

Application Name: Willamette River Aquatic Weed Management, Phase 7

Application Number: 000-0000-17557

By: Benton SWCD

Offering Type: ODA Noxious Weed Grant

Application Type: ODA Noxious Weed

OWEB Region: Willamette Basin

County: Benton

Coordinates: 44.608739,-123.186668

Applicant:

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Project Manager:

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Budget Summary:

OWEB Amount Requested: \$27,719
Total Project Amount: \$43,068

Administrative Information

Abstract

Provide an abstract statement for the project. Include the following information: 1) Identify the project location; 2) Briefly state the project need; 3) Describe the proposed work; 4) Identify project partners.

The Willamette River Aquatic Weed Management Phase 7 (WRAWMP) is the continuation of a project started by Benton County Cooperative Weed Management Area in 2014 with Oregon State Weed Board funding. The focus of the project is the control of Uruguayan primrose-willow (*Ludwigia hexapetala*) and yellow floating heart (*Nymphoides peltata*): two aggressive, invasive aquatic plants that threaten fish and wildlife habitat in freshwater systems. *N. peltata* is an A-listed Oregon State Noxious Weed. The project area spans the reach of the Willamette River in Benton County, covering approximately 22 river miles from Peoria to Albany and consists of three main components: 1) management of aquatic weed species at Collins Bay, Wapato Cove, Horseshoe Lake, and the mainstem Willamette River (A-listed *N. peltata*, B-listed *L. hexapetala*) through hand-pulling, herbicide application, and volunteer weed pulls, 2) targeted community outreach through two volunteer paddle and pulls and a workshop on aquatic invasive plants and distribution of the Water Weeds Guide for Benton County, and 3) monitoring plant distribution at project sites pre- and post-treatments. Through this project we partner with Willamette Riverkeeper, Oregon Parks and Recreation Department, Oregon Department of Agriculture, Portland State University, Horseshoe Lake Homeowners Association, private landowners, the Willamette Mainstem Cooperative, and the Willamette Aquatics Invasive Network. While we know this is the seventh iteration of this project, we have reached over 275 participants from Eugene to Portland through our outreach events and have decreased *Ludwigia* cover at treated sites by 85-100%. We have also successfully implemented EDRR of yellow floating heart at a number of sites on the mainstem. We were able to leverage our OSWB funding for restoration plan development and a feasibility study to determine costs and impacts of mechanical removal of dead floating mats of *Ludwigia* at Collins Bay.

Location Information

What is the ownership of the project site(s)?

Public land (any lands owned by the Federal government, the State of Oregon, a city, county, district or municipal or public corporation in Oregon)

What agency(ies) are involved?

Department of State Lands

Private (land owned by non-governmental entities)

This grant will take place in more than one county.

List the counties affected:

Benton and Linn County

Permits

Other than the land-use form, do you need a permit, license or other regulatory approval of any of the proposed project activities?

- Yes
 No

For Details Go to Permit Page

I acknowledge that I am responsible for verifying applicable permits, licenses, and General Authorizations required for the project, and can update information at grant agreement execution.

Yes

Racial and Ethnic Impact Statement

Racial and Ethnic Impact Statement

- The proposed grant project policies or programs could have a disproportionate or unique POSITIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs could have a disproportionate or unique NEGATIVE impact on the following minority persons. (indicate all that apply)
- The proposed grant project policies or programs WILL HAVE NO disproportionate or unique impact on minority persons.

Insurance Information

- Working with hazardous materials (not including materials used in the normal operation of equipment such as hydraulic fluid)
- Earth moving work around the footprint of a drinking water well
- Removal or alteration of structures that hold back water on land or instream including dams, levees, dikes, tidegates and other water control devices (this does not include temporary diversion dams used solely to divert water for irrigation)
- Applicant's staff or volunteers are working with kids related to this project (DAS Risk assessment tool not required, additional insurance is required)
- Applicant's staff are applying herbicides or pesticides (DAS Risk assessment tool not required, additional insurance is required)

Additional Information

This project affects Sage-Grouse.

Problem Statement

Weed species: List all state listed noxious weeds pertaining to this project. Create a separate entry per weed species.

Species #1

Noxious weed species

Yellow floating heart (*Nymphaea peltata*)

Habitat: Only list one habitat type per noxious weed species.

Riparian

Upland

Instream

Estuary

Treatment method

Herbicide and Manual

Net treatment acres

0.25

Gross treatment acres

17

Total survey acres?

20

Herbicide(s) and rate?

Aquatic label Imazamox (Clearcast) (1 quart per acre) with 0.5 - 2% surfactant (Agridex) and an indicator dye.

Treatment timing

Treatment will occur between July and October 2020.

Species #2

Noxious weed species

Water primrose (Ludwigia hexapetala)

Habitat: Only list one habitat type per noxious weed species.

Riparian

Upland

Instream

Estuary

Treatment method

Herbicide and Manual

Net treatment acres

4

Gross treatment acres

10.5

Total survey acres?

20

Herbicide(s) and rate?

Treatments will include an herbicide mixture of 3% aquatic label glyphosate, 1-2% surfactant (Agridex), and indicator dye. We will potentially use an herbicide mixture of 2% Imazamox (Clearcast) and 1% glyphosate with 1-2% surfactant (e.g. Syltac or Agridex), and an indicator dye. In 2019, we used the Imazamox mixture on the western portion of Collins Bay and had significant reductions of Ludwigia cover.

Treatment timing

Treatments will take place in early summer (June/July), when about half the plants have flowered, but seed capsules have not yet matured. A follow-up treatment will take place about six to eight weeks later (September).

Have you consulted with an ODA staff about this proposal?

Yes

No

If yes who?

Beth Myers-Shenai and Glenn Miller

Has this project been previously funded by Oregon State Weed Board?

Yes

No

If yes what year(s) and provide the grant number. Provide an overview of past grants: past treatment successes and failures, need for additional treatment, estimated acreage for treatment over past grants, method of control and how this project relates to other projects within the area?

