



OREGON  
**WATERSHED**  
ENHANCEMENT BOARD

Agenda Item I

**Spring Open Solicitation Grant  
Offering Board Awards**

Board Meeting October 23-25, 2023



Tina Kotek, Governor



OREGON  
WATERSHED  
ENHANCEMENT BOARD

775 Summer Street NE, Suite 360  
Salem OR 97301-1290  
[www.oregon.gov/oweb](http://www.oregon.gov/oweb)  
(503) 986-0178

*Agenda Item I supports OWEB's Strategic Plan priority # 5: The value of working lands is fully integrated into watershed health.*

## MEMORANDUM

**TO:** Oregon Watershed Enhancement Board  
**FROM:** Eric Williams, Grant Program Manager  
**SUBJECT:** Agenda Item I. Spring 2023 Open Solicitation Grant Offering  
October 23-25, 2023, Board Meeting

### I. Introduction

This staff report describes the Spring 2023 Open Solicitation Grant Offering and funding recommendations. Staff request the board approve the funding recommendations outlined in Attachment D to the staff report, including funding for 54 restoration grants, 30 technical assistance grants, 5 stakeholder engagement grants, and 21 monitoring grants.

### II. Spring 2023 Grant Offering Background and Summary

A total of 110 applications were received requesting almost \$19 million. Attachment A shows applications submitted by region, project type, and funding request.

### III. Review Process

Staff facilitated a review process where all eligible grant applications were evaluated by the agency's six Regional Review Teams (RRTs). Staff scheduled site visits for as many proposed projects as possible, with all RRT members invited to the visits.

OWEB then facilitated RRT meetings in each region for all grant types offered. Reviewers considered the likelihood of success of the proposed project based on evaluation criteria in rule, which are provided in Attachment B. After classifying applications as "Recommended," "Recommended with Conditions," or "Not Recommended," the RRTs then prioritized the projects recommended for funding by application type.

The RRT evaluations and recommendations, along with staff recommendations, were distributed to all applicants. Attachment C includes the number of applications recommended by RRTs and staff for each region by project type, as well as staff-recommended award totals by application type and region. Prior to the board meeting, staff will forward to the board any written comments received from applicants regarding the RRT and staff recommendations.

### IV. Salmon License Plate Projects

Staff recommends distributing \$500,000 in salmon license plates funds to two recommended restoration projects (\$250,000 each):

- 223-2016, “Smith River Basin: High Priority Passage Improvements,” and
- 223-3031, “Upper Sandy River Basin Habitat Restoration Project - Zigzag River.”

**V. Sage-grouse Projects**

At its April 2015 meeting, the board adopted a policy to make available at least \$10 million through its granting programs over the next ten years in support of projects located in Oregon’s sage steppe ecosystem that improve greater sage-grouse habitat. The recommended Spring 2023 Open Solicitation Grant awards include two projects that meet the criteria:

- 223-4029, “Brattain Post Fire Restoration Project Effectiveness,” requesting \$252,269, and
- 223-5028, “Dry Creek Phase III WQ Improvement,” requesting \$51,183.

If awarded, total funding for sage-grouse projects since 2015 will be \$14,254,493.

**VI. Funding Recommendation**

Staff considered the RRT recommendations and funding availability in developing the staff funding recommendations provided in Attachment D, which includes the number of applications recommended for funding by RRTs and staff by region and grant type. The funding recommendations for the Spring 2023 Open Solicitation Grant Offering are summarized in Table 1. This will be the first Open Solicitation grant award for the 2023-2025 biennium.

**Table 1: Spending Plan and Funding Recommendations for Spring 2023 Grant Offering**

Grant Type	Spending Plan	Awards to Date	Staff Recommendation	Remaining Spending Plan Balance
Restoration	\$36,500,000*	\$0	\$8,998,845	\$27,501,155
Technical Assistance	\$6,800,000*	\$0	\$929,070	\$5,870,930
Monitoring	\$4,500,000	\$0	\$2,235,398	\$2,264,602
Stakeholder Engagement	\$2,000,000	\$0	\$298,552	\$1,701,448
TOTAL	\$49,800,000	\$0	\$12,461,865	\$37,338,135

\*Spending plan amount includes funds anticipated to be added in July 2024

Staff recommend the board award funds for the staff-recommended projects listed in Attachment D.

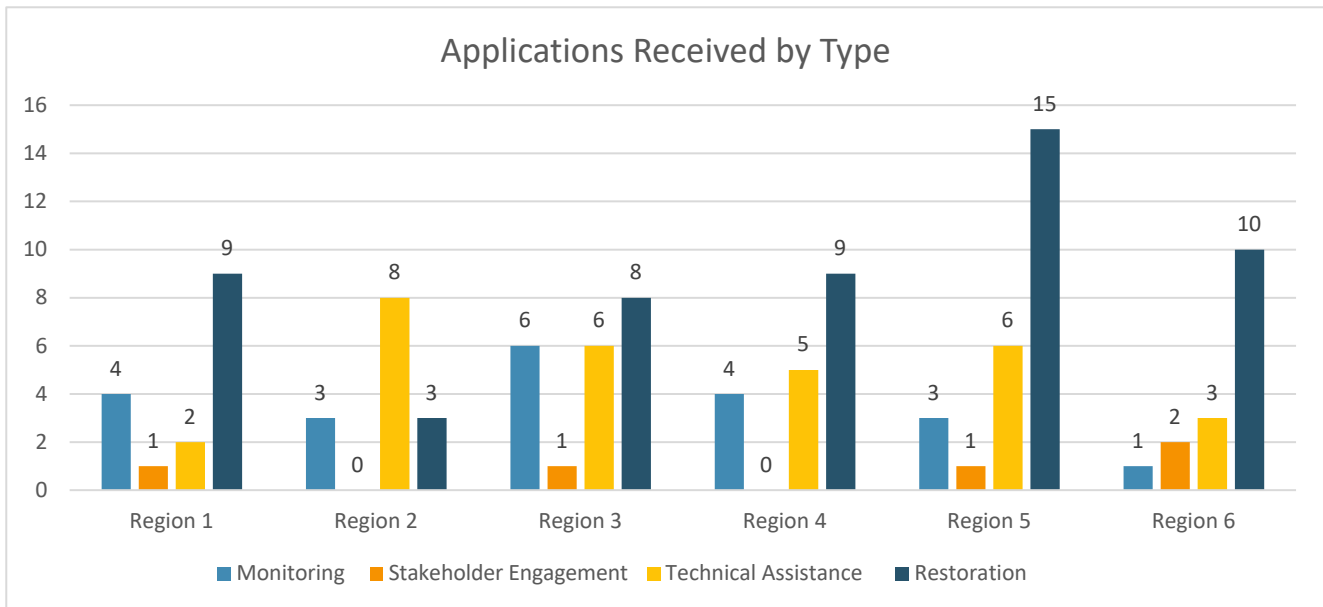
**Attachments**

- A. Grant Applications Submitted
- B. Evaluation Criteria
- C. Comparison of Projects Recommended by RRTs and Staff
- D. Regions 1-6 Funding Recommendations

# Oregon Watershed Enhancement Board Spring 2023 Open Solicitation Grant Offering

## Applications Received by Type

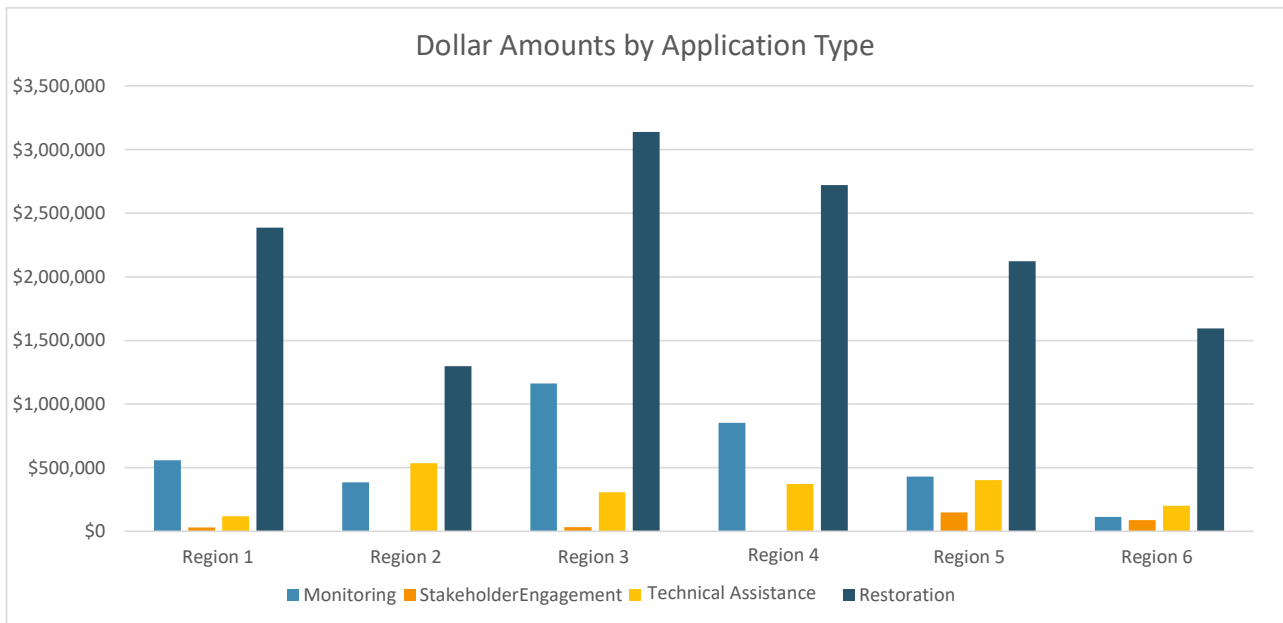
	Monitoring	Stakeholder Engagement	Technical Assistance	Restoration	Totals
<b>Region 1</b>	4	1	2	9	16
<b>Region 2</b>	3	0	8	3	14
<b>Region 3</b>	6	1	6	8	21
<b>Region 4</b>	4	0	5	9	18
<b>Region 5</b>	3	1	6	15	25
<b>Region 6</b>	1	2	3	10	16
<b>Totals</b>	21	5	30	54	110



## Oregon Watershed Enhancement Board Spring 2023 Open Solicitation Grant Offering

### Dollar Amounts by Application Type

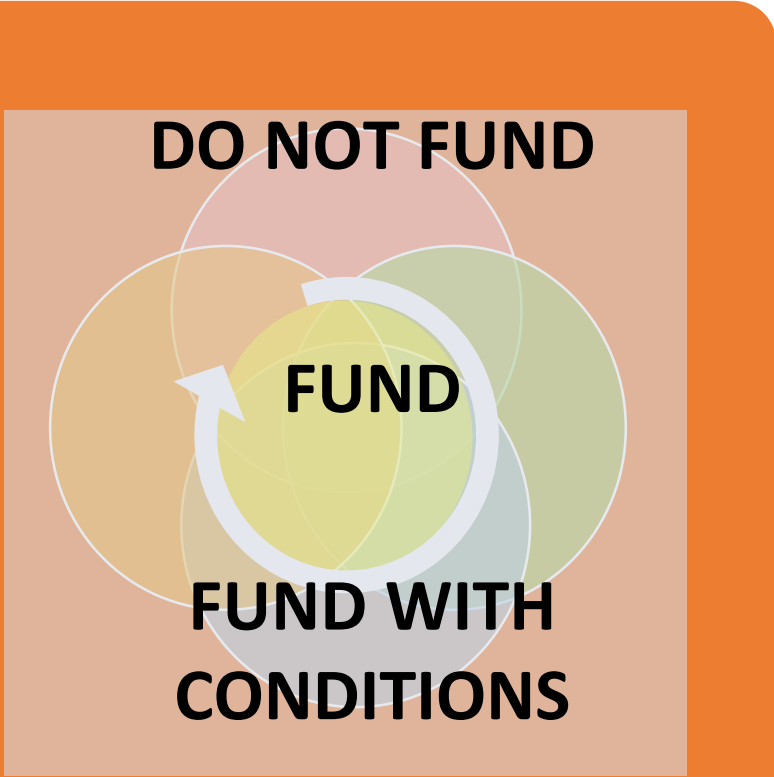
	Monitoring	Stakeholder Engagement	Technical Assistance	Restoration	Totals
Region 1	\$558,455	\$28,804	\$117,039	\$2,385,606	\$3,089,904
Region 2	\$384,064	\$0	\$535,573	\$1,296,129	\$2,215,766
Region 3	\$1,162,901	\$34,130	\$306,855	\$3,138,048	\$4,641,934
Region 4	\$851,592	\$0	\$371,524	\$2,719,380	\$3,942,496
Region 5	\$429,845	\$148,267	\$404,017	\$2,120,257	\$3,102,386
Region 6	\$113,273	\$87,351	\$199,979	\$1,593,504	\$1,994,107
<b>Totals</b>	<b>\$3,500,130</b>	<b>\$298,552</b>	<b>\$1,934,987</b>	<b>\$13,252,924</b>	<b>\$18,986,593</b>



# Open Solicitation – Restoration Grants

PROVIDE PUBLIC BENEFIT FOR WATER QUALITY, NATIVE FISH AND WILDLIFE HABITAT, OR WATERSHED/ECOSYSTEM FUNCTION

Recommend



Regional team reviews & evaluates each project individually based on how well project meets criteria

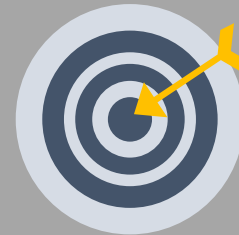
Prioritize



### CRITERIA

How well project meets criteria for project evaluation & preferences, including:

- Causes over symptoms of disturbance
- Whole watershed approach over site-specific
- Collaboration over single-party



### CERTAINTY OF SUCCESS

Certainty of success, based on the organizational capacity of the applicant & the likelihood the project will meet its ecological objectives



### BENEFIT TO OREGON PLAN

Benefit to the Oregon Plan for Salmon & Watersheds, as evidenced by its expected benefits to watershed functions, fish habitat or water quality



### COST BENEFIT

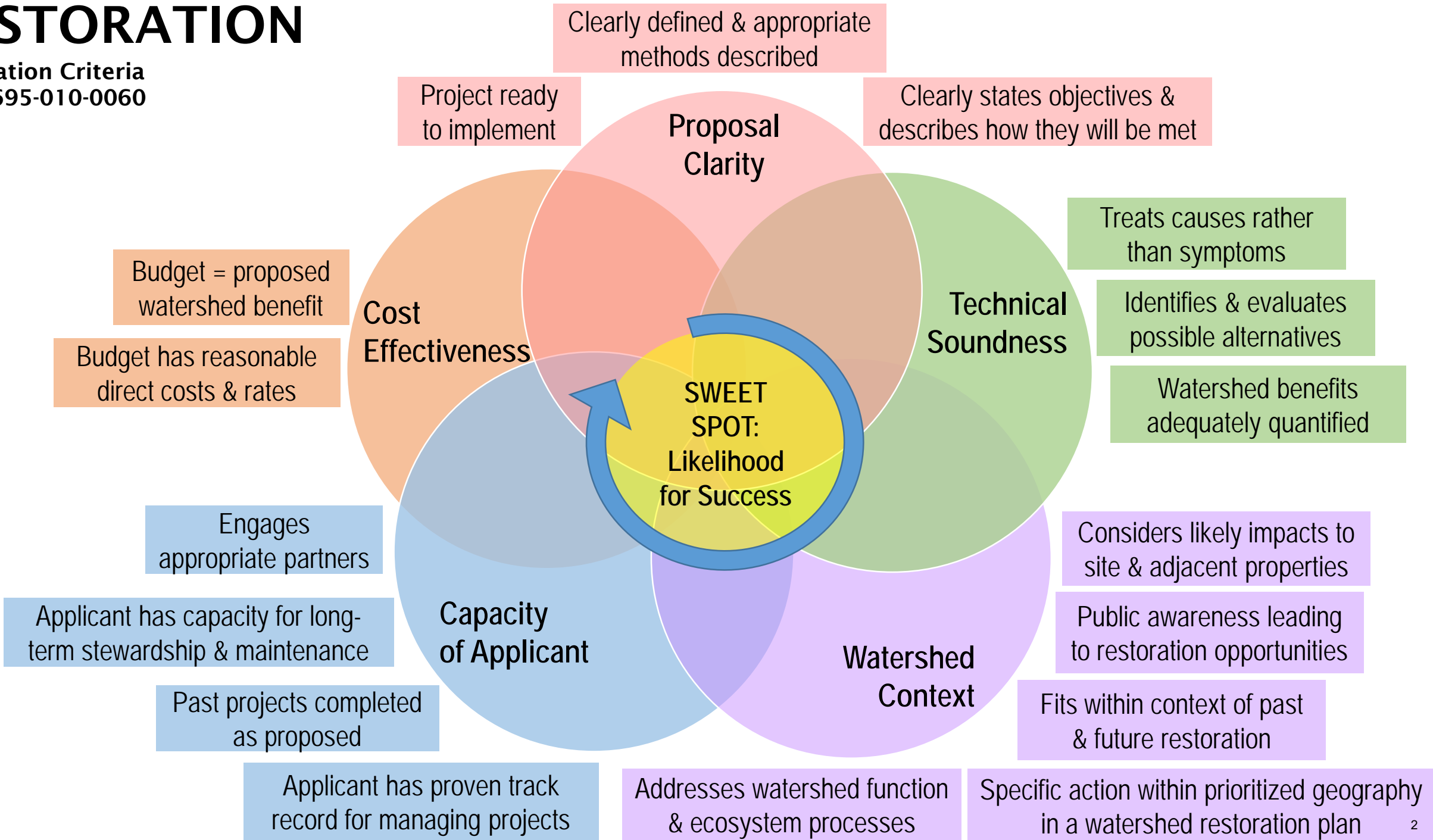
Project costs relative to the anticipated watershed health benefits

Recommendation to Staff

Staff review recommendations from each regional review team & make a statewide funding recommendation to the Board based on available resources for the grant period & type.

# RESTORATION

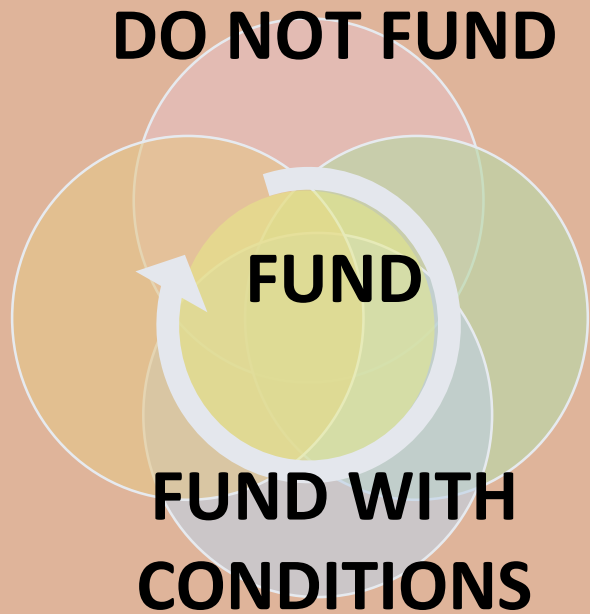
Evaluation Criteria  
OAR 695-010-0060



# Open Solicitation – Technical Assistance Grants

PROVIDE PUBLIC BENEFIT FOR WATER QUALITY, NATIVE FISH AND WILDLIFE HABITAT, OR WATERSHED/ECOSYSTEM FUNCTION

Recommend



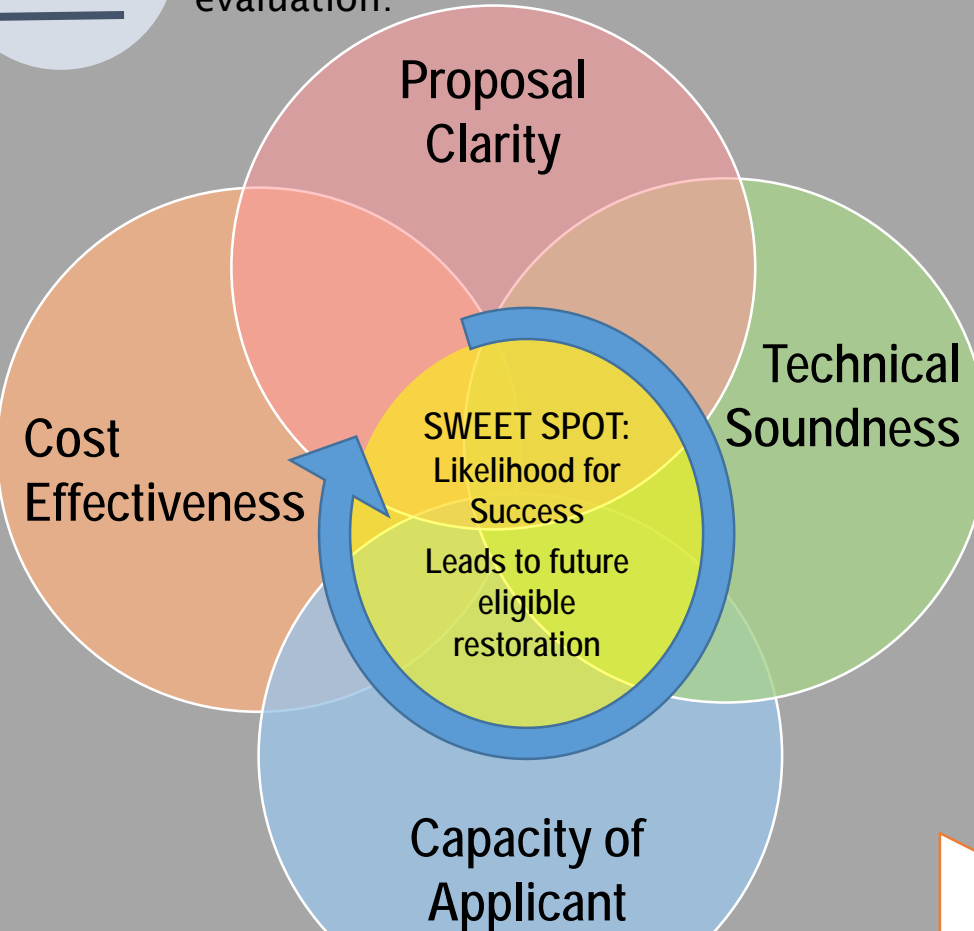
Regional team reviews & evaluates each project individually based on how well project meets criteria

Prioritize



## CRITERIA

How well project meets criteria for project evaluation:



Recommendation to Staff

Staff review recommendations from each regional review team & make a statewide funding recommendation to the Board based on available resources for the grant period & type.

# TECHNICAL ASSISTANCE

Evaluation Criteria  
OAR 695-030-0045

**Technical Design & Engineering** = project feasibility reports, designs, or engineering materials that directly lead to site-specific restoration or acquisition projects within a specified timeframe

**Resource Assessment & Planning** = information about existing water quality or habitat conditions and processes at an identified scale, and relates those conditions and processes to actions that will directly lead to desired future conditions within a specified timeframe

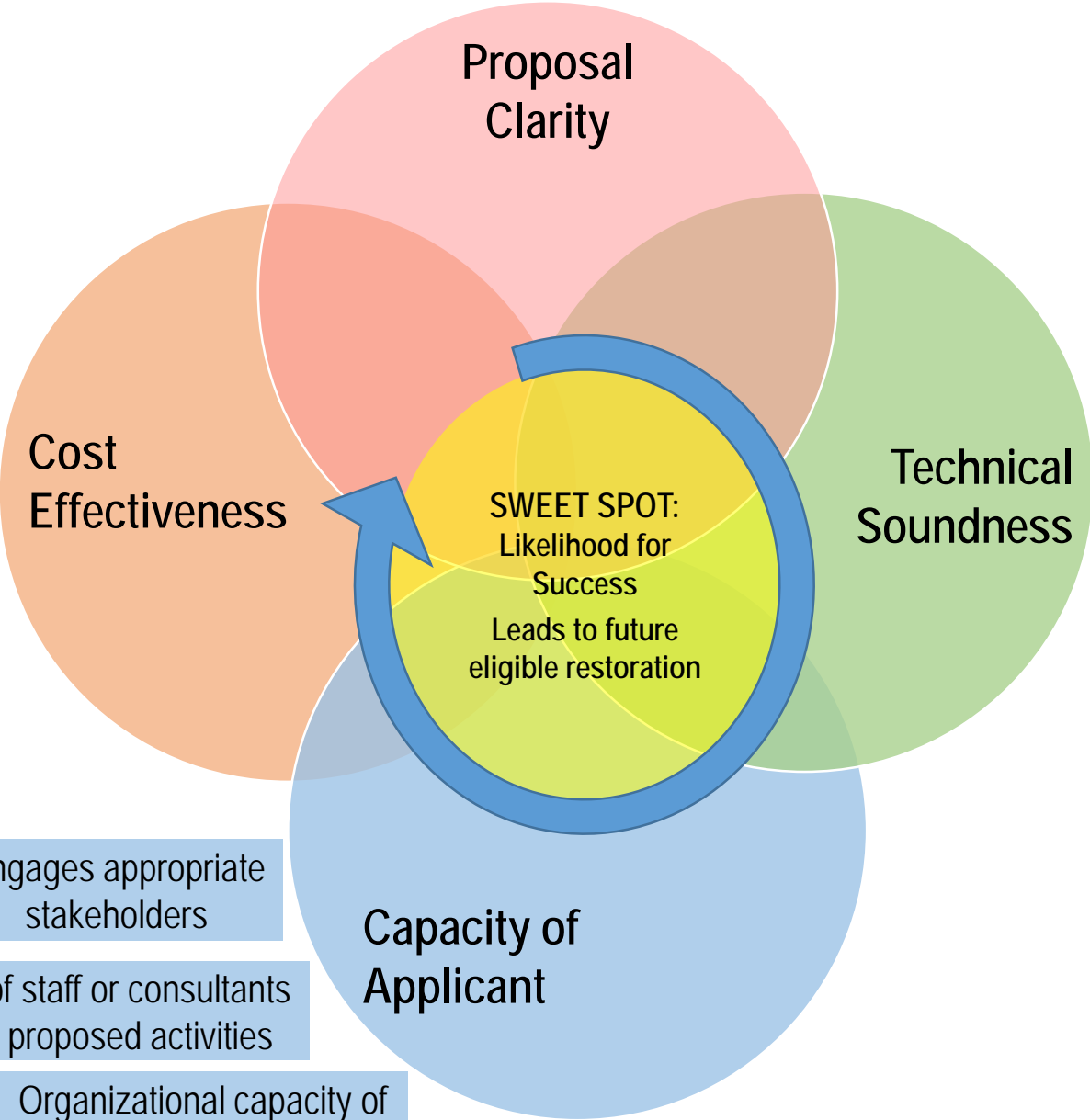
Describes a clear need

Cost aligns with work necessary to accomplish project objectives

Engages appropriate stakeholders

Qualifications of staff or consultants to accomplish proposed activities

Organizational capacity of applicant



**Technical Design & Engineering**

- Addresses limiting factors in existing conservation or recovery plan
- Describes alternative analysis that demonstrates a range of options were considered
- Appropriate data will be collected to inform designs
- Professionally accepted technical or engineering approaches will be used

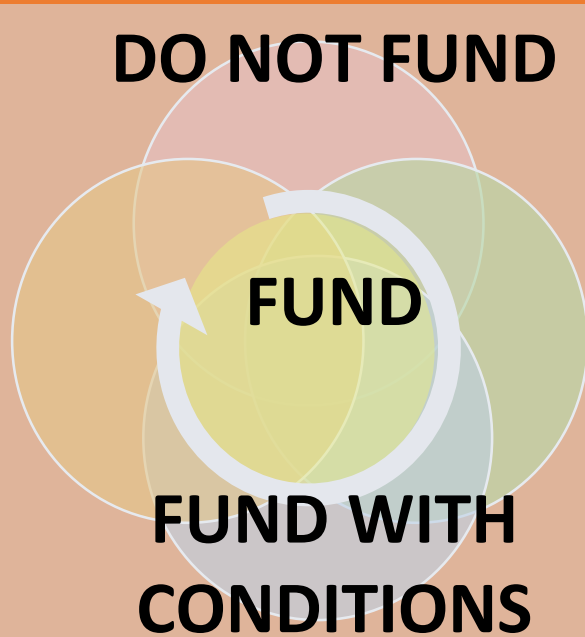
**Resource Assessment & Planning**

- Scope & scale is feasible, & partners have demonstrated ability in collaborative work at this scale
- Process by which data will be managed & shared with partners
- Professionally accepted methods & parameters will be used

# Open Solicitation – Stakeholder Engagement Grants

PROVIDE PUBLIC BENEFIT FOR WATER QUALITY, NATIVE FISH AND WILDLIFE HABITAT, OR WATERSHED/ECOSYSTEM FUNCTION

Recommend



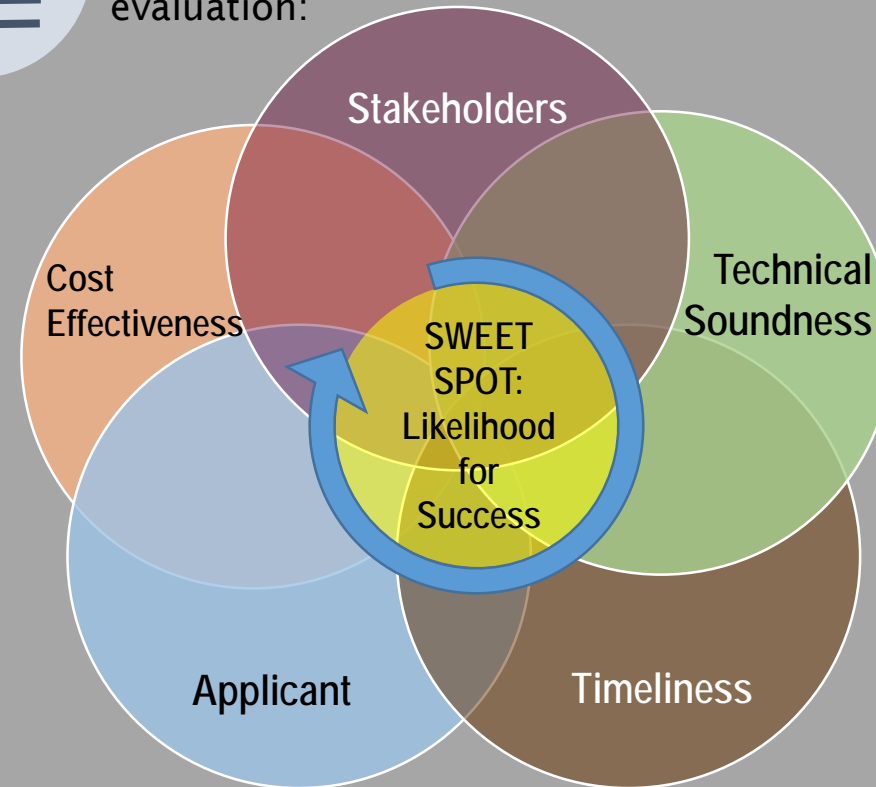
Regional team reviews & evaluates each project individually based on how well project meets criteria

Prioritize



## CRITERIA

How well project meets criteria for project evaluation:



## CERTAINTY OF SUCCESS

Based on the organizational capacity of the applicant & likelihood the project will meet its stakeholder engagement objectives


Recommendation to Staff

Staff review recommendations from each regional review team & make a statewide funding recommendation to the Board based on available resources for the grant period & type.

# STAKEHOLDER ENGAGEMENT

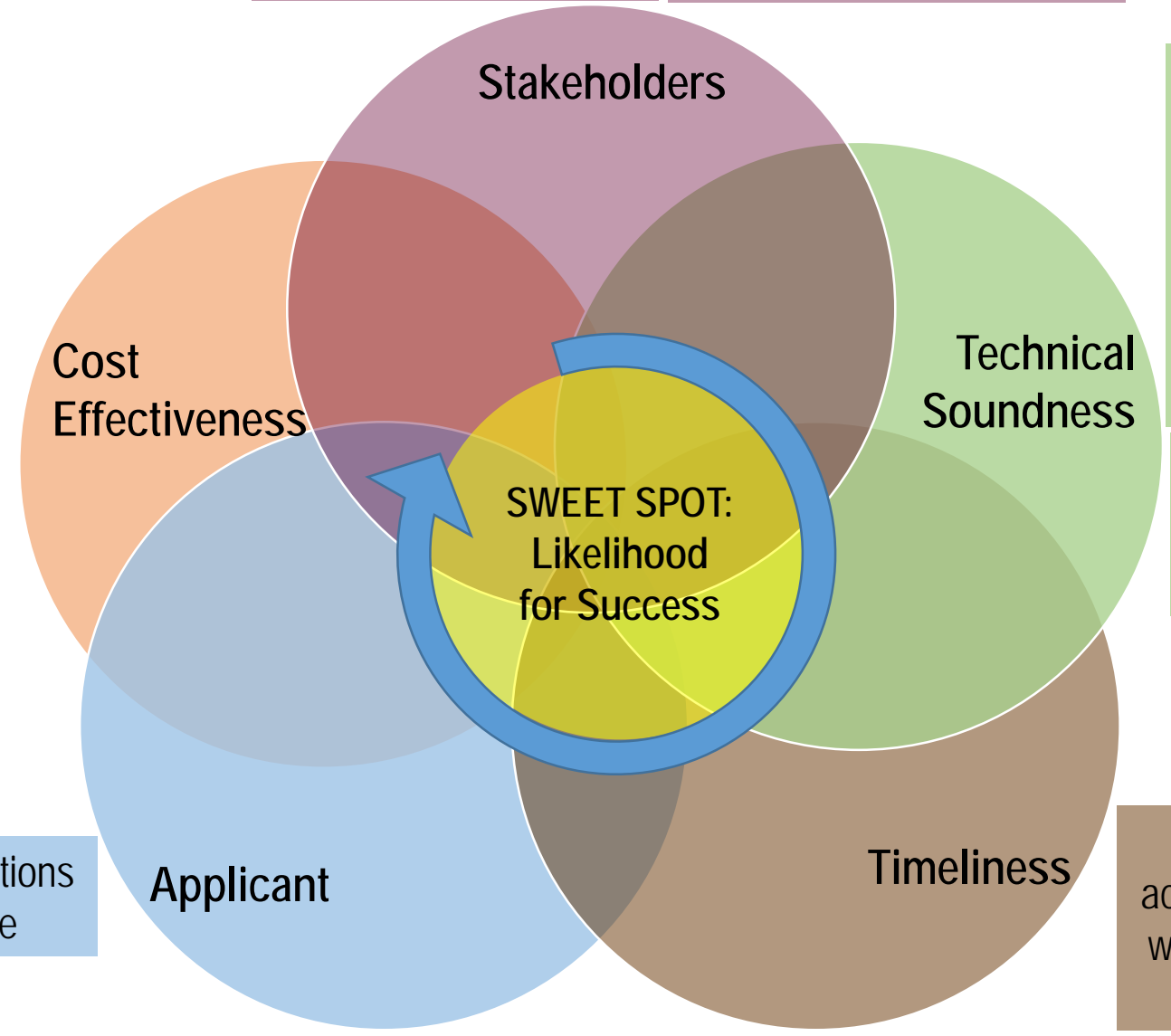
Evaluation Criteria  
OAR 695-015-0070

“Stakeholder Engagement Project” means a project whose purpose is to communicate and engage with landowners, organizations and the community about the need for, feasibility, and benefit of a specific eligible restoration or acquisitions project or program that leads to development of eligible projects within an identified geography.

Projects whose primary purpose is education are  NOT ELIGIBLE

Applicants engage with appropriate stakeholders in the appropriate geography

Likely effectiveness of multidirectional communication among the applicant & stakeholder



Shows qualifications & experience

Expected outcomes of resulting restoration or acquisitions include protecting or restoring fish or wildlife habitat, watershed function, and or water quality or quantity

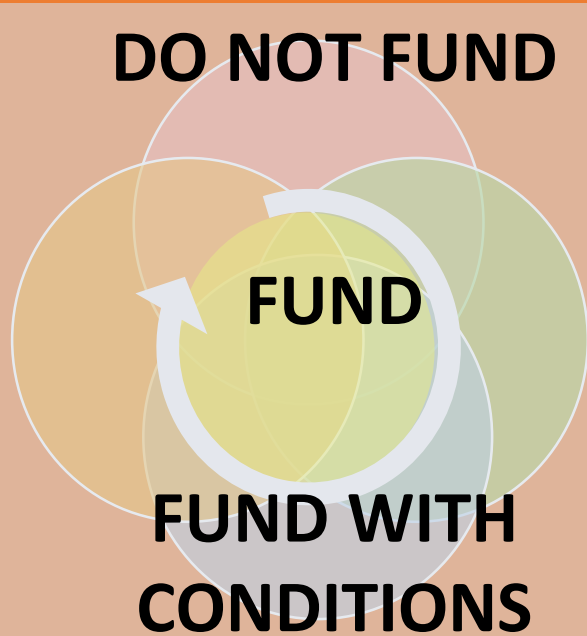
Evidence base linking engagement to eligible project types

Resulting restoration or acquisition projects, or program will lead to timely development of eligible projects

# Open Solicitation – Monitoring Grants

PROVIDE PUBLIC BENEFIT FOR WATER QUALITY, NATIVE FISH AND WILDLIFE HABITAT, OR WATERSHED/ECOSYSTEM FUNCTION

Recommend



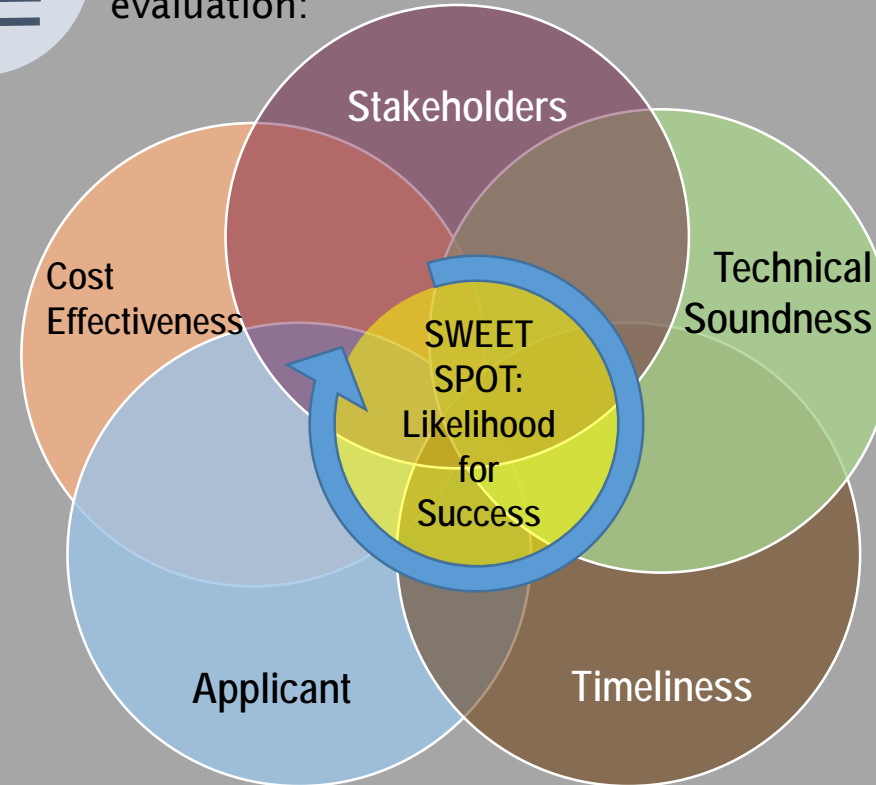
Regional team reviews & evaluates each project individually based on how well project meets criteria

Prioritize



## CRITERIA

How well project meets criteria for project evaluation:



## CERTAINTY OF SUCCESS

Based on the organizational capacity of the applicant & likelihood the project will meet its stakeholder engagement objectives

Recommendation to Staff

Staff review recommendations from each regional review team & make a statewide funding recommendation to the Board based on available resources for the grant period & type.

# MONITORING

Evaluation Criteria  
OAR 695-025-0140

**Eligibility**  
*Projects that gather & analyze data to:*

1. Describe current watershed conditions
2. Establish trends about watershed conditions
3. Evaluate the specific effects of a restoration or acquisition project

## Two Team Review

OPMT Review

RRT Review

Both Teams Review

Complements existing data or current or planned monitoring efforts

Need, relevance, applicability, & timeliness of proposed monitoring to inform future projects

Monitoring relates to limiting factors, habitat conditions, watershed processes or actions described in local plans

Monitoring questions & how proposed monitoring methods will answer these questions

Professionally accepted monitoring & analysis protocols, including quality assurance / quality control procedures to be utilized

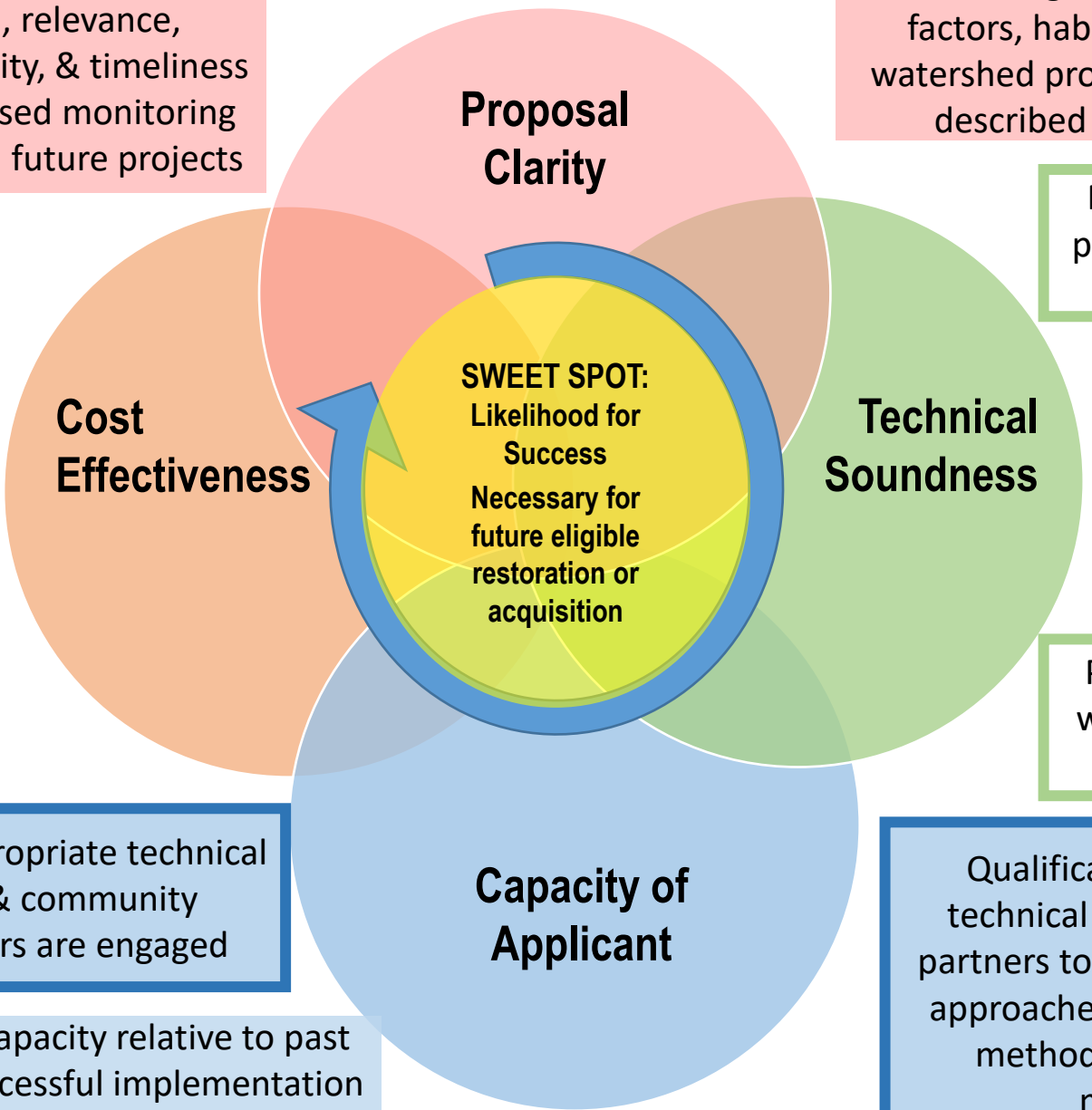
Process by which data & results will be stored, reported, & made publicly available

Proposed costs are appropriate for the work necessary to accomplish the objectives

How the appropriate technical experts & community stakeholders are engaged

Organizational capacity relative to past experience & successful implementation of monitoring projects

Qualifications & ability of applicant technical staff, consultants, or project partners to apply appropriate monitoring approaches & data collection & analysis methods to successfully complete monitoring activities



Comparison of Projects Recommended by **RRTs and Staff for the Spring 2023 Open Solicitation Grant Offering**

Tables compare the number of projects recommended by each Regional Review Team (RRT) with projects recommended by Staff based on funds available in the 2023-2025 Spending Plan.

