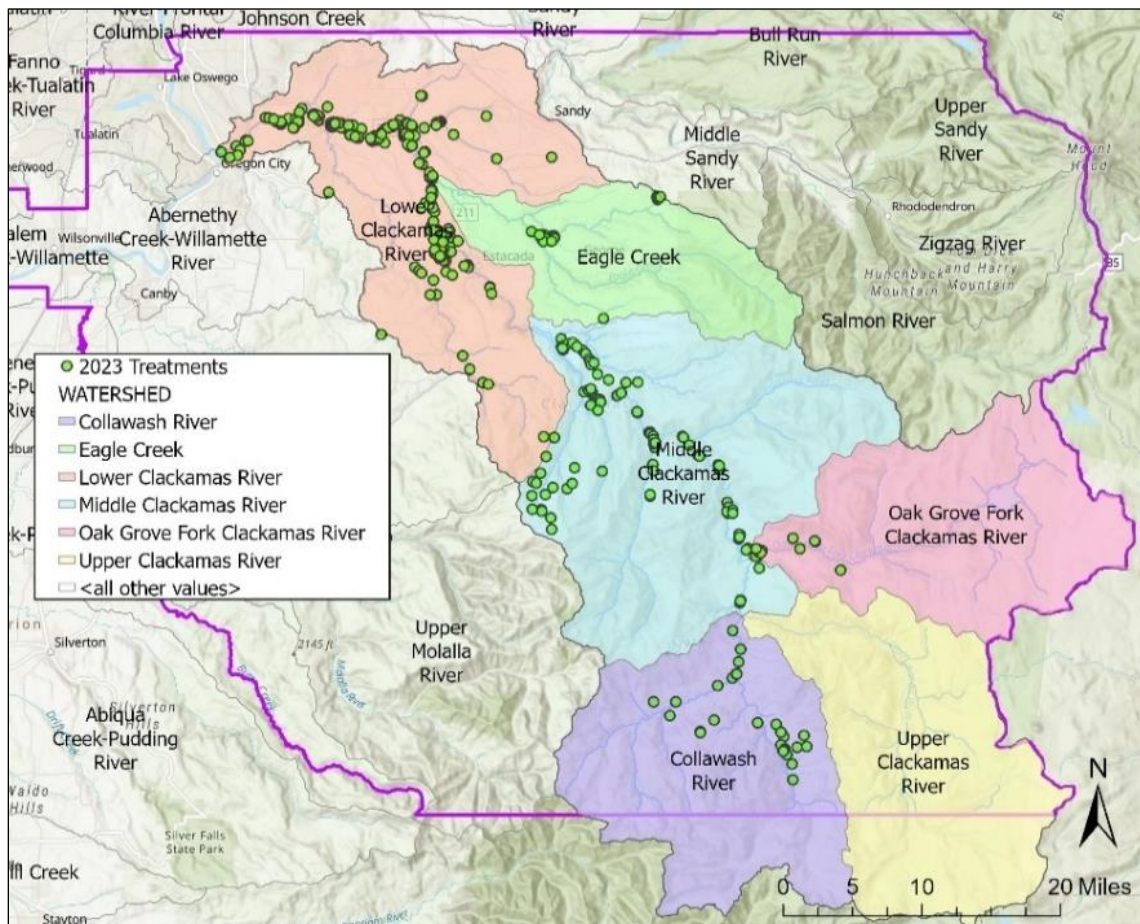
## Clackamas Soil and Water Conservation District (CSWCD)

The Clackamas SWCD is the designated noxious weed control program for Clackamas County and is spearheaded through their WeedWise program. The WeedWise program focuses on landscape-scale management of invasive weeds, offering free control of priority invasive weeds as a voluntary service to county residents. The WeedWise program also maintains the [Clackamas County Weed List](#).