OSWB 2014 (2014-27-400), 2015 (2015-28-501), 2016 (2016-29-601), 2017 (2017-30-701), 2018 (2018-31-818), 2019 (2019-32-908)

- Reached over 150 participants from Eugene all the way to Portland in our Paddle and Pull events.
- Reached over 140 participants in our community events.
- Found A-listed species (yellow floating heart) on the mainstem Willamette through outreach events and surveys and continue to implement EDRR at those sites.
- Survey over 15 miles of the Willamette mainstem each year, finding new small populations of A and B-listed species each time.
- Yellow floating heart at Horseshoe Lake returned in early 2019, but did not return after treatment in July of 2019. We will keep an eye out for it at this site.
- Reduced Ludwigia populations at Collins Bay and Wapato Cove by 85-90% since beginning of project.
- Increased native species cover and diversity at Collins Bay. Currently present are species such as bur-reed, wapato, and spatterdock.
- At Collins Bay, the portion of the site with the most flow has had the greatest reduction in Ludwigia cover (~95% reduction). The portion of the site with less flow has not responded as well (~60% reduction) and dead Ludwigia mats remain. In 2019, we used 2% Imazamox and 1% glyphosate to hoping break up this section more. We received funding to conduct a feasibility study for mechanical removal of these mats. The study will occur in 2020.
- The combination of hand-pulling in areas with significant wapato and herbicide in areas dominated by Ludwigia is working at Wapato Cove, with a 85% reduction since 2017.
- The late flood in 2019 had significant negative impacts on Ludwigia populations, helping us get a foothold on control. The flood also had positive increases on wapato populations.
- While there are some aquatic invasive species (AIS) projects upstream of Benton County, the majority of AIS are downstream of Corvallis, indicating these sites as priority for treatment.

Proposed Solution

Identify your integrated pest management methods:

- Assessment/Management Plan Development*
- Biological control*
- Education and outreach*
- Herbicide control*
- Manual or mechanical control*
- Monitoring*
- Other:*
- Prevention*
- Restoration*
- Survey*

Describe the method of survey planned

Survey *Ludwigia* and yellow-floating heart populations by boat using GPS. The use of GPS technologies and Fulcrum software will allow us to quickly map aquatic invasive data along the river during surveys and share data with other practitioners through shared databases including Weed Mapper, Oregon Invasives Hotline, iMapInvasives, and the Willamette Aquatic Invasive Network's (WAIN) shared database.

Is this project part of a designated weed district?

- Yes
- No

Is the project part of an existing weed management plan?

- Yes
- No

List the name of the management plan?

Five-Year Action Plan for the Willamette Mainstem Cooperative (WMC)
Benton County Cooperative Weed Management Area (CWMA) Strategic Action Plan

Is this a landowner reimbursement (cost share) project?

- Yes
- No

Goals and Objectives

Goal #1

State your project goal. A goal statement should state desired outcomes and the watershed benefit.

The primary goal of this project is to increase the quantity and quality of open aquatic habitat in the Willamette River system through control of invasive aquatic weeds.

List specific and measurable objectives. Objectives support and refine the goal by breaking it down into steps for achieving the goal.

We will reduce ecological impacts of Ludwigia on the river system through the reduction of downstream spread of the species through plant fragmentation. Sites targeted for control include Collins Bay (herbicide), Wapato Cove (hand-pulling and herbicide), the side channel of Lower Kiger (weed pull events), Tripp Island (weed pull events), and satellite populations of Ludwigia between Corvallis and Albany (herbicide and hand-pulling). We will reduce populations of Ludwigia in the river using integrated techniques at strategic sites. Treatment methods will include hand-pulling and herbicide application using updated techniques and equipment (Inteli-spray system with tractor, boat, and hose & reel).

Goal #2

State your project goal. A goal statement should state desired outcomes and the watershed benefit.

Our second goal is to ensure the eradication and control of yellow floating heart at two sites, Horseshoe Lake (the first observed populations in Benton County) and downstream of Crystal Lake boat launch.

List specific and measurable objectives. Objectives support and refine the goal by breaking it down into steps for achieving the goal.

After four years of treatment, yellow floating heart was not observed at Horseshoe Lake in 2018, but was observed in the detention pond that drains into the lake. When the lake was surveyed again in 2019, a small population of yellow floating heart was found and treated. We will continue to monitor this lake and engage with the HOA on their treatment of the detention pond. We also will reduce the ecological impacts of yellow floating heart of the river system. In 2016 and 2017, we saw the first observed yellow floating heart occurrences along the mainstem of the Willamette River in the Corvallis to Albany reach (at a side channel at Lower Kiger and at Tripp Island). Our volunteer groups hand-pulled the small populations and in 2018-2019 we did not observe yellow floating heart at these sites. We did, however, find a new small satellite population just downstream of Crystal Lakes boat launch in Corvallis. We will continue to visit these areas to pull any new plants, as well as survey for this species along the river and hand-pull or chemically treat populations, depending on the size of the populations we observe.

Goal #3

State your project goal. A goal statement should state desired outcomes and the watershed benefit.

Though this project, we propose to reach at least 50 people through education and outreach activities, including presentations, workshops, and volunteer weed pulls.

List specific and measurable objectives. Objectives support and refine the goal by breaking it down into steps for achieving the goal.

We will host two paddle and weed pull events and one community aquatic vegetation education event. These events average 20 participants and we are able to increase outreach and education about best management practices, aquatic invasives species, and hand-pull populations en route. We will provide information on aquatic weed identification and proper early detection and rapid response techniques. Through volunteer weed pulls, Ludwigia and yellow floating heart will be removed from areas where it is just becoming established before it forms more significant populations.

We will also share treatment methodology and results with other land managers and practitioners. The use of Fulcrum software will allow us to quickly map aquatic invasive data along the river during surveys and instantaneously share data with other practitioners through a shared database. All survey data collected for this project will also be entered into Weedmapper and WAIN's shared database to track treatments and map noxious weed populations. Control techniques and efficacy of treatments will continue to be recorded and shared through meetings, presentations, and workshops.

Which elements of the project will Oregon State Weed Board funds be used for? List specific activity and timing of the activity.

1) Salary and Wages:

Funding for Benton SWCD staff will be used for these tasks: project coordination and management (on-going), administration and oversight of all grant activities (on-going), coordination and facilitation of education and outreach activities (April - October 2020), information sharing and reporting (on-going), and monitoring of project sites (photo points).

2) Contracted Services:

Treatment and monitoring of yellow floating heart sites (mainly Horseshoe Lake and just downstream of Crystal Lakes boat launch). Treatment will occur between June-July depending on conditions and consist of application of herbicide. Secondary control treatments will take place August-September.

Treatment and monitoring of Ludwigia sites (Collins Bay and Wapato Cove). Treatment will occur between June-July depending on conditions and consist of application of herbicide. Secondary control treatments will take place August/September.

Education and outreach through the coordination of at least two days of paddle and weed pull events on the Willamette and one aquatic weed workshop for the community. All events will be held June - August.

3) Other

OSWB will be requested for the reimbursement of the Water Weed Guide to Aquatic Weeds for Benton County given out to volunteers at outreach events (on-going).