**Restoration**

Region	RRT	Staff	%
1	8	6	75%
2	3	3	100%
3	7	6	86%
4	7	6	86%
5	11	8	73%
6	6	6	100%
<b>Total</b>	<b>42</b>	<b>35</b>	<b>83%</b>

**Technical Assistance**

Region	RRT	Staff	%
1	1	1	100%
2	7	3	43%
3	5	4	80%
4	2	2	100%
5	4	3	75%
6	2	2	100%
<b>Total</b>	<b>21</b>	<b>15</b>	<b>71%</b>

**Stakeholder Engagement**

Region	RRT	Staff	%
1	1	1	100%
2	N/A	N/A	N/A
3	1	1	100%
4	N/A	N/A	N/A
5	1	1	100%
6	2	2	N/A
<b>Total</b>	<b>5</b>	<b>5</b>	<b>100%</b>

**Monitoring**

Region	RRT	Staff	%
1	3	1	33%
2	2	1	50%
3	4	4	100%
4	4	4	100%
5	3	3	100%
6	1	1	100%
<b>Total</b>	<b>17</b>	<b>14</b>	<b>82%</b>

Funding amounts are the totals for Staff Recommended projects

Region	Restoration	Technical Assistance	Stakeholder Engagement	Monitoring	Total
1	\$1,494,492	\$42,053	\$28,804	\$51,230	\$1,616,579
2	\$1,296,129	\$225,000	\$0	\$120,489	\$1,641,618
3	\$2,633,369	\$204,386	\$34,130	\$668,969	\$3,540,854
4	\$1,578,273	\$148,101	\$0	\$851,592	\$2,577,966
5	\$1,117,070	\$180,078	\$148,267	\$429,845	\$1,875,260
6	\$879,512	\$129,452	\$87,351	\$113,273	\$1,209,588
<b>Total</b>	<b>\$8,998,845</b>	<b>\$929,070</b>	<b>\$298,552</b>	<b>\$2,235,398</b>	<b>\$12,461,865</b>

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***OWEB Open Solicitation Regions***

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Region 1: North Coast

Region 2: Southwest

Region 3: Willamette Basin

Region 4: Central Oregon

Region 5: Eastern Oregon

Region 6: Mid-Columbia

# All Regions Fall 2022 Funding Recommendations

**Fall 2022 Funding Recommendations Status**

- Staff Recommended Funding
- Below Funding Line

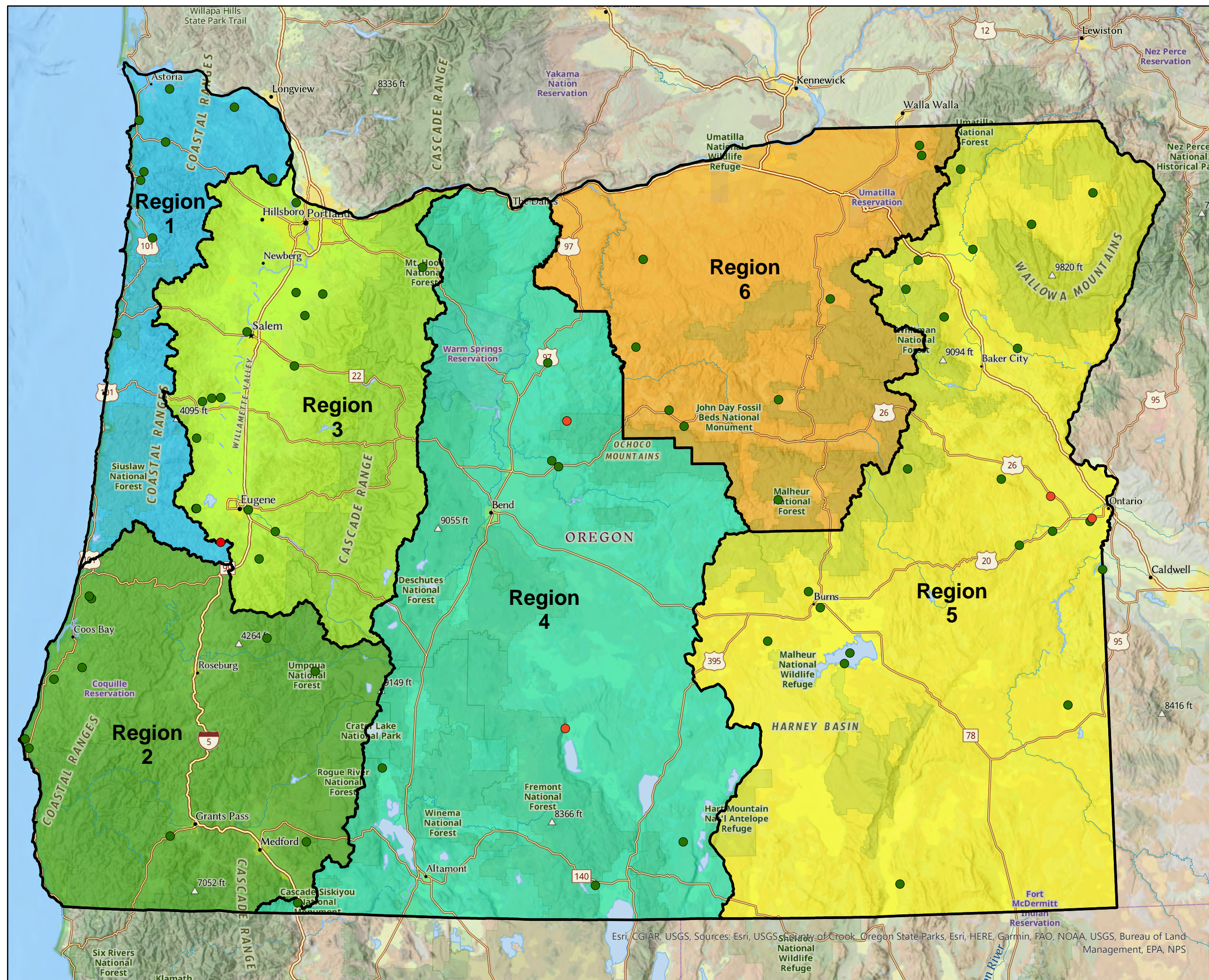
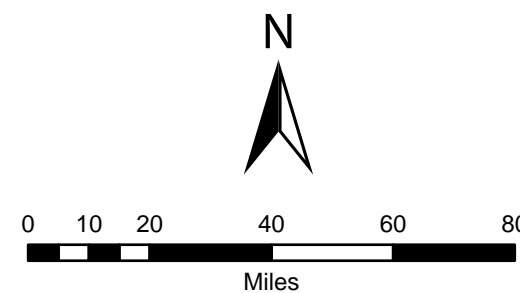
**OWEB Regions**

- Region 1
- Region 2
- Region 3
- Region 4
- Region 5
- Region 6



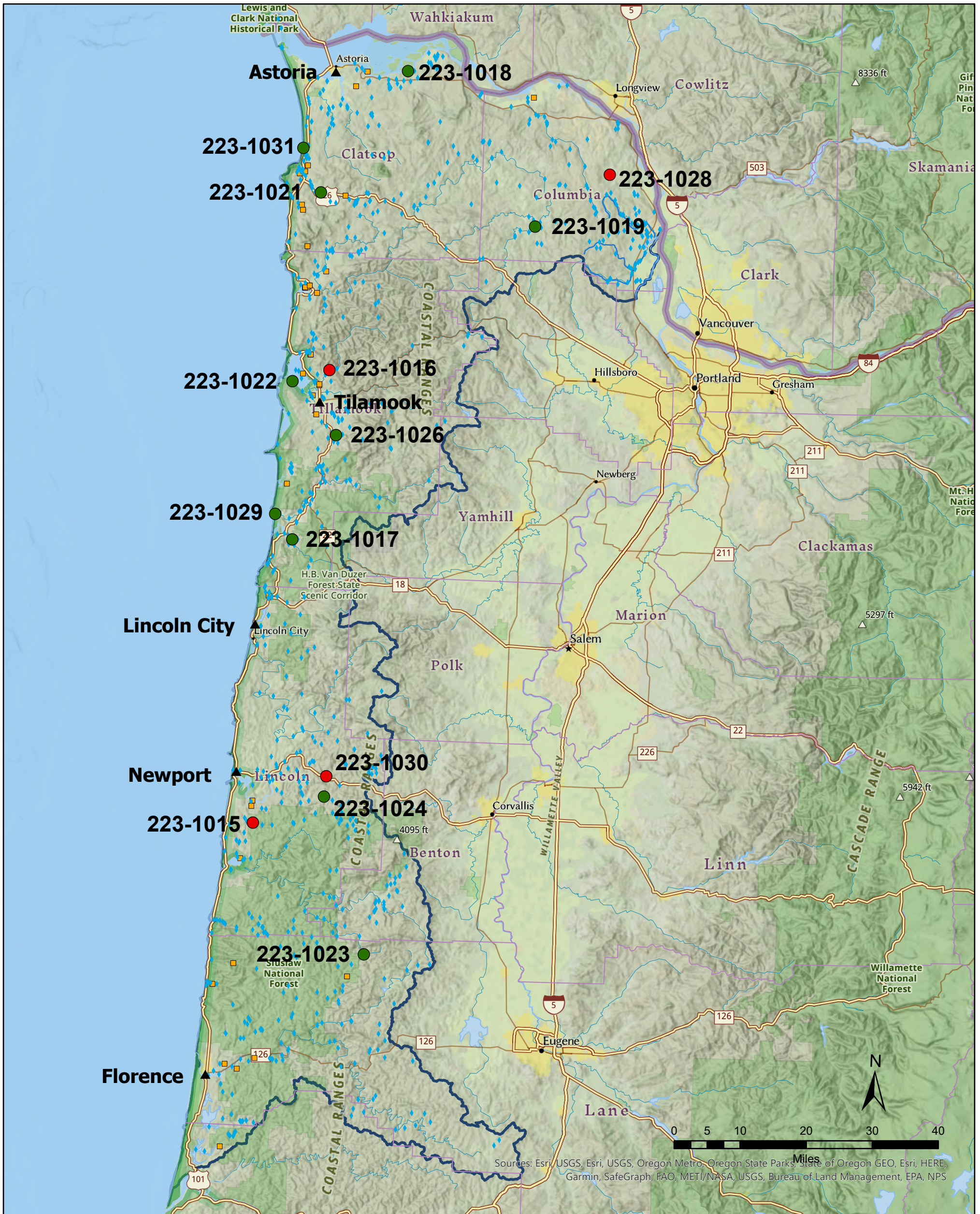
775 Summer St, NE Suite 360  
Salem, OR 97301-1290  
(503) 986-0178  
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Esri, CGIAR, USGS, Sources: Esri, USGS, County of Crook, Oregon State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS

# North Coast - Region 1 Spring 2023 Funding Recommendations



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**Funding Recommendation**

- Staff Recommendation For Funding (SRF)
- Below Funding Line (BFL)

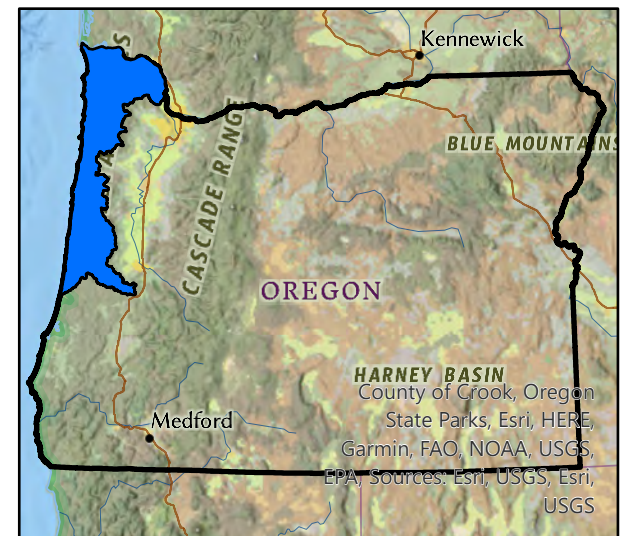
**Previous Grants 1998 - Spring 2022**

- Land Acquisition
- ◆ Restoration
- ▲ Region 1 Cities
- Region 1 Streams
- ▭ OWEB Region 1 Boundary



775 Summer St, NE Suite 360  
 Salem, OR 97301-1290  
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Oregon Watershed Enhancement Board: Region 1 Restoration, Technical Assistance, Stakeholder Engagement and Monitoring

<b>Region 1 - North Coast Restoration</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-1022	Trout Unlimited Inc	Tillamook Bay Wetland Connectivity and Fish Passage Project	Fish passage will be restored and a tidal wetland will be reconnected along Tillamook Bay with the replacement of a severely undersized culvert on Bayocean Road west of Tillamook.	505,060
223-1018	CREST	Nicolai-Wickiup Watershed Connectivity and Tidal Restoration - PHASE II	Critical rearing habitat for juvenile fish in the Lower Columbia River will be reconnected and tidal wetlands restored by creating a series of openings in two locations in the railroad prism.	497,338
223-1024	Oregon Wildlife Heritage Foundation	Deer Creek Willow Planting Project	Willow galleries will be planted in a valley bottom along a tributary of the Yaquina River to encourage the expansion of beaver populations. The ponds and dams that beaver create will restore natural function to the watershed and improve habitat for fish, including Oregon coast coho.	91,577
223-1017	Tillamook Estuaries Partnership	Heathershaw Planting Project	Native trees and shrubs will be planted and invasive species controlled in streamside habitat of the Little Nestucca River. Restoring a native forest will provide shade that will improve water quality and provide habitat for wildlife.	58,326
223-1021	Necanicum WC	Middle Necanicum Tributary Fish Passage and Habitat Improvement: Phase I	A legacy forest road and undersized culvert will be removed and the area regraded to restore fish passage and floodplain connection to a tributary of the Necanicum River.	74,033
223-1019	Upper Nehalem WC	Rock Creek Confluence Fish Passage Improvement	Fish barriers will be addressed at two locations within the City of Vernonia, including on Rock Creek, an important cold water tributary of the Nehalem River. The effort is part of a large water and sewer infrastructure project that will improve water quality in the Nehalem watershed.	268,158
<b>Total Restoration Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>1,494,492</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-1016	Tillamook County Public Works	Salmon SuperHwy Myrtle Creek Priority Fish Passage	A fish passage barrier will be addressed at a undersized culvert on Kilchis River Road in Tillamook County to improve fish access to upstream habitat.	203,060
223-1015	Lincoln SWCD	North Beaver Creek Leach Property Riparian Restoration	A streamside buffer along North Beaver Creek will be planted with native trees and shrubs to reduce stream temperatures and improve habitat for wildlife.	90,527

<b>Projects Not Recommended for Funding by RRT</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Amount Requested</b>	
223-1020	Nestucca-Neskowin Watersheds Council	Sutton Creek Proposal Rock Loop Fish Passage Project	597,527	

<b>Region 1 - North Coast Technical Assistance</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-1026	Tillamook Estuaries Partnership	Mary's Creek Culvert Replacements - Phase 1 Designs	Designs will be produced to improve fish passage at two locations on Marys Creek, a tributary of Fawcett Creek in the Tillamook River watershed.	42,053
<b>Total Technical Assistance Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>42,053</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
None				

<b>Projects Not Recommended for Funding by RRT</b>				
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Project #	Grantee	Project Title	Amount Requested
223-1025	Lower Nehalem WC	Gallagher Slough Fish Passable Tide Gate Upgrade	74,986

### Region 1 - North Coast Stakeholder Engagement

#### Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-1031	Necanicum WC	Necanicum Together: Landowner Engagement Program	Landowners will be engaged in the Necanicum River watershed along priority streams to develop a list of prioritized projects for the watershed council.	28,804
<b>Total Stakeholder Engagement Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>28,804</b>

#### Projects Recommended but Not Funded in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

#### Projects Not Recommended for Funding by RRT

Project #	Grantee	Project Title	Amount Recommended
None			

### Region 1 - North Coast Monitoring

#### Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-1029	Nestucca-Neskowin Watersheds Council	Nestucca, Neskowin & Sand Lake Expanded Monitoring II	Stream temperature and bacteria data will be collected for another two years in order to address a data gap in the watershed and inform planning and prioritization for future restoration projects.	51,230
<b>Total Monitoring Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>51,230</b>

#### Projects Recommended but Not Funded in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-1030	Lincoln SWCD	Upper Yaquina Strategic Implementation Area Monitoring	Water quality monitoring associated with a Strategic Implementation Area will be expanded upon and continued for four additional years in order to provide updated baseline data and assess changes in water quality.	135,408
223-1028	Lower Columbia Estuary Partnership	Collaborative Expansion of the Columbia County Water Quality Monitoring Program 2023-2026	Water quality monitoring will continue for three more years in six key subbasins in Columbia County. Continuous dissolved oxygen and eDNA monitoring will be incorporated into the program as well as the original water quality parameters that have comprised the monitoring to date.	270,865

#### Projects Not Recommended for Funding by RRT

Project #	Grantee	Project Title	Amount Requested
223-1027	Columbia SWCD	Lower Columbia Watershed Rapid Biological Assessment	100,952

<b>Region 1 Total OWEB Staff Recommended Board Award</b>	<b>1,616,579</b>
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<b>Region 1 - 6 Grand Total OWEB Staff Recommended Board Award</b>	<b>12,461,865</b>
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# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1015-22999

**Project Type:** Restoration

**Project Name:** North Beaver Creek Leach Property  
Riparian Restoration

**Applicant:** Lincoln SWCD

**Region:** North Coast

**County:** Lincoln

**OWEB Request:** \$90,527

**Total Cost:** \$113,345

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**Application Description** This project would aim to restore the riparian buffer along North Beaver Creek within the rural residential/agricultural property parcel. The main issues currently impacting this location include a lack of canopy cover over the stream channel, and a displacement of native shrubs by reed canary grass (*Phalaris arundinacea*) and Himalayan blackberry (*Rubus armeniacus*). Additionally, recent logging sites border the riparian zone on both sides- a 1,275-ft stretch on the north side, and 400 ft on the south, which are largely devoid of trees or other sizable established vegetation to act as a buffer from sedimentation and pollution runoff. A gravel road also runs along the northern border of the property, coming as close as 70 ft of the stream in some places, further compounding the issue of a lack of natural buffer.

Funding from OWEB will be used to restore riparian function along an 1,800-ft stretch of stream by suppressing invasive vegetation; implementing a planting plan utilizing 35-75 ft wide buffers that will provide shade, eventual accumulation of large woody debris within the stream channel, and habitat for local wildlife; and installing exclusion fencing to prevent browsing pressure from deer, elk, and beavers while plants become established. As this property is a short distance upstream from another OWEB-funded restoration site implemented by the MidCoast Watershed Council and directly upstream of another prospective restoration property, this site presents an excellent opportunity to restore riparian function along 5,600 feet of contiguous stream habitat.

### Review Team Evaluation

#### Strengths

- Establishing a healthy riparian corridor along North Beaver Creek will address water quality issues by providing shade that will contribute to an improvement in water temperature.
- The approach to control invasive species is multi-faceted by using a combination of manual and chemical techniques. Continuing plant establishment activities for four years post-planting will ensure the success of the project.
- Beaver Creek is a coho stronghold and contains high quality wetland habitat for rearing. Downstream, significant stream miles are in conservation ownership by both the Wetlands Conservancy and Oregon Parks and Recreation Department. Upstream, there is U.S. Forest Service ownership. This project addresses the critical habitat in between the two swaths of protected land.
- Fencing is proposed that is likely to keep livestock out of the riparian area.

- The plant species list has variety and includes a component of willows that could help reduce stream velocity and capture stream material. Slower velocities are important for fish during the winter months and encouraging the accumulation of streambed material will help address the incision that has degraded the aquatic habitat.
- The landowner may be interested in other restoration actions in the future, including large wood placement to restore instream habitat complexity.
- Applicant staff have worked closely with the watershed council on implementing similar projects in the past.

## Concerns

- The planting approach may create high competition among seed and potted stock because the proposed plant density is very high, particularly for the seed.
- The application lacks a clear map showing the location of the different plant communities that would be helpful for understanding whether the planting plan matches site conditions.
- The application does not provide detail on the chemicals that will be used to treat reed canary grass or a clear explanation of the site preparation protocols that will be used. This information would be helpful to evaluate the likelihood proposed methods will effectively control reed canary grass enough to establish a native riparian plant community.
- A power line runs directly overhead through much of the planting area, and the application does not describe how the power line could impact the planting approach, such as restrictions or vegetation control that might be associated with the power line easement.
- The proposed planting plan is a high cost for the ecological benefit expected. Purchasing higher cost potted plant material may not be the best approach when planting the high densities that are proposed. Typically, high density plantings involve smaller and more low-cost plant materials, such as plugs or bare-root stock. The application lacks a clear rationale for using more expensive, larger stock in high densities.

## Concluding Analysis

A healthy riparian corridor will be restored along a reach of Beaver Creek, a direct ocean tributary that provides habitat for anadromous fish species, including Oregon coast coho salmon. The re-establishment of native plants will provide shade to improve water temperature over time. The project is located near several other similar projects, which will maximize the benefit over a larger landscape by creating habitat connectivity.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

8 of 8

## Review Team Recommended Amount

\$90,527

## Review Team Conditions

n/a

**Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1016-23011

**Project Type:** Restoration

**Project Name:** Salmon SuperHwy Myrtle Creek  
Priority Fish Passage

**Applicant:** Tillamook County Public Works

**Region:** North Coast

**County:** Tillamook

**OWEB Request:** \$203,060

**Total Cost:** \$1,060,055

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**Application Description** The proposed fish passage project is located at the road/stream crossing of Kilchis River Road and Myrtle Creek in Tillamook County, Oregon. The crossing is located approximately 600 feet upstream of Myrtle Creek's confluence with the Kilchis River. An existing 41-foot-long, 5.5-foot diameter culvert is undersized, and its outlet is perched approximately four feet above the downstream water surface elevation. As a result, it adversely affects aquatic organism passage, impeding adult and juvenile salmonid access to approximately 1.6 miles of upstream habitat as well as hampering both the natural stream processes and the stream's ability to transport organic matter. The Kilchis River basin historically supports Oregon Coast Coho (OCC) Salmon (ESA listed as threatened), Pacific Coast Chum Salmon, Oregon Coast Winter Steelhead, Pacific Lamprey, Oregon Coast Chinook Salmon, and Sea-run Cutthroat Trout. This project has the potential to increase habitat connectivity for these anadromous fish and restore access to historical spawning and rearing habitat. In addition, the culvert contributes to downstream fine sediment loading and requires an inordinate level of inspection and maintenance to avoid plugging and breaching. The proposed project will finalize project designs and specifications, remove the existing culvert, and construct a 42-foot-long concrete bridge. To ensure project stability and long-term fish passage, the project also will construct approximately 280 feet of roughened stream channel (with boulders, large wood, and a resting pool). The project will employ a staged construction method to provide continuous ingress and egress for residences and businesses beyond the crossing. OWEB funds will support contracted services needed to construct the replacement structure and will supplement funds and in-kind contributions from the U.S. Fish & Wildlife Service, Tillamook County, Oregon Department of Fish & Wildlife, and Tillamook Estuaries Partnership.

### Review Team Evaluation

#### Strengths

- Replacing the road crossing on Myrtle Creek will result in improved passage to 1.6 miles of aquatic habitat in the Kilchis River watershed as well as allow for natural bedload transport through the stream reach.
- The project will benefit water quality by reducing the potential for road fill inputs to the stream that could result from failure of the existing structure.
- There has been a change in land ownership directly upstream of the site, and the current landowner is willing and supportive of the project.

- A broad partnership is behind the project, including partners from Trout Unlimited, U.S. Fish and Wildlife Service, and NOAA. Working together as the Salmon SuperHwy, the partnership has a proven track record of success with similar types of projects.

### **Concerns**

- Upstream of the crossing, Myrtle Creek has a steep gradient and the stream bed is comprised of large cobbles and boulders, which is not ideal spawning material for anadromous fish. The habitat benefit will likely be focused on cutthroat trout and will provide minimal benefit for other anadromous fish species. There is low intrinsic habitat potential for Oregon coast coho salmon and limited capacity for spawning upstream due to the lack of gravel.
- Land uses upstream are commercial timber and an old rock quarry. More information about existing upstream habitat conditions and the potential for future restoration actions in reaches upstream of the project site would have been helpful for understanding watershed context for the investment.
- The application is unclear about the different funding sources in the project budget and how they all intersect with the project timeline.

### **Concluding Analysis**

Improving passage at the project location on Myrtle Creek has long been a priority for both fish and wildlife and public works agencies. The road is an important emergency route and the current structure is at risk of failure. Previous efforts to replace the structure were stymied by an upstream landowner who was not interested in cooperating with the restoration effort. With a landownership change and a renewed focus by Salmon SuperHwy partners, passage will be restored to 1.6 miles of primarily cutthroat trout habitat.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

7 of 8

### **Review Team Recommended Amount**

\$203,060

### **Review Team Conditions**

n/a

### **Staff Recommendation**

### **Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

n/a

# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1017-23015

**Project Type:** Restoration

**Project Name:** Heathershaw Planting Project

**Applicant:** Tillamook Estuaries Partnership

**Region:** North Coast

**County:** Tillamook

**OWEB Request:** \$58,326

**Total Cost:** \$76,005

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**Application Description** The Heathershaw project is located along the Little Nestucca River and unnamed tributary to the Little Nestucca River. The property is located at the junction of Irish Rd and Little Nestucca River Hwy (Hwy 130) approximately 1.3 miles south of the junction of Hwy 130 and Hwy 101. The property's tax lot is 5S9Wsec9#100.

The riparian areas included in the project are dominated by reed canary grass, include eroding and sloughing riverbanks, and lack a diversity of native tree and shrub species.

The project will aim to control invasive species and establish native tree and shrub species within the riparian areas of the project and conduct tree release activities for 4 years.

Monitoring will be conducted once a year for 5 years and will include photo-point monitoring and survival rate estimates.

The Tillamook Estuaries Partnership's (TEP) Backyard Planting program has been implementing riparian enhancement projects for 21 years. Partners include TEP's Northwest Oregon Restoration Partnership (NORP), Oregon Dept. of Environmental Quality, the US Forest Service, and Trout Unlimited.

### Review Team Evaluation

#### Strengths

- Planting over five acres of riparian habitat along the Little Nestucca River will provide important benefits to the stream by reducing water temperature and decreasing impacts from bacteria. Healthy, functioning riparian vegetation has benefits for floodplain connectivity as well as habitat benefits for birds and mammals.
- The planting plan is appropriately detailed, and has clearly defined methods. The species list, site preparation, and planting strategy is technically sound and has been developed from decades of experience. The project is well-designed and includes an approach to test different site preparation and plant protection techniques prior to planting. This will ensure that the methods are site-specific and likely to achieve the goals and objectives.
- The project builds on other successful planting projects in the area and there may be potential for future restoration on adjacent sites.
- The budget is reasonable for the expected ecological benefit.

- The Backyard Planting Program is renowned in Tillamook County for consistently delivering successful riparian restoration projects and building relationships with agricultural landowners.

### **Concerns**

- The project site is primarily on the north side of the stream due to tax lot boundaries. As a result, the newly planted riparian buffer may not be able to provide significant stream shading.
- The setback for planting next to the stream is limited in some areas due to the site constraints of a working agricultural landscape; however, any planted buffer width will provide benefit compared to no buffer.

### **Concluding Analysis**

The Little Nestucca River suffers from high temperature and bacteria inputs, which this project will make strides toward addressing. The Little Nestucca river supports populations of coho, chinook, steelhead, and cutthroat trout. The project is likely to address water quality-related habitat limiting factors for these fish by establishing native trees and shrubs in the riparian area.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

4 of 8

### **Review Team Recommended Amount**

\$58,326

### **Review Team Conditions**

n/a

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

n/a

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$58,326

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1018-23016

**Project Type:** Restoration

**Project Name:** Nicolai-Wickiup Watershed  
Connectivity and Tidal Restoration - PHASE II

**Applicant:** CREST

**Region:** North Coast

**County:** Clatsop

**OWEB Request:** \$497,338

**Total Cost:** \$1,967,378

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**Application Description** Located between River Mile (RM) 20 and 30 of the Columbia River in Clatsop County Oregon, four geographically distinct but functionally similar sites comprise the Nicolai-Wickiup Watershed Connectivity and Tidal Restoration Project: Wolf Bay at Columbia RM 20 (46.169558, -123.695282), Agency Creek at RM 26 (46.186919, -123.607724), Warren Slough at RM 27 (46.192721, -123.575337), and E. Aldrich Point at RM 30 (46.232615, -123.496397).

This proposal only seeks funds to complete Agency Creek and the Warren Slough projects (Phase II) in summer of 2024. Wolf Bay. and Aldrich (Phase I) were funded for construction in 2023.

The project area is located directly adjacent to the Lewis & Clark National Wildlife Refuge on the OR shoreline of the Columbia River (CR) within the Big Creek- Frontal CR (HUC 10). This project is a partnership between CREST, North Coast Land Conservancy (NCLC), Columbia Land Trust (CLT), Oregon Department of Forestry (ODF), and three private landowners (Connie and Bob Hunt, Hampton Lumber, and ODOT/PNWR Rail). All landowners strongly support project implementation and have been key advocates throughout the design process.

In the project area, foraging and rearing habitat for all local and upriver stocks of juvenile salmonids are limited by past land use (rail/hwy and ag.) developments. Restoration efforts will focus on the enhancement of CR mainstem-adjacent habitat at the base of the Nicolai-Wickiup watershed bisected by the railroad, reestablishing juvenile salmonid access to rearing habitats. The projects will expand several existing openings and create new openings in the railroad prism providing access to over 110 acres (43.93 of which from Agency and Warren) of rearing habitat for salmonids. New railroad breaches, reducing velocities at existing openings, and channel excavation will significantly reduce the distances between existing available habitat patches, increase wetland capacity, and restore natural hydrologic connectivity.

### Review Team Evaluation Strengths

- The project will reconnect the lower Columbia River with 44 acres of tidal wetland habitat and provide critical rearing habitat for lower Columbia River fish species.
- The restoration and reconnection of estuary habitat will provide a host of benefits to a wide variety of species, including songbirds, mammals, forage fish, and waterfowl.
- The designs are technically sound and will address known fish passage barriers with a range of approaches, including levee breaching, bridge installation, and creating new openings in the railroad prism.
- The project is ready for implementation with permitting underway and additional funding secured for implementation.
- Data from temperature loggers installed upstream and downstream of the railroad line was used to inform project development.
- The applicant has been diligent in working with the railroad and putting together a large-scale project that encompasses several different land ownerships and crossing locations.
- CREST has a proven track record in implementing similar types of projects and this will be phase two of this tidal connectivity effort in the Lower Columbia.
- The project costs are reasonable for the acreage of tidal wetlands that will be reconnected and the expected ecological benefits, especially when considering the challenging design logistics required by the railroad line.

### **Concerns**

- The site constraints created by the railroad necessitate a more limited design approach for a higher cost than would be possible without the need to maintain the transportation infrastructure.

### **Concluding Analysis**

This fish passage and tidal connectivity project builds on a strategic effort within the Lower Columbia River estuary to reconnect priority areas of tidal wetland with the river. The applicant has built an effective working relationship with the railroad and numerous private and public landowners along the railroad line that resulted in rigorous project development and planning. Project sites have been prioritized throughout the Lower Columbia that will provide strategic habitat for migrating and rearing fish. This project will contribute to a larger watershed connectivity that will collectively provide over 100 acres of tidal habitat for the myriad of species that depend on estuaries to thrive.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 8

### **Review Team Recommended Amount**

\$497,338

**Review Team Conditions**

n/a

**Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$497,338

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1019-23018

**Project Type:** Restoration

**Project Name:** Rock Creek Confluence Fish  
Passage Improvement

**Applicant:** Upper Nehalem WC

**Region:** North Coast

**County:** Columbia

**OWEB Request:** \$268,158

**Total Cost:** \$342,307

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**Application Description** The City of Vernonia is working on two fish passage improvements within the city limits, at Rock Creek and Bear Creek.

Existing infrastructure, namely the sewer system and a culvert in Adams Ave, have created fish passage barriers over the years due to poor construction and/or degradation over time.

Within Rock Creek, the barrier is created by the existing sewer pipe and encasing concrete which is exposed during low-flow events and creates an unsuitable jump height for several of the present fish species. Where Bear Creek crosses the Adams Ave ROW, there is a similar sewer impediment which impedes fish passage. In addition to the sewer in Bear Creek, the Adams Ave culvert has degraded and created additional scour pools which add to the problem of allowing fish upstream.

Bear Creek is a tributary to Rock Creek spanning 1.8 miles to the west into the hills surrounding Vernonia. Rock Creek is a major cool-water tributary to the Nehalem River spanning 28.8 miles upstream of Vernonia to the productive headwaters. The proposed improvements are meant to remove the existing impediments and provide suitable conditions for fish migration while maintaining the necessary system functionality. Based on ODFW fish surveys, both waterways present migratory, spawning and rearing habitat for Chinook, Coho, Cutthroat Trout, Winter Steelhead, Lamprey, Largescale Suckers, Sculpins, and Crayfish. With this, it is known that different life stages of these species are present throughout the year and the variable flow patterns of the both creeks.

Improvements to fish passage are focused on removing the impediments and restoring creek connectivity. Project designs have already been created for these improvements through iterative design revisions based on consultation with ODFW and NOAA/NMFS. Improved passage in Rock Creek will be accomplished by removing the existing sewer infrastructure and grading back the vertical difference in the creek bed to suitable conditions.

### **Review Team Evaluation Strengths**

- The project will address two crossings, one on Rock Creek and one on Bear Creek, a tributary of Rock Creek. Rock Creek is a source of cooler water in the upper Nehalem watershed. Providing fish access to cold-water refuge will be beneficial to ESA-listed salmonids.
- The proposed fish passage work is part of a larger sewer infrastructure project that will improve water quality in Rock Creek.
- The Rock Creek watershed is a stronghold for fall and summer Chinook salmon. Oregon coast coho salmon and steelhead will also benefit from improved passage to rearing habitat.
- The applicant has a proven track record of successfully implementing similar types of projects.
- The watershed council and the City of Vernonia are building a partnership that is a catalyst for addressing other fish passage and water quality issues in the Rock Creek watershed.
- The work is cost-effective by combining the fish passage project with the larger infrastructure project.

### **Concerns**

- The permitting pathway described in the application is unclear. A clearly defined permit pathway is helpful for evaluating whether the applicable permits will be obtained in a timely manner so the project can proceed according to the proposed timeline
- There are other barriers upstream of both creeks, including a board check dam installed by the City of Vernonia annually to create a community swimming area. The dam is removed when adult fish appear, but it is a complete barrier to all life stages of fish throughout the summer when the cool water refugia in Rock Creek would be most important for juvenile fish to access. While the ecological benefit of the project is limited by this upstream summer barrier, the City of Vernonia and the Upper Nehalem Watershed Council are working together on a passage solution at the check dam.

### **Concluding Analysis**

Fish passage barriers on both Rock and Bear Creeks will be addressed during a larger sewer infrastructure project. Together, these project elements will improve water quality in waterways in and adjacent to the City of Vernonia in addition to providing for improved fish passage to upstream cold-water habitat. Removing the sewer line that crosses Rock Creek will not only make the creek more accessible for fish but it will also prevent the possibility of sewage leaks and overspill in the creek that threaten water quality. This project has potential to create momentum for continuing work to resolve the upstream barrier. Once a solution is found, fish passage could be restored to nearly 28 miles of habitat.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

6 of 8

### **Review Team Recommended Amount**

\$268,158

### **Review Team Conditions**

n/a

**Staff Recommendation**  
**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**  
Fund

**Staff Recommended Amount**  
\$268,158

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1020-23021

**Project Type:** Restoration

**Project Name:** Sutton Creek Proposal Rock Loop  
Fish Passage Project

**Applicant:** Nestucca-Neskowin Watersheds  
Council

**Region:** North Coast

**County:** Tillamook

**OWEB Request:** \$597,527

**Total Cost:** \$1,104,968

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**Application Description** 1) Sutton Creek is a 1.6-mile tributary of Neskowin Cr located in Tillamook County, at Neskowin. The headwaters are in the Suislaw National Forest and the creek flows through a beaver marsh wetland before reaching a residential neighborhood at its confluence with Neskowin Cr. Sutton Creek supports populations of ESA threatened coho salmon, winter steelhead, coastal cutthroat and Pacific lamprey.

2) In the downstream-most reach of the creek, two corrugated metal pipe (CMP) culverts at road crossings are undersized, failed/failing and not aligned with the channel. During storm events, the culverts fill with debris creating fish passage barriers and causing water to overtop banks flooding the neighborhood. In 2021, flooding overtopped both culverts resulting in damage to nearly two-dozen homes, washing away road fill at the downstream culvert exposing buried utility lines. One of the crossings is currently unusable.

3) The Nestucca, Neskowin, and Sand Lake Watersheds Council (NNSLWC) convened a technical review team and hired Stillwater Sciences to prepare 100% plans and a Basis of Design Report. The restoration project proposed here will replace the culverts with concrete box culverts following the stamped plans produced by Stillwater Sciences. This project will restore fish passage to 1.5 miles of spawning and rearing habitat for salmon and steelhead, including 0.8 miles of coho habitat.

4) The Project Team includes representatives from NNSLWC, the US Fish and Wildlife Service (USFWS), the US Forest Service (USFS), Trout Unlimited and Salmon Super Highway (TU & SSH), Tillamook Estuaries Partnership (TEP), and Proposal Rock Homeowners Association (PRHOA). ODFW will review and approve a Fish Passage Plan and will assist with fish salvage when work area isolation occurs prior to demolition and construction activities. USFS staff will provide federal and state permitting assistance for ARBO II and fish salvage under Wyden Authority rules.

### Review Team Evaluation

#### Strengths

- The project is located just upstream of the mouth of Neskowin Creek, which has historically been an important place for juvenile fish to find refuge when they are flushed out during high water events and need to avoid being swept out into the ocean.
- There are multiple partners involved in the project that bring a breadth of technical expertise.
- Technical designs for the two crossings are underway and the project is nearly ready for implementation.

### **Concerns**

- Additional details about the importance of Sutton Creek to fish and the expected ecological benefit from replacing the crossings would be helpful to better understand the ecological benefit of the project.
- Productivity of Oregon coast coho salmon and steelhead is only moderate in Sutton Creek. The coho population is dependent, meaning it relies on nearby independent populations for abundance. The restoration work may accomplish limited ecological benefit to ESA-listed fish for the cost.

### **Concluding Analysis**

Fish passage will be improved on Sutton Creek by replacing two culverts with larger structures. The downstream crossing has already failed and the road is currently unused. Replacing failing road crossings is a priority for a gated community to address the need for emergency vehicle access. The project may have limited ecological benefit due to the dependent nature of the fish populations in the watershed and site constraints surrounding the crossings from the heavily residential area limits restoration opportunities that can be considered.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

n/a

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

n/a

### **Staff Recommendation**

### **Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1021-23035

**Project Type:** Restoration

**Project Name:** Middle Necanicum Tributary Fish  
Passage and Habitat Improvement: Phase I

**Applicant:** Necanicum WC

**Region:** North Coast

**County:** Clatsop

**OWEB Request:** \$74,033

**Total Cost:** \$94,878

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**Application Description** 1) Upland from the Klootchey Creek Mainline and Middle Necanicum Mainline, this unnamed stream runs through Lewis and Clark Timberlands property. The Tributary drains into Klootchey Creek, and subsequently into the Necanicum River near milepost-3 on US-26. The tributary of focus for this project is a second-order fish-bearing stream that feeds into the Klootchey Creek/Necanicum system. Oregon Department of Fish and Wildlife surveys indicated that this stream supported ESA-listed coho, sea-run cutthroat, rough-skinned newts, red legged frogs and crayfish, and potentially winter-run steelhead.

2) It has been identified that a harvest road and failing culvert system is blocking fish passage to approximately 1.6-miles of type-F stream. Removing this barrier, widening the stream's width at the current barrier location to match with the floodplain, and reinforcing the new banks of the stream are all necessary to restore the stream's natural state.

3) Phase I of this project, which this grant proposal would support, will address the full decommissioning of the harvest road, removal of the failing culvert system, and excavation to return the stream system's width to the floodplain. In addition, measures will be taken to ensure that bank steepness, stream gradient and riparian vegetation are all addressed to protect against erosion and subsequent sediment transport, as well as increase the quality of the habitat as fish refugia.

4) Necanicum Watershed Council  
Nuveen Natural Capital/Lewis and Clark Timberlands  
Oregon Department of Fish and Wildlife  
Chinook Indian Nation

### Review Team Evaluation

#### Strengths

- The implementation plan for reconnecting 1.6 miles of stream habitat in a Middle Necanicum tributary is clear and technically sound. Road fill material and a collapsed culvert will be removed from a legacy timber harvest road and the streambank will be regraded to match the stream grade.
- The undersized culvert has caused sediment to build up and develop wetland habitat upstream. A large wood structure will be installed to retain that sediment in place so that no wetlands are lost.

- The stream supports populations of cutthroat trout and has potential to provide habitat for Oregon coast coho salmon. Removing the fish passage barrier will provide coho access to 1.6 stream miles located above the crossing that has high intrinsic habitat potential.
- The riparian buffer downstream is intact and in good condition.
- The project builds on previous downstream work to replace a culvert with OWEB funding.
- The partnership behind the project provides appropriate technical support for the project, including fish biologists from ODFW and a roads engineer from Nuveen Capital.

### **Concerns**

- More details describing the plant species and locations planned for plantings would have been helpful for understanding the revegetation prescription even though the planting is a minor project component.
- The stream would benefit from the addition of large wood to increase habitat complexity and including it in the project would increase the ecological benefit gained from this investment. There is indication in the application that large wood placement is planned as a future phase two project.
- Including designs in the application would have been helpful to better understand the methods for decommissioning the timber road. The applicant, however, is engaging a roads engineer and fish biologist with relevant experience to implement the project.

### **Concluding Analysis**

The watershed council has developed an effective partnership with an industrial timber landowner to restore stream habitat on a Necanicum River tributary. The existing timber road and culvert creates a full barrier for upstream fish migration. While coho distribution currently ends at the barrier, quality habitat exists upstream to which this project will restore access. Removing the failing culvert and restoring the streambank will connect quality upstream habitat with a downstream reach that has intact riparian conditions. The investment is reasonable for the expected benefits and is likely to lead to a phase two large wood placement project that will further improve habitat conditions.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

5 of 8

### **Review Team Recommended Amount**

\$74,033

### **Review Team Conditions**

n/a

**Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$74,033

**Staff Conditions**

n/a

# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1022-23038

**Project Type:** Restoration

**Project Name:** Tillamook Bay Wetland Connectivity and Fish Passage Project

**Applicant:** Trout Unlimited Inc

**Region:** North Coast

**County:** Tillamook

**OWEB Request:** \$505,060

**Total Cost:** \$1,384,758

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**Application Description** The proposed wetland connectivity and fish passage project is located at the road/stream crossing of Bayocean Road and Flower Pot Creek at milepost 4.1 approximately 5.5 miles West of Tillamook, Oregon. Here, a 14.6 acre tidal, estuarine wetland has become hydrologically disconnected from Tillamook Bay due to an antiquated, deteriorating, and undersized culvert and associated road prism where Flower Pot Creek meets Tillamook Bay. This problem culvert impairs tidal exchange and prevents native migratory fish from accessing tidal wetland rearing and upstream habitats in Flower Pot Creek. The culvert is 56 feet in length and 4 feet in diameter, situated within the tidal inundation zone. The tidal wetland provides valuable rearing habitat for anadromous fish utilizing Tillamook Bay including Oregon Coast Coho Salmon (ESA listed as threatened), Oregon Coast Chinook Salmon, Winter Steelhead Trout, Oregon Coast Chum Salmon, Pacific Lamprey, and Coastal Cutthroat Trout. The proposed project will eliminate the culvert and replace it with a 44ft bridge that will fully restore volitional fish passage and reconnect the estuarine habitat of Flower Pot Creek with Tillamook Bay. The new bridge will also eliminate the risk of culvert blowout and subsequent road closure. Bayocean Road meanders along the Southwestern edge of Tillamook Bay and is an important emergency and pedestrian route that connects the town of Tillamook to Cape Meares. The project also contains plans to enhance the estuarine habitat of Flower Pot Creek via channel stabilization and the use of large wood/root wads for additional fish habitat structure. OWEB funds will support contracted services needed to construct the replacement structure and will supplement funds and in-kind contributions from the U.S. Fish & Wildlife Service, Tillamook County, and Oregon Department of Fish & Wildlife, U.S. Forest Service.

### Review Team Evaluation

#### Strengths

- The project will provide floodplain inundation and water quality benefits that will both improve watershed process and habitat for aquatic species in Tillamook Bay at Flower Pot Creek.
- There is a 14.6-acre tidal estuarine wetland that has become hydrologically disconnected from the Tillamook Bay. Tidal wetlands provide valuable rearing habitat for anadromous fish. Replacing the culvert on Bayocean Road will restore tidal exchange and fish access to this wetland, which will provide rearing habitat for all species of juvenile salmonid occurring in the coastal region.
- The opportunity to restore tidal wetlands to historic hydrology is uncommon and a high priority for the coast.

- The current culvert is still structurally sound but allows only for minimal connectivity with the bay. The proposed design will completely restore tidal connectivity.
- The project will benefit a wide array of species that utilize estuaries, including crab, rock fish, and other forage fish.
- The Salmon SuperHwy partnership is a high functioning efficient network of practitioners with an extensive track record of implementing similar projects.
- The costs for the project are reasonable for the expected habitat benefit.
- The project is ready for implementation with match funding secured.

### **Concerns**

- No significant concerns are identified.

### **Concluding Analysis**

A 4-foot undersized culvert will be replaced with a 44- foot bridge to restore watershed connectivity between Flower Pot Creek and Tillamook Bay. In addition to restoring fish passage at the site, tidal inundation will be restored to an approximately 14-acre wetland associated with the tributary. This project provides a unique opportunity to open fish passage and reconnect important tidal wetland habitat to Tillamook Bay, and has a high likelihood of success in restoring priority habitats for ESA-listed fish.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 8

### **Review Team Recommended Amount**

\$505,060

### **Review Team Conditions**

n/a

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

n/a

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$505,060

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1024-23051

**Project Type:** Restoration

**Project Name:** Deer Creek Willow Planting Project

**Applicant:** Oregon Wildlife Heritage Foundation

**Region:** North Coast

**County:** Lincoln

**OWEB Request:** \$91,577

**Total Cost:** \$118,022

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**Application Description** The Deer Creek Willow Project is located in the Yaquina River Basin, 13.5 miles East of Elk City, Oregon approximately 2 river miles upstream from its confluence with the Big Elk Creek. This stream has been designated as Essential Salmonid Habitat and is important spawning and rearing habitat for ESA listed Coho Salmon, Chinook Salmon, Winter Steelhead, Pacific Lamprey, and Coastal Cutthroat Trout.

This project aims to address factors limiting recovery and conservation of Oregon Coast Coho, which were identified in the Oregon Department of Fish & Wildlife's Coho Conservation Plan (2007) and NMFS ESA Recovery Plan (2016).