The Clackamas SWCD is also a founding member and administrator of the CRISP. The WeedWise program works to build capacity and infrastructure to support CRISP-related activities serving as a hub for CRISP-related information pertaining to the mapping of weed observations, site surveys, treatments, project sites, and priority weed information associated with the *Clackamas River Invasive Species Management Plan*.

In 2023, we completed 535 treatments across 5 sub-watersheds:

- Lower Clackamas - 338 treatments on 18 target species
- Eagle Creek - 24 treatments, 5+ targets
- Middle Clackamas - 124 treatments, 13+ targets
- Collawash - 29 treatments, 2 targets
- Oak Grove - 20 treatments, 8 targets



*Distribution of noxious weeds treatments undertaken by the WeedWise program in 2023*



## Clackamas Water Environment Services (WES)

Clackamas Water Environment Services (WES) conducts weed control efforts in the lower portions of the Clackamas River Basin on the natural areas they own, and on site-specific restoration projects in conjunction with their [RiverHealth Stewardship Program](#).

In 2023, WES awarded \$300,000 in grants through its [RiverHealth Stewardship Program](#) to 12 organizations dedicated to the protection of local watersheds. The grants support a variety of activities that restore habitat, manage invasive plant species, organize community volunteer events, provide watershed science education.

In 2023, WES continued to maintain Carli Creek, a 15-acre constructed wetland completed in 2019 for storm water treatment. Invasive weed treatments are ongoing and will continue over the coming years to maintain the project after implementation. Mosaic Ecology continues to maintain the Carli Creek site. The site is performing well and we are on track to meet permit requirements. Species being treated: Armenian blackberry (*Rubus armeniacus*), reed canarygrass (*Phalaris arundinacea*), garlic mustard (*Alliaria petiolata*), false-brome (*Brachypodium sylvaticum*) and common teasel (*Dipsacus fullonum*).

With the help of NCPRD, WES also continued ongoing invasive species control on its other natural areas in the Clackamas basin, including the Rock Creek Confluence site (approximately 12 acres), and the Rose Creek Natural Area (approximately 5.6 ac) and properties in the Kellogg-Mt Scott Creek basin.



*The Carli Creek site, located on the lower portions of the Clackamas River, is a constructed wetland for storm water treatment. WES has been treating weeds here after completing the planting in 2019.*



## Columbia Land Trust (CLT)

Columbia Land Trust is a private, non-profit organization working to conserve and care for fish and wildlife habitat in the lower Columbia River region of Oregon and Washington. In the Clackamas Basin, the Land Trust owns a 23-acre forest called the McGahan Natural Area across the Clackamas River from Milo McIver State Park, and the Land Trust holds a conservation easement on a 32-acre private property near Madrone Wall Park.



*Native tree and shrub plantings in disturbed area along the boundary with a residential neighbor*

In 2023, CRISP funds supported maintenance of priority weeds at the McGahan Natural Area, including false brome and spurge laurel. The false brome control efforts are part of a larger effort by Clackamas SWCD and State Parks to control false brome along this reach of the river. New infestations of false brome were identified and mapped to be targeted for future control. Land Trust staff also maintained native tree and shrub plantings along the edges of the site to revegetate disturbed areas and buffer the existing forest stand.

### *Season Activities in 2023:*

- Spring/early summer: Land Trust staff controlled false brome, thistle, and tansy across 2 acres of the McGahan site.
- Spring/summer: Land Trust staff-controlled weeds and competing vegetation around approximately 100 native trees and shrubs planted in previous years at the McGahan site.
- Fall: A contractor crew funded by CRISP controlled false brome, garlic mustard, Himalayan blackberry, ivy, and other invasive weeds across the 23-acre McGahan site.