4) Travel

Travel to sites and events occurs throughout the project timeline.

How does this project relate to other projects being completed or planned (BLM, USFS or local projects) ?

The Willamette River Aquatic Weed Management Phase 7 fits within the mission and guiding principles of the WMC, a group of landowners, organizations, and volunteers who work together to improve the stewardship of natural resources across all landownerships on the mainstem Willamette, with a focus on the Corvallis to Albany reach. Ludwigia and yellow floating heart are listed as priority species for control in the Willamette River in the WMC Five-Year Action Plan. Capacity funding for the WMC is funded by Meyer Memorial Trust, through the Willamette River Initiative program, with Benton SWCD providing leadership and fiscal management.

Benton SWCD was recently awarded Meyer Memorial Trust funding to 1) develop 90% project implementation plan for mechanical removal of Ludwigia (and remaining dead mats) from Collins Bay, 2) develop a restoration plan for Collins Bay, 3) disseminate strategies of mechanical removal of Ludwigia to partners around Oregon, and 4) develop a preliminary decision-framework evaluating costs and benefits trade-offs for Ludwigia treatment. The restoration plan for Collins Bay will be completed by the end of 2020 and will highlight our timeline for treatments at Collins Bay and how we intend to treat Collins Bay in the future without the use of ODA OSWB funds.

How does this project fit into the statewide and/or local weed management objectives? Identify the county weed listing priority if known.

Objective 1: Leadership and Organization

The Benton County CWMA provides local leadership and organization to groups, agencies, and landowners related to the invasive plant issues around the county.

Objective 2: Cooperative Partnerships

The Benton County CWMA is made up of a broad partnership of agencies, organizations, and landowners. The Willamette Mainstem Cooperative, a group of stake holders, is also involved in the planning and implementation of this project.

Objective 4: Education and Awareness

Through partnerships developed in this project, we provide education and outreach to land managers, restoration practitioners, landowners, and the general public through aquatic workshops, volunteer weed pulls, and project site tours.

Objective 6: Early Detection and Control of New Invaders

This project includes EDRR of new invaders as a key element: we are successfully controlling the first observed *Nymphoides peltata* in Benton County, as well on the mainstem Willamette.

Wrap-Up

Are there additional partners

- Yes
 No

List additional partners?

Project Partner #1

Name or organization

Oregon Department of Agriculture

Role and responsibilities?

Beth Myers-Shenai and Glenn Miller, both Integrated Weed Management Specialists with ODA, will continue to provide in-kind support in the form of professional advice, site visits, and consultation on weed control activities. ODA provided photos and GIS shapefiles from aerial surveys for Ludwigia in the Willamette River system conducted during summer 2014. Further survey work is planned, as feasible. These data have helped to assess the extent of Ludwigia populations in the Willamette River system and are being utilized in the formation of a management plan for this plant (currently being developed by the Willamette Aquatic Invasives Network).

Project Partner #2

Name or organization

Oregon Parks and Recreation Department

Role and responsibilities?

OPRD staff, Scott Youngblood, will continue to participate in outreach activities related to this project. In the past, OPRD has participated in similar projects by providing coordination and safety assistance during volunteer activities on the river. Last year, OPRD provided canoes for participants. OPRD staff have helped control priority invasives on the Willamette. They will continue to provide these services in 2020 and in-kind funding in the form of staff time and equipment use.

Project Partner #3

Name or organization

Willamette Riverkeeper

Role and responsibilities?

Willamette Riverkeeper staff will continue to work with Benton SWCD to organize at least three river events, including one aquatic invasive workshop and two volunteer weed pulls on the Willamette River in Benton County. WRK will provide in-kind funding in the form of equipment use (boats, vans, and trailers). Grant funds are requested in this proposal for WRK staff time and mileage, which will be disbursed under paid contract.

Project Partner #4

Name or organization

Portland State University Center for Lakes and Reservoirs

Role and responsibilities?

Staff from PSU Center for Lakes and Reservoirs will continue to participate, as they have for our previous workshops and volunteer events, by offering expertise on aquatic invasives, presentations, and sharing outreach materials.

Project Partner #5

Name or organization

Horseshoe Lake HOA and Collins Bay and Wapato Cove Landowners

Role and responsibilities?

Private landowners at Horseshoe Lake, Wapato Cove, and Collins Bay will continue to partner with us on these projects through site monitoring, regular contact with Benton SWCD, and outreach to neighbors in the area. The Horseshoe Lake Neighborhood Association will continue to monitor and treat yellow floating heart as necessary in a detention pond that drains into the lake. Benton SWCD will continue to provide information handouts about the project and weeds of concern to interested landowners.

Project Partner #6

Name or organization

Willamette Mainstem Cooperative and Willamette Aquatic Invasives Network

Role and responsibilities?

Both WMC and WAIN focus on management of invasive species on the mainstem of the Willamette River. The WMC is a group of landowners, organizations, volunteers, and other interested parties working towards shared long-term stewardship of Willamette River resources with a focus on the Corvallis to Albany river reach. The WAIN, comprised of over 50 participating organizations (local, state, and federal), fosters collaboration to share information, expertise, technologies, aquatic resources, and restore aquatic and riparian habitat in the Willamette River Basin. WRAWMP (this project) has benefited from the work and expertise of members of WAIN and the WMC. The BC CWMA will continue to coordinate and work with these groups to share information and lessons learned in the management of Ludwigia.

How will restoration be a part of your project? If restoration is not a component of this project please explain.

Collins Bay is a site recommended for restoration due to the rarity of open marshland on the mainstem of the river, which is vital habitat for birds, fish, pond turtles, river otters, and many other species. Six seasons of treatment at Collins Bay have led to a significant reduction in Ludwigia cover, with some areas having greatly reduced plant cover to no plant cover (Appendix B). In 2016 and 2017, native plants such as wapato, common spikerush, soft rush, spike bent grass, American slough grass, slender rush, and slough sedge were all planted at Collins Bay. In 2019, native plant cover had increased since 2017 (Appendix B). Benton SWCD was also recently funded to develop a restoration plan for Collins Bay, which will be completed by the end of 2020. This plan will highlight how we intend to treat Collins Bay in the future without the use of ODA OSWB funds.

Does this project protect a high priority species or habitat? Please give a brief description of the species or habitat.