The project focus is to increase the quality and quantity of summer and winter rearing habitat for juvenile salmonids by restoring the riparian area within the project reach with native willow species to support existing beaver populations and promote their range expansion. By restoring the willow galleries that once dominated these valley bottoms, beaver populations will be able to thrive and return important ecological functions to the landscape by creating dams and ponds that restore floodplain connectivity, provide low velocity habitat for rearing juveniles, and mitigate water temperatures.

Project partners include the Oregon Department of Fish and Wildlife, The Oregon Wildlife Heritage Foundation, and the Mid-Coast Watershed Council.

### Review Team Evaluation

#### Strengths

- Project actions will address a limiting factor for Oregon coast coho by improving habitat complexity. The restoration actions will also benefit Chinook and steelhead.
- The approach is appropriate for the site given the access constraints. The site is currently only accessible via ATV or on foot.
- The project utilizes a process-based restoration approach by attracting beaver to the Deer Creek watershed. A willow component will be planted in a reed canary grass dominated area, which will also help restore native vegetation in the riparian area.

- The planting plan is technically sound by incorporating primarily willow with a few other native species to match site conditions and a detailed plant establishment plan. Willow will be the easiest species to establish on the site and if it is successful there is a high probability that beaver will recolonize the area.
- The applicant is partnering with both ODFW and the MidCoast Watersheds Council to build capacity to accomplish the work.
- The project approach is cost-effective for the expected watershed benefit.

### **Concerns**

- Reed canary grass suppression in the planting area will be limited to primarily hand operation techniques due to site access constraints. It may be challenging to achieve meaningful control.
- Due to limited site access, the applicant limited diversifying plant species they will be planting. The simple approach establishes a willow gallery to encourage beaver but there may be missed opportunities in improving biodiversity as a result.
- The applicant has had limited capacity to administer past OWEB grants and their current capacity to implement the project is unclear.

### **Concluding Analysis**

Deer Creek contains high quality low gradient habitat for Oregon coast coho salmon and other aquatic species. This project will address a 10-acre portion of riparian area along the project stream reach that has become dominated by invasive species, particularly reed canary grass. Encouraging beaver back to the site by establishing a willow gallery is a low-cost process-based restoration approach that is likely to succeed at the project site.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 8

### **Review Team Recommended Amount**

\$91,577

### **Review Team Conditions**

n/a

### **Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$91,577

**Staff Conditions**

n/a

# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1025-23004

**Project Type:** Technical Assistance

**Project Name:** Gallagher Slough Fish Passable  
Tide Gate Upgrade

**Applicant:** Lower Nehalem WC

**Region:** North Coast

**County:** Tillamook

**OWEB Request:** \$74,986

**Total Cost:** \$96,339

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**Application Description** The Gallagher Slough tide gates are located under Hwy 101 near its intersection with Hwy 53 between Nehalem and Wheeler. The 5 tide gates are deteriorating, top-hinged, wooden doors, 7 ft x 8 ft. Gallagher Slough drains approximately 1,031 acres dominated by agricultural land use and limited impervious area. The existing tide gates limit fish passage to both Gallagher and Pye Sloughs, which intersect just upstream of the gates. Diking, tide gates, and other modifications to the Nehalem Estuary have resulted in a 54.9% reduction in tidal wetland area (Brophy, 2019).

This project will develop 30% conceptual level designs for the Gallagher Slough tide gates. This level of design will be sufficient to determine if the gates can be retrofitted or if the entire structure will need to be upgraded. To accomplish this, an engineering firm will be contracted. Water monitoring equipment will be deployed by Tillamook Estuaries Partnership to measure water depth, temperature, and salinity inside and outside the gates. The engineering firm will conduct site and bathymetric surveys. This information will be used for a hydraulic analysis to determine the fish passage status of the current structure with a Muted Tidal Regulator (MTR) or the size required of a new structure. That model will also be used to predict the effects of the project on the site's current land use including inundation extent, depth, and frequency over time using tidal data and the locally collected data. This information will be used to inform a water management plan.

This project is being undertaken in collaboration with the Tillamook County Creamery Association, Tillamook Estuaries Partnership, Oregon Department of Transportation, and the Oregon Department of Fish and Wildlife.

Brophy LS, Greene CM, Hare VC, Holycross B, Lanier A, Heady WN, et al (2019) Insights into estuary habitat loss in the western United States using a new method for mapping maximum extent of tidal wetlands.

### Review Team Evaluation

#### Strengths

- Preliminary design solutions for replacing tide gates will be developed to address a long-standing fish

passage barrier on Gallagher Slough, the largest slough in the Nehalem River estuary. Historically, the slough provided important rearing habitat that was important for all salmonid fish species and once supported very productive populations.

- The Gallagher Slough tide gates is ranked on the list of priority ODFW fish passage barriers.
- The project is support by a partnership that includes ODOT, the Tillamook Estuaries Partnership, and the Tillamook County Creamery Association.

## Concerns

- The expected ecological benefit of a tide gate replacement or modification at the project location is unclear given the lack of quality habitat upstream. Water management changes will be necessary to realize benefits to fish and wildlife and the application contains limited detail about what the landowners might be willing to consider.
- Water quality in Gallagher Slough is very poor. Increased tidal exchange from a new tide gate may help address temperature and dissolved oxygen to a certain extent, but other land management changes, such as increasing riparian buffers and changing livestock management practices to protect riparian areas, may be necessary to realize any habitat benefits from increased fish passage. The application does not provide detail on any considerations to improve upstream habitat and water quality.
- The ownership of the tide gate is unclear in the application and the roles and responsibilities of funding and implementing the eventual project are not well described.
- The resulting restoration project from this technical assistance work will likely be expensive for the expected habitat benefits.

## Concluding Analysis

Gallagher Slough historically provided important rearing habitat for fish, including coho salmon. The current tide gate structure is a set of five top-hinged, wooden doors with an outdated design that does not provide optimal fish passage. Replacing or upgrading the tide gate could provide access to tidal estuary habitat that is critical for juvenile fish; however, with the poor water quality, high temperatures, lack of riparian shade, and intensive grazing found along the slough's reach, providing new access to fish may be of limited ecological benefit unless significant management changes can be realized. Details in the application are lacking with regards to what management changes, if any, will be possible with a tide gate upgrade. It is difficult to assess the ecological benefit of improved fish passage without an understanding of whether water management changes and other habitat improvements are possible within the slough.

## Review Team Recommendation to Staff

Do Not Fund

## Review Team Priority

n/a

## Review Team Recommended Amount

\$0

**Review Team Conditions**

n/a

**Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

n/a

# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1026-23039

**Project Type:** Technical Assistance

**Project Name:** Mary's Creek Culvert Replacements  
- Phase 1 Designs

**Applicant:** Tillamook Estuaries Partnership

**Region:** North Coast

**County:** Tillamook

**OWEB Request:** \$42,053

**Total Cost:** \$53,571

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**Application Description** This technical assistance application is to fund Phase 1 - 30% design work for two culvert replacements on Mary's Creek, a tributary of Fawcett Creek in the Tillamook Bay Watershed of Tillamook County. Anadromous salmonid fish species occurring on the Tillamook watershed include spring and fall chinook salmon, coho salmon, summer and winter steelhead, and sea-run cutthroat trout. These two culverts are the two lowest fish passage barriers in Mary's creek before it joins Fawcett creek. Each culvert exists on a separate private property, owned by Robert Phillips and Bradley Pierce respectively.

Mary's creek was surveyed by Oregon Department of Fish and Wildlife (ODFW) biologists in the summer of 2022. Cutthroat trout and coho salmon fry were found present at the time of survey. The survey identified 1.19 miles of coho habitat upstream from the lowest fish passage barrier, and 1.78 miles of fish habitat upstream of the lowest barrier total.

The goal of this project is to secure complete engineering designs for replacement of both culverts with adequately sized structures and streambed simulation design.

Engineering designs will be contracted out to a private engineering firm. TEP will prepare and release an RFP for engineering designs, manage the engineering contract, and convene the technical team for design review.

Project partners include Oregon Department of Fish and Wildlife (ODFW), Trout Unlimited (TU), USDA Natural Resource Conservation Service (NRCS), and Tillamook County Public Works (TCPW).

### Review Team Evaluation

#### Strengths

- Mary's Creek is a priority location in the Tillamook Bay watershed to restore habitat for Chinook, coho, steelhead, lamprey, and potentially chum. There is high potential for fish productivity upstream of two undersized culverts that are currently fish passage barriers, once they are improved.
- The application describes a clear need for the proposed design engineering plans for replacing two undersized culverts with the downstream crossing in an imminent stage of failure and the upstream crossing providing access to a community water source.
- A broad project partnership is behind the work, including local, state, and federal agencies. The applicant has a proven track record of success with similar projects.

- Intact riparian forest is present along portions of the stream reaches that provides shade and will likely contribute to future large wood recruitment into the stream.
- Previous review comments are addressed by providing additional alternatives analysis within the application. The design approach was also scaled back for the downstream structure to a level that is a better fit with the site conditions and the use of the road.
- Costs are reasonable for permit-ready designs for two crossings.

### **Concerns**

- Construction access to the sites may be challenging due to the current road conditions, particularly the downstream crossing that has limited functionality.
- The stream would benefit from other habitat improvements in addition to the fish passage work in order to realize the full ecological potential of this project. Large wood additions would further encourage the stream's interaction with the floodplain.

### **Concluding Analysis**

Mary's Creek is a tributary of Fawcett Creek in the Tillamook Bay watershed. The creek is prime habitat for a full suite of fish species, including Oregon coast coho salmon. Replacing the two road crossings will improve access to 1.8 miles of quality habitat for spawning and rearing. This is the second submission of this project for technical assistance funding after not being recommended in a previous cycle, and the applicant fully considered the comments from that review and improved the application. A technical team has been established that will help guide the design process, increasing the likelihood of success for the project to result in designs that will lead to improving passage for juvenile and adult migratory fish in Mary's Creek.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 1

### **Review Team Recommended Amount**

\$42,053

### **Review Team Conditions**

n/a

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$42,053

**Staff Conditions**

n/a

# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1031-22991

**Project Type:** Stakeholder Engagement

**Project Name:** Necanicum Together: Landowner Engagement Program

**Applicant:** Necanicum WC

**Region:** North Coast

**County:** Clatsop

**OWEB Request:** \$28,804

**Total Cost:** \$43,346

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**Application Description** 1) The Necanicum Basin is a relatively small watershed, amounting to just under 56,000 acres of drainage into the Pacific Ocean. The 21-mile river and its extensive tributary system are one of the Oregon Coast's four distinct populations of coho salmon that do not currently meet the sustainability criteria as defined by NOAA. The location of this project is the entirety of the Necanicum Basin, with priorities given to property owners with river/stream front land and on type-F streams.

2) As a rural-based Watershed Council with limited capacity (1.0 FTE), a hurdle that often results in missed restoration opportunities is the apparent disconnect between community and organization. The Necanicum Basin is rich with privately and publicly owned property that contain Type-F rivers and streams. This project is designed to proactively make a frequent connection between our community-based restoration work and the landowners in our basin that could both contribute and benefit from participating in restoration work.

3) This project is a multi-pronged outreach effort to connect landowners with the services and opportunities that the Watershed Council can provide. 1) We will be sending out 5 quarterly mailers with pre-stamped return postcards to landowners in the basin, asking for information and whether they may have interest in working with the watershed on a restoration effort. 2) Scheduling at least 4, but up to 6, local events for landowners to attend. Events will vary from simply "informational mixers" to conference style setup in which we'd invite folks from funding organizations like OWEB, ODFW, NOAA etc. to explain the benefits of restoration work with local WCs and 3) conduct time-intensive door-to-door campaigns to make a face-to-face connection with NWC staff and local landowners.

4) This project has indirect partners in the City of Seaside and City of Gearhart, which have both offered to assist with connecting to landowners through mailer assistance.

### Review Team Evaluation

#### Strengths

- The communication strategy to engage landowners in the Necanicum Basin is technically sound and contains a diverse array of approaches, including mail contact, brochures, website content, and in-person events.

- A landowner contact list and map of interested landowners will be produced that will inform and identify future restoration projects.
- The applicant is working with ODFW to acquire fish distribution information to disseminate to landowners and interested community members.
- The applicant has the capacity to implement the project and the proposed engagement will build on success with recent fundraising and community engagement work.
- The costs are reasonable for the proposed work and deliverables expected.

### **Concerns**

- It is unclear how the landowners will be identified and whether the scope of the project is targeted to high priority areas or the entire geography. Much of the landownership in the Necanicum watershed is commercial timber and there may be limited opportunities for diverse landowner participation.
- The project goals and success measures are not clearly stated within the application. More information on how the specific outreach approaches are expected to lead to future restoration projects would be helpful.
- The scope of the project may be ambitious for the available staffing resources.
- Brochures and mailings can be expensive and may not be the best approach to generating new landowner participation.

### **Concluding Analysis**

The stakeholder engagement proposal is timely because there is new interest developing in the Necanicum watershed and new entities open to considering restoration. The applicant organization is actively looking to engage with a wider audience and bring new voices to the table in the Necanicum watershed. The proposed landowner engagement is likely to build relationships with that audience that could lead to opportunities to restore coho habitat.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 1

### **Review Team Recommended Amount**

\$28,804

### **Review Team Conditions**

n/a

### **Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$28,804

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1027-22980

**Project Type:** Monitoring

**Project Name:** Lower Columbia Watershed Rapid  
Biological Assessment

**Applicant:** Columbia SWCD

**Region:** North Coast

**County:** Columbia

**OWEB Request:** \$100,952

**Total Cost:** \$134,951

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**Application Description** 1) The Lower Columbia River Watershed Council (LCRWC) presides in Columbia County, Oregon serving an area centered on the Clatskanie River including all drainages from Mcbride Creek (Columbia USGS RM 82.5) to Kelly Creek (Columbia USGS RM 37.8). The LCRWC territory encompasses a contiguous drainage area of approximately 190,720 acres of Oregon's Lower Columbia River area. This expansive territory provides habitat for ESA listed Coho, Chinook, Steelhead, and Chum salmon along with non-listed coastal cutthroat trout, and lamprey (Pacific and brook).

2) Watershed assessments and plans drafted by local, state, tribal and federal entities have identified the lack of basin-scale inventories of salmonid distribution, abundance, and habitat distribution in the LCRWC watersheds as significant data gaps in efforts to prioritize areas for restoration and conservation. Previous assessments within the LCRWC watersheds are outdated and/or do not provide the detail needed to establish restoration goals for specific sub-watersheds or reaches within those streams.

3) This project proposes to conduct a Rapid Bioassessment (RBA) and Limiting Factors Analysis (LFA) Lite of 110.9 stream miles throughout the watershed of the LCRWC. The project will collect essential data regarding salmonid distributions and abundance, and associated watershed characteristics that may serve as limiting factors for salmonids. The goal is to determine seasonal habitat limitations for coho and steelhead and develop a systematic approach to identify and implement restoration actions that address those limiting factors.

4) The project partners include:  
Lower Columbia River Watershed Council  
Columbia Soil and Water Conservation District

Bio-Surveys, LLC  
Oregon Department of Fish and Wildlife (ODFW)  
Oregon Department of Forestry (ODF)  
Evenson Logging, Van Natta Brothers Logging, Weyerhaeuser

## **Monitoring Team Evaluation**

### **Monitoring Team Strengths**

- This project will provide information to update the outdated existing fisheries data that the application summarizes.
- The applicant will convene a technical advisory committee (TAC) to interpret the results and apply the information to plan future restoration strategies.
- The contractor is highly qualified to complete the work and has a proven track record of collecting the data as proposed and providing a comprehensive report that summarizes the information and opportunities for restoration.
- The budget is very detailed, and the contractor costs are reflective of the expenses to accomplish the monitoring and reporting objectives proposed in the application.

### **Monitoring Team Concerns**

- The application contains redundant responses to different questions which made it challenging to find the details of the proposed monitoring project.
- The application didn't describe how this project will incorporate the existing water quality data that the Columbia SWCD/Lower Columbia Estuary Partnership has been collecting with OWEB funds. This could prove very helpful given they are collecting continuous water temperature in this geographic area.
- Several of the monitoring questions that are posed in the application are vague and is not clear how they plan to answer them. For example, it is not clear how they plan to make the distinction between adult or juvenile barriers or how they plan to determine if previous restoration actions are functioning as intended.
- The study design did not clearly articulate which streams and reaches will be monitored. The uploaded map was difficult to read and did not explicitly identify which reaches would be surveyed.
- The applicant plans to identify thermal refugia, but the application does not provide a clear description of how that will be done.
- The application did not describe the quality assurance/quality control measures to ensure that high quality data will be collected, managed, and reported.
- The applicant proposes to store the data in an Access database but the application lacks details on how the data will be backed to ensure long term storage is successful.
- It is unclear whether the TAC members have been engaged yet or if they've committed to participate. The match related to the TAC members in the application was pending with no letters of commitment. Several of the TAC members listed in the application are not likely to possess detailed knowledge of the stream reaches to interpret the results.

## Monitoring Team Comments

### Review Team Evaluation

#### Strengths

- The monitoring approach utilizes a well-established protocol for Rapid Bio-assessments that is technically sound. Anchor habitats will be identified within the lower Columbia watersheds using an appropriate methodology.
- The project addresses a known data gap in fish distribution and habitat within the watershed.
- The selected contractor has relevant experience and a proven track record of implementing similar projects.
- A technical committee will be engaged to provide project oversight and additional expertise to the monitoring effort.
- The cost for the proposed monitoring is reasonable given the number of miles slated for survey.

#### Concerns

- The maps are unclear within the proposal as they only provide a very basic geography of the survey areas. The rationale for the locations selected for survey is also not well described within the application.
- The application lacks details about the methodology for the Limiting Factors Analysis "Light".
- The proposed approach to conduct a spawning gravel inventory is not well described in the application and it is unclear how the data will be collected.
- Temperature data is listed as a parameter that will be monitored, but details are unclear. For example, it is unclear whether water temperature will be collected by continuous or grab sample monitoring or if the selected contractor has experience with temperature monitoring.
- Capacity to conduct the monitoring work is uncertain because the applicant has not been able to complete previous OWEB-funded projects due to staff turnover, low capacity, and organizational challenges.
- The application lacks letters of support or evidence of involvement from any of the proposed members of the technical committee.

#### Concluding Analysis

Rapid Bio-assessments have become a useful tool for restoration practitioners to plan and prioritize work within a watershed. There is limited information available currently within the geography covered by this proposal, and this monitoring work will refine fish distribution maps and identify stream reaches that contain anchor habitat. Partners working within the lower Columbia watershed have long suffered from a lack of strategy that comes with the lack of the information necessary to develop a suitable project prioritization approach, and this monitoring effort would take a step towards addressing that shortcoming. The application lacks clarity in several key areas, however, needed to better understand the project. More detail about site selection and the parameters beyond the typical Rapid Bio-assessment activities, such as water temperature and beaver populations, would have been helpful for evaluating the work

proposed.

**Review Team Recommendation to Staff**

Do Not Fund

**Review Team Priority**

n/a

**Review Team Recommended Amount**

\$0

**Review Team Conditions**

n/a

**Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

n/a

# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1028-23003

**Project Type:** Monitoring

**Project Name:** Collaborative Expansion of the Columbia County Water Quality Monitoring Program 2023-2026

**Applicant:** Lower Columbia Estuary Partnership

**Region:** North Coast

**County:** Columbia

**OWEB Request:** \$270,865

**Total Cost:** \$401,889

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**Application Description** The Lower Columbia Estuary Partnership (LCEP), Columbia SWCD, and partners request \$270,865 for a three-year water quality monitoring project in six key subbasins in Columbia County. Building on existing data collected since 2008, the project will expand monitoring efforts in Milton Creek, Scappoose River, Beaver Creek, Clatskanie River, and McNulty Creek watersheds for years 7-9 of continuous status and trends monitoring through our current program. These watersheds provide spawning, rearing, and refugia habitat for four ESA-listed groups of salmon and steelhead, and the Lower Columbia River (LCR) ESA Recovery Plan lists degraded water quality, elevated temperatures, and excessive fine sediments as limiting factors to their recovery.

The proposed work includes 1) continuing long-term data collection, measuring bacteria, temperature, turbidity, conductivity, dissolved oxygen (DO), and pH across 15 locations in the six focal watersheds; 2) adding continuous DO monitoring to these locations due to suboptimal conditions; 3) conducting a 2 yr eDNA study in Milton Creek sub-basins (11 locations) to identify E. coli sources; 4) collaborating with partners to integrate findings into restoration strategies, land-use plans, and best management practices.

Project partners, providing over \$130,000 in match funding (a 48% total OWEB match), include the City of Scappoose, City of St. Helens, Columbia County, Columbia County Soil and Water Conservation District, Lower Columbia Watershed Council, Scappoose Bay Watershed Council, Tillamook National Estuary Partnership, Oregon Department of Fish and Wildlife, and Oregon Department of Environmental Quality. This project remains a high priority for addressing water quality issues and contributing to ESA-listed species recovery, ensuring a healthier ecosystem for future generations.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- The proposed project including the bacteria eDNA source and continuous dissolved oxygen investigations will complement the existing water quality data that has been collected over several years with OWEB funding.

- This water quality monitoring project complements other local monitoring efforts in the Scappoose Bay watershed and the proposed rapid bioassessment by the Columbia SWCD.
- The applicant will follow established monitoring methods and are appropriate to answer their proposed monitoring questions.
- Continuing to collect the continuous water temperature and discreet water quality parameters at the existing sites for another three years will allow them to perform a statistical trend analysis.
- The applicant will apply several approaches to summarizing the results and making them publicly available including using tableau to visualize the data.
- The applicant has several years of experience collecting high quality data and summarizing the results in annual summary reports.
- The letters of support and match express that their technical expert and community engagement has been thorough and successful.
- The budget included sufficient detail and justification for the expenses necessary to accomplish the objectives proposed in the application.

### **Monitoring Team Concerns**

- The application contained redundant responses to different questions which made it challenging to find the details of the proposed monitoring project.
- The application would have benefited from a description of what is achievable with the bacteria eDNA results from similar monitoring approaches in other areas.
- The application lacked details on the bacteria eDNA lab sampling approach and specific field monitoring quality assurance quality control measures that are necessary before samples are sent to the lab.
- The application was not clear how they will correlate water quality results with streambank conditions to identify hotspots, seasonal variations, and potential sources within the watersheds. It is not clear what streambank condition data exists to know if this task is achievable.
- The application only broadly describes that ODFW and the Columbia Public Health department will be involved.
- It was not clear on exactly how the interpretation of the water quality and bacteria eDNA data would be done and the finished product that would be generated to summarize the data that they are collecting.
- It was not clear if the applicant has the capacity to interpret the bacteria eDNA data to meet their monitoring questions to apply the data in a meaningful way.
- It was not clear if the budget amount was sufficient to allow enough staff time to collect year-round continuous dissolved oxygen data at 15 sites given that this is a challenging parameter to monitor which requires frequent site visits and time to review the resulting data sets.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- The proposed monitoring continues the collection of a long-running dataset. Multiple year data of this

nature is valuable.

- The applicant has a proven track record of success with water quality monitoring and managing data. The data dashboard and website are helpful tools for making the information publicly accessible.
- The project partnership has grown in recent years to encompass a diversity of participants within the monitoring geography.

## Concerns

- The rationale for conducting dissolved oxygen monitoring year-round is not well described in the application, the need and applicability of using this data to inform future restoration is unclear.
- The project has broadened substantially to include eDNA and dissolved oxygen monitoring as well as the traditional temperature and bacteria data collection that has been conducted. The application appears to contain three separate projects in one application, and it is difficult to understand the need for the project expansion.
- There are a multitude of water quality parameters proposed for monitoring but understanding the project's end goal is challenging. There is an unclear path from the data being collected to informing the planning and prioritizing of restoration work.
- The eDNA project elements to trace E. coli sources can be a helpful tool for communicating with landowners, but this data is notoriously difficult to interpret to differentiate sources of E. coli, such as an elk herd versus a dairy. Higher frequency of sampling than what is proposed may be necessary to tease out sources of bacteria. It is unclear if the additional expense for this information is warranted due to the uncertainty in the results providing conclusive information about E. coli sources.
- Costs per year of monitoring have substantially increased, primarily due to the new project components and the labor-intensive nature of the dissolved oxygen monitoring. More information in the application explaining the increased costs for staff time and how the additional data is necessary for informing restoration would have been helpful in evaluating the cost-effectiveness of the work proposed.

## Concluding Analysis

The project partners have a proven track record of implementing water quality monitoring in the Columbia County geography, and this project will continue data collection for an additional three years. The project recently expanded to include additional partners and monitoring parameters that could potentially provide new information on sources of bacteria and identify target areas where dissolved oxygen is a concern.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

3 of 3

## Review Team Recommended Amount

\$270,865

## Review Team Conditions

n/a

**Staff Recommendation**

**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

n/a

## Open Solicitation-2023 Spring Offering North Coast (Region 1)

**Application Number:** 223-1029-23027

**Project Type:** Monitoring

**Project Name:** Nestucca, Neskowin & Sand Lake  
Expanded Monitoring II

**Applicant:** Nestucca-Neskowin Watersheds  
Council

**Region:** North Coast

**County:** Tillamook

**OWEB Request:** \$51,230

**Total Cost:** \$77,191

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### Application Description

This project proposes to continue collection of stream temperature and bacteria data, initiated in 2022, in priority reaches of the Nestucca, Neskowin, and Sand Lake watersheds during 2023-25. This proposed 2-year extension represents the second phase of a planned 6-8 year project intended to capture data over a timeframe that will allow for statistically significant trend analyses. This monitoring program's goal is to fill a data gap on bacteria loads and stream temperatures in key locations to inform prioritization and planning for restoration projects. Existing water quality data collected by state and federal natural resources agencies and NGOs over the years (1998 to present), and a recent Sand Lake Basin Limiting Factors Analysis and Restoration Prioritization, indicate that surface waters in these basins are water quality limited the following ways:

1. Many mainstem stream reaches exceed the state temperature standard and are too warm to protect salmon and trout. However, limited information is available for the tributaries.
2. Fecal bacteria concentrations in Nestucca Bay are occasionally too high to allow human contact with the water as well as too high to protect human consumption of shellfish harvested from the Bay.
3. Fecal bacteria concentrations in Sand Lake and at Neskowin beach are frequently too high to allow human contact with the water, resulting in beach closures for Neskowin.

The current and historic data demonstrate that water quality problems exist, but the data are not high resolution enough to make decisions on prioritizing restoration in specific tributaries. This project is coordinating with the Tillamook Estuaries Partnership (TEP) and Oregon Department of Environmental Quality's (DEQ) Volunteer Water Quality Monitoring Program (VWQMP) with sites that complement their existing program and expand monitoring to priority tributary streams.

Project partners include field and technical volunteers, DEQ, and TEP.

## **Monitoring Team Evaluation**

### **Monitoring Team Strengths**

- The proposed project will build on the first phase of monitoring that was recently funded by OWEB and is currently being implemented.
- The applicant is following established monitoring methods that are adequately described in the application and have a DEQ approved Sampling and Analysis Plan.
- The water quality data will be submitted to DEQ, and the applicant will take several steps to make it publicly available including uploading the bacteria data on the "SWIM GUIDE" online platform.
- The applicant is working with the Tillamook Estuaries Partnership (TEP) and DEQ to develop their monitoring project and is working with the Neskowin Citizen Advisory Committee to distribute fact sheets to inform the landowners.
- The applicant is working with trained volunteers to assist in collecting bacteria samples and water temperature data which will improve community engagement.
- The applicant plans to analyze water samples for bacteria which will allow them to save time and money over time. Building this capacity in their community has the potential to provide an important service to others in their area.

### **Monitoring Team Concerns**

- The uploaded maps did not include all the bacteria monitoring sites and it was not clear which sites are already monitored by TEP and which ones will be covered by the applicant.
- While the selection of monitoring sites that are publicly accessible are important it is not clear if their locations have a sufficient geographic distribution to answer their monitoring questions.
- The water temperature monitoring sites may not be adequate to document effects of completed projects (riparian, fish passage) since they are only located downstream of these restoration projects.
- The application did not include a description of the bacteria analysis lab methods that will be used to process the water samples and track the resulting data from the time the samples are delivered to the lab to when the analysis is completed.
- The application didn't describe how they will incorporate quality assurance/quality control measures into the volunteer data collection efforts to ensure high quality data will be generated.
- The application did not include a detailed description of how the data will be analyzed and interpreted to answer their monitoring questions.
- The volunteer coordination efforts estimated in the budget may not be sufficient if there are fluctuations in volunteer participation.

### **Monitoring Team Comments**

- Contact Spencer Sawaske at ODFW's Water Division to coordinate on the water temperature monitoring.
- Incorporate the approved sampling and analysis plan measures to ensure the volunteers are collecting high quality data.

## **Review Team Evaluation**

### **Strengths**

- Water quality monitoring initiated in 2022 will be continued in priority reaches of the Nestucca, Neskowin, and Sand Lake watersheds.
- The applicant has a proven track record successfully implementing the proposed monitoring strategy.
- The work addresses key data gaps in both the DEQ's long term temperature monitoring and Tillamook Estuaries Partnership's bacteria monitoring.
- The geography proposed for the monitoring contains stream reaches that are impaired for temperature and bacteria.
- The application describes how the proposed monitoring will refine information about cold water refugia and impaired waterbodies, which will be used to prioritize areas for restoration.
- The proposed methodology is technically sound and utilizes DEQ protocols. The applicant is working closely with DEQ to determine trends and plans to display the information on a website platform to be accessible by the public.
- The applicant incorporated community input in order to refine the chosen sampling locations.
- The project is cost effective for the work proposed.

### **Concerns**

- No significant concerns are identified.

### **Concluding Analysis**

Water quality monitoring will be continued on impaired Tillamook County streams. Collecting additional years of data will expand the value of the data set in filling important data gaps in the selected watershed geography. The project partnerships with agencies and other organizations conducting monitoring in the county is likely to succeed in filling data gaps in bacteria loads and stream temperatures in key locations to inform prioritization and planning for restoration projects.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 3

### **Review Team Recommended Amount**

\$51,230

### **Review Team Conditions**

n/a

**Staff Recommendation**  
**Staff Follow-Up to Review Team**

n/a

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$51,230

**Staff Conditions**

n/a

# Open Solicitation-2023 Spring Offering

## North Coast (Region 1)

**Application Number:** 223-1030-23053

**Project Type:** Monitoring

**Project Name:** Upper Yaquina Strategic Implementation Area Monitoring

**Applicant:** Lincoln SWCD

**Region:** North Coast

**County:** Lincoln

**OWEB Request:** \$135,408

**Total Cost:** \$174,508

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**Application Description** The Strategic Implementation Area (SIA) is located in the eastern portion of Lincoln County and encompasses the Upper Yaquina watershed. The sub areas within the Upper Yaquina Watershed included in the SIA are HUC12 171002040102 Bales Creek-Upper Yaquina, and 171002040103 Little Elk Creek. These water bodies have both been identified as Oregon DEQ 303(d) listed for impairments concerning dissolved oxygen, high temperatures, and bacteria (fecal coliform and E. coli). Excessive sedimentation and lack of riparian vegetation, or replacement of native vegetation with invasive species such as Himalayan blackberry (*Rubus armeniacus*) and reed canary grass (*Phalaris arundinacea*) is another common concern in these watersheds.

Six DEQ monitoring stations are already present within these watersheds, providing baseline water quality data. Our proposal is to conduct further monitoring on a 4-year timeline with the goal of assessing for changes in water quality since these waterbodies were last assessed in 2016/2018, identify parameters of concern within each reach in order to better target our outreach efforts, and provide updated baseline data as future restoration efforts are implemented within the watershed.

Lincoln SWCD will be partnering with the Oregon Department of Environmental Quality (DEQ), the USDA Natural Resources Conservation Service (NRCS), Oregon Department of Fish and Wildlife (ODFW), MidCoast Watersheds Council (MCWC), and the Oregon Department of Agriculture (ODA).

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- The proposed project will complement the existing data collected at the monitoring sites established in the past and the one site the applicant has maintained since 2000.
- The applicant has an existing local monitoring team comprised of state and federal agencies that was convened to help establish the Strategic Implementation Area (SIA) monitoring approach.
- The applicant is partnering with the NRCS to collect qualitative stream condition data and to track conservation practices that are implemented in the project area.
- The applicant is partnering with DEQ to help inform the study design and interpret the monitoring results.
- The budget includes cost-saving measures including sending water samples to the local Hatfield Marine Science Center for bacteria analysis.

## Monitoring Team Concerns

- The application didn't describe how this project would complement the SIA monitoring proposal that is providing resources to collect related water quality data in the same geographic area.
- The application language appears to be outdated given that the application describes a need to collect data to develop the TMDL and it has already been completed.
- The applicant doesn't describe the monitoring questions that they want to answer with the continuous water temperature and dissolved oxygen monitoring proposed in Objective 2 and includes the same monitoring questions posed in Objective 1.
- The applicant does not have a DEQ approved sampling and analysis plan despite the application describing that one exists.
- The application proposes to determine if Little Elk Creek is attaining water quality criteria and it was not clear if significant conservation actions have been implemented since 2018 to understand if this might be the case.
- The application doesn't describe the monitoring methods to collect the water quality data.
- The information provided in the methods section of the application isn't clear on how often they'll be downloading the data and who will be responsible for it.
- The application doesn't describe what specific data that will be measured using the Streamside Vegetation Assessment (SVA) and the SVAP2 to assess the riparian condition in objective 3.
- The application mentions collecting data with a solar pathfinder, but it was not clear how this data will be incorporated into the data analysis.
- The timeline doesn't describe when the vegetation assessment will occur.
- The application does not clearly describe the roles and responsibilities of DEQ to assist in the dissolved oxygen data collection and analysis to ensure this project will be successfully implemented.
- It is not clear if the applicant has the capacity to complete the water quality monitoring project as proposed given that their monitoring staff no longer work at the district.
- It was not clear how the staff time was estimated to determine if it is appropriate to complete the objectives proposed in the application.

## Monitoring Team Comments

### Review Team Evaluation

#### Strengths

- There is a broad partnership working on the Strategic Implementation Area (SIA) in Lincoln County and the proposed monitoring will result in water quality data in this geography.
- The applicant proposes a longitudinal profile sampling method as opposed to random site collection, which is an effective approach to understanding water quality.
- The applicant has coordinated extensively with DEQ.

## Concerns

- The application lacks information explaining how the proposed monitoring complements and utilizes previously collected monitoring data.
- The application indicates that the TMDL is in development, but the TMDL has already been developed and is out for comment. The intersectionality of this work with the existing TMDLs is not well-described.
- The application states that there is an existing DEQ-approved Strategic Action Plan (SAP) but there is no evidence of an approved SAP.
- The application lacks detail in how the monitoring builds off of the standard monitoring conducted as part of the SIA, which is also funded by OWEB.
- It is unknown how the monitoring work will complement other monitoring conducted locally.
- The applicant has recently built staff capacity, but the experience of the organization's staff in conducting this type of monitoring is unclear. The inclusion of continuous dissolved oxygen monitoring will be a challenging first foray into water quality monitoring.

## Concluding Analysis

Strategic Implementation Areas receive a limited base level of monitoring funding and this project will expand the amount of data collected through the SIA program. More detail describing how the proposed work will build on that base SIA monitoring and how the data will support TMDLs would have been helpful for understanding the need and relevance for the proposed monitoring. There is, however, value in maintaining momentum in monitoring the Upper Yaquina. With the TMDL completed in this basin, there is now a broader need for implementation monitoring and this project could make strides toward achieving that goal.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

2 of 3

## Review Team Recommended Amount

\$135,408

## Review Team Conditions

n/a

## Staff Recommendation

### Staff Follow-Up to Review Team

n/a

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

n/a

# South Coast - Region 2 Spring 2023 Funding Recommendations



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**Funding Recommendation**

- Staff Recommendation For Funding (SRF)
- Below Funding Line (BFL)

**Previous Grants 1998 - Spring 2022**

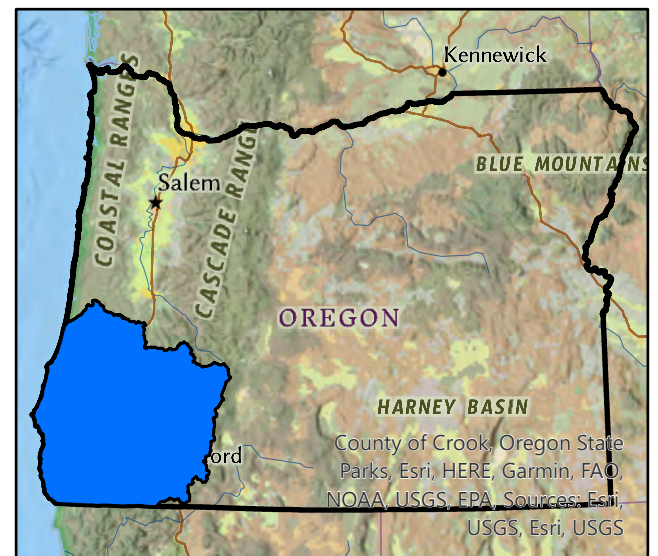
- Land Acquisition
- ◆ Restoration

- ▲ Region 2 Cities
- Region 2 Streams
- ▭ OWEB Region 2 Boundary



775 Summer St, NE Suite 360  
 Salem, OR 97301-1290  
 (503) 986-0178  
<https://www.Oregon.gov/OWEB/>

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County of Crook, Oregon State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Sources: Esri, USGS, Esri, USGS

Oregon Watershed Enhancement Board: Region 2 Restoration, Technical Assistance, Stakeholder Engagement and Monitoring

Region 2 - Southwest Oregon Restoration				
Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-2014	Coquille Watershed Association	Coaledo Tide Gate Replacement for Fish Passage Improvement	A failing tide gate in the lower mainstem Coquille River will be replaced to restore fish passage to tidal floodplain habitat for over-wintering juvenile salmon.	773,104
223-2015	Curry SWCD	Willow Creek Riparian and Instream Restoration 2023	Native trees and shrubs will be planted and large wood structures will be placed instream along Willow Creek, a tributary to Floras Creek, to improve water quality and stream conditions for native fish.	78,847
223-2016	Smith River WC	Smith River Basin: High Priority Passage Improvements	Fish passage impediments will be corrected on three streams in the Smith River watershed to improve fish passage to upstream spawning and rearing habitat.	444,178
<b>Total Restoration Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>1,296,129</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

Projects Not Recommended for Funding by RRT				
Project #	Grantee	Project Title		Amount Requested
None				

Region 2 - Southwest Oregon Technical Assistance				
Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-2021	Applegate Partnership, Inc.	Laurel Hill Push-Up Dam Fish Passage Project	Designs will be developed to replace a gravel push-up dam with a roughened channel on Williams Creek, near the confluence with the Applegate River, to improve fish passage, support streambank stabilization, and improve irrigation efficiencies for water users.	75,000
223-2022	Applegate Partnership, Inc.	Cheney Creek - Fish Hatchery Road Culvert Replacement	Fish passage improvement designs for the Fish Hatchery Road Culvert on Cheney Creek, a main tributary to the Applegate River, will be developed to replace a culvert with a bridge to allow fish access to high-quality habitat upstream.	75,000
223-2023	Applegate Partnership, Inc.	Iron Creek Fish Passage Project	Fish passage improvement designs at the Southside Road Culvert on Iron Creek, a tributary to the Applegate River, will be developed to replace a culvert with a bridge to allow fish access to high-quality upstream habitat.	75,000
<b>Total Technical Assistance Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>225,000</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-2018	Williams Community Forest Project	Pipe Fork Land Purchase Assistance	An appraisal of a land parcel containing a high quality Port Orford cedar and old growth forest characteristics will be conducted to support efforts to obtain acquisition of that property in the Williams Creek watershed.	33,880
223-2020	The Freshwater Trust	Gold Ray Floodplain Restoration Technical Assistance Project	Site specific management and restoration actions will be identified with landowners at the former Gold Ray dam floodplain located in Jackson County between the towns of Central Point and Gold Hill.	74,070
223-2017	Smith River WC	Smith River Basin: High Priority Passage Design	Designs will be developed to address fish passage issues on three streams within the Smith River Basin to improve fish access to habitat and increase coho productivity.	71,934
223-2019	Coquille Watershed Association	North Fork Coquille River Subbasin Geomorphic Assessment	A detailed sediment transport assessment will be conducted for the North Fork Coquille River from the river's headwaters to its confluence with the South Fork Coquille to identify and develop restoration projects.	74,998

Projects Not Recommended for Funding by RRT				

Oregon Watershed Enhancement Board: Region 2 Restoration, Technical Assistance, Stakeholder Engagement and Monitoring

Project #	Grantee	Project Title	Amount Requested
223-2024	Siskiyou Field Institute	Siskiyou Field Institute Meadow & Riparian Restoration	55,691

**Region 2 - Southwest Oregon Stakeholder Engagement**

Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Recommended
None				

Projects Not Recommended for Funding by RRT				
Project #	Grantee	Project Title	Amount Requested	
None				

**Region 2 - Southwest Oregon Monitoring**

Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-2025	Coquille Watershed Association	Basin Wide Temperature Monitoring of the Coquille	Water temperature monitoring will occur across the Coquille River basin to identify cold-water sources.	120,489
<b>Total Monitoring Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>120,489</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-2027	Illinois Valley WC	IVWC Passive WQM 2024-25	Baseline water quantity and quality data will be collected in the Illinois River watershed to inform a scientifically-based understanding of current and changing water quality in the watershed over time.	156,836

Projects Not Recommended for Funding by RRT				
Project #	Grantee	Project Title	Amount Requested	
223-2026	Cascade Pacific RC&D	Benson and Big Wetland Restoration Project Monitoring	106,739	

<b>Region 2 Total OWEB Staff Recommended Board Award</b>	<b>1,641,618</b>
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<b>Region 1 - 6 Grand Total OWEB Staff Recommended Board Award</b>	<b>12,461,865</b>
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## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2014-22977

**Project Type:** Restoration

**Project Name:** Coaledo Tide Gate Replacement for Fish Passage Improvement

**Applicant:** Coquille Watershed Association

**Region:** Southwest Oregon

**County:** Coos

**OWEB Request:** \$773,104

**Total Cost:** \$1,240,094

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**Application Description** The Coaledo Drainage District (CDD) is a 9,800-acre drainage along the main-stem Coquille River in Coos County, Oregon. CDD contains 11.4 miles of coho salmon habitat and 490 acres of tidal wetland habitat, of which 289 acres are restored wetlands protected in perpetuity by ODFW. However, this area has been converted from its historic state by clearing, leveeing, tidegating, and draining for agricultural purposes. These actions have led to the degradation of tidal wetland habitats and/or restricted access to remaining wetland and tidal channel habitats for juvenile coho and Chinook salmon, as well as other species. Lack of slow-water refugia and off-channel habitat is a critical limiting factor affecting Oregon Coast coho populations with the access and restoration of tidal wetlands being a top priority action for recovery. To address these limiting factors, CoqWA has partnered with CDD, The Bridges Foundation, private landowners, ODFW, Coquille Indian Tribe (CIT), and the Coos Soil and Water Conservation District (CoosSWCD), with the assistance of River Design Group (RDG) and Nehalem Marine to implement a working lands restoration project that promotes ecological, economic, and social resiliency in the Coquille watershed.

This project will improve fish passage and restore hydrologic connectivity by replacing current deleterious infrastructure with three 8'x10' box culverts, each fitted with an aluminum side-hinged tide gate and Muted Tidal Regulators to control upstream inundation and duration of gate door openness. Specifically, OWEB funds with match funds from ODFW, will pay for tide gate replacement actions, CoqWA staff time & mileage, project manager materials, and videography during implementation. A previously awarded OWEB grant, along with leveraged funds from CIT and Wild Rivers Coast Alliance (WRCA), will pay for replacement of a farm access bridge downstream of the tide gate, channel enhancements, and riparian enhancements.

### Review Team Evaluation

#### Strengths

- The project design is technically sound and is likely to succeed in restoring fish passage for juvenile salmonids at the Coaledo tide gate. The design approach resulted from two OWEB Technical Assistance grants.

- The tide gate replacement will compliment nearby riparian planting and fencing projects. Restoring a more natural tidal exchange regime improves water quality by reducing stagnant water that normally pools behind poorly functioning tide gates. The water quality improvements from these projects collectively support TMDL plan implementation.
- Restoring fish passage to tidal wetlands is identified as a top priority action for coho recovery. Off-channel winter habitat located in tidally influenced lowland is important to ESA-listed coho and other species' life histories by providing critical habitat for over-wintering survival.
- The project leverages multiple nearby tide gate replacement and off-channel habitat projects that will collectively increase the footprint of available coho habitat, expanding on the 400 acres of restored tidal wetland from the China Camp Creek tide gate replacement project.
- The applicant has experience working in tidally influenced agricultural areas and adapted lessons learned from previous tide gate replacements into the project approach.
- The project team includes qualified professionals with relevant experience.
- ODFW, the largest landowner in the project footprint, is tasked with operation of the water management plan, which is critical to managing the area for maximum fisheries benefits.
- The project is ready for implementation with engineering designs, permits, and cost estimates.
- The budget incorporates the likely potential for inflation to increase project costs before implementation.
- There is a monitoring program that is actively evaluating the effectiveness of replacing tide gates and the use by juvenile salmonids of the habitat made available through these projects.

### **Concerns**

- No significant concerns related to the tide gate replacement were identified during the review.