*Yearly maintenance prevents the spread of false brome, spurge laurel and other invasive weeds at the McGahan site, where weed pressure is high due to surrounding residential use and roadside soil and vegetation*

## Metro

The Metro Regional Government owns or manages over 18,000 acres of natural areas and parks throughout Clackamas, Multnomah, and Washington counties. Building on the accomplishments of previous years, Metro controlled a variety of invasive weeds across its properties thanks to the continued support of voter approved funding. In the Clackamas Basin, 15 sites were the focus of extensive weed management work. Early detection and rapid response (EDRR) treatments were completed by staff and contractors. In addition, restoration efforts spanned across Metro Natural Areas within the Clackamas Basin including on-going efforts for site preparation, planting, plant maintenance and in-stream restoration efforts.

Spring of 2023 proved to be difficult for treating high priority EDRR species on Clackamas River islands due to high water levels. In packaging Metro and CSWCD island work together, contractors were able to better time water levels for safe movement to and from the islands and treat garlic mustard before going to seed. This example highlights how collaboration through the CRISP partnership can maximize both project impact and efficiency.

In 2023, Metro implemented the following activities in the CRISP partnership focal area:

- 2014 acres across 16 sites surveyed and actively managed;
- 34 EDRR and high priority invasive species treated;
- 45,000 native trees/shrubs and 418 lbs of native seed planted at 5 of 16 Clackamas River sites;
- Invasive control, site prep, planting, and plant maintenance utilizing 8 contract firms, with receipts totaling over \$370,000 and \$35,000 in Metro CRISP cash match annually.



*Above: Before and after treatment photos of a robust Black Locust (*Robinia pseudoacacia*) stand at Metro's new Upper Holcomb Creek Natural Area.*

*Left: Contractors planting - 19,000 native trees and shrubs installed at North Fork Deep Creek South. Deep Creek bank previously occupied by dense knotweed.*



## Natural Resources Conservation Service- Clackamas (NRCS)

NRCS provides technical and financial assistance to local landowners through their farm bill funded programs. Within the Clackamas River Basin, weed control efforts are typically undertaken in conjunction with other conservation practices on private lands.

Current technical and financial assistance has focused predominantly on the management of common invasive weeds. The NRCS works very closely with the Clackamas SWCD Conservation Planning Program and often refers landowners to the SWCD for weed control activities. These resources are available on an ongoing basis and, where appropriate, should be considered for CRISP-related implementation.

NRCS spends cost-share funds to treat land using the conservation practices of herbaceous weed control and brush management, including forested and crop lands in both Clackamas and Multnomah Counties. NRCS is also developing a Soil Health in Pasture Livestock System Conservation Implementation Strategy (CIS) so they can target grazing and pasture lands. This would help them target livestock-related resource concerns and water quality, which often includes an invasive weed control component.



*Rare Plant training for prairie and oak species is provided by NRCS to teach practitioners how to identify rare, threatened and endangered species during project implementation.*



## North Clackamas Parks and Recreation District (NCPRD)

North Clackamas Parks and Recreation (NCPRD) is a service district of Clackamas County dedicated to providing exceptional parks and recreation programs, facilities, and services. The District – which serves more than 105,000 residents in a 27-square mile area – includes the city of Milwaukie and a large area of unincorporated Clackamas County. NCPRD serves at the interface between the public and natural areas within urban portions of the Clackamas River Basin. Their properties provide a unique opportunity to promote outreach and education efforts to the public but are also under the greatest threat from the introduction of invasive species through human-induced movement.

NCPRD owns and manages approximately 17.5 acres of natural area in the Clackamas watershed spread over four sites. Additionally, NCPRD assists Water Environment Services (WES) in the maintenance of approximately 21 acres on WES-owned property in the watershed.

In addition to helping WES, NCPRD worked on four sites owned by the District in 2023 in the Clackamas basin: Orchard Summit (tributary of Rock Creek), Rose Creek (Sieben Creek), Forest Creek (Sieben Creek) and Trillium Creek (tributary of Rock Creek).

With the help of volunteers, NCPRD planted a pollinator-friendly hedgerow of native plants along the power line corridor that follows our Forest Creek site. We also planted a pollinator hedgerow at Trillium Creek Park with a kit supplied by the Xerces society.