- 1) Anchor Habitat for Anadromous Fish: Collins Bay and Wapato Cove are within the areas identified in OWEB's Willamette River Habitat Protection and Restoration Program 2010-2015. They are also within ODFW's designated essential salmon habitat.
- 2) Open Water Marsh Habitat: Collins Bay was also listed as a special habitat by Carex Working Group, stating that open water marsh habitat was rarely encountered along the Willamette mainstem.
- 3) Western Pond Turtles: Western pond turtles are considered a sensitive species by the state of Oregon. While there are no official surveys on record, property owners Stanley and Louise Snyder spoke of pond turtles once found in Collins Bay. They have witnessed more wildlife species using the inlet since treatment on Ludwigia began. Western pond turtles require open water habitat with native emergent vegetation.
- 4) Wapato (*Sagittaria latifolia*) is considered a significant native plant for its cultural value. It is prevalent at these sites.

At the end of the project, how will it be determined whether the goals and objectives listed in application have been met? What elements will be monitored and by whom, how often and for how long?

Monitoring and evaluation of this project is currently being led by Benton SWCD, and will continue for as long as needed, provided funding is available. To determine success for this project, existing photo-points will continue to be used for monitoring purposes. Success will be determined by comparing post-treatment distribution and abundance of Ludwigia, yellow floating heart, and native plants to pre-treatment abundance and distribution.

Success of Ludwigia infested sites will be determined by a reduction in Ludwigia populations to a level that sites can be managed through river volunteer events at a budget and level manageable by local partners. This project includes the seventh year of treatment for Ludwigia at Collins Bay. We are currently funded to develop a restoration plan for Collins Bay that will lay out our exit strategy from Collins Bay and includes determining the feasibility for mechanical removal at this site.

What is the long-term plan for this project? Who will maintain the project after the grant and for how long?

Priority sites that are being treated, including Collins Bay and Wapato Cove, will be included as part of a strategic action plan being developed by WAIN. This plan will include clear goals and objectives for sites and will integrate work already accomplished with future restoration needs. The plan will also include a timeline for achieving restoration goals, and the associated actions needed to accomplish these goals. Continued community education and outreach about Ludwigia and yellow floating heart is key to long-term management and protection of priority habitats. Significant process has been made with public awareness about Ludwigia and yellow floating heart as a result of the river workshops and paddle and pull events. We reached over 50 people this year alone through these events. Benton SWCD will continue to maintain these projects for as long as funding can be obtained. We continue to look for alternative treatments, including recent funding for potential mechanical removal.

Budget

Item	Unit Type	Unit Number	Unit Cost	OWEB Funds	External Cash	External In-Kind	Total Costs
Salaries, Wages and Benefits							
Benton SWCD Project Manager	Hours	305	\$34.00	\$5,510	\$4,860	\$0	\$10,370
Benton SWCD Executive Direction	Hours	40	\$42.00	\$0	\$0	\$1,680	\$1,680
Category Sub-total				\$5,510	\$4,860	\$1,680	\$12,050
Contracted Services							
Collins Bay - Ludwigia control (herbicide) with Intelli-spray and tractor and backpack, early summer and early fall treatment (IRM)	Hours	75	\$62.50	\$4,688	\$0	\$0	\$4,688
Herbicide for Collins Bay	Days	2	\$185.27	\$371	\$0	\$0	\$371
Wapato Cove - Ludwigia control (herbicide) with Intelli-spray and tractor and backpack, early summer and early fall treatment (IRM); manual control in dense areas of wapato with sparse Ludwigia	Hours	112.5	\$62.50	\$7,032	\$0	\$0	\$7,032
Herbicide for Wapato Cove	Days	2	\$34.75	\$70	\$0	\$0	\$70
Horseshoe Lake, Benton County - Aquatic veg control (herbicide) with backpack, early summer and fall treatment (IRM)	Hours	12	\$62.50	\$750	\$0	\$0	\$750
Herbicide for Horseshoe Lake	Days	2	\$17.59	\$36	\$0	\$0	\$36
Willamette River Yellow Floating Heart Treatment	Hours	12	\$62.50	\$750	\$0	\$0	\$750
Herbicide for Willamette River	Days	2	\$11.73	\$24	\$0	\$0	\$24
Restoration work parties and community outreach (Willamette Riverkeeper contract)	Days	3	\$1,650.00	\$4,950	\$0	\$0	\$4,950
Restoration work parties (paddle and weed pull volunteers; minimum of 6 volunteers x 8 hours x 2 events)	Hours	96	\$25.43	\$0	\$0	\$2,442	\$2,442
WRK AmeriCorp Volunteer	Hours	120	\$25.43	\$0	\$0	\$3,052	\$3,052
Mileage reimbursement (Willamette Riverkeeper, Portland)	Miles	480	\$0.58	\$279	\$0	\$0	\$279
Canoes, paddling equip., dry bags, trailer & other equip. (Willamette Riverkeeper & OPRD)	Each	20	\$48.00	\$0	\$0	\$960	\$960
Assistance with outreach activities (Oregon State Parks Dept., Scott Youngblood)	Hours	30	\$45.15	\$0	\$0	\$1,355	\$1,355

ODA (Beth Myers-Shenai and Glenn Miller) assistance with coordination and treatment	Days	2	\$500.00	\$0	\$0	\$1,000	\$1,000
Category Sub-total				\$18,950	\$0	\$8,809	\$27,759
Travel							
Mileage for project (BSWCD staff)	Miles	410	\$0.58	\$238	\$0	\$0	\$238
Category Sub-total				\$238	\$0	\$0	\$238
Materials and Supplies							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Equipment							
			\$0	\$0	\$0	\$0	\$0
Category Sub-total				\$0	\$0	\$0	\$0
Other							
Reimbursement for Aquatic Weed Guides for Benton County given out at events	Each	100	\$4.56	\$456	\$0	\$0	\$456
Disposal of bagged hand pulled aquatic weeds	Each	1	\$45.00	\$45	\$0	\$0	\$45
Category Sub-total				\$501	\$0	\$0	\$501
Modified Total Direct Cost Amounts				\$25,199	\$4,860	\$10,489	\$40,548
Indirect Costs							
Federally Accepted 'de minimis' Indirect Cost Rate (up to 10%)	10%				Indirect Cost Total: \$2,520		
Total				\$27,719	\$4,860	\$10,489	\$43,068

* = OWEB funds excluded from indirect.

If the budget includes unusually high costs and/or rates, provide justification for those costs and/or rates.

If the budget identifies a contingency amount for specific line item(s) within the Contracted Services and Materials and Supplies budget categories, explain the specific reasons a contingency is needed for each line item. Contingencies are line-item specific and cannot be used for other costs.