### **Concluding Analysis**

Eleven miles of coho habitat and 490 acres of tidal wetland habitat will be made more accessible by replacing the Coaledo tide gate in the Coquille River watershed. Critical limiting factors affecting Oregon Coast coho populations will be addressed, including lack of slow-water refugia and off-channel habitat. Improving fish passage and restoring hydrologic connectivity will enhance ecosystem function to one of the largest basins in the freshwater Coquille estuary.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 3

### **Review Team Recommended Amount**

\$773,104

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$773,104

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Southwest Oregon (Region 2)

**Application Number:** 223-2015-23001

**Project Type:** Restoration

**Project Name:** Willow Creek Riparian and Instream Restoration 2023

**Applicant:** Curry SWCD

**Region:** Southwest Oregon

**County:** Curry

**OWEB Request:** \$78,847

**Total Cost:** \$142,027

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**Application Description** Willow Creek, a tributary of high importance to anadromous salmonids in the Floras Creek/New River watershed of northern Curry County, was relocated and straightened in the early 20th century to create more workable ground for livestock production. The combination of channel modifications and land clearing throughout the watershed resulted in degraded water quality and fish habitat. Efforts to restore conditions in the Willow Creek watershed began in the mid-1990s and have yielded positive results. The proposed project will build upon past and current efforts to further improve the condition of Willow Creek. The proposed project would yield 1.36 acres of riparian restoration and place eight large wood habitat structures along 0.57 miles of channel located between two recently treated reaches. The combination of these activities would improve water quality and habitat complexity in this vital watershed. Project partners include the Bureau of Land Management, Oregon Department of Agriculture, and landowners.

### Review Team Evaluation

#### Strengths

- The proposed stream habitat improvement and tree planting will compliment nearby instream restoration and riparian plantings and will create habitat connectivity along approximately two stream miles on Willow Creek.
- Restoring the riparian plant community will increase shade that can prevent elevated water temperature and improve water quality, which supports TMDL plan implementation.
- Restoring instream habitat by adding large wood structures in lower Willow Creek will provide spawning and rearing habitat for Chinook, coho, and steelhead. This will address actions identified in a recovery plan for ESA-listed coho.
- The approach to treat invasive plant species on site is based on lessons learned from previous projects in difficult treatment areas that had positive results.
- The fence setbacks will provide a generous buffer for a functioning riparian area to become established. There are long-term plant establishment plans in place to support the vegetation growth until the plant community achieves a free to grow state.
- Alternatives to the proposed approach for wood placement and plantings were considered.
- The project team has experience successfully implementing similar projects and has established working relationships with the landowners.
- Partner support from BLM, ODA, and landowners is demonstrated by match.

## Concerns

- Design information provided in the application for the instream wood structures has limited site specific details, such as log placement locations. Clarification was provided during the site visit that demonstrated how installation of the instream structures will fit within the footprint of the riparian restoration activities.
- Additional detail depicting the project activities on the map included in the application would be helpful for understanding the project site and locations of the proposed restoration treatments.

## Concluding Analysis

The project builds on relationships developed with private landowners and expands the footprint of riparian and stream restoration in Willow Creek, which is a tributary of Floras Creek. The proposed restoration actions will improve water quality and instream habitat complexity, which will provide habitat benefits for all freshwater stages of salmonid life cycles.

### Review Team Recommendation to Staff

Fund

### Review Team Priority

2 of 3

### Review Team Recommended Amount

\$78,847

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Fund

### Staff Recommended Amount

\$78,847

### Staff Conditions

N/A

## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2016-23007

**Project Type:** Restoration

**Project Name:** Smith River Basin: High Priority  
Passage Improvements

**Applicant:** Smith River WC

**Region:** Southwest Oregon

**County:** Douglas

**OWEB Request:** \$444,178

**Total Cost:** \$2,296,682

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### Application Description

This project will take place at three separate locations within the Smith River Basin: Coon, Sweden, and Herb Creek. These three streams lie within neighboring 6th field subbasins, the West Fork Smith River (Coon) and South Sister Creek (Sweden & Herb). All project sites possess poorly functioning fish passage infrastructure, featuring undersized culverts and/or associated passage inhibiting instream concrete weirs. These structures limit anadromous fish passage at multiple life stages, reduce habitat connectivity, and impede natural stream fluxes and function.

The Smith River Watershed Council (SRWC) proposes to remove, replace, or modify a combined 11 barriers to fish passage between the project locations. SRWC has contracted River Design Group (RDG) to produce engineered designs for the placement of passage structures meeting ARBO II criteria, as well as all state and federal requirements at all three project locations. These designs include provisions for new bridge installations which will replace existing culverts, as well as removal or modification of associated instream concrete weirs. Additionally, RDG's drawings will include plans for the placement of either a nature-like fishway or instream large wood placements to act as grade control structures after the removal of culvert associated weirs.

Project partners include: Bureau of Land Management, Coquille Indian Tribe, Pacific Lamprey Conservation Initiative, Oregon Department of Fish and Wildlife, Oregon Department of Transportation, River Design Group, and Roseburg Resources Co.

### Review Team Evaluation

#### Strengths

- Eleven fish passage barriers will be removed, modified, or replaced in the Smith River basin to improve access to 56 miles of spawning and rearing habitat important to chinook, ESA-listed coho, steelhead, and Pacific lamprey.
- Improving fish passage leverages significant investments in instream improvement activities implemented throughout the watershed by providing unimpeded access to restored stream habitat.

- The project team is experienced in restoration and includes the Bureau of Land Management, the Coquille Indian Tribe, The Pacific Lamprey Conservation Initiative, Oregon Department of Fish and Wildlife (ODFW), Oregon Department of Transportation, River Design Group, and Roseburg Resources Company.
- The project is ready for implementation with significant funding secured from a diversity of sources.
- The West Fork Smith River has an established ODFW Life Cycle Monitoring site that provides a long-term data set documenting fish usage. This information will be used to illustrate the impacts from improving fish passage on salmonid populations.

### **Concerns**

- Final design work is not completed. Clarifying information was provided during the site visit indicating the designs are on track for completion by the 2024 instream work window.
- Additional details regarding revegetation efforts to reduce erosion following construction would be helpful to evaluate whether planting plans are adequate for stabilizing the site.

### **Concluding Analysis**

Addressing fish passage barriers restores natural ecosystems processes beneficial to aquatic life, including improved sediment transfer, access to spawning habitat, expanded forage opportunities, and access to thermal refugia during summer months. Improving fish access to upstream stream reaches with quality habitat and cool water refugia is critical to protecting and restoring salmonid populations.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 3

### **Review Team Recommended Amount**

\$444,178

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

**Staff Recommended Amount**

\$444,178

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Southwest Oregon (Region 2)

**Application Number:** 223-2017-22996

**Project Type:** Technical Assistance

**Project Name:** Smith River Basin: High Priority Passage Design

**Applicant:** Smith River WC

**Region:** Southwest Oregon

**County:** Douglas

**OWEB Request:** \$71,934

**Total Cost:** \$313,543

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### Application Description

This project encompasses passage improvement design work at three streams within the Smith River Basin: Gold Creek, Vincent Creek, and Blackwell Creek. Gold Creek is the largest tributary of the West Fork Smith River, located 42 miles east of Reedsport Oregon. Blackwell and Vincent Creek are both tributaries to the main stem Smith River, 35 and 31 miles east of Reedsport respectively. The Smith River Watershed Council (SRWC) is seeking funding to address fish passage issues at five undersized and restrictive culverts. In addition to culvert replacement, designs will include the removal of three associated structures (two concrete weirs, and one high-gradient fish ladder). These underperforming passage structures restrict salmonid and native fish passage at all life stages, interfere with sediment transfer, and also threaten important junctions of Bureau of Land Management (BLM) road network used for local economic and recreational purposes. Funding would be utilized to contract an engineering firm to produce complete designs which incorporate all aspects of removal of legacy structures and installation of structures which meet all state and federal fish passage criteria.

Project partners include: Bureau of Land Management Coos Bay District, Oregon Department of Fish and Wildlife, National Fish and Wildlife Foundation, and Roseburg Resources Co.

### Review Team Evaluation

#### Strengths

- The proposal clearly illustrates the need for engineered designs that address fish passage at five locations in the Smith River Basin with undersized culverts and associated concrete weirs.
- The resulting restoration will target critical habitat for ESA-listed coho, chinook, and steelhead. The project area also has stream reaches listed on the Department of Environmental Quality's 303(d) list for temperature impairment.
- The project team is experienced in successfully using OWEB Technical Assistance projects to develop viable designs for addressing fish passage impairments.
- Addressing the passage barriers will restore a more natural sediment transport regime and improve habitat connectivity on three streams in the Smith River Basin.
- Project costs are appropriate for the work proposed.

## Concerns

- Additional information describing evidence used to determine there is a potential threat for roadway infrastructure failure would be helpful to better understand the extent to which the selected culverts are a priority for replacement.

## Concluding Analysis

The project builds on current momentum to improve fish passage throughout the Smith River Basin that is also leveraging significant investments in stream habitat improvement. The future restoration project will increase habitat connectivity for ESA-listed salmon species by improving access to approximately eight miles of aquatic habitat.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

6 of 7

## Review Team Recommended Amount

\$71,934

## Review Team Conditions

N/A

## Staff Recommendation

### Staff Follow-Up to Review Team

N/A

## Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

## Staff Recommended Amount

\$0

## Staff Conditions

N/A

## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2018-23012

**Project Type:** Technical Assistance

**Project Name:** Pipe Fork Land Purchase Assistance

**Applicant:** Williams Community Forest Project

**Region:** Southwest Oregon

**County:** Josephine

**OWEB Request:** \$33,880

**Total Cost:** \$48,530

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**Application Description** The Pipe Fork property is a 320 acre land parcel containing a high quality Port Orford cedar and Old Growth sanctuary that is being sold by the Josephine County, facilitated by the Williams Community Forest Project. Pipe Fork Creek flows from springs on the side of Grayback Mountain down through a lush canyon and over several waterfalls on the Pipe Fork property.

Technical Assistance is needed to obtain a land sale contract, complete a Yellow Book Appraisal for due diligence to satisfy the purchase, and for completion and sale costs to The Conservation Fund with a bridge loan. A Yellowbook Appraisal is needed to satisfy timber values, property values, and detailed conditions of the land to be purchased to satisfy the interests of the seller and buyers.

Pipe Fork Creek property has been recently awarded funding to be purchased by a land grant with the US government Land and Water Conservation Fund. It will be placed within the adjacent Pipe Fork Research Natural Area (RNA) for Port Orford cedar through the Bureau of Land Management. BLM currently manages the Pipe Fork Creek RNA for Port Orford cedar adjacent to the property as one of three such areas in Oregon as secluded enclaves of native plants and wildlife surrounding the Port Orford cedar forest complexes. Pipe Fork Creek provides a valuable consistent flow of cool water into the Williams Creek stream system. This Technical Assistance would provide the funding needed to help negotiate the land purchase from the Josephine County Commissioners and complete the sale and of the land through the many channels it will require.

### Review Team Evaluation

#### Strengths

- The Pipe Fork Creek property has a high conservation value. The old growth forest provides cool water sources for salmon bearing streams of the East Fork Williams Creek and the Williams Valley and diverse habitats that support the easternmost stands of Port Orford cedar in Western Oregon.
- Conducting an appraisal for due diligence is necessary for any purchase of real property.
- Project partners are committed to protecting the conservation value of the property.
- Funding from the federal Land and Water Conservation Fund was awarded to purchase the Pipe Fork Creek property; the proposed technical assistance project will provide an appraisal to determine the property's fair market value needed to complete this transaction.

- There is a clear potential for timber harvest to occur on the property under the current ownership that would adversely impact forest conditions. Purchase of the property for conservation would eliminate the risk to existing healthy forest conditions.

### **Concerns**

- The application lacks information describing the transaction structure or roles of the parties needed to understand and evaluate the proposed objectives. For example, more detail about the survey and assessment work is needed to understand the deliverables expected from the technical assistance investment.
- It is unclear whether the applicant has relevant experience for completing real estate transactions.
- The application lacks details describing how some of the budgeted costs are directly associated with developing an appraisal. For example, negotiations and closing costs are not typically actions associated with developing an appraisal. Also, the Williams Creek Watershed Council is included in Contracted Services but there is no information explaining what the watershed council will produce as part of the due diligence for purchasing the property.

### **Concluding Analysis**

Purchasing the Pipe Fork Creek Property and transferring it into a long-term conservation land holding will preserve a high-quality Port Orford cedar and old growth forest in the Williams Creek watershed. Obtaining due diligence products is necessary to purchase the property.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

4 of 7

### **Review Team Recommended Amount**

\$33,880

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

### **Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Southwest Oregon (Region 2)

**Application Number:** 223-2019-23024

**Project Type:** Technical Assistance

**Project Name:** North Fork Coquille River Subbasin  
Geomorphic Assessment

**Applicant:** Coquille Watershed Association

**Region:** Southwest Oregon

**County:** Coos

**OWEB Request:** \$74,998

**Total Cost:** \$115,638

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**Application Description** The North Fork Coquille River, located in Coos County, Oregon, is a significant waterway that provides critical habitat for fish and wildlife and serves as the drinking water source for the city of Myrtle Point. Unfortunately, the river is subject to ongoing erosion and sedimentation, which threaten its long-term stability and the health of surrounding ecosystems and agriculture. To better understand the geomorphic processes that govern the river's behavior and develop effective management strategies, a comprehensive survey of the North Fork Coquille River is required. This proposed project aims to perform a detailed geomorphic assessment of the North Fork Coquille River, covering a stretch of approximately 53 miles from the river's headwaters to its confluence with the South Fork Coquille River. The survey will include a range of field-based measurements and an analysis of available data, such as channel cross-sections, bathymetric surveys, bank profiles, and topographic surveys. Additionally, a basin-wide remote assessment will be combined with a geomorphic survey of 9.5 river miles to create a finalized geomorphic analysis. Project partners include the Coquille Indian Tribe, Coos Soil and Water Conservation District, Natural Resource Conservation Service, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture, the City of Myrtle Point, and Business Oregon. The results of this project will be critical for developing effective river management strategies that promote long-term stability and ecological health. Specifically, the survey data will be used to inform the development of sediment management actions, guide habitat restoration efforts, and identify areas of the river that are most vulnerable to erosion and sedimentation.

### Review Team Evaluation

#### Strengths

- A geomorphic assessment will be completed to investigate bank erosion in the North Fork Coquille River. Partners will use this assessment to prioritize restoration actions and design future projects that will improve water quality, fish and wildlife habitat, and watershed health.
- The project approach will factor in past and future climate change conditions.
- The applicant has previous experience utilizing similar stream reach-based assessments to focus restoration on targeting causes rather than symptoms of watershed impacts.
- A clear need for the proposed technical assistance is described in the application, and the project objectives and expected products are clearly defined.

- Previous project evaluation comments are incorporated into the proposed technical assistance approach.
- Partner support is demonstrated by letters from ODFW, BLM, Curry SWCD, City of Myrtle Point, and Coquille Indian Tribe.

### **Concerns**

- Additional information describing how the geomorphic assessment will inform identification, prioritization, and selection of future projects would be helpful for understanding how the product will be used.
- The cost effectiveness of individual activities is difficult to evaluate due to the use of lump sums in the application budget for contracted services.

### **Concluding Analysis**

Understanding the drivers causing erosion impacts to the North Fork Coquille River system will be important to focus efforts on meaningful actions that address the bank erosion. The resulting information will also provide a communication tool for outreach to landowners and the community that can build support for and participation in future restoration. The North Fork Coquille River basin has high salmonid production potential; resulting restoration projects will improve habitat for coho, Chinook, and steelhead.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

7 of 7

### **Review Team Recommended Amount**

\$74,998

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

### **Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2020-23048

**Project Type:** Technical Assistance

**Project Name:** Gold Ray Floodplain Restoration  
Technical Assistance Project

**Applicant:** The Freshwater Trust

**Region:** Southwest Oregon

**County:** Jackson

**OWEB Request:** \$74,070

**Total Cost:** \$97,070

---

**Application Description** The Gold Ray Floodplain Forest is located in Jackson County between the towns of Central Point and Gold Hill. The proposed project area is adjacent to the BLM Upper and Lower Table Rock recreation areas and county and state park lands. In 2009, Jackson County worked with the Rogue Valley Council of Governments (RVCOG) to successfully remove a 30+ foot tall channel spanning dam on the Rogue. The Gold Ray Dam had limited fish passage and held back coarse sediments for nearly a century. Dam removal immediately invigorated river habitat and resulted in fish returning to the hatchery at Lost Creek Dam nearly 1 month earlier than previously reported.

While dam removal improved fish passage and sediment transport processes, the project did not address the 350-acre floodplain forest upstream of the dam. Currently more than 150 acres of the floodplain lack overstory trees and are covered exclusively in invasive blackberry. Where mature overstory trees have persisted, the understory is dominated by invasives, limiting the ability of trees to establish. In addition to degrading the ecological conditions at the site, the high cover of flammable invasive species poses a fire risk.

The Freshwater Trust (TFT) proposes to administer a planning process through which the two primary landowners (Jackson County and Oregon Department of Fish & Wildlife) will identify site specific management and restoration actions that align with the landowners' desired future conditions, develop 10% designs for selected actions, develop the information needed for permitting, and develop cost estimates. This project will set the stage for implementation work on the full 350-acre project area and make it possible for TFT, Rogue River Watershed Council, Jackson Soil and Water Conservation District, RVCOG and other local partners to secure implementation funding and play a variety of roles in implementing the single largest floodplain restoration opportunity in the Rogue basin.

### Review Team Evaluation

#### Strengths

- The project focuses on restoring the footprint from the Gold Ray Dam removal site, which is one of the rare larger connected floodplain areas in the upper Rogue. The application clearly describes the ecological significance of the site, the factors limiting the site's potential, and the importance of the proposed design technical assistance to develop successful restoration approaches.

- The project will address limiting factors identified in several conservation plans and restoration priorities in watershed plans, including the Rogue Restoration Action Plan (2016).
- The design approach is technically sound and appropriate data will be collected to inform designs, including lidar and baseline mapping.
- Landowners will be engaged in identifying actions that align with shared priorities, reviewing the suite of potential future restoration projects, and developing a prioritized list of projects for the design process. This is likely to foster long-term ownership and active management in the success of the future restoration.
- The resulting project will restore natural floodplain function at the Gold Ray Dam removal site and provide water quality and habitat benefits for a variety of native terrestrial, avian, and fish species.
- The project costs are reasonable for the scope of work.
- The project team has relevant experience and knowledge designing and implementing similar restoration.

### **Concerns**

- Restoring floodplain forests will have limited impact on addressing the key limiting factors that threaten coho fish recovery, such as lack of instream habitat. Restoring floodplain forests, however, will still improve terrestrial and aquatic wildlife habitats on the Rogue's largest undeveloped floodplain.
- The project timeline may be ambitious for achieving the goals. Landowner engagement, developing and prioritizing actions, developing initial design approaches, and finalizing restoration plans will be challenging to complete within a one-year timeframe.

### **Concluding Analysis**

When the Gold Ray Dam was removed and water levels in the Rogue River dropped, many of the floodplain trees died. This die-off of the overstory trees allowed increased sunlight at the floodplain forest floor that encouraged weed populations to grow. Currently more than 150 acres of the floodplain lack overstory trees and are covered exclusively in invasive blackberry. Ecological conditions in the project area are degraded and pose a fire risk. Developing designs for priority projects will put the floodplain back on an ecologically functioning and resilient trajectory and improve community safety. Restoration of one of the largest connected floodplains in the upper Rogue will provide a variety of benefits to stream function and the species dependent upon this important habitat type.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

5 of 7

### **Review Team Recommended Amount**

\$74,070

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2021-23050

**Project Type:** Technical Assistance

**Project Name:** Laurel Hill Push-Up Dam Fish Passage Project

**Applicant:** Applegate Partnership, Inc.

**Region:** Southwest Oregon

**County:** Josephine

**OWEB Request:** \$75,000

**Total Cost:** \$305,860

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**Application Description** The Laurel Hill Push-Up Dam Fish Passage Project proposes to replace an annually constructed gravel push-up dam with a roughened channel on Williams Creek, near the confluence with the Applegate River. This project proposes to complete designs that will remove the last, most severe barrier, improve streambank stabilization upstream from the point of diversion, and irrigation efficiencies in the delivery of the water on the Bureau of Land Management's (BLM) Provolt Recreation Site. This project is located at river mile 0.1 on the mainstem of Williams Creek, a main tributary to the Applegate River near Provolt, Oregon. Replacement of the annual creek disturbance and nearly full spanning gravel push-up with a roughened channel and new headgate will provide year-round volitional fish migration for all life stages of ESA-listed Coho Salmon, fall Chinook Salmon, summer and winter Steelhead, Trout, and Pacific Lamprey. Williams Creek and its tributaries are among the most important producers of salmon and steelhead in the Applegate River watershed. Laurel Hill Push-Up Dam is listed on the Oregon Department of Fish and Wildlife (ODFW) 2019 Statewide Fish Passage Priority List as the 6th highest priority in the Rogue Basin.

This proposal seeks to address the final major active irrigation point of diversion and fish passage barrier in Williams Creek Watershed, building upon the Lower Bridgepoint Fish Passage Project completed in 2020 (OWEB grant 220-2015), and the Watts Toppin Fish Passage Project scheduled for implementation summer 2023. These projects are all within the lower two miles of Williams Creek and are similar in scale. Together, they will provide uninhibited access to valuable upstream spawning and rearing habitat. Project partners include Laurel Hill Ditch Association (LHDA), Rogue Basin Partnership (RBP), BLM, Williams Cr Watershed Council, and ODFW.

### Review Team Evaluation

#### Strengths

- The application describes a clear need for designs to replace an annually constructed gravel push-up dam with a roughened channel on Williams Creek, near the confluence with the Applegate River. The designs will include improvements to the irrigation conveyance system that will be more efficient, reduce the quantity of diverted water, and allow more water to remain instream.

- The project will provide uninhibited access to critical rearing and cold water refugia habitat for steelhead, cutthroat, Pacific lamprey, and ESA-listed coho.
- Limiting factors affecting ESA-listed Coho identified in NOAA's 2014 Final Recovery Plan for the Southern Oregon/Northern California Coast (SONCC) will be addressed.
- The project partners have considered a range of alternatives to address the complex situation at the site related to the combination of the water diversion network, the seasonal push up dam height, and the stream gradient.
- The project will build habitat connectivity with upstream fish passage improvement projects and extends the footprint of neighboring BLM projects targeting side-channel habitat development and riparian health.
- Project costs are appropriate for the proposed design work.
- The project is timely with support from the Laurel Hill Ditch Company, the principal water users, along with agencies and other key partners, including Laurel Hill Ditch Association, Rogue Basin Partnership, BLM, Williams Creek Watershed Council, and ODFW. The range of support coming together presents an urgency for developing a solution that addresses the passage and diversion issues where previous efforts failed due to the lack of cooperation and support that exists now.
- The applicant is experienced in working on complex fish passage projects with water users and has incorporated lessons learned from past projects.

### **Concerns**

- The landowner support letters are only for passage design and lack evidence indicating support for future water conservation expected from the improvements to the irrigation ditch system.

### **Concluding Analysis**

Williams Creek and its tributaries are among the most important producers of salmon and steelhead in the Applegate River watershed. The future restoration project will improve the survival and growth of juvenile Coho salmon and steelhead by providing access to summer and winter rearing habitat, reducing water temperatures, and limiting water withdrawals. Improving fish passage at Laurel Hill Dam will facilitate access to habitat that has been restored and enhanced through over ten years of in-stream habitat restoration projects. The project is likely to succeed with momentum generated by project support from the irrigators.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 7

### **Review Team Recommended Amount**

\$75,000

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$75,000

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Southwest Oregon (Region 2)

**Application Number:** 223-2022-23052

**Project Type:** Technical Assistance

**Project Name:** Cheney Creek - Fish Hatchery  
Road Culvert Replacement

**Applicant:** Applegate Partnership, Inc.

**Region:** Southwest Oregon

**County:** Josephine

**OWEB Request:** \$75,000

**Total Cost:** \$382,344

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**Application Description** This project addresses the need for fish passage improvement at the Fish Hatchery Road Culvert on Cheney Creek, a main tributary to the Applegate River near Grants Pass, Oregon and public safety on Fish Hatchery Road. This project will remove a fish passage barrier on Cheney Creek by replacing an undersized box culvert on Fish Hatchery Road with a bridge. The 6 miles of high-quality upstream habitat provides critical spawning and rearing habitat for ESA-listed Coho Salmon, Chinook Salmon, Steelhead Trout, Coastal Cutthroat Trout, and Pacific Lamprey. Cheney Creek is a cold water refuge. These streams are increasingly important for survival as river temperatures rise in the summer months. This project complements Chinook and Coho restoration efforts ongoing throughout the Rogue Basin as well as general watershed restoration efforts within the Cheney Creek watershed by BLM and APWC. Engineering designs for the box culvert replacement will be developed by Josephine County and a contracted bridge construction firm. The designs will allow fish passage through a fully passable bridge design and the road realignment will improve public safety at a location known for vehicle accidents. Project partners include: Josephine County, BLM, Rogue Basin Partnership, and ODFW. This application will provide match funding for ODFW's application to the National Culvert Removal, Replacement, and Restoration Grant Program.

### Review Team Evaluation

#### Strengths

- Designs will be developed to improve fish passage at Fish Hatchery Road Culvert in Cheney Creek, a tributary in the lower Applegate River.
- Limiting factors affecting ESA-listed Coho identified in NOAA's 2014 Final Recovery Plan for the Southern Oregon/Northern California Coast (SONCC) will be addressed.
- The project will benefit ESA-listed coho by improving access to six miles of upstream cold-water refugia.
- Passage improvement will leverage upstream instream habitat projects implemented by BLM.
- Partner support is demonstrated by letters included in the application from Josephine County, BLM, Rogue Basin Partnership, and ODFW.
- Project partners have the technical expertise needed to effectively design the restoration.
- A range of alternatives will be considered for the site conditions.
- The applicant is pursuing federal highway funding to implement the project.

## Concerns

- An additional map that places the project area in the broader Cheney Creek geography would be helpful for understanding the larger watershed context for the project.

## Concluding Analysis

Restoring access to stream habitat is vital to maintaining resilient populations of native fish species. Cheney Creek is a cold-water refuge. The high-quality upstream habitat provides critical spawning and rearing habitat for ESA-listed coho, Chinook, steelhead, Coastal Cutthroat Trout, and Pacific Lamprey. These streams are increasingly important for survival as river temperatures rise in the summer months.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

2 of 7

## Review Team Recommended Amount

\$75,000

## Review Team Conditions

N/A

## Staff Recommendation

### Staff Follow-Up to Review Team

N/A

## Staff Recommendation

Fund

## Staff Recommended Amount

\$75,000

## Staff Conditions

N/A

# Open Solicitation-2023 Spring Offering

## Southwest Oregon (Region 2)

**Application Number:** 223-2023-23063

**Project Type:** Technical Assistance

**Project Name:** Iron Creek Fish Passage Project

**Applicant:** Applegate Partnership, Inc.

**Region:** Southwest Oregon

**County:** Josephine

**OWEB Request:** \$75,000

**Total Cost:** \$233,844

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**Application Description** This project addresses the need for fish passage improvement at the Southside Road Culvert on Iron Creek, a tributary to the Applegate River near Grants Pass, Oregon at Southside Road. This project will remove a barrier that is on the Statewide Fish Passage Priority List on Iron Creek by replacing an undersized box culvert on with a bridge. The 2 miles of high-quality upstream habitat provides critical spawning and rearing habitat for ESA-listed Coho Salmon, Steelhead Trout, and Coastal Cutthroat Trout. Iron Creek is a cold water refuge. These streams are increasingly important for survival as river temperatures rise in the summer months. This project complements Coho restoration efforts ongoing throughout the Rogue Basin. Engineering designs for the box culvert replacement will be developed by Josephine County and a contracted bridge construction firm. Project partners include: Josephine County, BLM, Rogue Basin Partnership, and ODFW. This application will provide match funding for ODFW's application to the National Culvert Removal, Replacement, and Restoration Grant Program.

### Review Team Evaluation

#### Strengths

- A technically sound approach will be used to develop fish passage improvement designs at the Southside Road Culvert on Iron Creek, a tributary to the Applegate River.
- The existing culvert hinders fish access to two miles of habitat with high intrinsic potential. Addressing passage will provide cutthroat trout, steelhead, and ESA-listed coho access to cold water refugia.
- The application describes a clear need for technical assistance funding to support project design.
- The project partners have considered a range of alternatives to address the complex situation at the site resulting from the road location on top of the culvert and the positioning of the structure on a bedrock drop with no jump pool for fish.
- Partner support is demonstrated by letters included in the application from Josephine County, BLM, Rogue Basin Partnership, and ODFW.
- Costs are reasonable for the scope of work presented in the application.
- The applicant is leveraging technical resources and diverse funding sources to increase the likelihood of success in completing the design and restoration products.

#### Concerns

- An additional map that places the project area in the broader Iron Creek geography would be helpful for understanding the larger watershed context for the project.
- Some information in the application about fish benefits may not be applicable to the project because it appears to be pasted from other applications.

## **Concluding Analysis**

Developing designs to improve fish passage in Iron Creek will improve access to high-quality cold-water habitats in this perennial stream that is critical to the protection and recovery of salmonids and trout species in the Rogue River system. Restoring access to stream habitat is vital to maintaining resilient populations of native fish species. Iron Creek is a cold-water refuge. The high-quality upstream habitat provides critical spawning and rearing habitat for ESA-listed coho, Chinook, steelhead, coastal cutthroat trout, and Pacific lamprey. These streams are increasingly important for survival as river temperatures rise in the summer months.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 7

### **Review Team Recommended Amount**

\$75,000

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$75,000

### **Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2024-23065

**Project Type:** Technical Assistance

**Project Name:** Siskiyou Field Institute Meadow & Riparian Restoration

**Applicant:** Siskiyou Field Institute

**Region:** Southwest Oregon

**County:** Josephine

**OWEB Request:** \$55,691

**Total Cost:** \$69,614

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**Application Description** This project is located at the Siskiyou Field Institute (SFI) in Josephine County, Selma, Oregon, approximately 2.5 miles upstream from the confluence of Deer Creek and the Illinois River. The property spans 850 acres and includes nearly one mile of frontage with Deer Creek and nearly 20% of the Takelma Creek watershed. The location, size, water rights, unique plant communities, and riparian restoration potential make SFI a key location for conservation, connectivity, and positive impact on Deer Creek summer flows, temperature regulation, aquatic habitat, and community access. As SFI has recently submitted an updated draft management plan to OWEB that includes new baseline assessments of stream, riparian, and upland vegetation conditions, and prioritization and planning of key projects to be accomplished in the next 5 to 20 years, the focus now turns to the task of restoration design beginning with our lower 140-acre meadow complex along Deer Creek. The meadow complex has become increasingly dominated by pasture grasses and ODA priority noxious weeds that require aggressive treatment and two severely incised unnamed tributaries to Deer Creek that have been highly impacted by years of cattle grazing. The proposed Technical Assistance deliverables include 1) a technical design that would return a suite of species and habitat types that have otherwise become quite rare on the regional landscape, 2) The development of a multi-agency Technical Review Team to assist with restoration planning and implementation, and 3) prioritized restoration projects with preliminary conceptual designs including a focus on community access and participation. Sound management and restoration directives and committed partners set the stage for future restoration implementation. Project partners include Rogue Basin Partnership, USFWS Partners Program, The Understory Initiative, BLM, USFS, Trout Unlimited, Oregon Department of Forestry, Lomakatsi, and private restoration consultants.

### Review Team Evaluation

#### Strengths

- The application describes a clear need for the technical assistance design capacity to develop restoration actions identified in the conservation easement and management plan for the Siskiyou Field Institute (SFI) conservation property.
- The project site is protected by a conservation easement that will ensure long-term protection and maintenance of investments in habitat restoration.

- The property has significant ecological importance and has a high potential for restoring a functional riparian area and historic upland oak meadow habitats.
- Restoration progress on the SFI property is demonstrated by the development of a management plan and removal of an old diversion structure on Takelma Creek during summer 2023.

## Concerns

- Including a detailed work plan for the restoration design contractor line item in the budget would be helpful for understanding the expected outcomes from this cost.
- It is unclear who will serve on the technical advisory team described in objective one of the application. The application lacks information describing the affiliation of the team members and there is no documentation in the budget or match sections indicating a commitment to participate in the project. Information describing the technical advisory team membership is needed to determine whether appropriate expertise will be engaged in the project.
- Additional detail describing the proposed survey and assessment tasks is needed to determine whether appropriate data will be collected to inform project designs. For example, a description of the habitat and species to be targeted and the data to be collected is needed to evaluate whether the design product is likely to effectively address factors limiting habitat potential.
- The objectives are described as general process steps instead of detailed deliverables. For example, there is no clearly stated product described in objective three for reducing the impacts from invasive weeds, such as a prescription for treating target invasive weed species along with a planting and plant establishment plan. The number and wide distribution of invasive weed species is a clear threat to the property. A coordinated, long-term plan and commitment to control them will be necessary for restoring native plant communities. It is not clear if this project will produce a framework for addressing invasive plant species on the property.
- It is unclear if the instream habitat design approach for objective four is site appropriate without details indicating where large wood structures and beaver dam analogs will be placed.
- Understanding the larger long-term goals for the property would inform the review regarding proposed design and treatment approaches and whether they are site appropriate and likely to achieve those goals.
- The budget has lump sums that lacks details needed to determine if the tasks and activities are appropriate based on the estimated costs.

## Concluding Analysis

The property owned and managed by SFI provides an important opportunity to restore historic ecosystems at a location that can be used for outreach to other landowners in the area. While a Technical Assistance grant is needed to provide capacity for developing technically sound restoration designs, the application lacks details needed to evaluate the likelihood for the project to succeed.

## Review Team Recommendation to Staff

Do Not Fund

## Review Team Priority

N/A

## Review Team Recommended Amount

\$0

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Southwest Oregon (Region 2)

**Application Number:** 223-2025-22963

**Project Type:** Monitoring

**Project Name:** Basin Wide Temperature Monitoring of the Coquille

**Applicant:** Coquille Watershed Association

**Region:** Southwest Oregon

**County:** Coos

**OWEB Request:** \$120,489

**Total Cost:** \$174,821

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**Application Description** The proposed Basin Wide Temperature Monitoring of the Coquille is located in Coos County on the Mid-South coast and will determine the spatial and temporal temperature regime of the Coquille Watershed to support management of anadromous fishes and further watershed restoration prioritization that was started by the Coquille Coho Strategic Action Plan (Coquille SAP). The Coquille is lacking in long-term, widespread temperature monitoring data. This lack of data is leading to an incomplete picture of water temperatures in the Coquille Basin and is impacting the ability of the Coquille Watershed Association (CoqWA) and partners to develop effective management strategies. Without a clear understanding of water temperatures across the Coquille River, it is impossible to prioritize restoration and conservation efforts in a way that optimizes their impact. Therefore, a secondary goal is to provide a comprehensive temperature dataset that will be useful to other stakeholders and resource managers.

The proposed basin wide temperature monitoring project will partner with the Coquille Indian Tribe (CIT) and Oregon Department of Fish and Wildlife (ODFW) to deploy 80 temperature loggers throughout the basin for a 3-year period. Temperature will be collected year-round at 15 locations with the remaining being paired logger locations to identify cold-water sources. Discharge measurements will also occur during the summer, low-flow field audits. Results will be distributed in an annual report and data will be available through ArcGIS Online. Additional project partners: BLM, USFS, CoosSWCD.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This monitoring project will fill spatial data gaps associated with the existing monitoring network that the Coos SWCD and Coquille Indian Tribe (CIT) operates and builds on the water temperature monitoring effort initiated by ODFW in 2022.
- The application's monitoring questions are clear and the proposed monitoring methods they will follow are standardized procedures that enables them to collect the data to answer their questions.
- The study design pairs known tributaries with mainstem Coquille River locations to systemically identify cold water sources across the watershed.

- The applicant's definition of cold-water sources provides clarity on how they will be able to apply the data to answer their monitoring questions.
- The applicant will visit sites in August to measure tributary streamflow to quantify the cold-water source each stream is contributing to the mainstem.
- This project will use an electronic survey form developed in Survey 123 to minimize transcription errors and save time when uploading the field data into the database.
- The applicant will use R or Matlab to perform analyses to generate water temperature metrics and assess if the sites meet the cold-water source criteria to rank sites by the quantity of cold water each tributary is contributing in August.
- The data will be uploaded to DEQ to make the data publicly available and will develop a public facing Arc GIS Online map to make the data and site available to partners and interested parties.
- The applicant will write a report which will be distributed to the Coquille Strategic Action Plan team to help in the review and ground-truthing of their restoration priorities plan.
- The applicant and contributing partners all have experience collecting continuous water temperature and related field data in this basin.
- The applicant is working with technical experts and community that are part of the existing Coquille Strategic Action Plan team comprised of ODFW, BLM, NRCS, DEQ, CIT, Coos SWCD, Coquille Watershed Association, The Nature Conservancy and the Wild Salmon Center.
- The budget details the expenses needed for staff time by different tasks to complete the project as proposed.

### **Monitoring Team Concerns**

- It is not clear if the applicant will incorporate the Coos SWCD's water temperature data into their database and into their data analyses.
- The application states the sites were prioritized from information in their action plan but lacked details on how that was done given the large watershed they are working in.
- The application didn't describe the rationale to understand why some sites are monitored year-round and others are only monitored seasonally.
- It was not clear if the applicant will reduce the large number of monitoring sites over time once they analyze the data to understand how dynamic the water temperature conditions are across the watershed.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- The proposed basin-wide water temperature monitoring will provide a better understanding of the spatial and temporal temperature regime in the Coquille Watershed that will be used to prioritize watershed restoration.
- The monitoring data will be used to support implementation of the coastal coho strategic action plan. Water temperature is a key limiting factor for ESA-listed coho, and the data will provide a better understanding of the range of its impacts on fish.

- The data will inform upcoming Total Daily Maximum Load development and associated restoration actions.
- The proposal has clear measurable and achievable objectives.
- Including water discharge measurements will improve analysis of temperature data.
- The project complements other current monitoring work by the applicant and project partners.
- Partner support is demonstrated by letters included in the application from Coquille Indian Tribe, BLM, USFS, Coos SWCD, and ODFW.
- The monitoring effort leverages ODFW work related to core cold water areas.
- The project will complement existing water temperature data and current monitoring efforts in the Coquille basin by expanding the geographic range of the data collected and increasing the level of partner coordination in deploying sensors.
- The applicant is qualified to do the work and has a track record with similar monitoring projects. The applicant also has a history of sharing and utilizing data collected to inform restoration actions.

### **Concerns**

- It is unclear if ODFW is using a different stream temperature monitoring protocol than the one described in the application. The applicant should confer with ODFW on measurement protocols, especially for comparing monitoring data in larger river areas.
- Without information in the application describing the protocol that will be used to create discharge measurements, it is unclear whether professionally accepted monitoring methods will be used to collect this data.
- Measuring water temperature at 15-minute intervals will create a large amount of data that will require significant time to analyze and this additional data may not provide more insight into water quality conditions compared to less frequent monitoring intervals.

### **Concluding Analysis**

A clear understanding of water temperatures across the Coquille River is needed to prioritize restoration and conservation efforts in a way that optimizes their impact. A comprehensive dataset will support science-based decision making to restore or conserve healthy water temperatures for native fish through projects such as riparian fencing and planting, creating off-channel habitat, and placing logs and boulders for pool habitat. Climate change is expected to increase water temperatures across the Coquille River, identifying current cold-water sources and prioritizing efforts to create thermal refugia into the future is vitally important.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 3

### **Review Team Recommended Amount**

\$120,489

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$120,489

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2026-22967

**Project Type:** Monitoring

**Project Name:** Benson and Big Wetland  
Restoration Project Monitoring

**Applicant:** Cascade Pacific RC&D

**Region:** Southwest Oregon

**County:** Coos

**OWEB Request:** \$106,739

**Total Cost:** \$177,878

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**Application Description** The Tenmile Lakes area is a unique and significant watershed in regards to water quality, Coho productivity, and economically and socially to several Southern Oregon coastal region.

In the Tenmile basin, agricultural land-use is just 4% of the land-use in the watershed but our studies reveal that 100% of the historical wetlands were drained for agricultural land use, creating the largest and longest negative impact to native fish habitat and water quality in the basin. The Tenmile Lakes Steering Committee that includes Coos County, CTCLSUI, ODFW, DSL, ODEQ, City of Lakeside, WRLT, and TLBP developed the Tenmile Lakes Native Fish and Water Quality Restoration Plan (TLBP 2021) which prioritized wetland restoration within the priority tributaries of Big, Benson, and Johnson, above where they join the Lakes. In 2022, Partners were awarded funding from multiple sources and in-kind donations to implement the Big and Benson Wetland Restoration Projects. These two project will restore a total of 117 acres of palustrine emergent wetlands in the Tenmile Watershed.

Partners are seeking OWEB Monitoring funding to update our Tenmile Lakes Quality Assurance Project Plan (TLBP 2014) and implement on-the-ground effectiveness monitoring of the Big and Benson Creek wetland restoration project sites. This monitoring will track key channel and vegetation metric over time which will provide essential information for our wetland restoration and planting designs in the basin and the region.. OWEB funds will be utilized to support a Monitoring Field Technician, mileage, report supplies, Aerial Drone Surveys, and grant administration.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This project will monitor the effects of restoration that is aimed at addressing limiting factors that currently impact the water quality and native fish in the lake.
- This project will complement the historic data that has been collected at these sites.
- This resubmitted application has been revised based on the feedback from the review teams and has focused the monitoring to be a much simpler approach than previously proposed.
- The applicant will revise an existing quality assurance document and finish drafting a monitoring plan with these funds.

- The water quality data will be reviewed by the steering committee before being submitted to DEQ and a report will be made available on the applicant's website and uploaded to ODFW's data clearinghouse.
- The applicant has engaged community partners and technical experts by convening the Tenmile Water Quality Steering Committee, a group of local and state leaders which will help in reviewing the data and interpreting the results.
- The applicant has collected similar data in the past as part of a large-scale monitoring effort and their partners have experience collecting and reviewing similar data.

### **Monitoring Team Concerns**

- The application doesn't include a monitoring question to understand what they hope to learn from the grab water quality monitoring component.
- The water quality sampling frequency (quarterly) grab sampling is not likely to provide enough information to evaluate the effects of the restoration projects.
- The application proposes to use methods based on vegetation surveys described in Roegner et al. 2008 and will be adapted to the wetland project characteristics but it was not clear what kind of adjustments would be needed or if this citation for monitoring tidally influenced wetlands is applicable to this project.
- The project will be implemented by a technician that will be hired if the project is funded and it was not clear how much training and supervision, they will have to implement the project as proposed.
- The application doesn't describe how they are tracking or estimating streamflow which may greatly influence the monitoring results and the impact of the restoration actions. This information is described briefly in the attached monitoring plan.
- Parts of the application were confusing to understand the need to finalize the draft monitoring plan that is attached that includes monitoring in the lake that is not related to the effectiveness proposed in this application.
- The application lacks detail on how the ground and drone-based data will be analyzed to detect changes over time to answer the monitoring question posed in the application.
- It was not clear if the budget is adequate to complete the analysis and reporting of the drone imagery.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- Tenmile Lakes Basin partnership has successfully implemented other large scale water quality and project effectiveness monitoring projects in the past.
- The proposed monitoring will provide data for evaluating the effectiveness of a project funded by an OWEB restoration grant. Data will be collected to document stream channel and vegetation responses to restoration treatments at two large historic wetland complexes located at the confluence of two main tributaries with Tenmile Lakes. The restoration actions are expected to provide important rearing habitat for ESA-listed coho, improve water quality through sediment filtering and temperature reduction, and restore wetland functions.

- The Tenmile Lakes watershed has a large beaver population that will likely move into the new habitat, collecting monitoring information in the restored wetland may provide a better understanding of responses to habitat changes.

### **Concerns**

- It is unclear if the project timeline aligns with the proposed wetland restoration and will allow time to collect pre-project data.
- The monitoring protocols provided in the application lack information describing how data will be used to inform restoration.
- Additional information is needed to understand the technical soundness of the proposed vegetation survey protocols that are modified from professionally accepted methods to evaluate the constructed wetlands.
- The application lacks details describing the qualifications of the new monitoring technician. This position is key to the success of the project and additional information is needed to determine whether appropriate technical expertise will be engaged in the project.

### **Concluding Analysis**

Nearly three million dollars has been awarded to restore 117 acres of wetlands in the Tenmile Lakes area. Monitoring the effectiveness of this restoration investment may be helpful to inform future projects restoring pasturelands to wetland complexes that existed prior to land uses that drained and channelized these wetlands. The application lacks information needed to determine whether the proposed monitoring is likely to succeed in documenting restoration effectiveness.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Southwest Oregon (Region 2)

**Application Number:** 223-2027-23023

**Project Type:** Monitoring

**Project Name:** IVWC Passive WQM 2024-25

**Applicant:** Illinois Valley WC

**Region:** Southwest Oregon

**County:** Josephine

**OWEB Request:** \$156,836

**Total Cost:** \$231,215

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**Application Description** There is currently little water quality data on the Illinois River Basin located in Josephine County in southwestern Oregon. Illinois Valley Watershed Council (IVWC) proposes to address this paucity of water quality information by conducting water quality monitoring in the basin (HUC 17100311). The lack of water quality data makes it difficult for IVWC and other organizations in the area to make decisions, plan efforts, and/or evaluate the efficacy of projects generally. Specifically, IVWC would use water quality data to guide restoration efforts, design and implement a Pesticide Management Plan, engage with partners to write an updated Watershed Assessment Report, implement pollution control efforts, and engage local stakeholders.

IVWC's proposal is to strategically deploy passive monitoring units at 10 sites in the mainstem and tributaries of the Illinois River. USGS will process the field-deployed passive samplers, conduct the chemical analyses, calculate time-weighted average water concentrations of detected chemicals, provide interim reports as new results are available, and assist with data interpretation. IVWC will then conduct public engagement activities in collaboration with IVSWCD to disseminate results of water quality monitoring in the basin.

IVWC has collaboratively designed this project proposal in order to create a robust baseline dataset for the Illinois River Basin. Project partners include Illinois Valley Soil and Water Conservation District (IVSWCD), Oregon Department of Environmental Quality (DEQ), United States Geological Survey Columbia Environmental Research Center (USGS CERC), and the Integrated Ecology Research Center.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- The applicant will coordinate this monitoring project with the Illinois Valley SWCD's current and planned water quality monitoring efforts.
- The applicant will follow quality assurance and quality control procedures that have been established by the USGS to deploy and retrieve the passive samplers.
- The applicant will develop a sampling and analysis plan in coordination with the USGS and submit it to DEQ for review.