*Pollinator hedgerow being planted at Trillium Creek*

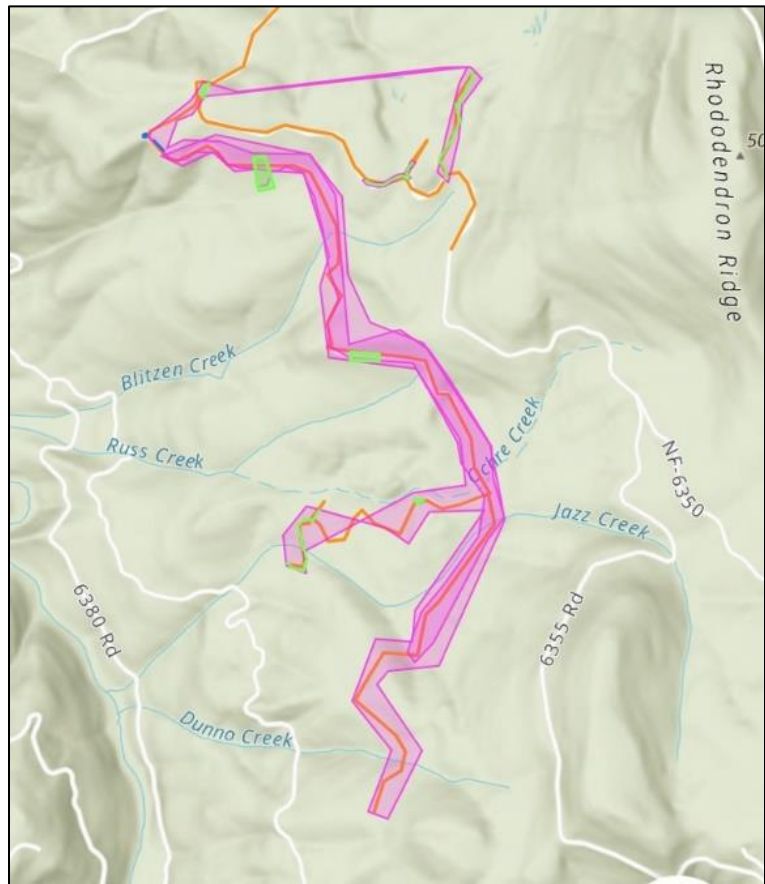
## Oregon Department of Agriculture (ODA)

ODA staff focuses primarily on priority noxious weeds such as spotted knapweed, sulfur cinquefoil, Japanese knotweed, and false brome on the uppermost sites in the Clackamas River watershed with the exception of false brome sites in the vicinity of the Collawash River. Work is coordinated with Clackamas SWCD staff to divide up sites and areas.

The primary ODA effort on this district in 2023 was intensive treatment of all spotted knapweed on spur 6350-160, as well as patches in the vicinity on the main road and two smaller spurs, as well as treatment of heavily infested cut banks in the upper section of Rd 46. Follow up treatments were also completed on diffuse knapweed in Cachebox Quarry where plant densities had dropped by over 60%, and in Squirrel Quarry where only 15 plants were found. ODA was able to bring new seasonal Mitch Lex to help cover the area, and even more work is planned for 2024 with his help!

Add a few bullet points to highlight work or summaries:

- Gross Acres Treated: 354
- Net Acre Treated: 0.95
- Road Miles Surveyed: 32



(left). Spotted knapweed (*Centaurea stoebe*). (above) Spotted knapweed treatment area on road 6350-160 and vicinity in the Collawash sub-watershed, Mount Hood National Forest. Pink areas represent treatment zones, with heavy spots mapped in green. The orange lines represent additional survey tracks.