Funding and Match

Fund Sources and Amounts

Organization Type	Name	Source Note	Contribution Type	Amount	Description	Status
Non-Governmental Organization	Benton Soil and Water Conservation District		In-Kind - Labor	\$1,680	Benton SWCD Executive Director	Secured
Non-Governmental Organization	Benton Soil and Water Conservation District		In-Kind - Volunteers	\$2,442	Restoration work parties (paddle and weed pull volunteers; minimum of 6 volunteers x 8 hours x 2 events)	Secured
Non-Governmental Organization	Benton Soil and Water Conservation District		Cash	\$4,860	Benton SWCD - Project Manager	Secured
Non-Governmental Organization	Willamette Riverkeeper		In-Kind - Materials	\$960	Canoes, paddling equip, dry bags, trailer & other equip	Secured
Non-Governmental Organization	Willamette Riverkeeper		In-Kind - Volunteers	\$3,052	AmeriCorp Volunteer	Secured
State	Oregon Parks and Recreation Department		In-Kind - Labor	\$1,355	Assistance with outreach activities (Scott Youngblood)	Secured
State	Oregon Department of Agriculture		In-Kind - Labor	\$1,000	Beth Myers-Shenai and Glenn Miller consultation and control assistance.	Secured
Fund Source Cash Total			\$4,860	Fund Source In-Kind Total		\$10,489

Match

Contribution Source-Type: Description	Amount
Benton Soil and Water Conservation District-In-Kind - Labor: Benton SWCD Executive Director	\$1,680
Benton Soil and Water Conservation District-In-Kind - Volunteers: Restoration work parties (paddle and weed pull volunteers; minimum of 6 volunteers x 8 hours x 2 events)	\$2,442
Benton Soil and Water Conservation District-Cash: Benton SWCD - Project Manager	\$4,860
Willamette Riverkeeper-In-Kind - Materials: Canoes, paddling equip, dry bags, trailer & other equip	\$960
Willamette Riverkeeper-In-Kind - Volunteers: AmeriCorp Volunteer	\$3,052
Oregon Parks and Recreation Department-In-Kind - Labor: Assistance with outreach activities (Scott Youngblood)	\$1,355
Oregon Department of Agriculture-In-Kind - Labor: Beth Myers-Shenai and Glenn Miller consultation and control assistance.	\$1,000
Match Total	\$15,349

Do match funding sources have any restrictions on how funds are used, timelines or other limitations that would impact the portion of the project proposed for OWEB funding?

Yes

No

Do you need state OWEB dollars (not Federal) to match the requirements of any other federal funding you will be using to complete this project?

Yes

No

Does the non-OWEB cash funding include Pacific Coast Salmon Recovery Funds?

Yes

No

Uploads

Letters: [AllLetters_20191209.pdf](#) -

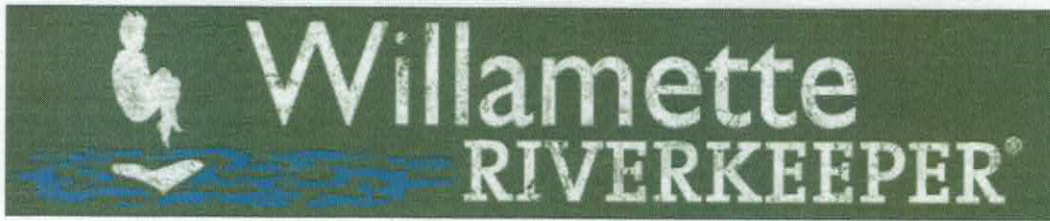
Map: [Maps_20191202.pdf](#) -

Photo (other): [AppendixB.pdf](#) -

Secured Match Forms: [SignedMatchForm.pdf](#) -

Permit Page

Project Activity Requiring a Permit or License	Name of Permit or License	Entity Issuing Permit or License	Status
Herbicide treatment	2300A Permit	DEQ	Apply for this annually



December 4, 2019

Oregon State Weed Board
635 Capital St. NE
Salem, Oregon 97301-2532

Dear Oregon State Weed Board Grant Review Team Members,

We are so very pleased to continue our long-standing partnership the Benton Cooperative Weed Management Area (CWMA) and Benton Soil and Water Conservation District (SWCD) for their work to control invasive species at priority sites on the Willamette River and to conduct outreach with the public on this issue. The strong focus on weed management in the Corvallis to Albany Reach of the Willamette River has been very effective in controlling existing weed infestation and preventing new infestations of EDRR species. This project will continue to treat target priority noxious weeds, restore biologically diverse habitat, and allow for much needed community outreach about the importance of protecting and enhancing off channel habitats in the Willamette Valley.

Willamette Riverkeeper is a non-profit organization dedicated to protecting and restoring the Willamette River. As partners in this project, Willamette Riverkeeper staff will work closely with Benton CWMA and SWCD staff to engage community members in hands-on stewardship and educational activities.

In partnership, we will co-facilitate one community aquatic weed workshop to engage and restoration professionals and members of the public in learning more about the impacts of aquatic invasive species. We will also plan and lead two on the water community "paddle and pull" / EDRR survey events. These work party events will focus on hand pulling target invasive plants and providing community outreach and hands on education. We will also spend one river day conducting an EDRR survey in the Corvallis to Albany Reach. The survey will focus on searching for new infestations of yellow floating heart. All of these activities will occur within the Corvallis to Albany Reach on the mainstem Willamette River.

Thank you for your careful consideration and support of this grant proposal.

Sincerely,

A handwritten signature in black ink that reads "Marci Krass".

Marci Krass
Restoration Program Manager



Oregon

Kate Brown, Governor

Parks and Recreation Department

725 Summer St. NE, Suite C

Salem, OR 97301-1271

(503) 986-0980

Fax (503) 986-0794

www.oregonstateparks.org



December 2, 2019

Oregon State Weed Board
635 Capital St. NE
Salem, Oregon 97301-2532

Subject: Support for the BC CWMA OSWB application entitled "*Willamette River Aquatic Weed Management Phase 7*"

Dear Oregon State Weed Board Grant Review Team Members,

I am writing to express the Oregon Department of Parks & Recreation's (OPRD) support for the Benton County Cooperative Weed Management Area's (BC CWMA) grant proposal for aquatic weed management. Partnerships between private and public landowners, local and state agencies, and non-profit conservation organizations have proven successful in recent years to address critical habitat needs along the Corvallis to Albany Reach of the Willamette. Building on past weed mapping and treatment work, the BC CWMA proposes to conduct follow-up treatments of *Ludwigia* in Collins Bay, and to add an additional site locally known as Wapato Cove. Several *Ludwigia* sites have been the focus of volunteer hand-pulling in previous years, and will continue to be monitored and targeted for hand-pulling during this project phase. OPRD has enjoyed working with BSWCD and other partners to assist with these efforts and events.