- The applicant described the timing of the sampling which is largely based on streamflow and the likelihood of detecting presence of toxins in the watershed.
- The applicant is coordinating with the USGS staff that is highly qualified and will be training the applicant to deploy and retrieve the samplers.
- The USGS will process the samplers to analyze for the presence of toxins and assist the applicant in analyzing the data and interpreting the results.
- The data will be available in USGS's online data portal Science Base and submitted to DEQ.
- Results will be included in a GIS story map to make the data available to engage the general public.
- The application includes several letters of support that demonstrate the applicant has engaged the partners in the community and they are interested in the data that will be gathered.

### **Monitoring Team Concerns**

- It is not clear if the sampling sites in this proposal are located near the SWCD's water quality monitoring sites to determine how the results can be integrated to characterize the watershed conditions.
- The applicant is relying on the USGS to manage, analyze and report the data and the application included little details on how that would be done to answer the monitoring questions posed in the application.
- The application describes the importance of collecting water temperature and streamflow data but lacked detail on how this data would be collected and incorporated into the data analyses.
- The application described the study design for the deployment of two different passive samplers across different seasons in 2024 but there was little information to understand the study design that resulted in a highly reduced monitoring effort in 2025 with fewer sites and use of one type of passive sampler.
- The narrative description of the 2025 monitoring effort is not consistent with the expenses estimated in the budget.
- The budget includes funding for two flow meters and the lack of information on stream flow monitoring methods in the application makes it challenging to determine if this proposed cost is appropriate to accomplish objective 1.
- It was not clear if the budget and timeline includes the activities to complete objective 3 to develop a pesticide management plan, update the watershed assessment report and prioritize restoration actions.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- Baseline water quality monitoring data will be collected in the Illinois River Basin that will be used to inform future riparian restoration projects.
- Data collected will inform Oregon Department of Agriculture and the Department of Environmental Quality's (DEQ) pesticide stewardship programs by providing water quality information in an area where there is currently little water quality data.

- Water quality impacts ESA-listed coho and other aquatic species. Additional information on existing conditions and locations where water quality is impaired will help with prioritizing restoration and outreach efforts.
- The applicant is working with United States Geological Survey and DEQ to establish a sample collection protocol.
- The methods described for detecting pesticide is technically sound.
- The United States Geological Survey input and oversight will provide capacity and appropriate technical expertise needed to implement the monitoring.
- The application includes a wide array of support letters that demonstrate the need and community support for the monitoring project.

### **Concerns**

- It is unclear how sampling site locations were chosen. More detail in the application is needed to evaluate whether sampling locations is likely to provide information needed to accurately identify pollution sources and isolate the source points.
- Additional detail on how the data will be collected and analyzed is needed to evaluate the likelihood the project will succeed in informing future restoration.
- A map that includes other water quality sampling locations would provide helpful context for understanding the sites chosen and how they fit into the larger monitoring network.
- Placing water quality monitoring equipment at locations with public access could make the equipment vulnerable to vandalism and impact data collection.
- Showing Environmental Protection Agency collaboration on what is being tested for would provide a better understanding on the value of the approach.

### **Concluding Analysis**

Potential impacts to human and aquatic life from unsafe pesticide inputs into streams is a growing concern in the Illinois Valley. The monitoring project will provide baseline water quality and quantity dataset that will lead to scientifically based assessment of the extent of pesticide presence. Water quality data will be used to guide restoration efforts, design, and implement a Pesticide Management Plan, and engage partners and landowners in implementing pollution control efforts.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 2

### **Review Team Recommended Amount**

\$156,836

### **Review Team Conditions**

N/A

**Staff Recommendation**  
**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

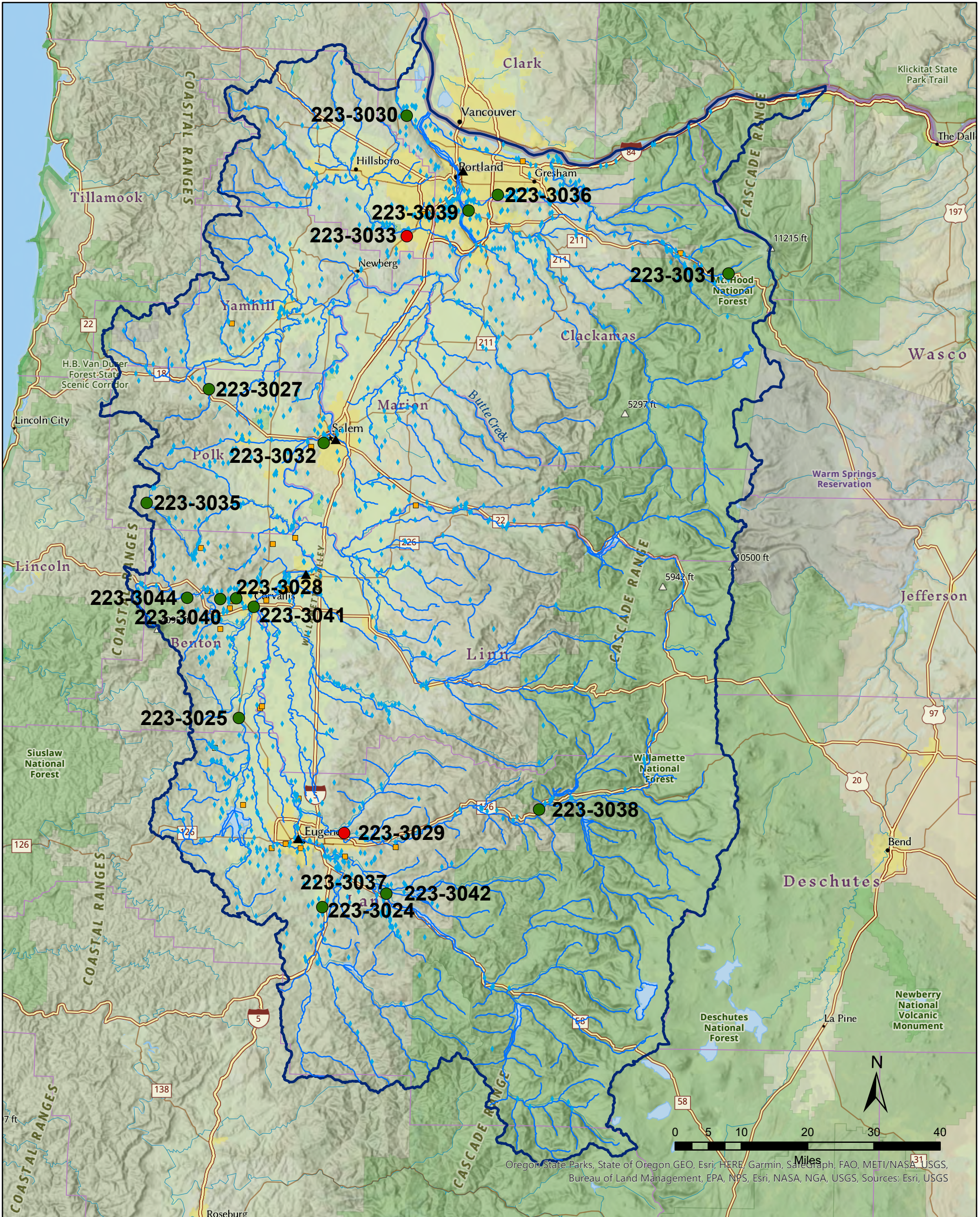
**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Willamette Basin - Region 3 Spring 2023 Funding Recommendations



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**Funding Recommendation**

- Staff Recommendation For Funding (SRF)
- Below Funding Line (BFL)

**Previous Grants 1998 - Spring 2022**

- Land Acquisition
- ◆ Restoration
- ▲ Region 3 Cities
- Region 3 Streams
- ▭ OWEB Region 3 Boundary



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ENHANCEMENT BOARD

775 Summer St, NE Suite 360  
Salem, OR 97301-1290  
(503) 986-0178  
<https://www.Oregon.gov/OWEB/>

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Region 3 - Willamette Basin Restoration				
Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-3030	CREST	Palensky Highway 30 - Wildlife Underpass	Safe wildlife passage will be established under Highway 30 that will allow amphibians and small mammals to traverse between the floodplains of the Palensky Wildlife Area and the Tualatin Mountain forests.	496,787
223-3025	Long Tom WC	Long Tom River Dam Removal at Monroe	Monroe Dam will be removed to restore aquatic migration corridors and natural stream processes in the lower Long Tom River to benefit native fish and wildlife species.	798,201
223-3031	The Freshwater Trust	Upper Sandy River Basin Habitat Restoration Project - Zigzag River	The abundance and productivity of Sandy basin salmon and steelhead populations will increase by restoring access to habitat and accelerating the recovery of naturally-functioning conditions within the stream channels and floodplain areas of the Zigzag River.	439,900
223-3028	Greenbelt Land Trust	Oak Creek Preserve Restoration Phase 1	Wetland, prairie, and oak habitats will be restored on a former farm field that will support a diversity of rare and endangered prairie plant and wildlife species.	296,516
223-3027	Confederated Tribes of Grand Ronde	Takilth Floodplain Reforestation	Twenty acres of floodplain forest will be restored within the 104-acre Takilth Wildlife Area by removing a hazelnut orchard and planting native streamside hardwood trees and shrubs.	217,728
223-3024	Coast Fork Willamette WC	Creswell Butte: Oak Woodland Restoration	Upland prairie, savanna and oak woodland habitat structure will be restored to provide habitat for a diversity of native species on Creswell Butte located within the lower Coast Fork Willamette watershed.	384,237
<b>Total Restoration Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>2,633,369</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-3029	Long Tom WC	Child Center Stormwater Improvements for Drinking Water Protection	Urban water quality will be improved by installing green stormwater infrastructure that will reduce pollutants entering the McKenzie River.	306,412

Projects Not Recommended for Funding by RRT				
Project #	Grantee	Project Title	Amount Requested	
223-3026	Greenbelt Land Trust	Willamette Floodplain Forest Enhancement	198,267	

Region 3 - Willamette Basin Technical Assistance				
Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-3032	Friends of West Salem Watersheds	Salem Floodplain Species Assessment and Natural Floodplain Functions Plan	A species assessment will be completed to support future floodplain development decisions in the City of Salem that assure floodplain ecological functions are considered and protected.	28,850
223-3037	Middle Fork Willamette WC	Finalizing Floodplain Restoration Designs & Permitting for Elijah Bristow State Park	Final designs will be completed for a process-based floodplain restoration project on the Middle Fork Willamette River that will result in habitat for native species such as Oregon chub, western pond turtle, spring Chinook salmon, and beaver.	75,000
223-3035	Luckiamute WC	It's Miller Time! Uncorking Habitat Potential in the Miller Creek & West Fork Luckiamute Sub-basins	Restoration plans will be developed to address impacts caused by splash damming and other historical practices to improve salmonid and lamprey production and improve water quality and storage in the upper Luckiamute sub-basin.	74,962
223-3036	Johnson Creek WC	Action Plan 2025-2035 Technical Assistance	The Johnson Creek Watershed Council's Restoration Action Plan will be updated to guide restoration activities to benefit fish, wildlife, and people in the Johnson Creek Watershed.	25,574
<b>Total Technical Assistance Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>204,386</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended

Oregon Watershed Enhancement Board: Region 3 Restoration, Technical Assistance, Stakeholder Engagement and Monitoring

223-3033	Ducks Unlimited Inc	Tualatin River National Wildlife Refuge-Onion Flats Project	Designs will be completed to restore fish passage, stream channel and habitat complexity, and functional wetlands that hold water during critical periods for fish and migratory birds on Rock Creek, a tributary of the Tualatin River.	39,771
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Projects <i>Not Recommended</i> for Funding by RRT				
Project #	Grantee	Project Title		Amount Requested
223-3034	Pudding River WC	Davis Creek Fish Passage Improvements Phase 1		62,698

### Region 3 - Willamette Basin Stakeholder Engagement

Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-3044	Benton SWCD	Benton County Oak Habitats Stakeholder Engagement	Oak woodland, savanna and prairie habitats will be assessed in Benton County. This information will be used to engage landowners in developing voluntary restoration projects to restore these habitats.	34,130
<b>Total Stakeholder Engagement Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>34,130</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

Projects <i>Not Recommended</i> for Funding by RRT				
Project #	Grantee	Project Title		Amount Requested
None				

### Region 3 - Willamette Basin Monitoring

Projects Recommended for Funding in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-3040	Institute for Applied Ecology	Restoration effectiveness monitoring of Taylor's checkerspot butterfly habitat	The effectiveness of Talyor's cherspot butterfly habitat restoration treatments will be assessed to inform future actions for the recovery of this endangered species in Oregon.	65,351
223-3039	North Clackamas Watershed Council	Temperature Trend Monitoring: North Clackamas Watersheds	Data will be collected to understand water temperature status and trends in the North Clackamas watersheds, which will be used to identify and prioritize future restoration projects.	87,625
223-3038	McKenzie Watershed Alliance	Middle McKenzie Stage 0/8 Restoration Effectiveness Monitoring	The effectiveness of process-based restoration used to restore floodplain function will be assessed to develop standards of practice for designing, constructing, and monitoring these types of projects.	362,696
223-3041	Marys River WC	Marys River Watershed Council Monitoring Phase 1	Data will be collected to understand water temperature status and trends in the Marys River watershed, which will be used to identify and prioritize future restoration projects.	153,297
<b>Total Monitoring Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>668,969</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

Projects <i>Not Recommended</i> for Funding by RRT				
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<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Amount Requested</b>
223-3042	Middle Fork Willamette WC	Effectiveness Monitoring of Floodplain Restoration at Elijah Bristow State Park Pre-Implementation	304,402
223-3043	Ecostudies Institute	Fire Effects Monitoring: Developing a Framework for Cultural and Ecological Health	189,530

<b>Region 3 Total OWEB Staff Recommended Board Award</b>	<b>3,540,854</b>
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<b>Region 1 - 6 Grand Total OWEB Staff Recommended Board Award</b>	<b>12,461,865</b>
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# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3024-23037

**Project Type:** Restoration

**Project Name:** Creswell Butte: Oak Woodland Restoration

**Applicant:** Coast Fork Willamette WC

**Region:** Willamette Basin

**County:** Lane

**OWEB Request:** \$384,237

**Total Cost:** \$568,622

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**Application Description** The 74-acre project is in Lane County along the southern border of the City of Creswell's urban growth boundary at Creswell Butte. Creswell Butte itself can be seen from the I-5 corridor and is within the City of Creswell's viewscape. The property is currently owned by private landowners who enrolled their property into a Conservation Easement (CE) held by McKenzie River Trust (MRT). The easement did not come with operations and maintenance (O&M) funds. Years of limited management have left the legacy oaks and open meadow habitats overgrown with shrubs, cherry, and conifers. The risk of losing the legacy oaks that remain is imminent and with no action key habitat values will be lost forever. The project seeks to leverage Oregon Department of Forestry (ODF) fuels reduction and Oregon Department of Fish & Wildlife (ODFW) Oregon Recreation & Conservation Funding with OWEB restoration funding in order to restore the degraded upland prairie and oak habitats. Project partners include Coast Fork Willamette Watershed Council, MRT, ODF, ODFW, Natural Resources Conservation Service, Larry H Weaver & Sheila J Hale Living Trust and the Creswell Butte Technical Advisory Team which includes the previously mention organizations in addition to US Army Corps of Engineers, US Fish & Wildlife Service, and the City of Creswell.

### Review Team Evaluation

#### Strengths

- The application has clearly defined project goals to restore and improve upland prairie, oak savanna, and oak woodland habitats and native species diversity on Creswell Butte located within the lower Coast Fork Willamette watershed.
- Previous application evaluation concerns related to the feasibility of removing large trees from the site are addressed by describing how skid roads will be used and shifting some restoration strategies to better match the site conditions. The budget also has more details describing project costs instead of providing lump sums.
- The project builds on an OWEB Technical Assistance Grant investment and previously completed restoration completed at Creswell Butte.
- The project has potential for raising awareness about habitat restoration because it is located on the edge of the City of Creswell and is highly visible.
- The target quantified habitat benefits expected from the project are reasonable. Restoring habitat on a hardwood butte will be valuable for migratory birds.
- Prescribed burns will be implemented in partnership with the Willamette Valley Fire Collaboration, which will provide the capacity and experience needed for using fire as a restoration treatment.

- The project site is protected by a conservation easement that will ensure long-term protection and maintenance of investments in habitat restoration.
- The applicant has the capacity and relevant experience for implementing the project.
- A diversity of partners and technical experts are engaged in the project and the Creswell Butte Technical Advisory Team. Partner support is demonstrated by letters and match from landowners, McKenzie River Trust, Oregon Department of Fish and Wildlife, Oregon Department of Forestry, and Ecostudies Institute.

### **Concerns**

- The project location may be challenging for utilizing prescribe fire due to its proximity to the City of Creswell and roads.

### **Concluding Analysis**

The proposed restoration is likely to contribute to addressing the degradation, loss, and fragmentation of upland prairie and oak habitats that has resulted in an overall significant decline of these habitats in the Willamette Valley. A combination of forest thinning, invasive plant control and re-seeding will be used to shift the site from a dense woodland to a mixed open oak and conifer woodland and prairie over the 73-acre conservation property.

### **Review Team Recommendation to Staff**

Fund with Conditions

### **Review Team Priority**

6 of 7

### **Review Team Recommended Amount**

\$384,237

### **Review Team Conditions**

If prescribed fire is not feasible, the line item in the budget for this cost should be used for an alternative fuel reduction action.

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund with Conditions

### **Staff Recommended Amount**

\$384,237

**Staff Conditions**

If prescribed fire is not feasible, the line item in the budget for this cost should be used for an alternative fuel reduction action.

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3025-23042

**Project Type:** Restoration

**Project Name:** Long Tom River Dam Removal at Monroe

**Applicant:** Long Tom WC

**Region:** Willamette Basin

**County:** Benton

**OWEB Request:** \$798,201

**Total Cost:** \$3,786,277

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**Application Description** The project is centered around the Monroe Drop Structure, a 9-foot high, low head dam on the Long Tom River at river mile 6.6. It is the downstream-most barrier on the Long Tom River and blocks upstream fish passage for juvenile upper Willamette River spring Chinook, which are ESA-listed as threatened. The project would open up access to 15 miles of mainstem and tributary rearing habitat for juvenile Chinook. The dam also blocks or impedes passage for Pacific lamprey and coastal cutthroat trout that would otherwise use habitat upstream of the dam for spawning and rearing. The dam also disrupts sediment transport processes, increases water temperatures, and creates ideal conditions for warmwater predatory fish as well as algae blooms. There are two other USACE low head dams upstream of the Monroe Drop Structure on the Long Tom River. LTWC has been working with USACE for nearly 20 years to develop plans for improving fish passage at all three dams, and once that vision is realized fish passage will be restored to 100+ miles of habitat in the Long Tom and Coast Range tributaries where LTWC has restored dozens of mile of habitat in partnership with OWEB and other funders. The proposed project is the first step in achieving this vision and is the highest priority aquatic project in the Long Tom Watershed.

The project will remove the dam, restore the channel 1,000' upstream of the dam, replace a fish passage barrier culvert to provide access to 1/2 mile of off-channel habitat in historical Long Tom River channel segments adjacent to the dam, and replace the City's municipal water intake, which is located 600' upstream of the dam. The current intake will not function once the dam is removed, so its replacement is an essential component of the project to maintain the City water supply and allow the dam to be removed. USACE, City of Monroe, the Confederated Tribes of Siletz Indians, and the USFWS National Fish Passage Program are partners on the project.

### Review Team Evaluation

#### Strengths

- The application has clearly defined restoration goals and objectives for restoring migration corridors for native aquatic species and fluvial processes in the lower Long Tom River.
- The project builds on previous OWEB Stakeholder Engagement and Technical Assistance Grant investments that resulted in the proposed restoration project.

- The project has previously promoted and will continue to promote public awareness for watershed restoration. The applicant conducted extensive stakeholder engagement to build support for removing the Monroe Dam.
- The Monroe Dam removal is the highest priority project for the Long Tom watershed and is a prioritized action in multiple watershed plans.
- Removing Monroe dam will connect 15 miles of upstream mainstem and tributary habitat that was historically used by juvenile spring Chinook. The applicant has implemented stream habitat restoration projects over the last 20 years above the dam that have benefitted trout. Once the dam is removed, spring Chinook and lamprey will be able to access and benefit from these restored stream reaches.
- Removing the dam and eliminating impounded water will decrease solar radiation, which will improve stream temperatures and provide further habitat benefit to native aquatic species.
- The project is ready for implementation with National Oceanic and Atmospheric Administration approval of the designs. It is also time sensitive to successfully utilize the US Army Corps of Engineers (ACE) Section 1135 program for funding.
- The applicant has capacity and relevant experience to implement the project.
- The project could potentially lead to future restoration on upstream drop structures. These structures are currently partial passage barriers for aquatic species and restoring complete passage will further improve stream habitat connectivity.
- The City of Monroe and the Confederated Tribes of Siletz Indians are co-sponsors for the project, which is required for the project to receive USACE Section 1135 funds. Partner support is also demonstrated by support letters from the City, Tribes, Oregon Department of Fish and Wildlife (ODFW), and the Upper Willamette Soil and Water Conservation District.
- Alternative solutions were fully vetted through extensive stakeholder engagement conversations. A habitat suitability index model was also used to model existing and predicted habitat benefits under different restoration alternatives.

## Concerns

- The application lacks design information for the dam removal portion of the project that may have provided helpful context for understanding how the project will be implemented. The dam removal will, however, be funded by the USACE Section 1135 program through a design-build approach. The OWEB request is for relocating the City of Monroe drinking water intake, which is necessary for the dam removal objective to move forward. The application does include technical information needed to understand the design and associated costs for this project component.
- It is unclear from the application the extent to which ODFW was consulted in conversations about fish passage at the project site.
- Potential benefits to Chinook may be overstated in the application while other watershed benefits are understated. While Chinook will pass upstream and utilize the stream habitat, they are unlikely to use the 15 miles of habitat because there will still likely be preference for other nearby basins, such as the McKenzie River. Removing the dam will still provide significant benefits for restoring watershed functions and improving stream temperatures.

## Concluding Analysis

The Monroe Dam, located six miles upstream of the confluence of the Long Tom River with the Willamette River, disrupts sediment transport, fish access to upstream habitat, and migration of other native aquatic species. The impoundment created by the dam also contributes to elevated water temperatures by increasing solar gain and residence time. The applicant implemented extensive

stakeholder engagement that led to this restoration opportunity by building whole community support in a small, rural city. This is a large, complex project and the applicant's coordination of partners, community outreach, and design work has generated the momentum for dam removal to proceed.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

2 of 7

**Review Team Recommended Amount**

\$798,201

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$798,201

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3026-22965

**Project Type:** Restoration

**Project Name:** Willamette Floodplain Forest Enhancement

**Applicant:** Greenbelt Land Trust

**Region:** Willamette Basin

**County:** Benton

**OWEB Request:** \$198,267

**Total Cost:** \$249,519

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**Application Description** Greenbelt Land Trust manages some of the most successful floodplain anchor habitat projects on the mid-Willamette. The proposed project is located across three permanently protected properties and collectively comprises over 800 acres: Harkens Lake, Horseshoe Lake and Little Willamette (Benton and Linn Counties). These properties were brought into the Willamette Wildlife Mitigation Program by BPA, OWEB, and ODFW for their strategic location and recognition of their outsized potential contribution to salmonid recovery efforts. Over the past ten years Greenbelt has converted well over 500 acres of ag-land into diverse floodplain forest, wetlands and prairies. Early on, we naively thought that active management finished once trees were free to grow. Ten years later we now realize that a second phase of restoration is needed to speed the development of the mature and complex floodplain forest characteristics that are so valuable to fish and wildlife. This project will implement mechanical thinning across hundreds of acres to establish a varied age and multi-layered riparian forest canopy. We will emphasize the development of large canopy trees, add understory native plant diversity, and replace areas dominated by invasive plant species with many acres of newly planted forest. These activities will expand the sites' food webs and resources for salmonids and a suite of OCS species, increase the acreage of floodplain forest, and promote improvements for water quality / quantity. Work will follow the land management plans approved / reviewed by OWEB, BPA and ODFW, while technical assistance is provided by the USFWS Partners for Fish and Wildlife Program, ODFW and Bob Altman. Greenbelt relies on restoration professionals such as Rosario Franco, Seven Oaks Nursery, Heritage Seedlings and Advanced Land Management. Our floodplain properties are demonstration sites for the conservation and restoration community and provide educational opportunities for students of all ages.

### Review Team Evaluation

#### Strengths

- The application has clearly stated objectives for a strategic and rational treatment approach at locations where previous floodplain forest restoration projects had higher-than-expected survival outcomes. The sites were planted using high density plantings, which is a common planting method in the Willamette Basin for restoring floodplain forests. Typically planting projects experience a high mortality; high-density plantings are designed to allow for natural thinning to occur through plant mortality. The trees and shrubs planted at the project sites had high survival rates, which is creating a dense monoculture. The proposed thinning to reduce plant density and uniformity is likely to add

complexity to the plant community and habitat diversity that will benefit native species, such as songbirds. The resulting mixed story forest will provide a higher habitat value in the bottom land forest plant community.

- The proposed approach to mechanically thin floodplain forests is based on a successful 30-acre pilot completed by the selected contractor. Due to this test project, the applicant has data to accurately estimate costs for the proposed project. Thinning the floodplain forest now will be more cost-effective, before trees get larger and are more costly to treat.
- The project includes a combination of three properties that altogether total 800 acres located in Willamette Anchor Habitats. The properties have OWEB and Bonneville Power Administration Conservation Easements that will ensure long-term protection and maintenance of investments in habitat restoration.
- Prioritized actions in watershed plans, including the Oregon Conservation Strategy, will be implemented.
- There is potential for the project to lead to future restoration. Demonstrating success in restoring the bottomland riparian forest could lead to additional floodplain reconnection restoration with the participating landowners and neighbors.
- The application budget includes details clearly describing project costs.
- The applicant has capacity and relevant experience to implement the project and will be working with a contractor with relevant forestry experience.

## Concerns

- No alternatives to the proposed approach were considered. For example, it might be possible that the plant community stratification will sort out in five more years through mortality without intervention. There may be merit to waiting to see how the sites respond to previous restoration strategies over a longer time period instead of intervening too early.
- There are no plans to leave large trees on the forest floor, all materials will be mulched instead. There could be a missed opportunity to provide habitat benefits for native species, such as amphibians, by leaving larger woody material on the ground.
- While the presence of invasive plants is currently low on the project sites, thinning and opening the forest could increase the risk of invasive plant species moving in.
- The proposed treatments may speed up the ecological processes leading to a diverse multi-layered floodplain forest; however, it is unclear if the treatments are necessary to achieve this outcome. The high-density planting method has been applied at locations across the Willamette Valley and this project could lead to future requests to retreat these sites. More information is needed to understand why intervention is needed to achieve meaningful ecological gains compared to monitoring the sites over a longer timeframe to see if the plant community achieves the desired habitat outcomes with time.

## Concluding Analysis

High-density floodplain riparian forest plantings have been an innovative restoration approach used to mediate for plant mortality and for reducing the use of plant protection that typically is washed downstream, such as tree tubes. There are a couple of paths that could provide opportunities to learn more about next steps for this proof-of-concept approach. One is to give the sites more time to see if they naturally move towards a multi-story floodplain forest. There is potential for this path to result in missing an opportunity for developing an understory plant community due to the monoculture stands shading understory growth. The second potential path is to thin the sites as proposed. The proposed

project has potential for influencing how sites across the Willamette will be managed. If the application is resubmitted, the applicant is encouraged to incorporate a monitoring component so that restoration practitioners can better understand whether using thinning on sites with high survival is necessary for achieving desired conditions. Monitoring that includes the stocking density and a forest inventory with plant densities, height, and stems per acre by different species or plant types would be helpful to better understand the extent to which thinning treatment is needed. This information could contribute to better understanding site attributes that restoration practitioners might use to determine whether it is best to leave a site alone or if thinning is necessary to achieve multi-story floodplain forest habitat goals.

**Review Team Recommendation to Staff**

Do Not Fund

**Review Team Priority**

N/A

**Review Team Recommended Amount**

\$0

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3027-22968

**Project Type:** Restoration

**Project Name:** Takilth Floodplain Reforestation

**Applicant:** Confederated Tribes of Grand Ronde

**Region:** Willamette Basin

**County:** Polk

**OWEB Request:** \$217,728

**Total Cost:** \$275,531

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### Application Description

Takilth is generally located at -123.425/45.030 in Polk County, Oregon. This property is approximately 106 acres and is bordered by both Mill Creek and Gooseneck Creek, which converge to confluence on the property. The property is permanently protected by a Bonneville Power Administration conservation easement. The existing riparian habitat is 39 acres and is known to host native fish and wildlife species, including Oregon Conservation Strategy species such as: winter steelhead, Pacific lamprey, brook lamprey, coastal cutthroat trout, Northern red-legged frog, and Western pond turtle. In order to improve floodplain connectivity and riparian habitat in the area, this project proposes to convert 20 acres of mature hazelnut orchard back to riparian floodplain forest. This grant request includes contracted services for orchard removal, plant materials, plant establishment and project maintenance for 3 years. Partners on this project include the US Fish and Wildlife Service (USFWS), Natural Resources Conservation Service (NRCS), Oregon Department of Fish and Wildlife (ODFW), Polk County Soil and Water Conservation District (SWCD), Greater Yamhill Watershed Council (GYWC), and Bonneville Environmental Foundation (BEF).

### Review Team Evaluation

#### Strengths

- The scope of work in the proposed solution section of the application has clear objectives and activities for converting a 34-year-old hazelnut orchard to a floodplain forest.
- The planting approach is technically sound and is based on the applicant's experience restoring floodplain forests in other locations in the Willamette.
- The project site is protected by a conservation easement that will ensure long-term protection and maintenance of investments in habitat restoration.
- A variety of Oregon Conservation Strategy species are present on the property and will benefit from habitat restoration actions, including: coastal cutthroat, lamprey, Northern red-legged frog, and Western pond turtle.
- The applicant has identified a qualified contractor with specialized equipment for removing the hazelnut orchard.
- The applicant has capacity and relevant experience to implement the project.
- Partner support from Oregon Department of Fish and Wildlife, Polk Soil and Water Conservation District, Yamhill Watershed Council, Bonneville Environmental Foundation, US Fish and Wildlife Service, and Natural Resource Conservation Service (NRCS) is demonstrated through letters included in the application.

- It is likely the applicant will continue to plan and implement future stream and floodplain restoration that will build a variety of habitats over the 104-acre site.

### **Concerns**

- There will likely be limited direct habitat benefits for fish or water quality improvements from the proposed restoration because the project footprint is disconnected from the adjacent stream. Benefits will likely remain within the 20-acre project footprint.

### **Concluding Analysis**

Converting the hazelnut orchard to a floodplain forest is likely to be the first step in restoring a mosaic of Willamette Valley habitats on the project site. Re-establishing forest habitat and restoring more natural floodplain function also contributes to resiliency against impacts from climate change. The proposed project is likely to succeed in establishing native floodplain forest habitat that will leverage habitat on other nearby conservation properties, including NRCS easements and Noble Oaks, which is also owned and managed for conservation by the Tribe.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

5 of 7

### **Review Team Recommended Amount**

\$217,728

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$217,728

### **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3028-23009

**Project Type:** Restoration

**Project Name:** Oak Creek Preserve Restoration  
Phase 1

**Applicant:** Greenbelt Land Trust

**Region:** Willamette Basin

**County:** Benton

**OWEB Request:** \$296,516

**Total Cost:** \$379,503

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**Application Description** Oak Creek Preserve (OCP; 144 acres, Benton County) is Greenbelt Land Trust's newest acquisition. In its current state, the property is mostly farm ground, but it is brimming with incredible potential to connect the largest network of Conservation properties west of Corvallis. OCP is within the Oregon Conservation Strategy (OCS) Conservation Opportunity Area for Corvallis Area Forests and Balds (081). It is also within US Fish and Wildlife Service (USFWS) Corvallis West Recovery Zone for endangered plants. The property includes legacy oaks, grassland remnants and the potential to convert 137 acres of agricultural lands to the most beautiful restored native prairie we've ever done. Known Oregon Conservation Strategy Species in the area include Western Bluebird, White Breasted Nuthatch, Oregon Vesper Sparrow, wintering Western Meadowlark, Kincaid's Lupine, Nelson's checkermallow and Willamette daisy. Our goal is to provide habitat for all of these species. Greenbelt is about to finish a \$7 million campaign focused on this iconic property and we are committed to the permanent protection and creation of resilient landscapes.

Native prairie and oak habitats are extremely rare, and this loss of habitat quality, quantity and connectivity has left many species in peril. Our goal is to reverse those impacts by doing the following:

- Permanently retire farming and create 133 acres of diverse wetlands and prairies to benefit rare plants, pollinators, amphibians and grassland birds.
- Restore 7.3 acres of legacy oak woodland and 3.5 acres of remnant upland prairie, controlling invasive shrubs, promoting oak longevity, and improving habitat for birds.
- Introduce Willamette Daisy, Nelson's checkermallow and other rare plants into restored prairies.
- Limit the occurrence and reduce the spread of target invasive species.
- Offer community/stakeholder events on the Property.

Partners include: OWEB, USFWS Partners & Recovery Programs, Grand Ronde Tribe, IAE and OSU.

### Review Team Evaluation

#### Strengths

- The application has clearly defined restoration goals, objectives, and activities for restoring vernal

pools, diverse prairies, and legacy oak stands on Oak Prairie Reserve located west of Corvallis.

- The proposed methods for restoring wetland, prairie, and oak habitats are technically sound, utilizing a recipe of actions the applicant has effectively implemented in other locations. The planned actions include establishing the following threatened and endangered plants: Nelson's checkermallow, Bradshaw's lomatium, Willamette daisy, and golden paintbrush.
- The project is located within an Oregon Conservation Strategy conservation opportunity area and US Fish and Wildlife Service (USFWS) recovery zone for endangered plants. The proposed restoration will build habitat connectivity across thousands of acres of conservation lands.
- Several Oregon Conservation Strategy species will likely benefit from the proposed habitat restoration because they are known to be in the area, including: Western Bluebird, White Breasted Nuthatch, Oregon Vesper Sparrow, wintering Western Meadowlark, Kincaid's Lupine, Nelson's checkermallow, and Willamette daisy.
- The presence of native bird species indicates that the existing oak habitat area on the property is functioning well.
- The applicant has capacity to implement the project and relevant experience with similar projects.
- Project costs are reasonable.
- The proposed project is timely because invasive plant species have not yet established on the site that would require extensive treatment and site preparation. This will make restoration activities easier to implement and cost less.

## Concerns

- The application lacks information describing how partners listed in the application abstract and referenced in an attachment will be involved in the project, including Confederated Tribes of Grand Ronde, Institute for Applied Ecology, and Oregon State University.
- Information describing plans for maintaining the open prairie, such as using prescribed fire, mowing, or herbicide application to control weeds, would be helpful for understanding long-term habitat stewardship strategies that will maintain restoration gains.

## Concluding Analysis

Native grassland, wetlands, and oak woodlands that were once the dominant habitats historically found in the Willamette Valley will be restored across 144 acres of permanently protected land. Restoring ecosystem function will provide habitat benefits to native species, including species listed on the Endangered Species Act and species identified in the Oregon Conservation Strategy. The project addresses habitat fragmentation caused by various land uses by creating a corridor that connects 1,400 acres of conserved lands to the south with thousands of acres of oak, prairie, and forest habitat owned by Oregon State University to the north.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

4 of 7

**Review Team Recommended Amount**

\$296,516

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$296,516

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Willamette Basin (Region 3)

**Application Number:** 223-3029-23017

**Project Type:** Restoration

**Project Name:** Child Center Stormwater  
Improvements for Drinking Water Protection

**Applicant:** Long Tom WC

**Region:** Willamette Basin

**County:** Lane

**OWEB Request:** \$306,412

**Total Cost:** \$399,952

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**Application Description** This project is in Lane County at The Child Center (TCC), at the intersection of Marcola Rd. and Hayden Bridge Rd. on the McKenzie River.

The proposed work will significantly improve the function of existing green stormwater infrastructures (GSI) that manage stormwater from 1.9 acres of parking lots and roofs of TCC before entering the McKenzie River approximately 195' upstream of Eugene Water & Electric Board's (EWEB's) drinking water intake, providing almost no time for pollutant loads to dilute. Separately, TCC is engaged with Pure Water Partners (PWP) to restore their eight acres of riparian edge which is inundated with highly invasive plants. These activities will result in better flood attenuation, pollution management, riparian habitat, and drinking water for 176,000 EWEB customers, and both public and private wells.

GSI facilities provide stacked benefits, including addressing drinking water quality, aquatic life habitat, and habitat for upland species. Improved stormwater management will reduce the urban complex of pollutants entering the McKenzie River including heavy metals, petrochemicals, temperature, sediment & emerging pollutants of concern such as 6PPD-quinone from tire dust that has been shown to kill Coho Salmon within hours of exposure. Drinking water for EWEB's entire service area will be directly improved through pollution reduction. These same pollutants negatively impact aquatic life, so impacts to those species will be addressed by the same actions. Improved flood attenuation will reduce flash flood impacts like scouring and sediment movement. As the GSI is currently filled with invasive weeds, removing and replacing them with a dense planting of natives will reduce invasive pressure while improving upland habitat for birds and pollinators.

Project partners include TCC, EWEB, SUB, City of Springfield, PWP, McKenzie Watershed Council (MWC), and Urban Waters & Wildlife Partnership (UWWP).

### Review Team Evaluation

#### Strengths

- The application describes a clear need to address stormwater pollution that has toxic effects on native aquatic species, especially salmonids.

- The methods for improving existing green stormwater management infrastructure at the project site are technically sound. Plans to utilize native plants and incorporating biochar into the soil to increase the capture of pollutants are above and beyond the minimal requirements for stormwater management infrastructure. The use of native plants will also provide pocket habitat that will support native birds and pollinators.
- The proposed restoration will address actions identified in federal, state, and local watershed plans, including the recovery plan for upper Willamette Chinook and steelhead, by reducing toxins from urban sources that impact fish.
- The project is ready for implementation with completed designs and feasibility study and is time-sensitive due to match dollars that must be spent in 2024.
- The project was ranked as a high priority site utilizing the stormwater project prioritization matrix developed by the applicant through a previous OWEB Technical Assistance Grant investment.
- The project site is in immediate proximity of the Eugene Water and Electric Board's water intake for drinking water; stormwater runoff from the property drains into the stream upstream of this intake. The project location is a high priority for removing stormwater toxins to benefit both stream habitat and to protect a drinking water source.
- The applicant has capacity and relevant experience to implement the project and has built a stormwater program by partnering with cities, water providers, and landowners in the Upper Willamette area.
- The application budget includes a detailed explanation that describes context for project costs.
- A diversity of partners support the project, which is demonstrated by letters and match contributions.
- The landowner is engaged in the Eugene Water and Electric Board's Pure Water Partnership program, which has received previous OWEB grant investments, to explore options for addressing invasive species and restoring the riparian area along the property.

## Concerns

- The application objectives are unclear in describing a scope of work because they are stated as watershed benefit outcomes instead of specific, measurable steps for achieving the project goal.
- The current stormwater management infrastructure is underperforming even though the parking area is only ten years old. Information or data that was used as evidence to determine this infrastructure is failing and the extent to which it is impacting water quality would be helpful for understanding the priority for investing in the project.
- Additional information explaining the project need and how OWEB investment will target voluntary improvements would be helpful for understanding the project context. For example, it is unclear who the responsible party is for renovating a failing stormwater management system and why actions to address it are not automatically triggered through city regulation.
- Long-term plans and funding for maintaining the stormwater management facilities are unclear from the application. While the applicant will provide an operation and maintenance plan designed to ensure long-term functionality, it is unclear who will be responsible for implementing it and how maintenance will be funded.
- The landowner support and role in the project is unclear because there is no letter of support and there are no roles identified for the landowner, other than a pending match. It is unclear if the landowner will play a role in long-term maintenance.
- The overall project cost is high for the potential watershed benefit.

## Concluding Analysis

The proposed project provides an opportunity to reduce stormwater potentially impacting aquatic habitats and drinking water. The investment will build on a strategic, programmatic approach to reduce pollutants in stormwater through voluntary measures and will offer an example to the community of a sustainable climate friendly landscape. A clear maintenance plan and resources to implement the plan will be important for maintaining the restoration investment.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

7 of 7

**Review Team Recommended Amount**

\$306,412

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Willamette Basin (Region 3)

**Application Number:** 223-3030-23026

**Project Type:** Restoration

**Project Name:** Palensky Highway 30 - Wildlife Underpass

**Applicant:** CREST

**Region:** Willamette Basin

**County:** Multnomah

**OWEB Request:** \$496,787

**Total Cost:** \$2,932,607

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**Application Description** Spanning between Portland and Scappoose in Multnomah County, OR, U.S. Highway (Hwy) 30 poses a significant barrier to wildlife movement between the floodplain wetlands along Multnomah Channel and the upland forests of the Tualatin Mountains. Amphibian species including 1) the northern red-legged frog (*Rana aurora*), a Federal Species of Concern, State Sensitive Species, and top-ranked ODFW priority among Oregon Conservation Strategy Species for the Willamette Valley and 2) Pacific treefrog (*Pseudacris regilla*) each migrate twice/yearly between the forests and floodplain wetlands. The 4-lane Hwy severely impacts this migratory pattern, with high mortality rates as amphibians are struck by vehicles as they traverse back and forth across the Hwy.

This project is a collaboration between CREST, the Oregon Department of Transportation (ODOT), and the Oregon Department of Fish and Wildlife. The designs call for a wildlife underpass that will convey migratory amphibians, while meeting the safety and design standards of ODOT. The result is a 130-foot long underground tunnel with a natural bottom substrate, natural light openings, and 600 linear feet of directional wall to guide amphibians and small mammals to the new crossing.

Two other partner projects along Hwy 30 are currently in feasibility and initial designs. The Harborton Wetland Amphibian Underpass (led by Oregon Wildlife Foundation and USFWS), and Crabapple Creek (led by Metro and LCEP). Each are examining the feasibility of installing additional wildlife underpasses beneath Hwy 30. If all projects are constructed there will be three (3) new wildlife crossings along 5.5 miles of Hwy 30 – greatly enhancing wildlife connectivity throughout this region. Since the Palensky – Highway 30 wildlife corridor is fully designed, permitted, and ready for construction there is an opportunity to learn a lot about design, construction and monitoring which can be put to use for the two subsequent wildlife corridor projects.

### Review Team Evaluation

#### Strengths

- The application has clearly defined goals, objectives, and activities to establish safe wildlife passage for amphibians and small mammals under Highway 30. The proposed wildlife underpass will connect floodplain habitat in the Palensky Wildlife Area with the Tualatin Mountain forests.

- Installing the wildlife underpass will address actions identified in the Oregon Conservation Strategy for northern red-legged frogs, which is a Federal Species of Concern, State of Oregon Sensitive Species, and a top-ranked Oregon Department of Fish and Wildlife (ODFW) priority among Oregon Conservation Strategy Species for the Willamette Valley. The new wildlife underpass will also benefit other native species that need to move between habitats.
- The project location was selected based on ODFW data that indicates the project site is a mortality hotspot for northern red-legged frogs.
- The project is ready for implementation with designs at 100% completion, permits are secured, two-thirds of the funding is secured, and Oregon Department of Transportation (ODOT) has approved the designs along with project staging plans.
- Alternative design and project location options were evaluated before selecting the proposed strategy.
- The proposed project will leverage two related northern red-legged frogs migration passage projects on Highway 30, including one with an OWEB Technical Assistance Grant investment. The project is also associated with extensive salmon habitat restoration occurring on the adjacent Palensky Wildlife Area, which is 470 acres of floodplain wetlands, sloughs, ponds, and riparian forests directly along the Multnomah Channel.
- The applicant is engaging adjacent landowners to address potential impacts to adjacent properties that could occur during and after project implementation.
- The applicant is engaging appropriate partners and partner support is documented in letters included in the application.
- The applicant has capacity to implement the project and relevant experience with similar projects.
- The project cost reflects the migration and habitat benefits that will be gained for a priority conservation species.

## Concerns

- Installing a wildlife underpass for amphibians is a proof-of-concept project that has not been done before. There is some uncertainty that the desired outcomes can be achieved. The well-documented frog mortalities, however, indicates the site is a significant migration corridor and is a reasonable location to pilot a wildlife underpass for amphibians.

## Concluding Analysis

Highway 30 has disconnected an important northern red-legged frog migratory corridor, causing elevated levels of mortality as frogs migrate back and forth across the four-lane highway between the Tualatin Mountains and the floodplain wetlands of the Multnomah Channel. Creating a wildlife underpass underneath Highway 30 is likely to provide unimpeded safe passage between large parcels of protected habitat, including the 470-acre Palensky Wildlife Area and the 354-acre upland forest protected and managed by Metro. Establishing a wildlife underpass will provide landscape scale habitat connectivity across the forests and wetlands of the Northern Willamette Valley along the Columbia River Bottomlands.

## Review Team Recommendation to Staff

Fund

**Review Team Priority**

1 of 7

**Review Team Recommended Amount**

\$496,787

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$496,787

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Willamette Basin (Region 3)

**Application Number:** 223-3031-23031

**Project Type:** Restoration

**Project Name:** Upper Sandy River Basin Habitat  
Restoration Project - Zigzag River

**Applicant:** The Freshwater Trust

**Region:** Willamette Basin

**County:** Clackamas

**OWEB Request:** \$439,900

**Total Cost:** \$1,015,620

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**Application Description** The Freshwater Trust (TFT) and US Forest Service (USFS) are taking the lead on the Upper Sandy River Basin Habitat Restoration Project-Zigzag River on behalf of the Sandy River Basin Partners (the Partners). The Sandy River originates on Mt. Hood and flows 56 miles northwest before entering the Columbia River near Portland, Oregon. The proposed project will address primary limiting factors by increasing off channel habitat/floodplain connectivity and large wood abundance on the Zigzag River (a tributary of the Sandy located within the upper Sandy sub-watershed). Proposed work is on public land managed by the USFS located near Zigzag, Oregon in Clackamas County.