## Oregon Parks and Recreation Department (OPRD)

OPRD has a major focus on the management of invasive weeds at Milo McIver State Park. OPRD has been working for the last several years to map and treat infestations of priority noxious weeds throughout the park system and has developed a management strategy for controlling these invasive weeds. Weeds of greatest focus within the park are garlic mustard (*Alliaria petiolata*), false brome (*Brachypodium sylvaticum*), meadow hawkweed (*Hieracium caespitosum*), and mouse ear hawkweed (*H. pilosella*).

Through the support and coordination with the CRISP partnership, OPRD can treat over 40 acres of State Parks property that contains several of the Clackamas County priority weed species. In 2023 OPRD pledged \$5,000 match for contracted services, \$3,000 of in-kind work from OPRD staff, and a collaborative view on Clackamas County invasive species management within State Parks. Here are some CRISP Highlights and Treatments for 2023:

**Garlic Mustard:** OPRD treated or surveyed roughly 15 acres of Milo McIver State Park for garlic mustard (GM) in 2023. In 2023 OPRD staff surveyed the 21 known locations of GM within the park and contracted out the herbicide treatment. Over the last several years GM populations have been shrinking in size, and percent coverage is also lower. Few plants are making it to maturity, we are probably working on exhausting the seed bank in these locations.

**Hawkweeds:** Unlike GM the hawkweed treatments have not been as successful. We are seeing an increase in percent coverage for meadow hawkweed, and mouse-ear hawkweed expanding to new areas of the park. OPRD is working with CSWCD to look at alternative treatment methods to address the Hawkweed expansion at Milo McIver State Park.

**Burn Unit:** In 2023 CRISP funding was used to treat false brome (FB) in the wildfire impacted area of Milo McIver, FB is expanding throughout the burn unit. In addition, OPRD partnered with Clackamas River Basin Council (CRBC) to hold two volunteer planting days to add native vegetation back into the area impacted by the wildfire.



Volunteer planting at Milo McIver



## Portland General Electric (PGE)

PGE’s 2023 activities within the Clackamas River Basin included implementation of the Clackamas Hydro Project’s Vegetation Management Plan (VMP) in accordance with the Federal Energy Regulatory Commission (FERC) license. The VMP includes three interrelated programs: Vegetation Maintenance, Invasive Non-native Plant Species Prevention and Control, and Revegetation.

### *Non-Native Invasive Plant Prevention and Control*

PGE staff conducted manual control of small invasive plant populations and hired licensed contractors to conduct herbicide treatments on 30 acres within the Mt. Hood National Forest (MHNF). Species treated included, sulphur cinquefoil, meadow and spotted knapweed, reed canary grass, Canada thistle, and Scotch broom. PGE also conducted work on 20 acres at PGE-owned land near Estacada. Priority species included garlic mustard, herb robert, shiny geranium, false brome, and meadow knapweed. PGE also conducted invasive plant surveys within the Clackamas FERC Boundary in 2023. PGE identified new populations of sulphur cinquefoil and knapweed on the MHNF, along with new populations of meadow knapweed and false brome on PGE owned land. Surveys will guide treatment plans over the next few years. PGE also contracted with PSU to conduct aquatic invasive plant surveys in Timothy Lake, Lake Harriet, North Fork Reservoir, and Estacada Lake. No aquatic invasive plants were identified in project reservoirs in 2023.

### *PGE Revegetation and Vegetation Management*

PGE applied 250 lbs of native seed over 13 acres of disturbed sites located on the MHNF in 2023. Most of the seed was applied to areas disturbed during PGE salvage logging projects along the Oak Grove flowline/Lake Harriet distribution line and the 4630/Pipeline Road rights-of-way managed by PGE. A native seed mix consisting of California brome (*Bromus carinatus*) and blue wildrye (*Elymus glaucus*) was applied to disturbed sites. PGE also planted over 400 native conifers at the Three Lynx townsite as part of site restoration following demolition of the old structures.



*Restoration work at the PGE Three Lynx townsite on the MHNF.*

## United States Forest Service- Mt Hood National Forest

The U.S. Forest Service works in cooperation with 12 partners to carry out a variety of invasive plant management activities, which is a high priority for Mt. Hood National Forest (MHNF). In 2023, the MHNF obligated over \$2 million among eight agreements to complete invasive plant treatment and native plant restoration across the forest.