The control of target invasive plants will contribute significantly to improving ecological function of the Willamette River, and protecting unique and high quality habitats.

In order to support the next phase of these efforts, OPRD staff plans to assist in volunteer and outreach activities on the river including weed pulls and aquatic weed workshops. OPRD will contribute \$1,355 in staff time for control, monitoring, and outreach activities related to this project. Thank you for your consideration of this proposal.

Sincerely,

Sarah Steele
Willamette District Manager



***The Ridge at Cascade Heights HOA
c/o 1905 NW Eagles Nest Circle
Albany, OR 97321 (541) 791-7989***

Oregon State Weed Board
Oregon Department of Agriculture
635 Capital St. NE
Salem, Oregon 97301-2532

November 19, 2019

Subject: Support for the BC CWMA OSWB application: "*Willamette River Aquatic Weed Management Phase 7*"

Dear Oregon State Weed Board Grant Review Members,

On behalf of the Cascade Heights Homeowners Association (HOA), I would like to express our strong support for the Benton County Cooperative Weed Management Area's (BC CWMA) grant proposal for "*Willamette River Aquatic Weed Management Project Phase 7*" in the Corvallis to Albany Reach of the Willamette River.

The BC CWMA, currently coordinated by the Benton Soil and Water Conservation District (SWCD), has been working with the HOA on control treatments of yellow floating heart (*Nymphoides peltata*), an Oregon Department of Agriculture (ODA) A-listed noxious weed, at Horseshoe Lake. The lake is partially owned by the HOA.

In 2019, Benton SWCD surveyed our lake and found yellow floating heart after a two year hiatus. They were able to treat the site in July 2019 and did not find it again afterwards. In 2020, BC CWMA proposes to monitor the lake for yellow floating heart and treat it in the case of its return, which we support.

The HOA is actively engaged in monitoring of the lake and in learning more about yellow floating heart, its effects, and possible treatment methods. Concurrent with Benton SWCD's treatment regimen for yellow floating heart at the lake, the HOA will continue to have the detention pond that drains into the lake inspected for yellow floating heart and treated by a contracted professional if any plants are found.

The continued control of yellow floating heart at Horseshoe Lake will contribute significantly to improving ecological function of the lake and protect this unique open water habitat along the Willamette River.

Thank you for your consideration of this proposal.

Sincerely,

Mark Jones, President
The Ridge at Cascade Heights HOA

***Board of Directors: Mark Jones, President <> Judy Steel, Treasurer <> Kathy Meddaugh, Secretary
Marsha Nierenberg, Director <> Karen Carnahan, Director***

Appendix A: Treatment Site Maps - Benton and Linn Counties

Yellow Floating Heart at Horseshoe Lake, Benton County



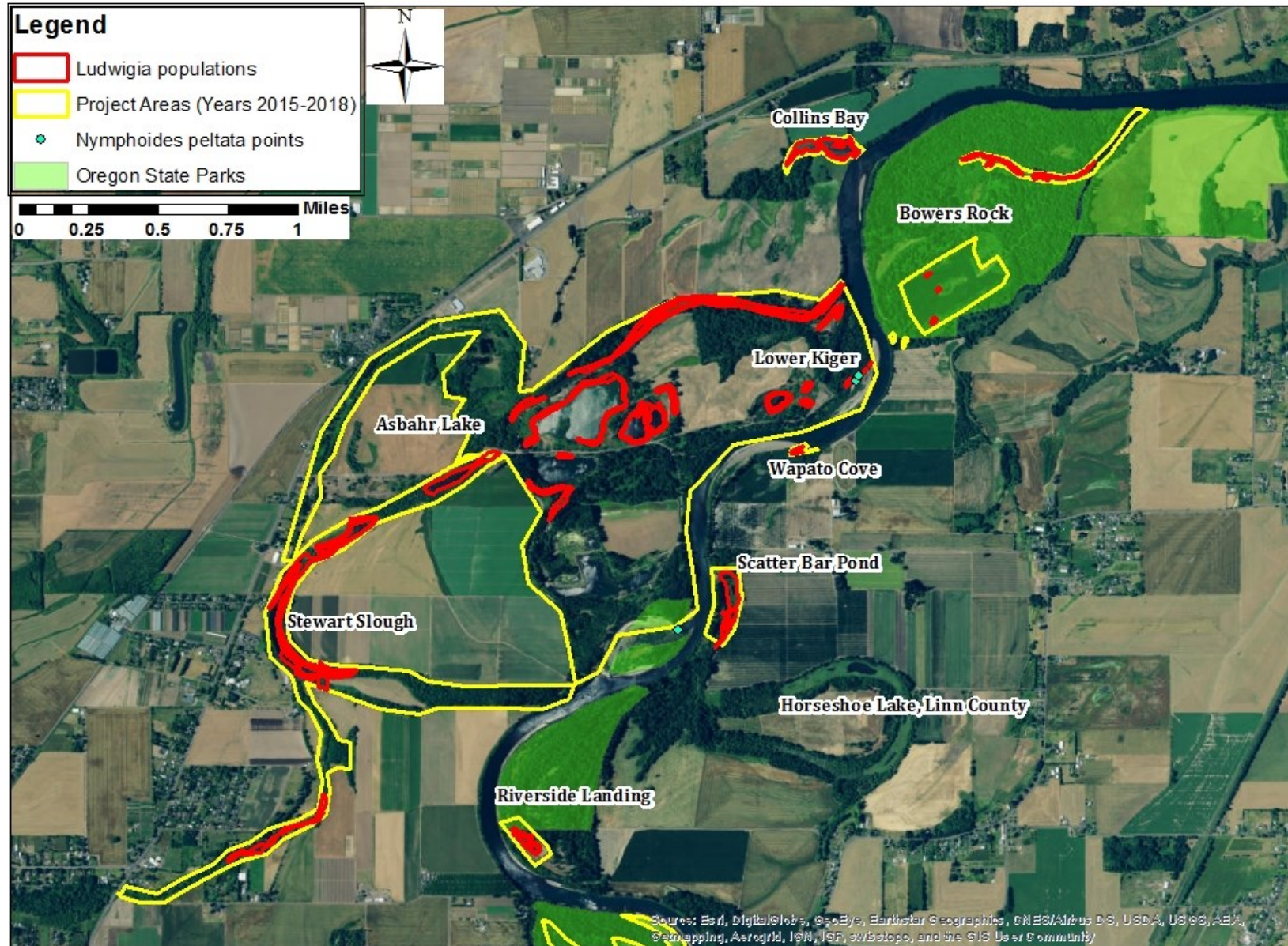
Appendix A: Treatment Site Maps—Benton and Linn Counties