Sandy River salmon and steelhead populations have declined over the last century due to degradation of habitat and other factors. The Partners have identified the upper Sandy sub-watershed among the top areas providing high quality habitat for the basin's native fish. The Partners are aligned on a near term goal of restoring this priority watershed to advance Sandy basin-scale restoration.

Restoration actions to be undertaken as part of the proposed project include: reactivation of flow to historic side channels and floodplain habitat; construction of large wood habitat structures; and placement of additional large wood in side channels and on stream margins. This project is part of a larger, multi-year, watershed-scale restoration effort and builds on similar successful projects completed in the basin by TFT and the Partners since 2008.

### Review Team Evaluation

#### Strengths

- The proposed work is part of a large-scale restoration strategy that builds on momentum from and leverages investments in previously successful restoration that includes reactivating flow to historic side-channels and floodplain habitat, constructing instream large wood habitat structures, and placing additional large wood in side-channels and on stream margins.
- The applicant will use clearly defined restoration methods that have been applied in the Upper Sandy Basin for over a decade. The project builds on past practices by incorporating lessons learned from previous restoration. The proposed restoration techniques have been used in previous project phases to increase fish habitat abundance. Resulting fish counts indicate the approach is effective.

- The proposed restoration actions will address watershed limiting factors to Endangered Species Act (ESA)-listed fish recovery by restoring large wood abundance in Zigzag River and increasing off-channel habitat for Chinook, coho, and steelhead spawning and juvenile rearing.
- The map included in the application depicting planned and completed restoration provides a comprehensive overview of the long-term Upper Sandy Basin restoration strategy implementation.
- The applicant team provides tours that raise awareness about the impacts of stream restoration in restoring healthy native fish populations.
- The project team has a consistent track record for implementing similar high-quality projects. The team has relevant experience for designing the restoration treatments.

### **Concerns**

- Including information describing how restoration practices are monitored and plans for identifying when long-term maintenance may be needed and how it is implemented would be helpful for understanding how long-term habitat gains are maintained.
- The application has limited documentation of project support with only one letter of support from partners even though the Sandy Basin Partnership has had a long relationship in collaborating and supporting projects. Documentation of additional partner support would strengthen the application.

### **Concluding Analysis**

The proposed project builds on a phased stream restoration strategy that has been implemented since 2008 and has a record of producing quantified fish response to habitat improvements. The Sandy River watershed provides habitat to numerous ESA-listed fish species, making it a priority area for instream habitat restoration. The project has a high ecological benefit-cost ratio and certainty of success, which is guided by a multi-year strategic action plan and documented by monitoring data from previous phases of restoration.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 7

### **Review Team Recommended Amount**

\$439,900

### **Review Team Conditions**

N/A

### **Staff Recommendation**

### **Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$439,900

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering

### Willamette Basin (Region 3)

**Application Number:** 223-3032-22978

**Project Type:** Technical Assistance

**Project Name:** Salem Floodplain Species Assessment and Natural Floodplain Functions Plan

**Applicant:** Friends of West Salem Watersheds

**Region:** Willamette Basin

**County:** Marion

**OWEB Request:** \$28,850

**Total Cost:** \$39,850

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**Application Description** The project includes the floodplains of the Willamette River, Mill Creek, Pringle Creek, Glenn Creek and all and flood prone areas within the urban growth boundary of the City of Salem.

The Salem reach of the Willamette River lies within Conservation Opportunity Area 60, Middle Willamette, as identified by the Oregon Conservation Strategy. This reach has incurred losses of 12% primary channel area, 16% side channels, 33% alcoves, and 9% islands according to the Biological Opinion of 2016. The BiOp further describes the conditions of the reach as: " the formerly hardwood-dominated riparian forests along with mixed forest made up less than half of the riparian vegetation by 1990, while agriculture dominated. This conversion has reduced river shading and the potential for recruitment of wood to the river, reducing channel complexity and the quality of rearing, migration and spawning habitats".

The project will develop a Floodplain Species Assessment and public information materials that will be used to inform the staff and public about floodplain dependent species and their conservation and reduce flood insurance rates in Salem. The project will also develop a draft Natural Floodplain Functions Plan that can be adopted by the City Council for additional CRS credits further lowering flood insurance rates.

As the capitol city and the second largest city in the state, Salem can provide a model approach to providing advance protection to floodplain species. This pilot can show other communities a way to address the apparent conflicts between the Endangered Species Act and the National Flood Insurance Program.

Current management of floodplain development in Salem does not consider ecological impacts of proposed development, only engineering standards. This project will provide the City of Salem with tools to identify measures to protect floodplain functions that are critical to riparian and aquatic species. The City of Salem is a critical partner.

### Review Team Evaluation

## Strengths

- Previous application evaluation concerns are addressed.
- A collaborative approach will be used to create a Floodplain Species Assessment and a Natural Floodplain Functions Plan to protect floodplain areas used by threatened and endangered species. The applicant is using FEMA guidance for the National Flood Insurance Program to proactively create a potentially replicable approach for meeting the program requirements while demonstrating that better information about ecological considerations can be incorporated into floodplain development programs at the local level.
- The expected product will compile information about each listed species, their habitat needs, and the management considerations necessary to protect them into the form of an assessment. This assessment could be used by the City of Salem as a planning resource to ensure ecological conditions of floodplains are considered when making floodplain development decisions. The assessment could also help inform land purchases for preservation in an urban area that could be otherwise purchased for development.
- A clear need for the proposed technical assistance is described in the application. Currently the City of Salem lacks staff capacity to address the ecological side of floodplain management. As a result, only engineering and flooding concerns are considered with development and not habitat concerns. This has led to stream health degradation typically seen in urban areas, including loss of habitat and side-channel complexity. Developing the proposed species assessment, is the first step for the City to have the information needed to integrate ecological concerns into the planning process.
- The applicant will coordinate with a diversity of agencies and non-profits, including Oregon Department of Fish and Wildlife (ODFW), Oregon Department of Agriculture (ODA), US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), Oregon Natural Heritage Program, and City of Salem to collect habitat data and form a plan that could lead to long-term protection of floodplain functions that will benefit endangered species.
- The example plan for the City of Monroe included in the application provides helpful context for understanding the expected product that will result from the proposed technical assistance.
- Information collected through the project will be made publicly available. The plan will be presented to the public and to the city council for approval.
- Partner support for the project is demonstrated by letters from Salem Audubon Society and West Salem Neighborhood Association. City of Salem support is demonstrated by staff involvement in the grant application and Letters of Support from the Public Works Director and Mayor, which was approved by the city council.
- Qualified technical experts with relevant experience will implement the project.
- Project costs are reasonable for the proposed technical assistance.

## Concerns

- There is potential for the City to not actively use the plan to protect habitat; however, the city council unanimous decision to provide a letter indicates genuine intention. The plan is the first step for integrating habitat into planning decisions.

## Concluding Analysis

Protecting floodplain habitat for threatened and endangered species is important for species recovery, and floodplain development is a major threat to their survival. The proposed Floodplain Species Assessment and Natural Floodplain Functions Plan has potential for serving as a model for providing

information needed for future floodplain development decisions to incorporate and protect ecological functions. The City of Salem is experiencing strong pressure for development and the City is using 20-year-old floodplain maps to make planning decisions. Current information describing floodplains and the species using them is needed to make planning decisions that incorporate habitat protection. The technical assistance product can help the City utilize preservation as a tool for creating ecological uplift.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

1 of 5

**Review Team Recommended Amount**

\$28,850

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$28,850

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Willamette Basin (Region 3)

**Application Number:** 223-3033-22994

**Project Type:** Technical Assistance

**Project Name:** Tualatin River National Wildlife  
Refuge-Onion Flats Project

**Applicant:** Ducks Unlimited Inc

**Region:** Willamette Basin

**County:** Washington

**OWEB Request:** \$39,771

**Total Cost:** \$58,707

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**Application Description** The 209-acre Onion Flats tract is part of a large marsh that once existed on the landscape within the Rock Creek drainage in the Tualatin River watershed. The Tualatin River National Wildlife Refuge located near Sherwood, Oregon, owns most of the historic Onion Flats wetland basin. 82 acres are privately owned working lands that support agriculture. The tract does support rearing habitat for Coho and brook lamprey, cutthroat trout, ESA Steelhead, waterfowl, and other wildlife, but use is inconsistent due to the variability in flooding that occurs on the site. Without functional water management infrastructure, the tract is subject to the flood stages of the Tualatin River: as river levels rise following wet season precipitation events, the basin floods; and as river levels drop, water recedes quickly. This drop in water levels results in a loss of floodplain wetland habitat and function.

Private landowners desire to continue the maintenance of working lands, thus limiting the implementation of a process-based restoration strategy that fully addresses stream and wetland function for the foreseeable future. Overarching goals are to develop a project concept that 1) restores wet season flooding patterns that occurred historically to provide more consistent habitat for migratory birds; 2) ensures passage for native aquatic species and explores options for improving stream function; and 3) maintains agriculture on private lands. This approach likely entails removal of a barrier and replacement with a step-pool system that will allow for aquatic species passage in Rock Creek, while retaining water on the floodplain after flood waters recede. Water can then be managed to inundate the tract between October and March for waterfowl and providing passage for aquatic species. The tract would be dewatered in April to support agricultural and refuge management operations.

Project partners will include US Fish Wildlife Service, Ducks Unlimited, ODFW and Pvt landowners.

### Review Team Evaluation

#### Strengths

- The application has clear objectives and activities for designing water management infrastructure,

such as a step-pool system, to restore and maintain wetland habitat functions during critical periods for fish and migratory birds.

- Currently a structure in Rock Creek, a tributary of the Tualatin River, is prohibiting fish passage during non-flood conditions and prevents flood management. The resulting design will restore wet season flooding patterns that will provide natural habitat for migratory birds and improve stream function by providing passage for aquatic species.
- Multiple species will benefit from the expected future restoration project, including lamprey, coho, steelhead, waterfowl, and other wildlife.
- Partner support for the project is demonstrated by letters from US Fish and Wildlife Service (USFWS) and Oregon Department of Fish and Wildlife.
- The applicant has the capacity, relevant experience, and knowledge for implementing the project.

### **Concerns**

- Onion Flats has mixed land ownership that includes USFWS properties and private agricultural lands. The USFWS is in the process of acquiring additional lands in the project area. There may be merit to waiting until the acquisition is complete and there are clear ownership boundaries before designing restoration. This would better facilitate capturing restoration opportunities on the new USFWS property into the project.
- It is unclear how the resulting design will address potential sediment issues. With standing water, sediment could build up, then recede back into the stream, and degrade water quality.
- It is unclear what considerations will be made to ensure the design will not lead to fish entrapment, which is a common concern related to projects designed to restore flooding and wetlands for bird habitat.
- Letters from the private landowners demonstrating support for the project concept would strengthen the application.

### **Concluding Analysis**

A project concept and early design work will be developed that balances habitat with agricultural working lands. The resulting restoration is expected to restore historic wet season flooding patterns to provide more consistent habitat for migratory birds, improve stream function, and ensure passage for native aquatic species in Rock Creek while maintaining agriculture on private working lands.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

5 of 5

### **Review Team Recommended Amount**

\$39,771

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3034-23019

**Project Type:** Technical Assistance

**Project Name:** Davis Creek Fish Passage Improvements Phase 1

**Applicant:** Pudding River WC

**Region:** Willamette Basin

**County:** Marion

**OWEB Request:** \$62,698

**Total Cost:** \$90,664

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**Application Description** The Davis Creek Fish Passage Improvement Project - Phase 1 (DFP1) is located in the Molalla-Pudding Subbasin of the Willamette Basin. The project site is in Marion County on Davis Creek, which is within the Lower Abiqua Creek 6th level HUC, near the City of Silverton. DFP1 addresses the restoration of freshwater aquatic habitat connectivity for salmonids including the federally-listed Upper Willamette River Winter Steelhead. Davis Creek is a West Cascades foothills headwater tributary to the temperature-impaired mainstem of Abiqua Creek within Willamette Valley. This technical design proposal will prepare the path for the construction of fish-friendly, modernized infrastructure under two private roads. The culverts are instream artificial obstructions limiting access to approximately 4.5 miles of spawning and rearing habitat. Funding for the DFP1 technical design will result in 60% designs, permits submitted to regulatory entities, and begin partnership development for Phase 2 which includes Marion County. Partnership for DFP1 includes the Oregon Department of Fish and Wildlife which will provide technical assistance, the Department of the Interior/Fish and Wildlife Service which will provide match funding through the National Fish Passage Program Funding, and the private landowners who will voluntarily allow the project to move forward. The Pudding River Watershed Council will coordinate the project and work closely with Waterways Consulting to move forward with the permitting process.

### Review Team Evaluation

#### Strengths

- Davis Creek is a tributary of Abiqua Creek, which provides the highest quality fish habitat in the Pudding River watershed. Abiqua Creek is also temperature limited in the summer. Davis Creek could potentially provide temperature refugia for fish rearing because its north-south orientation provides afternoon shade. Addressing fish passage at road crossings on Davis Creek will open fish access to this rearing habitat in the summer.
- Landowner project support is demonstrated by letters included in the application.

#### Concerns

- The proposed technical assistance will result in designs to replace two culverts on private driveways. There are two county culverts located upstream of these driveways that are also fish passage barriers. The application indicates the future restoration project will open 4.5 stream miles. Passage to this 4.5 stream miles requires the county to address passage in a future phase two project;

however, there is no indication the applicant has communicated with the county or evidence the county will address these crossings. The proposed technical assistance will instead lead to opening approximately a tenth of a mile of stream habitat.

- It is unclear whether a range of alternatives will be considered, such as working with the landowners to reduce the number of crossings.
- The cost of the future restoration will be significant due to the stream channel width. Future crossings will require a large diameter culvert for one site and a 55-foot-long bridge for the second site. The cost will outweigh the benefit for the amount of stream length that will be made available in Davis Creek. While the Abiqua Creek basin has the highest density of steelhead in the Pudding River watershed, this watershed is not as high of a priority for Endangered Species Act (ESA)-listed fish compared to other Willamette tributaries, such as the Clackamas and Mackenzie Rivers.
- Including stream temperature data and other habitat data from the Rapid Bio Assessment in the application would be helpful to better understand stream conditions and the potential value for opening access to the stream habitat as temperature refugia.
- It is unclear whether the applicant has capacity to administer the project in addition to the existing projects in progress.

### **Concluding Analysis**

The cost of the proposed technical assistance and resulting restoration is likely to be high for the limited habitat gains at a location that is not as high of a priority for ESA-listed fish compared to other Willamette tributaries. Investment in replacing the crossings on the private driveways would be more cost-effective if the upstream county culverts were included in the project so that connectivity of 4.5 miles of stream habitat is restored.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3035-23061

**Project Type:** Technical Assistance

**Project Name:** It's Miller Time! Uncorking Habitat Potential in the Miller Creek & West Fork Luckiamute Sub-basins

**Applicant:** Luckiamute WC

**Region:** Willamette Basin

**County:** Polk

**OWEB Request:** \$74,962

**Total Cost:** \$93,847

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**Application Description** The project is centered on Miller Creek and the West Fork Luckiamute River (WFLR) within the Upper Luckiamute 6th field hydrologic unit. Located in the northwest corner of the Luckiamute basin in Polk County, the project encompasses approximately 5.2 miles of Miller/WFLR from the confluence with the Luckiamute River. Historical practices such as splash dams, log drives, logging to the water's edge, and log removal impacted upper Luckiamute sub-basins, including Miller/WFLR. In addition to legacies of past practices, the site includes a remnant berm from the Valley & Siletz Railroad, bisecting the Miller/WFLR confluence. The project seeks to address lack of instream complexity and degraded riparian conditions by 1) conducting an alternatives analysis and selecting a preferred alternative for potential removal or modification of a portion of the berm and 2) surveying Miller/WFLR and developing a suite of restoration actions. Resulting projects will be designed to maximize habitat and water quality benefits for winter steelhead, Pacific lamprey, coho salmon, cutthroat trout, and, where appropriate, beaver.

Rapid bio-assessment snorkel surveys and temperature monitoring data indicate Miller/WFLR provide valuable habitat to steelhead, P. lamprey, and other salmonids and that there are also opportunities for enhancements. The Luckiamute Watershed Council (LWC) used NetMap, a fine-scale watershed-based modeling tool, in combination with field verification to prioritize restoration reaches for steelhead recovery. The proposed project area is the next priority site from that process. Partners include Starker Forests, Inc. (landowner), Manulife Investment Management (land manager), Bureau of Land Management, and Oregon Department of Fish and Wildlife. This area has long been identified as a priority but was paused due to other project commitments and site complexities. Now, the LWC, Starker Forests, and Manulife are aligned to move this project forward. It's Miller Time!

### Review Team Evaluation

#### Strengths

- The application clearly links current site conditions to the causes of watershed disturbance that created them, which are primarily due to past logging practices such as riparian harvest, log removal, and flash dams. The resulting technical assistance is likely to succeed in developing restoration actions that address causes of watershed disturbance instead of symptoms.

- The proposed design work is technically sound by utilizing professionally accepted approaches and incorporating lessons learned from previous large wood placement projects.
- The restoration actions that will be designed will address habitat limiting factors identified in a number of watershed plans by addressing the lack of instream complexity and degraded riparian conditions.
- A map of all the applicant's restoration projects in the area is included in the application and provides context for understanding the potential cumulative impact of the applicant's watershed strategy.
- Stream temperature data is included in the application that confirms the project area has potential to provide cold water refugia for aquatic species, which is a priority for restoration.
- Alternatives will be identified and analyzed as part of the technical assistance project.
- Future restoration expected from the technical assistance will have significant benefit for the cost by maximizing water quality and providing habitat benefit for lamprey, steelhead, coho, cutthroat, and beaver.
- The applicant has the capacity, relevant experience, and knowledge for implementing the project.
- Partner support is demonstrated by letters from the landowners, Bureau of Land Management, and Oregon Department of Fish and Wildlife. The landowner's commitment to the project is demonstrated by their approaching the watershed council to pursue the project.
- Costs are reasonable for the expected products.

### **Concerns**

- The railroad that bisects the project area may have historic cultural value, which may limit restoration options.

### **Concluding Analysis**

Developing restoration actions to address habitat limiting factors caused by splash damming and other historical land use practices associated with logging will improve channel-floodplain interaction, stream habitat, and water quality that will benefit winter steelhead, Pacific lamprey, coho salmon, cutthroat trout, and beaver.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 5

### **Review Team Recommended Amount**

\$74,962

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$74,962

**Staff Conditions**

N/A

## **Open Solicitation-2023 Spring Offering** Willamette Basin (Region 3)

**Application Number:** 223-3036-23062

**Project Type:** Technical Assistance

**Project Name:** Action Plan 2025-2035 Technical Assistance

**Applicant:** Johnson Creek WC

**Region:** Willamette Basin

**County:** Multnomah

**OWEB Request:** \$25,574

**Total Cost:** \$52,453

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**Application Description** Johnson Creek Watershed Council proposes to update its existing 10-year Action Plan, which sunsets in 2025. The watershed covers 54 square miles, of which 67% is in Multnomah County and 33% in Clackamas County and includes parts of the cities of Milwaukie, Portland, Gresham, and Happy Valley.

With the existing Action Plan (2015-2025), the Council and its agency partners confirmed limiting factors to watershed health, analyzed water quality data, assessed fish passage barriers, and prioritized riparian taxlots for shade enhancement using ORDEQ's Heat Source model.

Since that time, new watershed challenges and data have come to our attention that need to be incorporated into future restoration strategies. Climate change is the most significant driver in needing to update our Action Plan. We have eight years of new data that needs to be incorporated into articulating a new restoration strategy and Action Plan. In particular we wish to incorporate:

- a) the impact of inline ponds on increasing stream temperature
- b) eight new years of water temperature data
- c) other water quality data and threats
- d) recent instream habitat survey data
- e) a new stormwater pipeshed analysis, which will assist us identifying focus areas for stormwater BMP projects to improve water quality and reduce hydromodification.

The Council and its partners for years have met monthly as a watershed restoration and monitoring technical work group, the Johnson Creek Interjurisdictional Committee. This committee will work together to update the Action Plan, with a Council Project Manager coordinating the effort and writing the plan. Partners include:

US Geological Survey, City of Portland, City of Gresham, Multnomah County, Clackamas County Water Environment Services, Oregon Dept of Environmental Quality, Oregon Dept. of Fish & Wildlife, Metro, City of Milwaukie.

## **Review Team Evaluation**

### **Strengths**

- The Johnson Creek Watershed Action Plan will be updated to integrate current water quality and habitat information and reassess watershed priorities and restoration opportunities.
- Eight years of stream temperature data will be utilized to classify stream reaches by temperature regime and inform action plan strategies for prioritizing restoration.
- The applicant has identified inline ponds as a significant contributor to increased stream temperature. Some ponds have been addressed through completed restoration. The new action plan will update information to better document the location, size, and other characteristics of the remaining inline ponds to prioritize them for restoration.
- The Johnson Creek fish passage barrier assessment will be updated and barriers will be re-prioritized to adjust the assessment after ten previously prioritized barriers have been addressed. The updated fish passage barrier assessment will also incorporate climate change considerations.
- BIPOC-led community partner organizations will be convened with agency partners to better understand heat islands in areas with low tree density and identify opportunities to address these heat islands by for example, removing pavement and replacing it with rain gardens.
- Public outreach is a significant focus for the applicant and this organization has experience in packaging information with marketing in mind for community and landowner engagement.
- The current action plan is included with the application and the quality of this plan indicates a technically sound product will likely result from the current project.
- The applicant has capacity and relevant experience to implement the project.
- Technical experts will be engaged in updating the Johnson Creek Watershed Action Plan through monthly interjurisdictional meetings.
- A diversity of partners support the project and their involvement is demonstrated by match and support letters, including East Multnomah Soil and Water Conservation District, Cities of Gresham and Portland, Multnomah and Clackamas Counties, US Geological Survey, and Oregon Department of Environment Quality.
- Costs are reasonable for the work proposed.

### **Concerns**

- The action plan approach focuses primarily on stream related watershed concerns. Designing the action plan update to include more upland perspectives to capture the whole watershed up to the ridgetop would strengthen the product by providing a holistic watershed action plan.
- It is unclear from the budget how engagement with underserved communities will be funded. For example, there may be a need to incorporate costs for multi-lingual support and stipends to compensate for participants' time by breaking down financial barriers to participation. These strategies can increase the likelihood for success in engaging these underserved communities.

### **Concluding Analysis**

As the applicant's current action plan sunsets in 2025, it is timely to update the plan with new information, reassess watershed issues, and reprioritize restoration actions. The applicant has a history of pursuing strategic restoration based on their action plan, which indicates the product is likely to lead to future

restoration. The new action plan will include priorities that will lead to ecological and social benefits by incorporating strategies that address community health concerns affecting underserved communities.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

4 of 5

**Review Team Recommended Amount**

\$25,574

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$25,574

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3037-23064

**Project Type:** Technical Assistance

**Project Name:** Finalizing Floodplain Restoration Designs & Permitting for Elijah Bristow State Park - Phase 2

**Applicant:** Middle Fork Willamette WC

**Region:** Willamette Basin

**County:** Lane

**OWEB Request:** \$75,000

**Total Cost:** \$168,960

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**Application Description** The 437-acre project area within Elijah Bristow State Park (EBSP) is at the confluence of the Middle Fork Willamette River with Lost Creek, below Dexter Dam, and between the Lane County towns of Jasper and Lowell. Historically this area was a dynamic floodplain with multiple, braided channels and sloughs, ephemeral gravel bars and islands, and extensive cottonwood gallery forests. Located below three large dams that have modified flows and altered the natural sediment regime, the dynamism of this floodplain has been lost. Gravel mining and building berms contributed to a more static environment. After the completion of a feasibility analysis, modeling and alternative analysis, and the creation of initial conceptual designs, the MFWWC conducted a Stakeholder Engagement process to foster tribal and community input and involvement in floodplain restoration. The engagement process included public events, tours, extensive landowner outreach, communication with federally recognized Tribes, and culminated in the creation of the Community Advisory Committee to represent diverse community interests. The MFWWC and the Technical Team of collaborating partners from Oregon Parks and Recreation Department (OPRD), Oregon Department of Fish and Wildlife (ODFW), Confederated Tribes of Grand Ronde (CTGR), US Forest Service (USFS), and US Army Corps of Engineers (USACE) seek funding to contract Wolf Water Resources to finalize engineered designs and complete project permitting. The MFWWC is submitting adjacent TA proposals to the Open Solicitation and the Willamette Anchor Habitat Investment Fund.

The Open Solicitation proposal will support development of Upper Zone designs to 60% completion and coordination to submit a Section 408 Alteration Determination Application to USACE. The Anchor Habitat Investment Fund proposal seeks support to complete Lower Zone designs to 60% completion, finalize the Upper Zone Designs, and bring designs for both zones to a permit ready status.

### Review Team Evaluation

#### Strengths

- The application provides a clear explanation describing the need to finalize Stage 8 process-based floodplain restoration designs and initiate permitting processes.

- There is limited off-channel habitat on the Middle Fork Willamette River below Dexter dam and the future restoration project is likely to provide habitat benefits for multiple native species, including western pond turtle habitat, spring Chinook, lamprey, and Oregon chub.
- The Stage 8 restoration approach is reasonable for addressing limiting factors affecting stream habitat that resulted from loss of floodplain function in the Middle Fork Willamette River. While the Stage 8 concept is relatively new, it is becoming more widely accepted for restoring watershed process and function.
- Appropriate data and analysis will be used to inform the design.
- The proposed project builds on previous technical assistance and stakeholder engagement OWEB investments on a large-scale, complex river restoration project that will require a long-term approach to both design and implementation. The applicant has been strategic in parsing out project design and engagement efforts that aligns with the applicant's capacity and constraints from limited resources.
- The future restoration project will be highly visible because it is located on an 850-acre state park that is popular for recreation use.
- Appropriate partners are engaged in the project. Oregon Parks and Recreation Department (OPRD) support is demonstrated by a letter and in-kind match to participate in the project. The applicant along with OPRD has made impressive progress in securing support from recreation user groups utilizing Elijah Bristow State Park, including agreement on moving trails.
- The applicant has a technical team of qualified experts to help guide the project.
- A qualified contractor is implementing the design work.
- Project costs are appropriate for the proposed technical assistance.

## Concerns

- The future restoration project will require moving a US Geological Survey (USGS) gauging station, which will impact long-term gauging data and options for future gauging techniques. Implementing the restoration may depend on the feasibility of moving this station. The applicant has initiated conversations with USGS to determine options for moving forward.
- The park infrastructure could limit restoration opportunities. The applicant's community engagement, however, has increased support for restoration and park users are participating in conversations to identify where there can be flexibility in where trails are located.
- Implementing a Stage 8 restoration approach below a flood control dam may have uncertain results due to the influence of the dam on stream flows and the supply of large wood; however, there is still significant potential for restoring floodplain conditions.

## Concluding Analysis

Utilizing a process-based restoration approach at Elijah Bristow State Park will restore a portion of the Middle Fork Willamette River back to a dynamic, braided multi-channel meandering river through a cottonwood gallery floodplain forest. This will provide habitat benefits for key indicator species such as Oregon chub, western pond turtle, spring Chinook salmon, and beaver. The site provides opportunity to be highly visible to the public and serve as an example of process-based floodplain restoration strategies for areas between headwaters and downstream zones.

## Review Team Recommendation to Staff

Fund

**Review Team Priority**

2 of 5

**Review Team Recommended Amount**

\$75,000

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$75,000

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3038-23069

**Project Type:** Monitoring

**Project Name:** Middle McKenzie Stage 0/8  
Restoration Effectiveness Monitoring

**Applicant:** McKenzie Watershed Alliance

**Region:** Willamette Basin

**County:** Lane

**OWEB Request:** \$362,696

**Total Cost:** \$799,679

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**Application Description** Process-based restoration to a Stage 0 or 8 condition is a relatively new approach to river restoration that is gaining interest in the scientific community. In theory, restoring river valleys to a Stage 0/8 condition (and processes that will sustain it) will have the greatest ecological uplift and resilience to disturbance and climate change, but project effectiveness has been largely untested. Short-term project effectiveness outcomes are encouraging, but there is still much to learn.

Partners within the McKenzie River watershed, including McKenzie Watershed Alliance (MWA), Eugene Water & Electric Board (EWEB), McKenzie River Trust (MRT), US Forest Service (USFS), Bureau of Land Management (BLM), and ODFW – all with direct involvement in this Effectiveness Monitoring (EM) Project – have a common vision to restore about 2,000 acres of the Middle McKenzie Valley and important tributaries to a Stage 0/8 condition (Attachment 1; 370 acres completed so far). Linked to this EM Project, partners have designed and developed the next round of valley-scale restoration projects on Finn Rock Reach (FRR) of the McKenzie River (150 acres, River Mile 55-56) and Quartz Creek (166 acres, River Mile 0-1.8), a major tributary to the McKenzie immediately downstream of FRR (Attachment 2). These projects are just down river from the town of Blue River in Lane County.

The goal of EM for these two restoration projects is to assess whether process-based restoration will indeed restore and enable fluvial and biological processes to reshape and sustain a Stage 0/8 condition over time and to help develop standards of practice for designing, constructing, and monitoring future Stage 0/8 projects. EM components include quantifying the hydrogeomorphic, ground water, habitat, macroinvertebrate, and Chinook spawning responses to restoration and using the results to inform future standards of practice, which are sorely needed in the growing field of process-based restoration.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This monitoring project builds off existing and completed Stage 0 restoration effectiveness monitoring efforts in surrounding locations with many of the same partners that have developed these monitoring approaches.

- This monitoring project will benefit from existing LiDAR data that is available for both project sites that was collected in 2022 and will be collected in 2024 and 2026 for post project comparisons.
- The project will utilize monitoring methods that are informed from past monitoring of Stage 0 restoration projects and are cited in scientific literature or existing agency's established methods.
- The application included an uploaded table that described the monitoring questions, and the restoration processes they are assessing.
- The monitoring study design was described for each monitoring objective and is appropriate for each monitoring question(s) posed.
- The data that will be collected will be maintained by the monitoring leads in databases that are consistently updated and backed-up. The leads will ensure the data management includes accurate metadata and records of all data collection activities.
- Individual reports will be written by the monitoring lead that is responsible for each data set and then combined into one comprehensive report in 2028.
- This project will share results and make the information available in a variety of ways, including posting reports on the internet, delivering presentations at conferences and the applicant is willing to work with OWEB to develop workshops or webinars.
- The project partners are highly qualified and have several years of experience collecting ground and remotely sensed data to monitor the effects of stage 0 restoration projects.
- The partners involved with this project have a good track record of sharing results of the restoration and monitoring efforts and their information is integrated into training restoration practitioners on how to implement this innovative restoration approach.
- The applicant and partners have worked extensively to engage the local community over time and is committed to engaging them into the future as these large-scale floodplain restoration and monitoring projects are implemented.
- The budget includes a detailed summary of the different monitoring components to demonstrate how the expenses were estimated and include sufficient time and resources for data analysis and reporting.

### **Monitoring Team Concerns**

- It is not clear what existing data is available pre-restoration at Finn Rock for the phase 1 restoration project that was implemented in 2021 to understand if a before after study design can be implemented as proposed.
- The application focuses on monitoring changes from restoration that will occur immediately after the restoration are implemented and did not include a description of what potential plans there are for returning to the site to track changes over time as they continue to evolve. The application would have benefited from a description of how they would think of a returning timeframe in a period of years or after certain hydrological events or geomorphic conditions begin to emerge.
- The application didn't mention developing a Sampling and Analysis Plan for the macroinvertebrate monitoring and if that data will be submitted to DEQ.
- The status of the land ownership of the remaining 99 acres of the 181-acre project area on Quartz Creek was not clear as McKenzie River Trust is engaged in ongoing negotiations with the landowner and how that might impact the likeliness that the entire project will be implemented as proposed.
- It is not clear if sufficient time and funding is allocated in the budget for project management and monitoring coordination across all the monitoring components proposed to occur from 2023 to 2028.

## Monitoring Team Comments

### Review Team Evaluation

#### Strengths

- The application clearly describes the need and relevance of the proposed monitoring to evaluate the effectiveness of Stage 0 and Stage 8 process-based restoration approaches.
- A technically sound approach is proposed for using monitoring techniques to analyze results from Stage 0 and 8 restoration projects. This includes collecting baseline data, which is often overlooked with effectiveness monitoring projects.
- The methods for answering each monitoring question are appropriate. There are clear linkages between the monitoring questions and how they relate to river and biological responses to the restoration actions. The application also includes tables for the monitoring sites that describe SMART objectives linked to the monitoring questions.
- Monitoring results will be incorporated into the US Forest Service (USFS) Programmatic Aquatic Restoration Monitoring Strategy modeling framework. This will allow the data to be compared against other sites to create a synthesis of how the novel Stage 0 and 8 restoration method is performing at a regional scale. The findings will be used to inform future restoration projects implementing Stage 0 or 8 techniques.
- Partner support is demonstrated by letters from USFS, McKenzie River Trust, and Eugene Water and Electric Board, each of whom articulated how the results of the project will inform future restoration actions at their respective organizations.
- The applicant has capacity for implementing the proposed monitoring by working with partners, including Bureau of Land Management and USFS.
- The project team has relevant experience and expertise.
- The budget is reasonable for the broad temporal and spatial breadth of the project.

#### Concerns

- The proposed two to three years of post-project monitoring may be too short for answering questions about floodplain process activation, which may take a longer time to answer with statistically relevant data. Flow variations year to year could affect the accuracy of data interpretation. The McKenzie River system is a dynamic and changing landscape; it will take many years of analysis to understand how the wood, sediment, and water table are responding to Stage 0 and 8 restoration treatments. The applicant, however, plans to continue raising funds for long-term monitoring beyond the three years that may lead to the data collection needed to answer the monitoring questions.
- Some of the proposed monitoring components may not be necessary for answering whether Stage 0 or 8 floodplain conditions were achieved. While the Unmanned Aircraft Systems (UAS) and topobathymetric data could provide helpful information, it is unclear whether it is necessary to answer the monitoring questions. It is also unclear how the groundwater data will be more informative above and beyond collecting the proposed wetted width data.
- It is unclear whether alternative monitoring strategies were considered to increase the cost-effectiveness of the proposed monitoring approach given the limited availability of monitoring funds. For example, maybe one site could be monitored over a longer timeframe.
- The number of hours budgeted for applicant staff may not be enough for the work associated with the amount of data that will be generated over the project timeframe.
- It is unclear how the project goals and objectives will be affected if the match grant from Bonneville Power Administration is not secured.

## **Concluding Analysis**

Process-based restoration to a Stage 0 or Stage 8 floodplain condition is a relatively new approach to river valley restoration. Significant investment has been made in projects utilizing this technique. Restoring unconfined river valleys to Stage 0 or 8 conditions and the processes that will sustain those conditions is expected to have the greatest ecological uplift and resilience to disturbance and climate change; however, project effectiveness has been largely untested. The proposed monitoring provides an opportunity to evaluate the effectiveness of Stage 0 and 8 restoration methods while also integrating those results into a broader USFS programmatic modeling framework with other projects sites regionally. Findings from this effort will likely inform future implementation of Stage 0 and 8 restoration that could improve implementation techniques and potentially determine more cost-effective adaptations when implementing these projects.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 4

### **Review Team Recommended Amount**

\$362,696

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$362,696

### **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3039-23029

**Project Type:** Monitoring

**Project Name:** Temperature Trend Monitoring:  
North Clackamas Watersheds

**Applicant:** North Clackamas Watershed Council

**Region:** Willamette Basin

**County:** Clackamas

**OWEB Request:** \$87,625

**Total Cost:** \$124,035

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**Application Description** The North Clackamas Watersheds Council will continue its successful temperature monitoring program in Kellogg, Mt. Scott, River Forest, Boardman, & Rinearson watersheds into the 2024-26 time frame. We will track status & trends in watersheds essential to all salmonids & lamprey rearing, spawning, or migrating through the Willamette River system & use the data to prioritize key restoration actions to restore & maintain cold-water refugia (CWR) & to examine temperature drives to prioritize restoration over time.

We will extend the collection & analysis of A-level data at a minimum of 28 monitoring stations to gather 5 years of continuous data, building on two years of successful trend monitoring which began with non-OWEB funds in 2022. Sites are selected to characterize stream reaches, tributaries, & cold-water refugia sites, establish a 5-year baseline, & to detect trends related to climate, development & restoration. We will continue our rigorous quality control data, our partnership with technical experts.

We will share this data in presentations with stakeholders, agency partners, & funders of restoration projects. We will continue a successful process that integrates temperature data, along with fish use & fish passage information, into our Interagency Working Group framework & Watershed Action Plan system that prioritizes restoration work for both the Council & our agency partners. The first year of data already has already led to specific restoration activities. OWEB support will accelerate this progress toward restoration.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- The proposed project will collect water temperature data to better understand this limiting factor to inform future restoration actions.
- There is a need for continuous water temperature in this area and this project will complement existing fish data being collected by partners in the basin and the water temperature collected by the applicant in 2022 and 2023.
- The applicant is following established water temperature monitoring methods described in a DEQ approved Sampling and Analysis Plan and will be updated to include the additional sites proposed in the application.
- The study design will include 20 long term permanent sites to monitor tributaries to the Willamette River based on the 2020 bioassessment across a variety of land uses and spatial distribution to track trends over time.

- The applicant will work with Portland State University to assist with the five-year trend analysis that they plan to complete.
- The applicant is hosting an existing interagency working group that serves as a forum for engagement with technical experts and community partners that increases collaboration and dissemination of information.
- The applicant has staff and an existing contractor that have the experience and qualifications to collect and report the data as proposed.
- The applicant uploaded a summary of the water temperature data they have recently collected that demonstrates their ability to review and assess the continuous data they are collecting.
- The budget includes expenses that are detailed by task and these proposed costs are appropriate to complete the work necessary to accomplish the objectives.

### **Monitoring Team Concerns**

- The applicant only proposes to check on the water temperature loggers once mid-way through the field season which may not be sufficient in these smaller tributaries to ensure they are submerged throughout the monitoring season.

### **Monitoring Team Comments**

- Contact Spencer Sawaske at ODFW's Water Division to coordinate on monitoring cold water refugia.

### **Review Team Evaluation**

#### **Strengths**

- A technically sound approach will be used to collect water temperature data. There is a clear need for collecting the data to better understand stream temperatures in the North Clackamas watersheds and identify opportunities for maintaining and restoring cold water refugia, which is a limiting factor for Endangered Species Act (ESA)-listed fish.
- The proposed monitoring builds on previous data collection and examples of this data is included in the application, which demonstrates the project is likely to succeed in producing quality data.
- The water temperature data will be used to improve the fish passage assessment that is underway by providing information to prioritize restoration projects that will improve fish access to cold water reaches. This will provide habitat benefits for ESA-listed fish and lamprey species.
- The applicant has already developed a Sampling and Analysis Plan with Oregon Department of Environmental Quality (ODEQ) and will update it with the new proposed monitoring sites.
- The data will contribute to the state's Total Maximum Daily Load plan implementation by leading to projects that protect and restore cold water refugia.
- The applicant regularly engages community stakeholders to collaboratively implement work in the watershed.
- Previous monitoring results have been shared through public workshops, articles, and the applicant's website.
- The project costs are reasonable for the proposed work and the application budget provides details needed to understand expenses.

- The applicant has a track record collecting water quality data and using data to plan restoration. The application provides examples of projects that have already moved forward as a result of information learned from previous monitoring data.

### **Concerns**

- Additional information describing how the factor analysis in objective two of the application will be completed would be helpful for better understanding how data will be analyzed. The application indicates Portland State University (PSU) and ODEQ will be engaged to help conduct the analysis so these details may be worked out later. PSU and ODEQ have the relevant expertise to assist the applicant with this data analysis.
- Checking water temperature loggers once mid-way through the field season may not be sufficient to ensure the loggers remain submerged throughout the summer in the smaller tributaries.

### **Concluding Analysis**

The proposed monitoring project will extend and expand an existing monitoring program in the North Clackamas watersheds area. Water temperature data will be used to prioritize restoration and inform project designs to ensure they provide access to cold-water refugia habitat, a priority habitat limiting factor affecting ESA-listed fish in the North Clackamas watersheds.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 4

### **Review Team Recommended Amount**

\$87,625

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$87,625

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Willamette Basin (Region 3)

**Application Number:** 223-3040-23030

**Project Type:** Monitoring

**Project Name:** Restoration effectiveness monitoring of Taylor's checkerspot butterfly habitat

**Applicant:** Institute for Applied Ecology

**Region:** Willamette Basin

**County:** Benton

**OWEB Request:** \$65,351

**Total Cost:** \$88,825

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**Application Description** Taylor's checkerspot butterfly (TCB), a federally-listed endangered species, was once abundant in the Pacific Northwest. TCB are threatened by loss of habitat from agricultural development, fire suppression, urbanization, forest succession, the spread of invasive species, and genetic drift.

The goal of this project is to conduct pre- and post-treatment effectiveness monitoring to assess the success of restoration actions conducted under an OWEB project to enhance habitat conditions for TCB at nine sites in Benton County, Oregon. Two of these sites have extant populations of TCB and seven sites are considered high priority for TCB introductions.

Pre- and post-treatment effectiveness monitoring will 1) estimate the patch abundances of the two known TCB host plants, golden paintbrush (*Castilleja levisecta*), and English plantain (*Plantago lanceolata*), 2) estimate the cover of TCB nectar plants, and 3) assess habitat conditions. We will assess restoration efficacy by quantitatively comparing the pre- and post-treatment estimates of host and nectar plants, as well as assessing the change in habitat conditions.

By monitoring TCB habitat conditions, this proposal addresses a Draft Priority Recovery Action (USFWS 2022) of studying the response of TCB to management actions. Our assessment of restoration efficacy will directly inform future restoration efforts and recovery criteria for TCB. We currently have a poor understanding of how to restore habitat to benefit TCB and to date there is no established recovery plan nor guidelines. The OWEB restoration proposal that this proposal complements represents the largest effort to date to restore habitat for TCB in Oregon. Without the ability to evaluate the effectiveness of these actions, we risk spending precious time, effort and money on less-than-effective treatments.

Project partners include the USFWS, Benton County, Greenbelt Land Trust, and private landowners.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This project complements existing data at several of the same sites collected by the applicant in 2016 and data collected by the state of Washington on this rare butterfly habitat following the same monitoring protocol.

- The applicant will follow an established monitoring protocol they developed in coordination with the state of Washington.
- The applicant will incorporate necessary quality assurance and quality control measures to train field technicians and review field data for completeness and for transcription errors as it is transferred from paper field forms to be stored electronically.
- The results will be made available through a variety of ways including posting the final technical report on the applicant's website and presenting to the Prairie Plant Working Group. The final technical report will also be posted on Research Gate and the Cascadia Prairie Oak Partnership's technical library.
- The applicant is partnering with a variety of land managers in the Willamette Valley that are engaged and interested in restoration including state, federal, non-profit agencies and private landowners. The uploaded letters of support demonstrate this engagement and interest in applying the information that this project will produce.
- The applicant's staff are highly qualified to collect this data and have relevant experience developing and following monitoring protocols to collect specific data related to the Taylor's checkerspot butterfly and similar plant/butterfly species in the Willamette valley.
- The proposed costs are appropriate to complete the work necessary to accomplish the objectives.

### **Monitoring Team Concerns**

- The proposed analysis of the vegetation cover data is simplistic, which will compare the results before and after with no statistical tests being performed.
- The analysis will only summarize one year of pre and post restoration data that will not account for other environmental factors that could affect the results. The application did not describe how the habitat data will be analyzed.
- It was not clear if pesticide applications in the surrounding landscape is a factor that can influence the effectiveness of the plant establishment and butterfly colonization efforts.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- The proposed monitoring is clearly linked to habitat restoration actions funded through an OWEB grant for Taylor's checkerspot butterfly (TCB), a federally listed endangered species.
- The monitoring project will provide critical data needed to assess the effectiveness of TCB habitat restoration actions that will inform current and future restoration practices.
- The monitoring actions are a priority in the draft US Fish and Wildlife Service (USFWS) recovery action plan for TCB. The protocols that will be used are listed in this plan and, therefore, are standardized. This allows for comparisons across sites.
- The applicant has capacity to implement the project and relevant experience pairing OWEB restoration and monitoring grants to restore habitats for Endangered Species Act-listed species and collecting effectiveness monitoring data to track progress and inform restoration strategies.
- A large and diverse working group of state, federal, university, non-profits, and landowners are participating in the project.

- Project costs are reasonable for the proposed monitoring.
- Data will be made available online on the applicant's website and through online libraries. The applicant also has a history of sharing monitoring results through presentations at practitioners' meetings and conferences.

### **Concerns**

- The timelines for the restoration actions and monitoring actions are unclear in the application. It is unclear whether sites will receive chemical treatment at the same times as monitoring data will be collected. If these actions are co-occurring, it could potentially affect the butterfly population data.