Priority exotic plant control activities on the National Forest are carried out in cooperation with the Oregon Department of Agriculture - Noxious Weed Control Program, Portland Water Bureau, Portland General Electric, Bonneville Power Administration, Oregon Department of Forestry, Oregon Department of Fish and Wildlife, Student Conservation Association, Clackamas County, Clackamas SWCD, Wasco County, Hood River County, Walama Restoration Project, Oregon Department of Transportation, Sandy Basin Watershed Council, and Timber Lake Job Corps. In 2023, these treatments equated to over 420 net acres of noxious weed control forest wide, 317 of which were in the Clackamas River Basin. These acres in the basin were treated by CRISP partners (CSWCD, ODA, and PGE), Student Conservation Association (SCA) interns, and MHNF staff. The third year EDRR treatment within Riverside fire and Bull Complex fire areas was completed in the summer and fall.

Infestations identified within the fire scar from 2020 and 2021 wildfires were successfully suppressed thanks to EDRR efforts from our partners. Continued control efforts in 2023 have minimized expansion of established populations along campgrounds, road margins, and day-use sites along the Highway 224 corridor. During the 2023 field season, new infestations were mapped and swiftly treated preventing further spread. The tremendous amount of support from our partners has benefited ongoing fire recovery work on the Clackamas River Ranger District. Major ground-disturbing projects include danger tree removal along forest roads, developed recreation site re-build, trail clearings and repair, fish habitat restoration, and road repair. Essentially, all of these projects have the potential to spread invasive plant propagules. Treating these areas early and often would reduce the risk of negatively impacting sensitive habitats and outcompeting native flora. We want to thank all of our partners for helping us maintain a healthy ecosystem for the benefit of future generations who visit Mt. Hood National Forest.



*SCA interns Beth Anderson (left, left photo) and Dan Fawcett Jr. (right, left photo) plants western red cedar and willow stakes along a new culvert in Camp Creek at West Ski Bowl.*



During the 2023 field season, two SCA interns joined the Mt. Hood botany program on the west side. Both interns provided significant support not only to botany but also to fisheries, recreation, wildlife, soils, hydrology, and archaeology programs. Much of the survey efforts were within burned areas focused on road systems that have not been visited since the 2020 fires, rock quarries previously visited in 2017, and trails within Wilderness areas. Sites were mapped using Survey123 and Avenza. Native plant seeds were also collected to support restoration projects on the District. The information gathered by the interns will help inform various NEPA projects, fire recovery work, and update information in our national database that is vital for planning.

Finally, District staff had a Scotch broom removal event called “Broom Bash” at open day-use sites and closed campgrounds along Highway 224. The goal was to provide an opportunity for staff to go outside, experience healthy manual labor, and improve habitat quality one plant at a time. We are planning another Broom Bash in 2024.



*Clackamas River Ranger District staff removes Scotch broom along recreation sites along Highway 224 in spring 2023. Left to right: Ut Huynh, Lin Kyan, Laurens Kuypers*

*SCA intern Dan Fawcett Jr. (left) and recreation technician Joe Jolley (right) removing Scotch broom near the Fish Creek Road and Highway 224 intersection.*





## Thank You

Reflecting on the many accomplishments of the Clackamas River Invasive Species Partnership, it is clear there has been an immense amount of support to help stop the spread of invasive species within the Clackamas River Basin.

We would like to thank all of the participating organizations for their many contributions. The success of the CRISP reflects the commitment of these participating organizations to the long-term health of the Clackamas River Basin.

We would especially like to thank the staff of our participating organizations who have contributed their passion, expertise, and dedication to this partnership. We would also like to thank our many funders for ensuring the viability of the CRISP and for investing in the future of the Clackamas River Basin. Thank you!