Yellow Floating Heart downstream of Crystal Lake Boat Launch

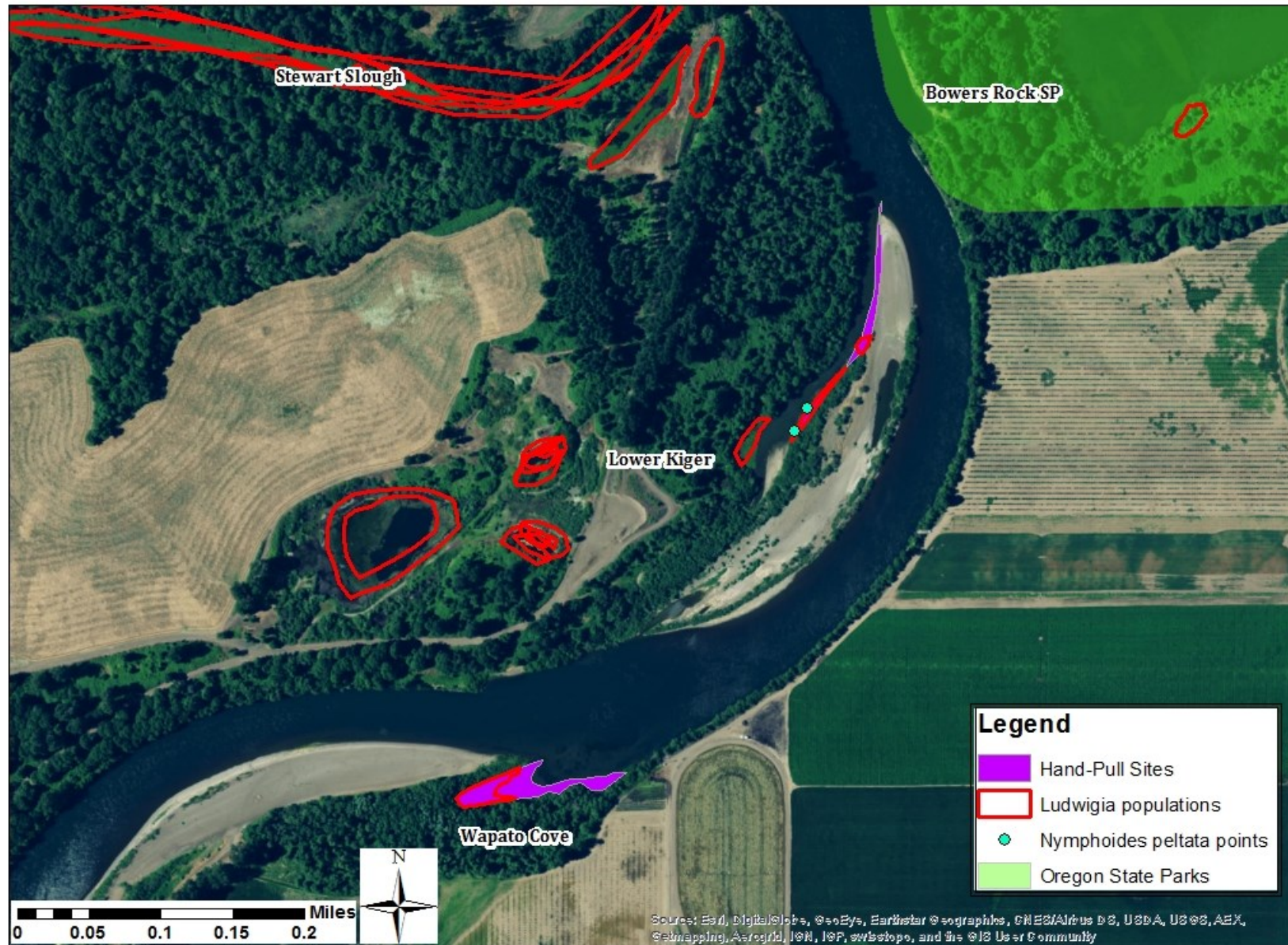


Appendix A: Treatment Site Maps - Benton and Linn Counties

Ludwigia and Yellow Floating Heart Sites along Willamette River



Hand-Pulling Sites for Ludwigia and Yellow Floating Heart



Appendix A: Treatment Site Maps - Benton and Linn Counties

Collins Bay Photo Points



Appendix A: Treatment Site Maps - Benton and Linn Counties

Collins Bay Restoration Planting Areas



Appendix B: Photos of WRAWM Phases 1-6



Yellow floating heart at Horseshoe Lake—
June 2016



Yellow floating heart at Horseshoe Lake—
July 2019



Yellow floating heart at Horseshoe Lake—
September 2019



Yellow floating heart at Horseshoe Lake—
June 2016



Yellow floating heart at Horseshoe Lake—
July 2019



Yellow floating heart at Horseshoe Lake—
September 2019

Appendix B: Photos of WRAWM Phases 1-6



Photo Point 1—July 7, 2014 before Ludwigia treatment



Photo Point 1—June 27, 2016, before 3rd year of Ludwigia treatment



Photo Point 1—July 7, 2017, before 4th year of treatment



Photo Point 1—July 15, 2019, before 6th year of Ludwigia treatment



Photo Point 1—September 12, 2019, after 6th year of Ludwigia treatment.

Appendix B: Photos of WRAWM Phases 1-6



Photo Point 2—July 7, 2014, before Ludwigia treatment



Photo Point 2—June 27, 2016, before 3rd year of Ludwigia treatment



Photo Point 2—July 7, 2017, before 4th year of Ludwigia treatment



Photo Point 2—July 15, 2019, before 6th year of Ludwigia treatment



Photo Point 2—September 12, 2019, after 6th year of Ludwigia treatment

Appendix B: Photos of WRAWM Phases 1-6



Photo Point 3—July 7, 2014, before Ludwigia treatment



Photo Point 3—June 27, 2016, before 3rd year of Ludwigia treatment



Photo Point 3—July 7, 2017, before 4th year of Ludwigia treatment



Photo Point 3—July 15, 2019, before 6th year of Ludwigia treatment



Photo Point 3—September 12, 2019, after 6th year of Ludwigia treatment

Appendix B: Photos of WRAWM Phases 1-6



Photo Point 4—July 7, 2014, before Ludwigia treatment



Photo Point 4—July 25, 2016, before 3rd year of Ludwigia treatment



Photo Point 4—July 7, 2017, before 4th year of Ludwigia treatment



Photo Point 4—July 15, 2019, before 6th year of Ludwigia treatment



Photo Point 4—September 12, 2019, after 6th year of Ludwigia treatment

Appendix B: Photos of WRAWM Phases 1-6



Photo Point REST-1 (July 25, 2016): Before 2016 control treatments for Ludwigia and before wapato planting in Fall 2016.