### **Concluding Analysis**

TCB is a federally listed endangered species that was once abundant in native prairies across the Pacific Northwest. Loss of habitat has led to a decline in their distribution to only 11 extant populations. The proposed monitoring is paired with an OWEB restoration grant to collect pre- and post- treatment data to assess habitat conditions and examine the effectiveness of restoring host plant communities in rebuilding the TCB population. There are currently no guidelines for TCB habitat restoration due to a poor understanding of how to establish these plant communities and how the TCB population will respond. The data collected will be used to adaptively manage current efforts based on plant and TCB response and inform future actions. This will support implementation of the draft USFWS recovery action plan for TCB, which identifies habitat enhancement as the top priority action for the species.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 4

### **Review Team Recommended Amount**

\$65,351

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

**Staff Recommended Amount**

\$65,351

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3041-23033

**Project Type:** Monitoring

**Project Name:** Marys River Watershed Council  
Monitoring Phase 1

**Applicant:** Marys River WC

**Region:** Willamette Basin

**County:** Benton

**OWEB Request:** \$153,297

**Total Cost:** \$198,451

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**Application Description** The Marys River Watershed Council (MRWC) proposes to collect continuous temperature data from surface waters in the Marys River River Watershed during the summer months of 2023 and 2024. This is a continuation of an existing trend temperature monitoring program begun thanks to matching support from Meyer Memorial Trust as part of the Model Watershed program. The goal of this program is to continue to fill a data gap of stream temperatures and trends in key locations to inform prioritization and planning for restoration projects. Sites are selected to characterize priority tributaries and stream reaches, detect trends, and collect baseline data. The MRWC proposes to deploy 35 monitoring stations within Benton and Lincoln Counties. These include the continuation of 15 active stations in the middle and upper Marys River watershed, reactivation of 7 historical monitoring stations, and addition of 13 stations at new locations of interest. Work will include field deployments, midseason checks, and retrieval of loggers, as well as data analysis. The MRWC will also implement appropriate quality assurance and quality control measures to ensure high-quality data that meets A-level standards, as defined by the Oregon Department of Environmental Quality (DEQ). As a result of this proposed work, 15 of the 35 proposed monitoring sites would have a total of 13 years of data. The MRWC will conduct an analysis of the full dataset to assess trends and examine relationships with external drivers of temperature. The MRWC will share data through presentations, landowner summaries, and will submit data to DEQ. Project partners include field and technical volunteers, private landowners, OSU Extension Service, City of Corvallis, Benton County Public Works, and the Luckiamute Watershed Council.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This project will complement existing water temperature and rapid bioassessment data collected by the applicant and additional water temperature data collected by partners in the watershed.
- The applicant will follow established water temperature monitoring methods and develop a Sampling and Analysis Plan that will be reviewed and approved by DEQ.
- This resubmitted application, included a response to concerns that were identified in the previous evaluation and provided additional information that improved the application's technical soundness.
- The application included a detailed table that was uploaded that described which sites they will continue to monitor, which new sites they are proposing, how the data can be used and which questions they plan to answer.

- The applicant will follow data management procedures to store the raw data in a cloud-based file storage system and have backup copies on desktop computers.
- The applicant has a variety of staff that will implement this monitoring project and all of them have a range of experience collecting, managing and reporting this data. In addition, the applicant will hire a qualified monitoring coordinator to help manage the program and they will be trained by staff that have completed this work in the past.
- The applicant is engaging technical experts through a Technical Advisory Team (TAT) which includes several technical experts from state, university, federal and local partner organizations to analyze and interpret the results to inform future restoration and monitoring activities.
- The application includes several letters of support demonstrating their engagement efforts and commitment to participating on the TAT.

### **Monitoring Team Concerns**

- It is unclear what will be completed during the second phase of the project since the conclusions they will draw at the completion of the first phase due to some sites having limited data.
- The quality of the previously collected water temperature data is unclear due to the limited capacity of the applicant to perform the monitoring and lack of a Sampling and Analysis Plan.
- The monitoring methods for measuring streamflow were not described in detail and the protocol was not cited. It was not clear if multiple water depth and velocity measurements will be taken across the wetted width.
- The application did not describe how the data will be analyzed to identify temporal trends for the 16 sites that have 10 years or more of data.
- It is not clear why the budget increased by \$50,000 from the last time it was submitted.

### **Monitoring Team Comments**

- Contact Spencer Sawaske at ODFW's Water Division to coordinate on monitoring cold water refugia.
- Consider incorporating the completed TMDL shade gap modeling results into the monitoring site selection process.

### **Review Team Evaluation**

#### **Strengths**

- Previous application evaluation concerns are addressed. The applicant's response to feedback provided a linear connection that demonstrated how these concerns were addressed.
- The monitoring will build on previous data collection and examples of this data are included in the application.
- The proposed monitoring will support Oregon Department of Environmental Quality's (ODEQ) Total Maximum Daily Load plan implementation by leading to projects that protect and restore cold water refugia.
- The applicant is working with ODEQ to create a Sampling and Analysis Plan.

- Monitoring will occur in areas that were identified as critical habitat for steelhead and Chinook salmon.
- The applicant will have capacity to implement the proposed work because the budget includes funds for a monitoring coordinator.
- Data will be shared with landowners and partners.
- Partner support and roles are demonstrated by letters from Oregon State University, City of Corvallis, Benton County Public Works, Benton Soil and Water Conservation District, Natural Resource Conservation Service, and a technical advisory member.

### **Concerns**

- The application includes an example of temperature data that was used to identify areas for restoration on a tributary and lists a number of restoration techniques that were implemented. Additional information describing how data is used to determine and select site-specific restoration techniques would be helpful to better understand how the data informs restoration.
- It is unclear why the current application has significantly higher costs compared to the previous application for a similar scope of work. The project cost is also higher compared to other similar monitoring projects.

### **Concluding Analysis**

Stream temperature data will be collected to fill data gaps and determine trends in priority streams in the Marys River Watershed. The proposed temperature monitoring is likely to help the applicant identify locations of cold-water refugia, a priority habitat for Endangered Species Act-listed fish, to prioritize and plan strategic restoration projects.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

4 of 4

### **Review Team Recommended Amount**

\$153,297

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

**Staff Recommended Amount**

\$153,297

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Willamette Basin (Region 3)

**Application Number:** 223-3042-23040

**Project Type:** Monitoring

**Project Name:** Effectiveness Monitoring of Floodplain Restoration at Elijah Bristow State Park\_Pre-Implementation

**Applicant:** Middle Fork Willamette WC

**Region:** Willamette Basin

**County:** Lane

**OWEB Request:** \$304,402

**Total Cost:** \$380,927

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**Application Description** Process-based restoration plans for Elijah Bristow State Park (EBSP) are in collaborative development between Oregon Parks and Recreation Department (OPRD), Middle Fork Willamette Watershed Council (MFWWC), Oregon Department of Fish and Wildlife (ODFW) among other diverse partners and stakeholders. The proposed 437 acre project area is located below Dexter Dam downstream to the Lost Creek confluence with the Middle Fork Willamette River, between the Lane County towns of Jasper and Lowell. Historically, EBSP was a dynamic floodplain with multiple braided channels and sloughs. Anthropogenic alterations such as gravel mining and dam construction have altered floodplain processes which has led to instream habitat degradation. Process-based restoration designs informed by Stage-0 and Stage-8 stream evolution model approaches will be implemented to restore floodplain function. To prepare for restoration, the MFWWC will develop a monitoring plan for the EBSP project area and conduct two years of pre-project monitoring to establish baseline conditions for a Before-After analysis of floodplain conditions and evaluate the effectiveness of restoration. Primary partners for this project include OPRD, Wolf Water Resources (W2r), ODFW, and the US Forest Service (USFS).

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- The application includes an objective to develop a monitoring plan that will synthesize data collected at Elijah Bristow State Park by other entities and incorporate that into the pre-project monitoring plan to avoid duplicate data collection.
- This project will monitor the effects of stage 0 restoration on terrestrial wildlife presence and abundance which has been lacking in other large-scale floodplain restoration projects.
- This project is making a focused effort to collect two years of pre-restoration data to be able to evaluate the effectiveness of this large-scale floodplain restoration project.
- The applicant has a clear plan for data management for a variety of data that will be collected including how the data will be stored on their server and backed up on an external hard drive.
- The applicant will interpret the data and include all the results in a monitoring report that will be shared on their website and uploaded to ODFW's Natural Resource Information Management Program (NRIMP) clearinghouse and submit the water quality data to DEQ.
- The remote sensing contractor has the necessary experience collecting and analyzing similar data in largescale floodplain restoration projects.

- The applicant has engaged a variety of partners and have established a technical team which will review the monitoring plan and a community advisory committee to provide updates on the monitoring process to keep the public informed.

## **Monitoring Team Concerns**

- Parts of the application were confusing, the applicant proposes to finalize a monitoring plan, yet this application proposes several detailed monitoring tasks with an extensive budget to support these efforts.
- This application will only support the collection of pre-restoration project data. The applicant will have to seek funding to collect post restoration data and evaluate the effectiveness over time.
- It is not clear what monitoring questions they are trying to answer by collecting bat and bird information since this was not included in objective three.
- The brief description of the bat monitoring methods described in the contractor's estimate that was uploaded to the application are not professionally accepted methods.
- The application does not describe the continuous dissolved oxygen monitoring methods and no citation was provided.
- The approach to filter water samples, freeze the filters and submit them for nutrient analyses later in the year is not a standard approach and it was not clear why this was proposed.
- Evaluating the project's success based on adult fish returns to Dexter dam is not likely to yield valuable information due to the variety of factors that affect fish returns across the basin.
- The application did not describe how they will track water releases at Dexter Dam and how they will incorporate gravel augmentation to understand project effectiveness.
- The timeline to hire a monitoring specialist, develop a Sampling and Analysis Plan, gather relevant data from agencies and complete the monitoring plan in four months is extremely ambitious and is not likely to be enough time to figure out the necessary details to ensure a successful monitoring approach.
- This monitoring proposal includes several complex monitoring efforts into one single application. A paired down application that proposes monitoring where capacity exists to identify a clear monitoring lead will increase the likelihood of success.

## **Monitoring Team Comments**

## **Review Team Evaluation**

### **Strengths**

- Effectiveness monitoring could be helpful for documenting the proposed Stage 8 restoration planned for the Elijah Bristow State Park located downstream of Dexter dam in the Middle Fork Willamette watershed. The Stage 8 project is complex and will be challenging to implement due to the combination of the site being at a highly visible location with a high volume of park users and the influence of Army Corps dams on the hydrology and floodplain function. Utilizing the Stage 8 techniques will likely push the boundaries of what can be done to restore floodplain conditions using this process-based restoration approach. Documenting project effectiveness will, therefore, be important.

- The proposed monitoring methods will include collecting baseline pre-project data before starting restoration actions.
- Monitoring from previous Stage 0 projects completed by the applicant will be used to help inform the effectiveness monitoring at Elijah Bristow State Park.
- The project builds on previous OWEB stakeholder engagement and technical assistance investments at the Elijah Bristow State Park.
- Partner support is documented through letters and match from Oregon Parks and Recreation Department, US Forest Service, and Oregon Department of Fish and Wildlife.
- The project budget is reasonable for the breadth of the project.

## Concerns

- The connection between the expected restoration actions, monitoring questions, and proposed monitoring actions are unclear. Information describing connections between the restoration that will be implemented and what the applicant expects to learn from the data to be collected would be helpful for understanding the need and relevance of the monitoring project.
- A large volume of metrics is proposed; it is unclear how the data will be used or if all the proposed metrics are needed for evaluating the effectiveness of the Stage 8 restoration. For example, while results from bat and bird data collection may be interesting, it is unclear how it will be used to directly inform restoration strategies. It is also unclear what will be learned from the nutrient monitoring that can be used for informing how Stage 8 restoration is implemented or determine whether Stage 8 restoration goals are met.
- The first objective in the application is to develop a monitoring plan. It is unclear if the application budget could be accurately estimated for the wide array of monitoring metrics proposed before a monitoring plan is established. It is also unclear how the detailed list of equipment and supplies was determined before the monitoring plan is completed.
- Some of the proposed methods are not standard protocols; information describing how the resulting data is likely to succeed in informing the effectiveness of the Stage 8 project implementation would be helpful for evaluating the technical soundness of these methods.
- While the applicant recognizes the limitations of using traditional monitoring methods on Stage 0 and 8 projects, some traditional monitoring methods are still proposed that are unlikely to be successful. For example, some of the proposed data collection will utilize randomized locations, which will likely not be effective because the same sites often cannot be accessed again after Stage 8 restoration treatments.
- While the application indicates monitoring results from the Coal and Staley Creeks Stage 0 projects will be incorporated, the application lacks information describing the existing data sets from these projects.
- It is unclear whether alternative monitoring strategies were considered to increase the cost-effectiveness of the proposed monitoring approach given the limited availability of monitoring funds. For example, monitoring fewer metrics that would provide more direct evidence on whether the Stage 8 project is performing as expected and inform future implementation approaches.
- It is unclear the extent to which the applicant has engaged with other practitioners implementing Stage 0 and 8 projects. Coordinating with practitioners implementing and monitoring similar restoration techniques could lead to cost savings and ensure similar monitoring approaches are used to compare projects across a broader geography.
- If the applicant is unable to hire a monitoring coordinator qualified to manage the complex monitoring project proposed, the applicant may not have capacity to complete the work and it could impact their ability to meet the project timeline.

## Concluding Analysis

Process-based restoration to a Stage 8 condition is a relatively new approach to river valley restoration and significant investment has been made in projects utilizing this technique. Effectiveness monitoring to document whether these projects are achieving their expected outcomes is important for learning more about this novel restoration approach. The proposed effectiveness monitoring for the Elijah Bristow State Park Stage 8 project includes a high volume of diverse metrics and it is unclear if each metric is needed to determine whether the restoration technique is effective or the data will inform how these projects will be implemented. Developing a monitoring plan before pursuing funds for implementing the monitoring may provide a helpful tool for focusing the monitoring approach.

**Review Team Recommendation to Staff**

Do Not Fund

**Review Team Priority**

N/A

**Review Team Recommended Amount**

\$0

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Willamette Basin (Region 3)

**Application Number:** 223-3043-23057

**Project Type:** Monitoring

**Project Name:** Fire Effects Monitoring: Developing a Framework for Cultural and Ecological Health

**Applicant:** Ecostudies Institute

**Region:** Willamette Basin

**County:** Lane

**OWEB Request:** \$189,530

**Total Cost:** \$351,830

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**Application Description** Prior to colonization of the Willamette Valley (WV) in the 1800s, Kalapuya people helped shape the fire regime and evolution of local ecosystems through the use of intentional cultural fire. Since the forced removal of Kalapuya people and a societal suppression of fire, less than one percent of prairie and oak fire-adapted habitats now remain in the WV. Consequently, the use of prescribed fire to help restore these habitats and steward the land is increasing in the region, in addition to the increased realization and need for Indigenous people and values to be prioritized in these efforts. However, there is limited established monitoring data on the effects of prescribed fire on ecological and cultural parameters that prioritize local Indigenous values and goals.

Ecostudies Institute plans to bring technical experts and local Indigenous people together on a team to collaboratively develop a prescribed fire monitoring framework that prioritizes Indigenous perspectives and values. Vegetation, soils, air quality, avian, and cultural resources monitoring protocols will be used to collect one year pre-burn data and two years of post-burn data on up to 10 burn units to begin establishing a baseline dataset that could be used for long-term monitoring purposes. With the help of the technical team, the data will be interpreted and used to inform and provide recommendations on prescribed fire implementation, monitoring approaches, and next steps for expanding the framework and establishing a long-term dataset.

Current partners in this project include the Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, the City of Eugene, Natural Resources Conservation Service, The Nature Conservancy, and the Upper Willamette Stewardship Network. We plan to engage more partners during the technical team development process.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- The applicant will be working with tribes in Oregon to apply their knowledge and cultural values to develop a monitoring approach of prescribed burns in the Willamette Valley.
- The applicant will collect the field data using a combination of digital data tablets or paper field forms and store it electronically in different software using a cloud-based file system.

- The applicant has the necessary qualifications to collect the vegetation, fuels, soil and bird data and cite a variety of professionally accepted field methods that might be followed after the monitoring plan is finalized.
- The applicant has engaged staff from the Confederated Tribes of Siletz Indians and Confederated Tribes of Grand Ronde which both provided letters of support that demonstrate their engagement and interest in participating in this project.
- At the end of the project all data will be interpreted and presented in a final report. The final report will be posted on the applicant's website, at the Cascadia Prairie Oak Partnership conference and website and results of this monitoring efforts will be presented at relevant local and regional forums.
- The applicant uploaded a separate table to the application that breaks down the staff time by task to understand how staff wages were calculated.

### **Monitoring Team Concerns**

- The application lacked a description of the existing data that has been collected by partners in the Willamette Valley on completed prescribed burn projects, such as the Baskett Slough project and others implemented by the US Fish and Wildlife Service, Oregon Department of Forestry, Institute for Applied Ecology (IAE) and the Confederated Tribes of Grand Ronde.
- The application describes evaluating the effects of fire suppression in oak prairie woodlands, but it wasn't clear how the sites would be selected to specifically evaluate the impacts of this management strategy. In addition, it was not clear how past management history on each parcel of land will be incorporated into the data analyses to understand the effects of the prescribed burns.
- An important and key component of the project hinges on the engagement of tribes and other partners to develop the collaborative monitoring approach, which is to be completed before May 2024. It is not clear if six months is enough time for thoughtful and meaningful engagement with the tribes to occur, especially if there is a lack of consensus on what and where to monitor.
- Several of the details on the monitoring study design depend on the availability and access to prescribed burns and it was not clear if there will be a deliberate approach to stratify the sites to evaluate spring and fall burning regimes.
- It was not clear why IAE wasn't mentioned in this application since they seem to be a likely partner to engage in this project given their work with oak prairie restoration in the Willamette Valley.
- It is unclear if the costs are appropriate since a thorough review of the monitoring of prescribed burns in the Willamette Valley was not described in the application.
- It was not clear if expenses are included in the budget to compensate the tribes for their time to engage in this project in a meaningful way.
- The budget table includes substantial match for prescribed burn planning on four NRCS easement sites but there was no information in the application that describes what this match includes and where these sites are to understand how this relates to the project.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- The application clearly describes proposed work with a technical team and Tribes to design a monitoring framework and protocols for understanding the effects of fire to inform future burning

practices.

- The applicant has experience with ecological monitoring in Washington.
- The applicant will share reports with local and regional restoration practitioners, including Rivers to Ridges Partnership, the Upper Willamette Stewardship Network, and Cascadia Prairie Oak Partnership.
- Partner support is demonstrated by letters, including communications indicating support from the Confederated Tribes of Siletz Indians and Confederated Tribes of Grand Ronde.

## Concerns

- “Cultural burning” is not clearly defined in the application, and it is unclear how the term is being used to describe a practice that is different from “ecological fire.” The application indicates the applicant is the only dedicated prescribed cultural burn program in the Willamette Valley; however, the Confederated Tribes of Grand Ronde has been implementing prescribed burning for many years. It is unclear how the applicant’s team is doing something different from the Tribes without a clear definition for cultural burning.
- It is unclear from the application how monitoring sites will be selected. The 30-year conservation concept map for the Willamette Valley Oak and Prairie Cooperative included in the application does not indicate where sites might be located. Four Natural Resource Conservation Service (NRCS) sites are referenced in the application; however, no details are provided that describe the site conditions and characteristics nor are these sites noted on the map.
- Coordination with some partners is unclear from the application. For example, there is no letter of support or match confirmation from NRCS included in the application related to the NRCS sites and secured match referenced.
- It is unclear how the proposed monitoring could complement existing data or other current monitoring because the application does not acknowledge the considerable related data that exists from multiple organizations.
- It is unclear whether the project budget is reasonable for the proposed monitoring because the monitoring plan and methods are not yet developed.
- More specific monitoring questions related to on-the-ground restoration actions would demonstrate how the proposed monitoring can inform future restoration. For example, a question about the effectiveness of reseeding immediately after a burn could directly inform future restoration practices.
- All of the proposed monitoring is focused on ecological datapoints; however, the application emphasizes that cultural fire is different from ecological fire. No potential cultural type metrics are described in the application that could be used for monitoring cultural burning. It is unclear why the project focuses on the impacts of cultural fire but describes monitoring ecological health in response to fire.
- It is unclear how the data will be used specifically to inform future restoration planning or practices. Burning has occurred for a long time in the Willamette, it is unclear how the data will help the applicant use fire differently compared to current practices by the Tribes and other restoration practitioners.

## Concluding Analysis

There is value in learning more about fire and its effects on ecological, cultural, and community health. It, however, is unclear how the monitoring approach will lead to informing restoration that will improve habitat and watershed functions. The application does not describe how the applicant expects to use the resulting data specifically or how fire could be used differently based on what is learned from that data.

The application lacks details needed to evaluate the project with the monitoring review criteria. More information is needed to understand the technical soundness of the monitoring approach, how the data is necessary for carrying out restoration, and whether the significant investment is reasonable for the proposed work. Developing a monitoring plan before pursuing funds for implementing monitoring could provide the information needed to evaluate the monitoring project.

**Review Team Recommendation to Staff**

Do Not Fund

**Review Team Priority**

N/A

**Review Team Recommended Amount**

\$0

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Willamette Basin (Region 3)

**Application Number:** 223-3044-23047

**Project Type:** Stakeholder Engagement

**Project Name:** Benton County Oak Habitats  
Stakeholder Engagement

**Applicant:** Benton SWCD

**Region:** Willamette Basin

**County:** Benton

**OWEB Request:** \$34,130

**Total Cost:** \$46,330

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**Application Description** 1) Project location: Existing and potential oak woodland and savanna/prairie habitats will be assessed in all of Benton County. Our initial focus will occur in Core Conservation Areas identified by the Willamette Valley Oak and Prairie Cooperative and expand outward.

2) Project need: Oak habitats are some of the most imperiled habitats in the Willamette Valley eco-region. For years, Benton SWCD has worked with private landowners to restore oak habitats when we receive a request for assistance. However, the geographic extent of the oak habitat is unknown in Benton County and incomplete data prevents us from strategically targeting landowners in key areas for restoration. Identifying our target audience based on average acreage sizes, location within the county, and assessing their current management objectives and barriers to conservation will help us to develop a strategy for restoration and seek the appropriate funding sources. We might find that we need to develop better programming and funding opportunities for small acreage oak habitat owners.

3) Describe the proposed work: We intend to analyze the most current GIS data to determine oak habitats, as well as tax parcels to identify areas in which to target outreach. We will work with partners to host events highlighting oak restoration activities and funding opportunities. Focus groups will also serve to help us learn about local landowner motivation for oak restoration. Information gathered will inform project partners of landowner interest, location and parcel size to leverage funds for OWEB restoration grants, NRCS programs (EQIP and RCPP), and/or other sources of restoration funding.

4) Identify project partners

Natural Resources Conservation Service

Greenbelt Land Trust

Benton County Small Woodlands Association

Willamette Valley Oak and Prairie Cooperative

Trout Mountain Forestry

Marys River Watershed Council (WC)

Luckiamute WC

Long Tom WC

US Fish and Wildlife Service

## **Review Team Evaluation**

### **Strengths**

- A combination of data collection and stakeholder engagement actions is proposed to better understand opportunities for restoring oak habitat in Benton County. Products will be used to coordinate oak habitat restoration on properties that are 20 acres or less, which are often overlooked when considered as stand-alone projects.
- A variety of outreach methods, such as tours, workshops, focus groups, and landowner interviews, will be used to raise awareness of oak habitats and restoration opportunities.
- A group of technical partners are involved in the project, including: Natural Resources Conservation Service, Greenbelt Land Trust, Benton County Small Woodlands Association, Willamette Valley Oak and Prairie Cooperative, Trout Mountain Forestry, Marys River Watershed Council (WC), Luckiamute WC, Long Tom WC, and US Fish and Wildlife Service.
- Partner support is demonstrated by letters included in the application.
- A facilitator will be hired for the focus groups designed to obtain landowner input on oak restoration strategies.
- The applicant has capacity and relevant experience to implement the project.
- Costs are reasonable for the proposed activities.

### **Concerns**

- The linkage between the success indicators for the proposed stakeholder engagement activities with future restoration is somewhat vague; however, the proposed activities are likely to generate landowner interest that could lead to oak habitat restoration.

### **Concluding Analysis**

The combination of data analysis and landowner engagement is likely to lead towards a better understanding of oak restoration opportunities among private landowners in Benton County. Oak habitats are a priority strategy habitat in the Oregon Conservation Strategy. Coordinating opportunities to restore oak across properties 20 acres or less, which typically do not receive funds, could provide a collective impact in restoring oak across a broader landscape in the Mid-Willamette valley.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 1

### **Review Team Recommended Amount**

\$34,130

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

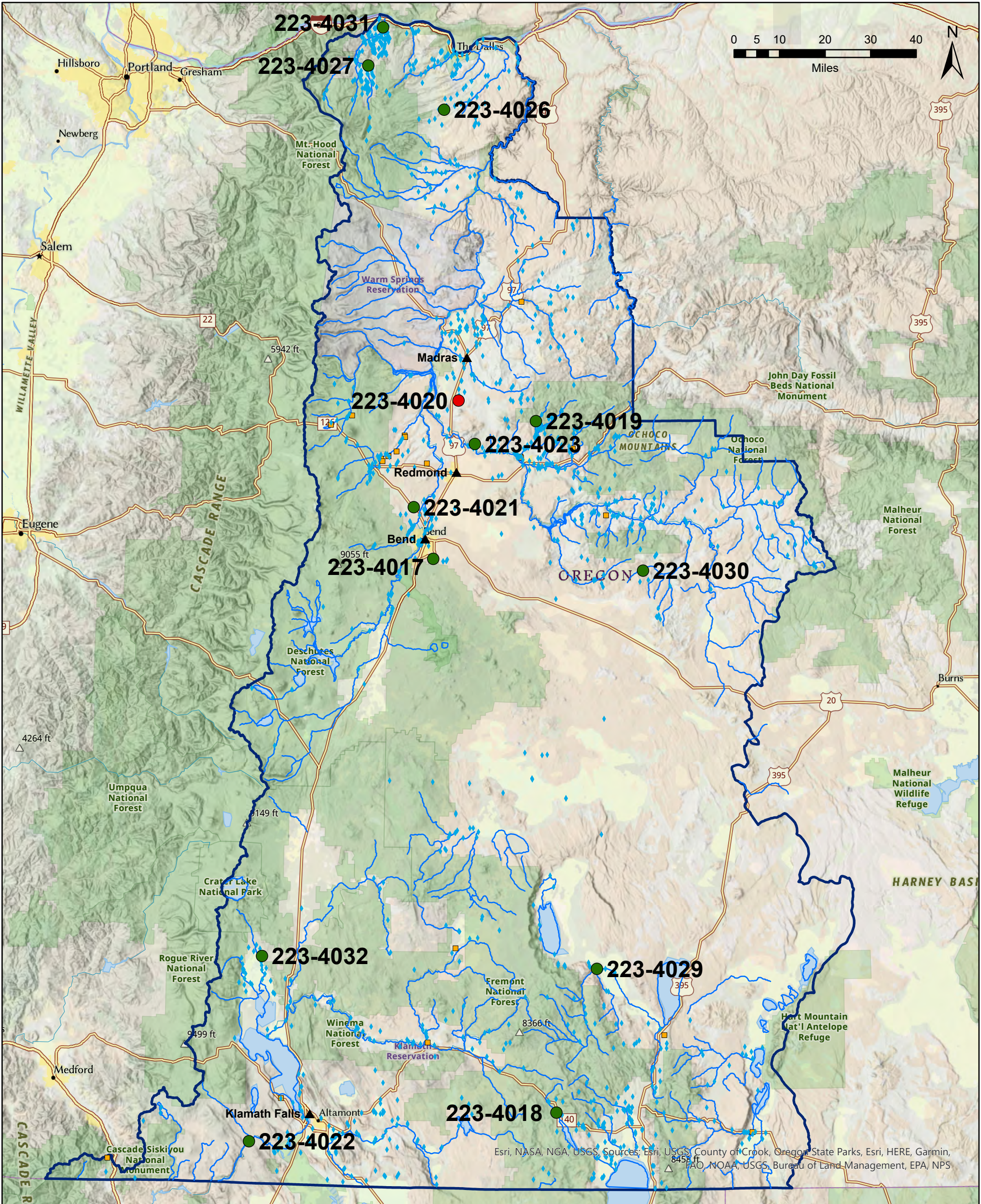
**Staff Recommended Amount**

\$34,130

**Staff Conditions**

N/A

# Central Oregon - Region 4 Spring 2023 Funding Recommendations



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**Funding Recommendation**

- Staff Recommendation For Funding (SRF)
- Below Funding Line (BFL)

**Previous Grants 1998 - Spring 2022**

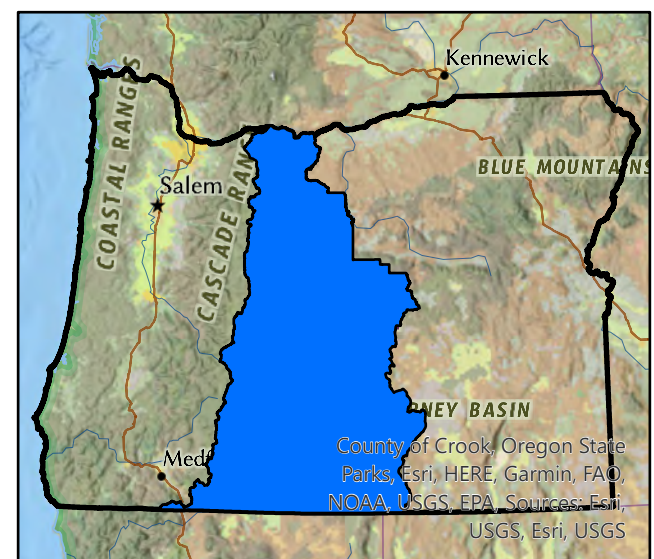
- Land Acquisition
- ◆ Restoration
- ▲ Region 4 Cities
- Region 4 Streams
- ▭ OWEB Region 4 Boundary



OREGON  
**WATERSHED**  
ENHANCEMENT BOARD

775 Summer St, NE Suite 360  
Salem, OR 97301-1290  
(503) 986-0178  
<https://www.Oregon.gov/OWEB/>

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County of Crook, Oregon State Parks, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Sources: Esri, USGS, Esri, USGS

Oregon Watershed Enhancement Board: Region 4 Restoration, Technical Assistance, Stakeholder Engagement and Monitoring

<b>Region 4 - Central Oregon Restoration</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-4022	Trout Unlimited Inc	J.C. Boyle Reservoir Riparian Habitat Buffer Fencing	The entire JC Boyle reservoir footprint along the Klamath River will be fenced off with wildlife friendly fencing to protect sensitive natural and cultural resources.	201,258
223-4018	Lake County Umbrella Watershed Council	Upper Drews Creek Fish Passage	An aging stream diversion will be replaced to provide fish and lamprey passage along Drews Creek in Lake County.	263,335
223-4019	Crooked River WC	Foley Butte Holistic Restoration	A suite of restoration actions will be implemented to improve fish and wildlife habitat and water quality along Allen Creek and adjacent forest lands in Crook County.	188,680
223-4017	Arnold Irrigation District	Deschutes River Flow Restoration - Arnold Irrigation District Phase Two	The Arnold Irrigation District will pipe leaky open ditch irrigation delivery canals to restore streamflow in the Upper Deschutes river to support Oregon spotted frog critical habitat.	250,000
223-4021	Tumalo Irrigation District	Tumalo Irrigation District Deschutes Basin Restoration Group 6b	Open ditch irrigation delivery canals will be piped to support the Tumalo Irrigation District's continued effort to restore streamflows to Tumalo and Crescent Creeks.	200,000
223-4023	Lone Pine Irrigation District	LPID Irrigation Modernization Project Phase 2	The Lone Pine Irrigation District will pipe leaky open ditch irrigation delivery canals to restore streamflow in the Upper Deschutes river and support Oregon spotted frog critical habitat.	475,000
<b>Total Restoration Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>1,578,273</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-4020	North Unit Irrigation District	Irrigation Modernization and Winter Flow Augmentation Project Segments 1 and 2	Open porous irrigation canal will be converted into leak free pipe to conserve water to improve water quality and habitat for Oregon spotted frog.	500,000

<b>Projects Not Recommended for Funding by RRT</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Amount Requested</b>	
223-4015	Crooked River WC	Lower Crooked Habitat Restoration - Silva Ranch	241,819	
223-4016	Crooked River WC	Lower Crooked Habitat Restoration - King Ranch	399,288	

<b>Region 4 - Central Oregon Technical Assistance</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-4027	Hood River WS Group	Lower East Fork Hood River & Baldwin Creek Fish Passage & Habitat Restoration	Construction ready designs will be developed for fish passage and habitat enhancement projects along Baldwin Creek and the East Fork of the Hood River.	73,101
223-4026	Wasco SWCD	Fifteenmile Managed Underground Storage Pilot Testing 2023	Designs will be developed for a full scale aquifer recharge project buildout that will benefit native fish and water quality along Fifteenmile Creek in Wasco County.	75,000
<b>Total Technical Assistance Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>148,101</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
None				

<b>Projects Not Recommended for Funding by RRT</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Amount Requested</b>	
223-4024	Klamath Lake Land Trust	Planning for Restoration due to Bootleg Fire	74,263	
223-4025	Lakeview SWCD	Chewaucan Working Wetland Reconnaissance	74,279	
223-4028	Ecotrust	Enhancing Salmon Habitat on the Mainstem Columbia River through Control of Invasive American Shad	74,881	

<b>Region 4 - Central Oregon Stakeholder Engagement</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

<b>Projects Recommended but Not Funded in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Recommended
None				

<b>Projects Not Recommended for Funding by RRT</b>				
Project #	Grantee	Project Title	Amount Requested	
None				

<b>Region 4 - Central Oregon Monitoring</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-4031	Hood River WS Group	Hood River Basin Partnership Restoration Effectiveness Monitoring Plan	A monitoring plan will be developed for evaluating the effectiveness of a wide variety of restoration project types in achieving expected ecological outcomes in the Hood River basin.	77,480
223-4032	Trout Unlimited Inc	Response of a threatened amphibian to drought and bullfrog removal	Oregon spotted frog population and distribution will be monitored in the Upper Wood River valley in Klamath County to evaluate the effectiveness of removing bull frogs, one of the biggest threats to Oregon spotted frogs.	282,149
223-4030	OSU Office of Sponsored Research & Award Admin	Assessing the Long-Term Effectiveness of Juniper Removal on Water and Vegetation	The effects of removing Western juniper on local hydrology, groundwater, and native vegetation will be monitored to characterize ecological impacts of juniper removal.	239,694
223-4029	Fort Rock/Silver Lake SWCD	Brattain Post Fire Restoration Project Effectiveness	A study within the 2020 Brattain fire scar will be completed to determine the effectiveness of seeding post fire compared to allowing natural regeneration of vegetation to occur.	252,269
<b>Total Monitoring Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>851,592</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

<b>Projects Not Recommended for Funding by RRT</b>				
Project #	Grantee	Project Title	Amount Requested	
None				

<b>Region 4 Total OWEB Staff Recommended Board Award</b>	<b>2,577,966</b>
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<b>Region 1 - 6 Grand Total OWEB Staff Recommended Board Award</b>	<b>12,461,865</b>
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## Open Solicitation-2023 Spring Offering Central Oregon (Region 4)

**Application Number:** 223-4015-23014

**Project Type:** Restoration

**Project Name:** Lower Crooked Habitat Restoration  
- Silva Ranch

**Applicant:** Crooked River WC

**Region:** Central Oregon

**County:** Crook

**OWEB Request:** \$241,819

**Total Cost:** \$497,600

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**Application Description** 1) The proposed work takes place on the Silva Ranch, located within the LCRSR area, approximately 4.5 miles northwest of Prineville. The project reach extends from approximately river mile (RM) 43 to RM 44.3.

2) The Crooked River Watershed Council and Natural Resources Conservation Service, through a Regional Conservation Partnership Program (RCPP), are working with private landowners between the City of Prineville and Smith Rocks State Park to implement the Lower Crooked River Strategic Restoration (LCRSR). The LCRSR is a comprehensive project intended to address key watershed deficiencies as recognized by the Mid-C Steelhead Recovery Plan (ODFW 2010), NRCS Hydrology Study (NRCS 2010), Lower Crooked River Watershed Assessment (CRWC 2008), and Deschutes Sub basin Plan (DBWG 2008) which all include an element of degraded fish and wildlife habitat, water quality, and riparian plant communities within the 19-mile Prineville valley reach of the mainstem Crooked River in Central Oregon.

3) The Silva Ranch project will include 1,680 linear feet of restoration treatments, large wood structures, bank sloping/planting, existing side channel connection at base flow, habitat promoting features inside channel. The proposed project will aid in steelhead and Chinook salmon reintroduction efforts in the greater Deschutes Basin, specifically for water quality, juvenile out-migrating habitat, and potential for adult holding/resting structure and long term wood recruitment.

4) Specific project partners include Portland General Electric, Crooked River Ditch Company, Crooked River Weed Management Area, Crook County SWCD, Confederated Tribes of the Warm Springs, City of Prineville, Oregon Watershed Enhancement Board, US Bureau of Reclamation, Ochoco Irrigation District, and the Oregon Department of Fish and Wildlife.

### Review Team Evaluation

#### Strengths

- The project is part of a larger Lower Crooked River strategy the applicant and partners are implementing through the NRCS Regional Conservation Partnership Program to address key watershed limiting factors prioritized in watershed and recovery plans. The match funding provided by NRCS is secured and will support final design development and permitting.

- Sloping back streambanks, installing large wood structure, and restoring riparian vegetation to stabilize the bank can be a technically sound approach for arresting erosion while providing habitat benefit.
- The proposed restoration actions will build connectivity among restoration investments by tying directly into work completed by the neighboring Deschutes Land Trust and City of Prineville.
- The application includes letters of support from partners and the landowner.
- Previous project evaluations concerns are addressed by including additional details regarding revegetation treatments and engagement with adjacent landowners.

## Concerns

- The application lacks details describing how CREP is integrated into the project design. For example, the CREP buffer is not identified in the project design; and it is unclear if seeding and planting components identified in the application will be part of CREP or implemented prior to CREP. Also, plant establishment costs included in the budget may not be appropriate if CREP is also funding plant maintenance. Without details describing plans for CREP, such as a map showing CREP components in relation to the proposed restoration actions, it is unclear if the project will take full advantage of the CREP investment.
- It is not clear how the seeding and planting components described in the application plant page will be implemented and how these components will be maintained to ensure success. There are no clear roles assigned between the applicant and landowner describing how plantings will be implemented and managed over time.
- The water quality benefit from the proposed treatment wetland is unclear. The application lacks key design specifications needed to evaluate whether the wetland design approach can effectively provide water quality improvements to irrigation tailwater, such as the hydrological residence time and the anticipated inflow volume. The application lacks information describing how the wetland feature will be maintained or who will be responsible for the maintenance.
- The ecological benefit from the proposed side-channel treatment is unclear. There is potential for the channel to fill in through sedimentation, contribute to elevated surface water temperatures, and cause increased predation from non-native warm water fish species using the side-channel as habitat.
- The streambank stabilization proposed will likely treat symptoms rather than root causes of watershed disturbance and may prioritize protection of agricultural lands over restoring natural watershed function. The instream habitat value of these treatments will be limited because most of the large wood structure installed will not interact with the river for most of the year.

## Concluding Analysis

Restoration actions will be implemented to improve instream habitat and streambank stability along the Crooked River downstream of the City of Prineville. This section of the Crooked River has been heavily modified to support high value agriculture, making it a challenging environment to implement conservation actions that complement existing land use. The actions proposed are standard and effective practices to enhance habitat; however, the proposal lacks clarity around key design elements needed to understand the potential ecological benefit expected from the investment.

## Review Team Recommendation to Staff

Do Not Fund

**Review Team Priority**

NA

**Review Team Recommended Amount**

\$0

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Central Oregon (Region 4)

**Application Number:** 223-4016-22961

**Project Type:** Restoration

**Project Name:** Lower Crooked Habitat Restoration  
- King Ranch

**Applicant:** Crooked River WC

**Region:** Central Oregon

**County:** Crook

**OWEB Request:** \$399,288

**Total Cost:** \$942,013

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**Application Description** 1) Identify the project location - The King Ranch project site is located in the lower Prineville valley approximately six miles west from the city of Prineville. The ranch is on the north side of and adjacent to the Crooked River immediately downstream of the Lytle Creek confluence with the river.

2) Briefly state the project need - The purpose and need of this project is to address habitat limiting factors identified and described in the Middle Columbia Steelhead Conservation Plan (ODFW; 2010). It will address current conditions that do not fully support fish and aquatic needs and that impact water quality.

3) Describe the proposed work - The proposed work includes bank stabilization and restoration elements for side channel and mainstem areas centered on the use of large wood structures to sort and reduce sediment delivery, develop and maintain scour pools, and provide fish habitat (cover and refuge). Alcove habitat will be created and improved and river bar habitat areas will be enhanced to provide long term stability for fish and wildlife benefits. Revegetating key areas and in association with large wood structure locations will provide additional bank stability, shading to reduce stream temperature, and long-term detritus to the aquatic system.

4) Identify project partners - Partners include USDA-NRCS (designs, permits, wetland delineation, and some project oversight), Ochoco Irrigation District (irrigation system improvements), Crook County Soil & Water Conservation District (landowner outreach and project evaluation), King Ranch landowner (Greg and Karen Huston), and the U.S. Bureau of Reclamation (potential funder). Other traditional partners have offered letters of support but have no defined role in the project.

### Review Team Evaluation

#### Strengths

- The project is part of a larger Lower Crooked River strategy the applicant and partners are implementing through the NRCS Regional Conservation Partnership Program to address key watershed limiting factors prioritized in watershed and recovery plans. The match funding provided by NRCS is secured and will support final design development and permitting.
- Improving side-channel and alcove features could offer instream habitat benefits and potential stream cooling affects through hyporheic exchange.
- Juniper trees will be sourced locally from adjacent uplands on the landowner's property, reducing transportation costs.

- The proposed restoration actions will build connectivity among restoration investments by tying directly into work currently in progress across the river on a neighboring ranch where similar type conservation actions are being implemented.
- The landowner has previous experience as a contractor implementing restoration projects and will be able to offer lessons learned to improve implementation.

## Concerns

- The application indicates water quality will be monitored but lacks details describing how this will be implemented.
- The streambank stabilization proposed will likely treat symptoms rather than root causes of watershed disturbance and may prioritize protection of agricultural lands over restoring natural watershed function. The river naturally wants to laterally migrate in the valley, stabilization will hinder this natural process. The instream habitat value of these treatments will be limited because most of the large wood structure installed will not interact with the river for most of the year.
- The application lacks details describing how the CREP program will be integrated with the proposed restoration, including the location and timing of CREP practices and the timeline for the planting activities outlined on the application plant page. Without details describing plans for CREP, such as a map showing CREP components in relation to the proposed restoration actions, it is unclear if the project will take full advantage of the CREP investment.
- Information describing where grass seeding will occur and how it will be implemented is needed in the application to determine whether the proposed seeding treatment is likely to succeed, and the seed mix is appropriate for the site conditions.
- The project may not be ready for implementation because permit applications have not been submitted.
- It is unclear if the existing hydrology will support the ecological benefits expected from enhancing the side-channel and alcove features. The application lacks detail describing the varying flow scenarios for when these features will be activated and provide habitat benefit. There is potential for the side-channel to fill in through sedimentation, contribute to elevated surface water temperatures, and cause increased predation from non-native warm water fish species using the side-channel as habitat.

## Concluding Analysis

A suite of restoration actions will be implemented to improve fish and wildlife habitat and water quality along the Crooked River. Existing high value agriculture dominates the historic floodplain of the Crooked River in this valley located downstream of Prineville. The actions proposed are standard and effective practices to enhance habitat; however, the proposal lacks clarity around key design elements needed to understand the potential ecological benefit expected from the investment.

## Review Team Recommendation to Staff

Do Not Fund

## Review Team Priority

N/A

## Review Team Recommended Amount

\$0

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4017-22970

**Project Type:** Restoration

**Project Name:** Deschutes River Flow Restoration - Arnold Irrigation District Phase Two

**Applicant:** Arnold Irrigation District

**Region:** Central Oregon

**County:** Deschutes

**OWEB Request:** \$250,000

**Total Cost:** \$12,708,667

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**Application Description** Arnold Irrigation District (Arnold or the District) operates over 39 miles of canals and laterals in the Deschutes Basin. The original system was built over a century ago by early settlers using methods and materials available to them at that time: open canals lined with porous volcanic rock. The open canals cause a tremendous amount of seepage, resulting in loss of nearly 50 percent of the water withdrawn. Thus, with the current system, Arnold must withdraw double the amount of water delivered to patrons.

Phase Two of the Arnold Irrigation District Flow Deschutes Basin Restoration Project (herein referred to as 'this phase' and/or 'project') will enclose 23,175 length-feet (LF) of open canal into leak-free piping to eliminate the seepage loss and restore 12.6 cubic-feet-per-second (CFS) of flow to the Deschutes Basin during the spring and winter. The water conserved will be protected instream for the benefit of water quantity, water quality, and habitat for native and listed species in the Deschutes Basin. This phase is a continuation of Phase 1 which enclosed 17,022 LF of open canal and conserved 11.2 cfs.

### Review Team Evaluation

#### Strengths

- The project is the second and final phase of a multi-year effort to restore streamflow in the Deschutes River that will improve instream habitat conditions for fish and wildlife, specifically targeting the Oregon Spotted frog.
- The proposal clearly describes details for converting four miles of open irrigation canal into leak free piping, including the piping length, associated costs, and expected conserved water amounts.
- The project cost is reasonable for the expected benefit by securing up to 12.6 cfs of conserved water instream.
- Converting leaky open ditch canals to buried HDPE pipe is identified as an effective strategy to meet ecological objectives in the Deschutes River Basin Habitat Conservation Plan (2022).
- The project is ready for implementation with permits and matching federal funds secured.
- The applicant is collaborating with other irrigation districts in Central Oregon to creatively seek opportunities to assist one another amongst drought conditions. Specifically, the applicant will work directly with North Unit Irrigation District (NUID) to provide conserved water realized during the irrigation season, and in return NUID will release conserved water amounts from Wickiup reservoir during the winter months per direction from USFWS to support Oregon spotted frog habitat.

## Concerns

- It is unclear how much of the expected conserved water will be realized due to reductions in water allocations in response to current drought conditions.
- The application attachments contain a significant amount of information that is not directly relevant to the actions outlined in the scope of work described in the proposed solution section. For future application submittals, the applicant is encouraged to consider uploading materials relevant to only the actions identified in the application.
- The cost effectiveness of individual project components is difficult to evaluate due to the use of lump sums in the application budget.