Photo Point REST-1 (July 7, 2017): Only a few wapato sprouting (not visible).



Photo Point REST-1 (June 26, 2019): A good stand of wapato present, as well as native giant bur-reed.

Appendix B: Photos of WRAWM Phases 1-6



Photo Point REST-2 (October 4, 2017): Native aquatic materials (wapato tubers and native aquatic seed) added Fall 2017.



June 26, 2019: Dense wapato stand found at Collins Bay.



Photo Point REST-2 (June 26, 2019): Native aquatic materials growing (wapato and giant bur-reed) despite new trail nearby.



June 26, 2019: Native aquatic materials growing (wapato on right and giant bur-reed on the left) at Collins Bay.



Love Your River

Together we can help
the Willamette and its
habitats!

Get to know aquatic plants

Take home a weed guide

Paddle and pull with us



July 18 and July 30, 2019: Participants pull Ludwigia during annual Paddle and Pull events.



Aquatic Plant Workshop

Thursday June 27, 10:00AM-3:30PM

Learn to ID and survey for native and invasive plants between Corvallis and Albany.

Water Weed Pulls

Paddle with us & pull weeds along the way.

Corvallis to Albany river reach
Thurs. July 18, 9:30AM-3:30PM or
Tues. July 30, 9:30AM-3:30PM

Bring your own boat or borrow a canoe.



For more information or to sign up:
www.bentonswcd.org/programs/willamette-

#LoveYourRiver

#WillametteRiver



July 30, 2019: Laura Brown gives a weed talk, helping participants identify noxious aquatic weeds.

Appendix B: Photos of WRAWM Phases 1-6



July 30, 2019: Richard Dickenson helps a volunteer ID species (above) while NRCS helps dispose of noxious weeds (below)!

June 27, 2019: Participants take part in learning to ID aquatic natives and invasive weeds despite the rain!

Appendix B: Photos of WRAWM Phases 1-6



Wapato Cove: Ludwigia was dominant throughout the south side of the site and had mixed densities in other areas. August 12, 2016 prior to treatment.



Wapato Cove: Ludwigia significantly reduced and wapato prevailing after large Willamette spring flood and two years of treatment. September 12, 2019 after 1st round of 2019 herbicide treatment.

Appendix B: Photos of WRAWM Phases 1-6



Wapato Cove: August 12, 2016, prior to Ludwigia treatment.



Wapato Cove: October 23, 2018, after 2nd year of Ludwigia treatment.



Wapato Cove: September 12, 2019, after 3rd year of Ludwigia treatment.



Wapato Cove: September 12, 2019, dense stands of wapato.

Appendix B: Photos of WRAWM Phases 1-6



Lower Kiger Island (LKI) Plot 1: Hand pulling of small patches by volunteers. July 16, 2016.



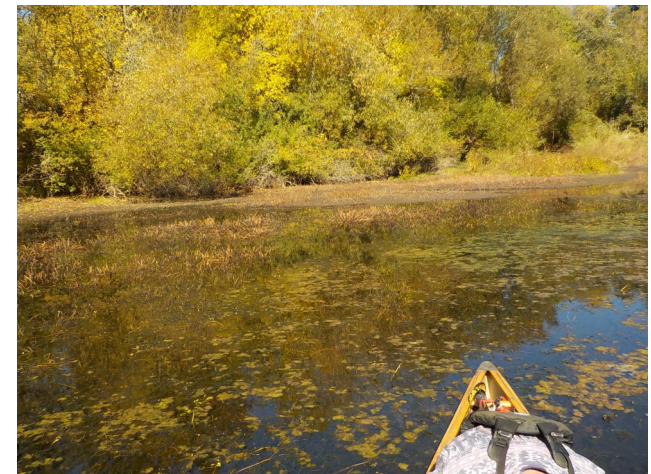
LKI Plot 1: Hand pulling of small patches by volunteers. Patches have greatly decreased in size after several years of hand pulling. July 18, 2019.



LKI Plot 2: Before 1st year of herbicide treatment using OWEB-WSIP funds. July 13, 2016.



LKI Plot 2: Before 2nd year of herbicide treatment using OWEB-WSIP funds. July 8, 2017.



LKI Plot 2: After 3rd year of herbicide treatment using OWEB-WSIP funds. October 15, 2018.



ODA Noxious Weed Grant Program

Match Funding Form

*Document the match funding
shown on the budget
page of grant application*



OSWB accepts all non-OWEB funds as match. An applicant may not use another OWEB grant to match an OSWB grant. At the time of agreement signature, match funding for OSWB funds requested must be secured, you must show that at least 25% of match funding has been secured. On this form, identify the type of match (cash or in-kind), the status of the match and either a dollar amount or a dollar value (based on local market rates) of the in-kind contribution. You may also provide proof of match by submitting a copy of signature pages from your funding sources, such as Federal or State grants/contracts.

If you have questions about whether your proposed match is eligible or not, visit the OWEB website at <https://www.oregon.gov/oweb/Documents/Budget-Categories-Definitions.pdf> or contact Tristen Berg • tberg@oda.state.or.us or 503-986-4622.

Grantee:

Grant #:

Project Name:

Match Funding Source	Type (√ one)	Status (√ one)*	Dollar Value	Match Funding Source Signature/Date*
Benton SWCD - PM	<input checked="" type="checkbox"/> cash <input type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	4,860	Holly Cross
Benton SWCD - ED	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	1,680	Holly Cross
Benton SWCD - Volunteers	<input type="checkbox"/> cash <input checked="" type="checkbox"/> in kind	<input checked="" type="checkbox"/> secured <input type="checkbox"/> pending	4,741	Holly Cross
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		
	<input type="checkbox"/> cash <input type="checkbox"/> in kind	<input type="checkbox"/> secured <input type="checkbox"/> pending		

* **IMPORTANT:** If you checked the "Secured" box in the Status Column for any match funding source, you must provide either the signature of an authorized representative of the match source in the final Column, or attach a letter of support from the match funding source that specifically mentions the dollar amount you show in the Dollar Value Column.