## Concluding Analysis

This final project phase proposed by Arnold Irrigation District will complete the district's system improvement plan to pipe and pressurize the irrigation system to improve streamflow in the Deschutes River while providing water reliability to its patrons. The District, alongside all other irrigation districts in Central Oregon, are working diligently to address the roughly 50% seepage loss occurring in delivery canals. This project is timely to utilize significant federal match investments being made in the basin. The substantial increase in water remaining instream will directly impact and improve the natural hydrograph, support state and federally listed fish species, and support riparian habitat important for wildlife.

### Review Team Recommendation to Staff

Fund

### Review Team Priority

4 of 7

### Review Team Recommended Amount

\$250,000

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Fund

**Staff Recommended Amount**

\$250,000

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4018-23002

**Project Type:** Restoration

**Project Name:** Upper Drews Creek Fish Passage

**Applicant:** Lake County Umbrella Watershed Council

**Region:** Central Oregon

**County:** Lake

**OWEB Request:** \$263,335

**Total Cost:** \$329,835

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**Application Description** Drews Valley Ranch is located 21 miles west of Lakeview in Lake County, Oregon. The 11,400-acre ranch is surrounded by the Fremont-Winema National Forest and includes nine miles of streams, eight tributary creeks, a reservoir, and grassy wet meadows. The ranch is home to more than 185 species of birds, fish, and mammals, including the bald eagle and red-band trout.

The Upper Drews Creek Fish Passage Project was initiated in the summer of 2020 as the Lake County Umbrella Watershed Council secured an Oregon Watershed Enhancement Board Technical Assistance grant to survey the project sites and develop a 60% design plan to address fish passage. The lower diversion is a fish passage barrier when stop logs are in place, which overlaps a critical time fish migrate out of Drews Reservoir upstream to spawn.

A design plan has been developed and cost estimates have been retained from a local engineering firm. The Council is seeking construction funds to implement work to restore fish passage at an irrigation diversion on Drews Creek to provide access upstream, while maintaining flood irrigation to the wet meadows. The project will compliment and build upon several conservation actions that have been implemented on the ranch over the last three decades, including a conservation easement, four fish screens, improved fish passage, cross fencing, and off-site water developments.

Project Partners involve Drews Valley Ranch, Oregon Department of Fish and Wildlife, US Fish and Wildlife Service, and Anderson Engineering and Surveying.

### Review Team Evaluation

#### Strengths

- Previous project evaluations concerns are addressed by removing the streambank stabilization treatments.
- The fish passage solution will support volitional movement of fish and lamprey, which are of high importance in Drews Creek. This project will make available an additional 1.5 miles of stream habitat during the irrigation season and improve access to the entire upper watershed in the non-irrigation season.

- The applicant is working with a private landowner that has implemented previous fish passage solutions on other parts of the ranch as well as enrolled a portion of the property in a conservation easement.
- The application includes a grazing management plan that is thorough.
- The ditch associated with the water diversion proposed for modification is already screened to ensure no fish are entrained in irrigation ditches.
- The applicant has successfully implemented similar types of fish passage projects.
- The applicant is working with Ducks Unlimited on projects nearby and will utilize their expertise to investigate the upstream barrier to develop conceptual solutions for further expanding habitat connectivity.

### **Concerns**

- There is a known fish passage barrier 1.5 miles upstream of the project location, and downstream there is no fish passage on Drews Reservoir. These barriers limit the potential habitat access that could be gained from the investment.
- The project area is largely devoid of riparian vegetation and could benefit from riparian enhancements.
- It is unclear what the fish population assemblage and distribution is within the Drews Creek basin above Drews Reservoir. It is also unclear what the timing is for species migrating to and from spawning and rearing habitats above the reservoir. This information would be helpful to better understand the value this fish passage project will have for native fish.

### **Concluding Analysis**

Fish passage will be addressed along Drews Creek in Lake County. The project builds off momentum gained in providing volitional fish passage in the Drews Creek basin above Drews reservoir. Drews Creek is an important tributary in the Goose Lake watershed by supporting a wide array of native aquatic species endemic to the Goose Lake basin that will benefit from the increased stream habitat connectivity expected from this project.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 7

### **Review Team Recommended Amount**

\$263,335

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$263,335

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4019-22950

**Project Type:** Restoration

**Project Name:** Foley Butte Holistic Restoration

**Applicant:** Crooked River WC

**Region:** Central Oregon

**County:** Crook

**OWEB Request:** \$188,680

**Total Cost:** \$285,775

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**Application Description** Foley Butte Ranch, located in the northwest corner of Crook County, Oregon, encompasses 30,655 acres of timberland, creeks, meadows, and mountains. This property is known for its abundant wildlife species, including Mule deer, Rocky Mountain elk, Cougars, Black bears, Bobcats, coyotes, grouse, chukar, and native fish species in the creeks. Within the Foley Butte property there are several different HUC-6 watersheds, this grant will focus on the Allen Creek Watershed. Working on a large property of this size offers a unique chance for large scale watershed restoration work throughout the uplands, and several different headwaters of tributaries to McKay creek, with McKay creek being a main tributary to the Crooked River. This application will address several limiting factors identified in this area by working with project partners to address habitat needs on a holistic landscape scale.

2. This specific project area has suffered from past grazing management regimes that have allowed cattle to overgraze the riparian corridors along streams throughout this property, causing native vegetation to be nearly void along the riparian areas. Grazing management has also led to the encroachment of western juniper, and the decline of forbs, shrubs, and quaking aspen.

3. Project elements include cutting 88.2 acres of encroached Western Junipers, protecting and enhancing 5 acres of sensitive aspen stands by removing encroaching conifers and 4-strand wildlife-friendly fencing. Six springs will be developed with one spring including an above ground cistern for emergency wildfire water storage. 17.84 acres of CREP will be enrolled along Allen Creek, with VerticalPost Structures and large wood, enhancing the riparian corridor, an additional 4 acres of non-CREP riparian fence will be installed in the uplands, lastly 7 acres of weed treatment.

4. Project partners include the following: CRWC, Nuveen Natural Capital, Crooked River Weed Management Area, and Crook County SWCD.

### Review Team Evaluation

#### Strengths

- Previous project evaluations concerns are addressed by including additional details regarding CREP enrollment, activities, budgets, and timeline.

- The landowner is new to the area, has an interest in conservation, is donating material from on-site, and is actively engaging local partners to develop restoration plans to improve fish and wildlife habitat.
- The grazing management plan included in the application offers insight on how the property will be managed for livestock to maintain restoration investments.
- The upland spring developments will facilitate improved livestock distribution and remove their dependence on riparian areas to access water. They will also be fenced with wildlife friendly fence and have escape ramps for wildlife.
- The instream habitat structures proposed for Allen Creek are likely to improve aquatic habitat conditions for juvenile and adult fish. This stream is designated as critical habitat for Mid-Columbia Steelhead.
- The applicant is engaging appropriate partners to assist with implementation of the conservation actions. The application includes support letters documenting how partners plan to engage in this project.

### **Concerns**

- Juniper removal may not be the highest priority action to promote forest health and improve watershed function on the property. Photos in the application indicate there has been pine and fir mortality along with aggressive past forest management that has led to a degraded forested landscape that poses a risk to watershed and riparian function. Focusing on improving the health of the pine and fir stands over juniper removal may be a higher priority for restoration.
- The landowner needs a water right to store water in a cistern for the purpose of wildfire emergencies and there is no water right associated with this use in the project area.
- It is unclear how much area around the proposed spring developments will be fenced.
- The budget includes material costs for the large woody debris described in objective three of the application but does not contain installation costs.

### **Concluding Analysis**

A new landowner who recently purchased a 30,000-acre ranch on Allen Creek in the Crooked River watershed will be engaged to restore upland, aspen, and riparian habitats. The actions outlined in the application present a holistic suite of restoration activities that are likely to improve habitat for upland species and aquatic species, including Rocky Mountain elk, Mule deer, steelhead, and Redband trout. The applicant is encouraged to work with the landowner to develop a property wide forest management plan as part of the project.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 7

### **Review Team Recommended Amount**

\$188,680

**Review Team Conditions**

The applicant shall work with the landowner to engage with the Oregon Water Resources Department (OWRD) to obtain a water right to store spring water in a cistern for the purposes of wildfire emergencies.

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$188,680

**Staff Conditions**

The applicant shall work with the landowner to engage with the Oregon Water Resources Department (OWRD) to obtain a water right to store spring water in a cistern for the purposes of wildfire emergencies.

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4020-23028

**Project Type:** Restoration

**Project Name:** Irrigation Modernization and Winter Flow Augmentation Project Segments 1 and 2

**Applicant:** North Unit Irrigation District

**Region:** Central Oregon

**County:** Jefferson

**OWEB Request:** \$500,000

**Total Cost:** \$20,800,000

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**Application Description** The North Unit Irrigation District (NUID or the District) Irrigation Modernization and Winter Flow Augmentation Project Segment 1-2 (Project) will enclose a portion of Lateral 43, a 34,040 length feet (LF) open porous irrigation canal into leak free HDPE piping to conserve 5.3 cubic-feet-per-second (CFS) of water previously lost to seepage. The water conservation achieved by this project will (1) improve conditions for ESA-listed species including the Oregon spotted frog; (2) improve water quality; (3) improve and stabilize agricultural production through water supply reliability; and (4) eliminate water delivery and operations inefficiencies.

NUID and its delivery system is located in the Deschutes Basin near Madras, Oregon in Jefferson County. The district is under contract with the U.S. Bureau of Reclamation to operate the North Unit project that withdraws water from Wickiup Reservoir with a diversion on the Deschutes River in Bend. The district operates 65 miles of main canal and 235 miles of laterals that were built nearly a century ago as a part of President Franklin D. Roosevelt's New Deal emergency relief program. The open canals were lined with volcanic rock that causes 37% of the water withdrawn to be lost due to seepage. Thus, along with other irrigation districts in the region, NUID is committed to enclosing the open canals and laterals into leak free pipe to conserve water and restore flows to the Deschutes Basin.

NUID is a junior right holder on the Deschutes and with the persistent drought in the region have experienced an exponential uptick in fields left fallow due to lack of water that threatens a major food source for the region and nation. Upon completion, this project will allocate the 5.3 cfs of conserved water to irrigation use during the spring and summer, and release the same amount of water in the winter months for the benefit of the ESA-listed Oregon Spotted Frog habitat near Wickiup Reservoir.

### Review Team Evaluation

#### Strengths

- The proposal clearly describes details for converting 34,040 length feet of open porous irrigation canal into leak free piping, including the piping length, associated costs, and expected conserved water amounts.

- The applicant and engineer have demonstrated experience in successfully implementing similar irrigation projects.
- The restoration proposed implements actions identified in a habitat conservation plan. Converting leaky open ditch canals to buried HDPE pipe is identified as an effective strategy to meet ecological objectives in the Deschutes River Basin Habitat Conservation Plan (2022).
- The applicant will release conserved water amounts from Wickuip reservoir, where they own storage water rights, during the winter months per direction from USFWS to support Oregon spotted frog habitat.
- The project is ready for implementation with secured federal match funds.

## **Concerns**

- It is not clear why the applicant prioritized the specific laterals proposed for piping. There is no information describing how these laterals fit into the overall system improvement plan for the North Unit Irrigation District.
- The application attachments contain a significant amount of information that is not directly relevant to the actions outlined in the scope of work described in the proposed solution section. For future application submittals, the applicant is encouraged to consider uploading materials relevant to only the actions identified in the application. For example, the entire system improvement plan is not necessary, only specifics related to the actions in the application.
- It is unclear if the project is ready for implementation. Final designs were not complete at time of application, and it is not clear if State permits are secured.
- The project cost is high for the ecological return on investment.
- The cost effectiveness of individual project components is difficult to evaluate due to the use of lump sums in the application budget.

## **Concluding Analysis**

The North Unit Irrigation District, alongside all other irrigation districts in Central Oregon, are working diligently to address the roughly 50% seepage loss occurring in delivery canals. This project is timely to utilize significant federal match investments being made in the basin. The water conservation expected from this project will improve water quality and conditions for ESA-listed species, such as the Oregon spotted frog.

## **Review Team Recommendation to Staff**

Fund

## **Review Team Priority**

7 of 7

## **Review Team Recommended Amount**

\$500,000

## **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Central Oregon (Region 4)

**Application Number:** 223-4021-23036

**Project Type:** Restoration

**Project Name:** Tumalo Irrigation District Deschutes Basin Restoration Group 6b

**Applicant:** Tumalo Irrigation District

**Region:** Central Oregon

**County:** Deschutes

**OWEB Request:** \$200,000

**Total Cost:** \$5,465,625

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**Application Description** The Deschutes River and its tributaries, including Tumalo Creek, suffer from low summer streamflows that are a major limiting factor for fish habitat and water quality in the basin. Restoring live flow in the basin is a regional and state-wide objective championed by local, state, and federal entities. For nearly three decades, Tumalo Irrigation District (TID) has been pursuing a water conservation program to provide a permanent solution to system-wide water losses caused by porous open irrigation canals. Since the mid-1990s, TID and its funding partners have enclosed over 154,704 length feet (LF) of open canal into leak-free piping, resulting in 27 cfs of return flow to Tumalo Creek and the Deschutes Basin.

This current phase of the Project conserves 1.1 CFS of water and returns 0.85 cfs to Tumalo Creek during the irrigation season and Crescent Lake during the storage season by enclosing a portion of the Columbia Southern Lateral in 36-42" diameter HDPE piping. The 0.85 cfs conserved by this project that will be returned instream will be protected by the Allocation of Conserved Water statute.

This Project has a direct and immediate impact on water conservation and instream flow restoration. One hundred percent of the publicly funded conserved water through each phase of the SIP will be returned and protected instream; providing substantial water quality and quantity benefits to the Deschutes Basin; with a majority being returned to Tumalo Creek. Tumalo Creek, Crescent Creek, the Little Deschutes River, and the Deschutes River are listed as impaired waterways under Section 303(d) of the Clean Water Act.

### Review Team Evaluation

#### Strengths

- The project will protect streamflow in Tumalo Creek, a cold water refugia during the summer irrigation season, which may aid in decreasing stream temperatures in the Deschutes River system.
- The proposed project builds on previous phases completed by the applicant that successfully enclosed open porous irrigation canals into leak free pipe and restored streamflow through water conservation in the Tumalo and Crescent Creek watershed.
- The protected water storage in Crescent Lake expected from the project will allow for additional flow releases into Crescent Creek that will enhance Oregon spotted frog and native fish habitat.
- The applicant, design team, and contractors have the expertise to successfully implement the project.

## Concerns

- The application attachments contain a significant amount of information that is not directly relevant to the actions outlined in the scope of work described in the proposed solution section. For future application submittals, the applicant is encouraged to consider uploading materials relevant to only the actions identified in the application.
- The cost effectiveness of individual project components is difficult to evaluate due to the use of lump sums in the application budget.
- It is unclear how much water quality benefit the conserved 0.85 cfs will have on the Middle Deschutes river and the extent to which it can contribute to cooling water temperatures.

## Concluding Analysis

The project continues implementation of the applicant's watershed action plan to restore streamflow by piping leaky open ditch canals. The approach has proven to be effective in achieving desired streamflow restoration outcomes that benefit ESA-listed and other native fish species and contribute to improved water temperature conditions in the Deschutes basin.

### Review Team Recommendation to Staff

Fund

### Review Team Priority

5 of 7

### Review Team Recommended Amount

\$200,000

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Fund

### Staff Recommended Amount

\$200,000

### Staff Conditions

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4022-23041

**Project Type:** Restoration

**Project Name:** J.C. Boyle Reservoir Riparian  
Habitat Buffer Fencing

**Applicant:** Trout Unlimited Inc

**Region:** Central Oregon

**County:** Klamath

**OWEB Request:** \$201,258

**Total Cost:** \$355,231

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**Application Description** (1) This project is located on JC Boyle Reservoir, a reservoir on the Klamath River in Klamath County Oregon. (2) In November 2022, the Federal Energy Regulatory Commission issued a license surrender order for the Lower Klamath River Hydroelectric Project. Dam removal will start with Copco 2 Dam in 2023 and Copco 1 Dam, Iron Gate Dam and J.C. Boyle Dam in 2024. Water levels on J.C. Boyle Reservoir will be drawn down in the spring of 2024 and expose the lake bottom for the first time since 1958, and the dam will be removed later in 2024. The newly exposed sediment and riverbanks needs to be protected in order to successfully establish native vegetation. (3) This project will install a riparian buffer fence on J.C. Boyle Reservoir at the high-water mark to exclude range cattle, feral horse grazing, deleterious ATV use, and protect historical and cultural sites in the reservoir footprint. Fencing will also protect the mouth of Spencer Creek, which will be restored as part of the reservoir drawdown process. The fence will have walkthrough areas to allow access for recreational activities. Native planting and seeding in the reservoir footprint will be completed by project partners as part of the dam removal restoration process. (4) Project partners include Klamath River Renewal Corporation (KRRRC), Resource Environmental Solutions (RES), Bureau of Land Management (BLM), Oregon Department of Fish and Wildlife (ODFW), Modoc Nation, and Green Diamond Resource Company.

### Review Team Evaluation

#### Strengths

- The timing of this project is aligned with the JC Boyle dam removal and restoration of the native riparian vegetation in the reservoir area.
- The fencing proposed is a necessary component to ensure restoration of the JC Boyle reservoir area is protected once the dam is removed. The fencing will protect sensitive habitat as native vegetation is re-planted along the reservoir soils and anadromous salmonids return to this section of Klamath River.
- Fencing specifications will be wildlife friendly to promote wildlife movement while inhibiting livestock and ATV access.
- The applicant is engaging appropriate partners to assist with implementation of the conservation actions. The application includes support letters documenting how partners plan to engage in this project.
- The project will protect cultural resources important to the Modoc Nation.
- The cost of the fence is reasonable and was estimated based on previous fencing projects.

## Concerns

- At the time of application, the exact footprint of the fence location is still unknown. It is also unclear who will maintain the fence and how future maintenance will be funded to ensure the restoration investment is sustained to ensure resource protection. Final designs and landowner engagement are ongoing and will be determined prior to dam removal.
- OHV use is heavy in the area adjacent to JC Boyle reservoir; however, the applicant has not engaged the OHV community.
- The application indicates public awareness activities are planned but provides few details describing how and when these will occur. The timing of the dam removal is quickly approaching, and it will take time to effectively engage the vast number of partners and community stakeholders affected by this project.

## Concluding Analysis

The entire perimeter of the JC Boyle reservoir footprint will be fenced to ensure protection of newly exposed soils once the JC Boyle dam is removed. The applicant learned there was no funding allocated to this effort as part of the dam removal project and stepped up to take the lead on this project component last minute. The project is time-sensitive because once the reservoir sediments are exposed in early 2024 after the dam is removed, they will immediately be vulnerable to disturbance.

### Review Team Recommendation to Staff

Fund

### Review Team Priority

1 of 7

### Review Team Recommended Amount

\$201,258

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Fund

### Staff Recommended Amount

\$201,258

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4023-23059

**Project Type:** Restoration

**Project Name:** LPID Irrigation Modernization  
Project  
Phase 2

**Applicant:** Lone Pine Irrigation District

**Region:** Central Oregon

**County:** Crook

**OWEB Request:** \$475,000

**Total Cost:** \$3,498,000

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**Application Description** Location: With canals in Jefferson, Deschutes & Crook counties, water flows from Deschutes River & overflow spills into Crooked River. Phase 2 includes Crook & Jefferson County. OWEB Region 4, Coor 44°22'40"N/ 121°04'24"W. Need: Addresses watershed concerns. Conveyance system water loss, water delivery & operation inefficiencies, fish & aquatic habitat instream flow, reduce public risk, increase property safety, improve water quality, local agriculture economic sustainability & resilience, legally protects a portion of conserved water instream. Improving water resources is a Deschutes Basin focus & coordinated effort of 8 irrigation districts. Work: Strategies to construct an efficient system, reduce energy & permanently restore Deschutes River flows. The project will realign canal systems, eliminate 4.11 miles of open canal & laterals, pipe & pressurize 10.89 miles of canals/laterals, save 3,219 acre-ft annually at a rate of 5.2 cfs. Phase 2 will install 4.2 miles of main canal/laterals: MC = 1305 ft 36", 1155 ft 32", 1610 ft 30", 2295 ft 26", 2770 Lft 24", 2195 ft 16", totaling 11,330 ft HDPE pipe; lats = 2575 ft 12", 6385 ft 10", 1310 ft 6", 845 ft 4", totaling 11,115 ft HDPE pipe installed. LPID has a System Improvement Plan, Addendum-Alt C w/specific project details, Preliminary Investigative Report. Open earth ditch canals evaluation of seepage loss using state-of-the-art equipment found a loss of 5.2 cfs at measurement. Eliminating 20% seepage loss helps restore flows in Deschutes River. In-stream flows benefit endangered species & water quality, including spotted frogs, chinook salmon, mid-Columbia steelhead & bull trout. Piping the system eliminates spills improving Crooked river water quality. Partnerships: With DBBC & DRC, LPID coordinates & shares resources & assets to conserve water, improve farm/ranch services, enhance river conditions for wildlife/recreation. FCA helped develop the SIP, PIR, Watershed/EA. USDA/NRCS gives funding/technical assistance.

### Review Team Evaluation

#### Strengths

- The project is the second and final phase of a multi-year effort to restore streamflow in the Deschutes River to improve instream habitat conditions for fish and wildlife, specifically targeting the Oregon Spotted frog.
- The proposal clearly describes details for converting over four miles of open porous irrigation canal and laterals into leak free piping, including the piping length, associated costs, and expected conserved water amounts.

- The restoration proposed implements actions identified in a habitat conservation plan. Converting leaky open ditch canals to buried HDPE pipe is identified as an effective strategy to meet ecological objectives in the Deschutes River Basin Habitat Conservation Plan (2022).
- The project is ready for implementation with secured permits and federal match funds.
- The applicant is collaborating with other irrigation districts in Central Oregon to creatively seek opportunities to assist one another amongst drought conditions. Specifically, the applicant will work directly with North Unit Irrigation District (NUID) to provide conserved water realized during the irrigation season, and in return NUID will release conserved water amounts from Wickiup reservoir during the winter months per direction from USFWS to support Oregon spotted frog habitat.

### **Concerns**

- It is unclear how much of the expected conserved water will be realized due to reductions in water allocations in response to current drought conditions.
- The application attachments contain a significant amount of information that is not directly relevant to the proposed actions outlined in the scope of work described in the proposed solution section. For future application submittals, the applicant is encouraged to consider uploading materials relevant to only the actions identified in the application.
- The cost effectiveness of individual project components is difficult to evaluate due to the use of lump sums in the application budget.

### **Concluding Analysis**

This final project phase proposed by the Lone Pine Irrigation District will complete the district's system improvement plan to pipe and pressurize the irrigation system to improve streamflow in the Deschutes River while providing water reliability to its patrons. The District, alongside all other irrigation districts in Central Oregon, are working diligently to address the roughly 50% seepage loss occurring in delivery canals. The project is timely to utilize significant federal match investments being made in the basin. The water conservation expected from this project will increase streamflow, which will improve water quality, habitat, and habitat availability in the Deschutes River downstream from Wickiup Reservoir.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

6 of 7

### **Review Team Recommended Amount**

\$475,000

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$475,000

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4024-22951

**Project Type:** Technical Assistance

**Project Name:** Planning for Restoration due to Bootleg Fire

**Applicant:** Klamath Lake Land Trust

**Region:** Central Oregon

**County:** Klamath

**OWEB Request:** \$74,263

**Total Cost:** \$113,967

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**Application Description** The 280 acres of land owned by the Klamath Lake Land Trust (KLLT) on and around the Sycan River that had been forested prior to the Bootleg Fire in summer 2021 is the subject of this funding request. The property is located north of Beatty, OR.

We anticipate that the impacts from the fire will include erosion, degraded water quality, loss of habitat, and invasive species intrusion. We also anticipate that reforestation will be more challenging as a result of climate change, which will result in warmer temperatures in the region, more instances of drought due to less snowpack, diminished water quality, increased pests and invasive species.

KLLT requests funding to help facilitate the development of a current conditions report and restoration plan for the property. These goals will be achieved by working in partnership with KC Harvey and the Klamath Tribes, with input from the OR Department of Forestry.

### Review Team Evaluation

#### Strengths

- The Sycan River property, owned and managed by the Klamath Lake Land Trust (KLLT), has an array of habitat types, including sage steppe, dry type Ponderosa pine, riparian, and instream. Potential future restoration of these habitats will likely benefit native fish and wildlife and water quality.
- The applicant is utilizing the Burned Area Emergency Response Assessment (BEAR) developed for the Bootleg fire as a basis to inform project objectives.
- The Klamath Tribes are a partner on this project, their engagement is demonstrated by a letter of support. The Klamath Tribes have been partnering with KLLT on past restoration efforts on the Sycan River property.

#### Concerns

- Specific ecological goals that will be used to determine the baseline metrics needed to inform a restoration plan are not identified in the application. Without this, it is unclear how the assessment will lead to restoration benefiting fish and wildlife habitat and water quality.
- It is unclear from the application how appropriate technical resources and partners in the region will be engaged in the baseline conditions assessment work. There is no information in the application or support letters describing efforts to partner or collaborate with agencies or organizations involved in post fire recovery work.

- An out of state consultant will be engaged exclusively to carry out the baseline conditions assessment and develop the restoration plan. It is unclear if the consultant has relevant experience to characterize and assess a post fire landscape in Klamath County.
- State agency engagement and support for the project is unclear because there are no letters of support from any State agency included in the application.
- Livestock from neighboring landowners continue to cause significant damage to riparian habitats on the property; however, it is unclear from the application how the applicant plans to address this trespass through the restoration plan.
- The severity of the Bootleg fire on the property was sporadic and mostly impacted portions of the Ponderosa pine stands. The application lacks information describing current forest management and the desired future condition that will be used for restoration planning and meet the landowner's vision for dry type Ponderosa pine habitats. It is unclear what metrics will be collected for the baseline conditions assessment that will inform restoration actions to promote forest health and resiliency.
- The project cost is high for the expected products. Additional detail is needed in the application budget to evaluate whether costs are reasonable and necessary for the proposed work.

### **Concluding Analysis**

The Klamath Lake Land Trust proposes to complete an assessment that characterizes resources on their Sycan River property. The application lacks critical details describing the metrics that will be collected as part of this assessment and how metrics will be used to develop and prioritize a list of restoration actions.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

### **Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4025-23005

**Project Type:** Technical Assistance

**Project Name:** Chewaucan Working Wetland  
Reconnaissance

**Applicant:** Lakeview SWCD

**Region:** Central Oregon

**County:** Lake

**OWEB Request:** \$74,279

**Total Cost:** \$93,029

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**Application Description** The Chewaucan Watershed consists of a 53-mile-river, several tributaries, and thousands of acres of flood irrigated pasturelands, which provide stopovers and breeding grounds for thousands of migratory and resident bird populations. Additionally, these marshes provide sustainable forage for family ranching operations. Lake Abert, a hypersaline pluvial lake, is the end point within this watershed, additionally supporting migratory birds. The river and surrounding area provides habitat for the Chewaucan redband trout, mule deer, and sage grouse.

Five catastrophic wildfires have burned 75 percent of the upper watershed, likely resulting in drastic changes to the entire catchment. The Lakeview SWCD is undertaking a comprehensive analysis of the working wetlands in the lower 17 miles of the Chewaucan River Basin, approximately 25,000 acres known as the Upper and Lower Chewaucan Marshes. An in-depth field reconnaissance will provide area resource managers with information necessary to understand the current watershed conditions, document any completed restoration projects, help identify source problems along with restoration opportunities, and prioritize areas of concern. Known natural resource concerns include invasive weeds, infrastructure inadequacies, streambank erosion, and potential threats to aquatic habitat.

Our project would begin in late 2023 with a workshop to engage stakeholders and compile existing information. Reconnaissance would occur in spring and summer of 2024, with a final report detailing findings and treatment recommendations by fall of 2024 and shared through a final stakeholder workshop in early 2025. The remainder of 2025 will be used to pursue funding for additional action plans and restoration efforts based on the final survey and reconnaissance findings. Project partners include Lake County Umbrella Watershed Council (LCUWC), private landowners, Oregon Department of Fish & Wildlife (ODFW), and Intermountain West Joint Venture (IWJV).

### Review Team Evaluation

#### Strengths

- Baseline watershed conditions data will be collected for the Chewaucan working wetlands to prioritize future restoration. The project area has never been fully assessed for its fish and wildlife habitat enhancement potential. Local technical experts have indicated the area has ecological importance to migratory birds, sage grouse, and redband trout.

- The project footprint spans a large geography in the Chewaucan River Basin that is privately owned by only three landowners. Access to this approximately 25,000-acre area was previously not possible. New management and landowner willingness have opened new opportunities for conservation.
- Wet meadows and marshes located in the project area support nesting habitat for a suite of birds. For example, the area is known for supporting large quantities of Sandhill cranes and Trumpeter swans.
- The Chewaucan marsh is located along the Pacific flyway within the SONEC region and is adjacent to other similar type habitats significant to migratory birds, such as Lake Abert and the Warner Lakes Valley.
- Sage steppe habitat designated as core areas for greater sage grouse surrounds the Chewaucan marsh; the wet meadows on the project site are important habitat features for sage grouse and provides habitat connectivity with the surrounding area.
- Partner support for the project is demonstrated by letters of support included in the application.

## Concerns

- It is unclear what types of restoration projects are envisioned for within the marsh and wetland areas that will likely be identified through the proposed technical assistance.
- The project focuses on addressing terrestrial invasive plant species within agricultural operations; it is unclear how future restoration actions will address habitat limiting factors and improve native wetland and meadow function.
- It is not clear how the baseline assessment described in the application will lead to future restoration that provides habitat benefits for native fish. The Chewaucan River, which serves as a fish migration corridor, has been ditched and channelized to support agriculture production and is disconnected from the adjacent meadows. Additional information describing potential restoration concepts that is likely to be considered, such as reconnecting the river with the meadows, would be helpful to better understand potential future ecological outcomes.
- While the consultant identified to assist with this effort has experience working in rural communities to generate interest and collaboration amongst landowners, partners, and technical expertise in terrestrial habitats, it is unclear if the consultant has the necessary wetland and marsh background to adequately assess and characterize these habitat types.
- The landscape has been heavily modified to support agriculture. It is unclear how willing the landowners are to make land use changes that will be recommended to improve fish and wildlife habitat and water quality.
- The use of Traditional Ecological Knowledge (TEK) is not appropriate in the context provided in objective two of the application. TEK does not refer to recent history from the last 150 years, but instead refers to knowledge of Indigenous people from pre-European settlement history.

## Concluding Analysis

An assessment and characterization of lands encompassing approximately 25,000 acres will be completed to develop restoration projects. Understanding existing resources and the conservation potential within a large geography is a reasonable first step to strategize future restoration investments. The application lacks detail describing how the assessment will lead to restoration actions that will improve wetland and marsh function, water quality, and fish and wildlife habitat.

## Review Team Recommendation to Staff

Do Not Fund

**Review Team Priority**

N/A

**Review Team Recommended Amount**

\$0

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4026-23043

**Project Type:** Technical Assistance

**Project Name:** Fifteenmile Managed Underground Storage Pilot Testing 2023

**Applicant:** Wasco SWCD

**Region:** Central Oregon

**County:** Wasco

**OWEB Request:** \$75,000

**Total Cost:** \$129,373

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**Application Description** Located in Wasco County, the Fifteenmile Watershed includes lands drained by Fifteenmile Creek which discharges into the Columbia River. Fifteenmile Creek flows through the town of Dufur, located 15 miles south of The Dalles. The Fifteenmile watershed is home to federally-listed (threatened) wild Mid-Columbia steelhead, a culturally-significant population of Pacific Lamprey, other native fish species, and a vibrant farm community. The project location is 6 miles upstream from Dufur, near river mile (RM) 35. Surface flows in Fifteenmile Creek are over-allocated in the summer months, and the Watermaster regulates off junior water right holders to protect senior users during the irrigation season. Low stream flow and associated high temperature have been identified as primary limiting factors for viable fish populations. Summer low-flow temperatures in reaches of Fifteenmile Creek often exceed temperature thresholds for salmon and trout rearing, migration and spawning.

Subsurface storage of cool water has been identified through previous studies as a feasible approach to enhance summer streamflows, and improve temperature conditions for migration and rearing. The concept is to divert and treat cool water from Fifteenmile Creek during higher flow winter/spring months, store it in a deep, confined aquifer and return the water during low flow periods.

In April of 2023 the pilot basin was constructed and pilot testing had begun, however throughout the testing soils in the basin were not filtering the water at the capacity and water quality needed for subsurface storage. This application will provide further technical assistance to refine the pilot project to ensure and verify the design parameters for the full-scale diversion and treatment system to produce a source water quality that meets standards for injection and storage.

Partners include the Wasco County SWCD, Fifteenmile Watershed Council, ODA, OWRD, DEQ and ODFW. (See Attached Agency Roles Diagram)

### Review Team Evaluation

#### Strengths

- The project continues the exploration of aquifer storage recovery to address streamflow and water temperature concerns along Fifteenmile Creek, an important stream for Mid-Columbia summer Steelhead.
- The applicant has worked for multiple years developing a pilot design concept that is likely to succeed in using cool water stored underground to enhance summer stream flows and improve temperature conditions for fish migration and rearing.

- The pilot project will continue to test and refine the design to embark on an expensive, larger project build out.
- The project builds off past efforts that increased streamflow during critical summer months, including the Fifteenmile Action to Stabilize Temperatures (FAST) program.
- The applicant and partners have a long history of implementing restoration and collecting monitoring data.

### **Concerns**

- It is unclear whether water returned instream at the point of diversion will result in flow downstream at the lower reaches of Fifteenmile Creek because the stream reaches below this point of diversion are known to go sub-surface during summer months.
- It is difficult to evaluate the ecological value of the expected conserved water without details about the future instream water right, including the priority date and the water right holder.

### **Concluding Analysis**

Using aquifer storage is a bold and innovative approach that could prove to be an effective solution for restoring flow during critical summer timeframes. The current technical assistance project is the final design step for a pilot project that has potential to be a long-term solution to providing adequate water flow and temperature conditions for Middle Columbia Steelhead and other fish species in Fifteenmile Creek.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 2

### **Review Team Recommended Amount**

\$75,000

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

**Staff Recommended Amount**

\$75,000

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4027-23049

**Project Type:** Technical Assistance

**Project Name:** Lower East Fork Hood River & Baldwin Creek Fish Passage & Habitat Restoration Design

**Applicant:** Hood River WS Group

**Region:** Central Oregon

**County:** Hood River

**OWEB Request:** \$73,101

**Total Cost:** \$275,976

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**Application Description** This project will take place on the Lower East Fork Hood River and Baldwin Creek, located within the Hood River Watershed in Hood River County. The Hood River Watershed Group (HRWG), in partnership with the Confederated Tribes of the Warm Springs (CTWS) and private landowners, will develop fish passage and instream habitat restoration designs along the Lower East Fork and Baldwin Creek, a critical clearwater tributary to the Lower East Fork.

The purpose of these projects will be to restore aquatic habitat as an aid to the recovery of ESA-listed spring Chinook salmon, winter steelhead, and coho, as well as resident cutthroat and rainbow trout. Improving instream habitat and fish passage are listed as priority actions within the Hood River Basin Partnership Strategic Action Plan (2021) and multiple local planning and assessment documents. These documents identify the lack of habitat quantity and quality, including passage barriers, channel stability, habitat diversity, and sediment load, as primary factors limiting the natural production of spring Chinook, steelhead, and other salmonids in the East Fork Hood River.

This project will develop 90% restoration designs, resulting in 1.2 miles of instream habitat restoration on the Lower East Fork Hood River, and 1.25 miles of restored instream habitat, improved passage to approximately two miles of stream, and reconnection of up to 11 acres of floodplain on Baldwin Creek. Work will include topographic surveying, hydrologic and hydraulic modeling, cultural resource surveying, wetland delineations, and 90% design drawings. HRWG will pursue implementation funding with the completed designs.

Project partners include Hood River Watershed Group (project manager), CTWS (cash match), and project landowners.

### Review Team Evaluation

#### Strengths

- The application clearly articulates a need for developing engineering plans to support future fish passage and habitat enhancement projects along Lower East Fork Hood River and Baldwin Creek.

- The applicant and partners have a long history of implementing similar types of projects.
- Support from the private landowners affected by the project is demonstrated by letters included in the application.
- Using existing LiDAR data that provides detailed topographic information will result in cost savings.
- The inclusion of cultural resource surveys is appropriate for the project design stage.
- Baldwin Creek is a clear water tributary to the East Fork Hood River that provides critical habitat for aquatic species.
- The project area along the East Fork Hood River is protected by a conservation easement managed by the Columbia Land Trust that will ensure long-term protection and maintenance of investments in habitat restoration.
- Habitat upstream of both project locations have high intrinsic habitat value for Steelhead and Chinook.

### **Concerns**

- It is unclear from the pictures provided in the application whether the perched culvert acts as a fish barrier.

### **Concluding Analysis**

The project continues momentum the applicant and partners are building to engage private landowners in an urban-rural interface to implement fish passage and instream and floodplain habitat enhancement opportunities. The future restoration project will increase the quantity and access to spawning, rearing, and overwintering habitat for winter steelhead, spring Chinook, coho salmon, and resident trout in the Lower East Fork Hood River and Baldwin Creek. Ecological processes, including stream-floodplain interaction, riparian function, and maintenance of instream habitat complexity, will also be restored and provide further fish habitat benefits.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 2

### **Review Team Recommended Amount**

\$73,101

### **Review Team Conditions**

N/A

### **Staff Recommendation**

### **Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$73,101

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Central Oregon (Region 4)

**Application Number:** 223-4028-23056

**Project Type:** Technical Assistance

**Project Name:** Enhancing Salmon Habitat on the Mainstem Columbia River through Control of Invasive American Shad

**Applicant:** Ecotrust

**Region:** Central Oregon

**County:** Wasco

**OWEB Request:** \$74,881

**Total Cost:** \$98,631

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**Application Description** The proposed project, “Enhancing Salmon Habitat on the Mainstem Columbia River through Control of Invasive American Shad”, aims to enhance the freshwater habitat of mainstem Columbia River and create ecological benefits for salmon by significantly reducing the abundance of the invasive American shad species through increased harvests by tribal fishers. Development of dams in the Columbia River have created an ideal habitat for American shad, which are now contributing to deleterious conditions for native salmon populations. Shad harvests will decrease ecosystem stressors, enhance freshwater habitats, and build economic resilience for tribes of the Columbia Basin.

Ecotrust will provide technical assistance to support the collaborative development of a Strategic Action Plan that will lead to increased tribal shad harvests through strategies such as developing a commercial shad fishery and new market channels for shad products. Utilizing a community-centered approach, funding from OWEB will build upon current stakeholder engagement efforts and support the critical next step of developing a Strategic Action Plan to develop a shared vision and define the full scope of work, including geographic extent, a phased approach timeline, and the range of strategies to be piloted.

Project partners currently include Columbia River Inter-Tribal Fish Commission, Oregon State University, and individual tribal fishers and natural resource experts. Additionally, we are engaging tribal leaders from the Yakama Nation, Warm Springs, Umatilla, and Nez Perce Tribes, as well as the Bureau of Indian Affairs, U.S. Army Corps of Engineers, and others. Ecotrust is a 501c3 based in Portland and holds nearly 30 years experience in providing TA and supporting efforts to increase regional resilience to a changing climate and advance lands and waters stewardship practices to be more ecologically restorative and economically just. Our project partners have requested we serve as project lead.

### Review Team Evaluation

#### Strengths

- The application clearly articulates a need for developing a strategic action plan for managing non-native American shad in the Columbia Basin.

- A thoughtful and unique approach is proposed to restore native salmonids in the Columbia Basin by creating economic opportunities to reduce invasive shad that are crowding salmonid habitat.
- The applicant is engaging tribal leaders from the Yakama Nation, Warm Springs, Umatilla, and Nez Perce Tribes, as well as the Bureau of Indian Affairs.

### **Concerns**

- It is unclear if there will be an ecosystem improvement from the implementation of the plan. There is not enough evidence that indicates removing invasive shad will have a beneficial impact on native salmonids.
- American shad have done extremely well in the Columbia River, there is concern the species will again recolonize and outcompete native salmonids if shad harvests cannot be sustained.
- It is unclear whether all the appropriate stakeholders are engaged. For example, commercial fishery involvement is not described in the application and this community likely has experience and expertise that could offer insight into harvest methods and techniques to reduce incidental by-catch of ESA-listed fish.
- More clarity is needed on the catch rate in relation to selective harvest methods to understand the extent of potential ESA-listed species caught as bi-catch.
- American shad is native to the East coast of the United States and is harvested for food and other markets, their experience and expertise could offer valuable insights to this effort, yet there is no mention of engaging with those involved.
- It is unclear how Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife (WDFW), and Army Corps of Engineers will serve in developing the strategic action plan. Engagement with these entities will be essential for the plan to be successful.

### **Concluding Analysis**

A strategic action plan will be developed to control invasive American shad populations to benefit native salmonids. American shad have a huge presence in the Columbia River that could offer economic opportunities to Tribes and reducing their population could increase habitat available for native salmonids. There are too many unknowns to discern what long-term ecological value this project could offer to native fish.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Central Oregon (Region 4)

**Application Number:** 223-4029-22979

**Project Type:** Monitoring

**Project Name:** Brattain Post Fire Restoration  
Project Effectiveness

**Applicant:** Fort Rock/Silver Lake SWCD

**Region:** Central Oregon

**County:** Lake

**OWEB Request:** \$252,269

**Total Cost:** \$324,724

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**Application Description** 1) Our project effectiveness monitoring project is on private lands in the 2020 catastrophic Brattain wildfire scar, which negatively affected eight 12- digit HUCs in the upper Chewaucan and Anna River watersheds, with landscape level ecological degradation. The small incorporated town of Paisley is our work hub.

2) Post fire recovery work focused on improving aquatic habitat and water quality for the Chewaucan Redband trout (state status – vulnerable, potentially at risk) through erosion abatement. This included aerial seeding and aerial herbicidal application (OWEB grant #s222-8501-22392 and 220-8011-19315), with more recent OWEB funds (grant #s 222-8501-22392 and 222-8501-22727 ) for burnt wood removal as site preparation for seeding. With this high level of Oregon based investment, there is a need to evaluate aerial seeding success with naturally revegetating vegetation to guide other similar post fire restoration work in the Great Basin system.

3. Our project proposal is for a comprehensive monitoring plan in two phases with an initial focus on natural revegetation by deep rooted bunchgrasses compared with aerial seeding, and a phase 2: herbicide application / seeding, by slope, aspect, burn severity, and soil type. This will include vegetation and soil parameters. Our approach will utilize ground surveys for absolute measurements, drone aerial imagery for larger area coverage, and satellite imagery for a watershed approach, resulting in relevant and timely information for restoration , cost effectiveness of restoration methods, and outreach tools for land management agencies and producers. An on site postfire assessment will complete phase 2.

4. Project partners include private landowners, Oregon State University Department of Animal and Rangeland Sciences (OSU ANRS), Oregon State University Lake County Extension (OSU Extension), Bureau of Land Management (BLM), United States Forest Service (USFS), and Lake County Umbrella Watershed Council (LCUWC).

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This project will produce information that is needed to better inform post-fire rangeland seeding.
- The proposed project will follow established protocols to collect field and drone-based data that are cited in the application.

- The applicant has engaged the local community to recruit interested private landowners to perform this monitoring and the letters of support demonstrate public landowners are interested in applying this information to implement fire rehabilitation projects in the future.
- The applicant is working with a qualified university professor and OSU Extension staff that have experience collecting, analyzing and reporting rangeland data in Oregon.
- This project will report results and share findings in several ways including hosting a field day, working with OSU Extension to produce a publication, and developing a peer reviewed manuscript.

### **Monitoring Team Concerns**

- The application does not describe how the data will be stored long term and how it will be made accessible to the public or interested natural resources professionals.
- The application has very limited information on quality assurance and quality control procedures of the vegetation and soil samples that will be collected and delivered to the OSU lab for analysis.
- The applicant is measuring effects in and outside of exclosures which will measure changes associated with grazing, but no monitoring question was posed to understand what purpose the monitoring of vegetation in and outside grazing exclosures will serve.
- It is not clear how the interpretation of the monitoring results will account for how the lands were grazed after the fire in 2020 and after restoration was initiated in December 2022.
- It is not clear if the reseeding in the Fall 2023 will treat the three polygons and paired treatment and control sites in the same way to allow this study design to be implemented as proposed.
- It is not clear who is performing the drone monitoring and if they have the necessary qualifications and experience to collect and analyze the data.
- The application lacked details on how the drone data would be managed, analyzed and integrated to apply detailed information across a wider geography.
- The application lacked information to explain why the weather station is being installed, what parameters are being recorded, how that data will be managed and how that data will be used in the data analysis or interpreting the results.
- It was not clear how the three different locations' site-specific conditions will be incorporated into the data analysis and interpretation.
- The budget was not clear how the project manager and university contractor's hours were estimated to determine if they were appropriate to complete the objectives as proposed.
- The budget does not include expenses to perform the drone monitoring and it is not clear if there are adequate resources to complete objective 3.
- It is not clear why the professor's hourly rate is different than what was proposed in a separate application that was submitted.

### **Monitoring Team Comments**

N/A

### **Review Team Evaluation**

#### **Strengths**

- The proposed monitoring is likely to answer key questions public land managers, private landowners, and resource entities face when determining post fire seeding needs and specifications.

- The use and utilization of drone imagery will provide valuable data at the appropriate scale to answer the monitoring questions proposed.
- The maps included in the application are informative and useful to understand the monitoring site locations and their context within the greater Brattain fire scar landscape.
- Partner and agency engagement is demonstrated by their involvement in project development and letters of support.
- The applicant and partners have the appropriate skills and experience to carry out the proposed monitoring.
- The collaboration with OSU Extension in Lake County will generate landowner guides and materials that the ranch community can use as tools to promote native vegetation recovery post fire.

## **Concerns**

- The application lacks information describing grazing management occurring throughout the project area. It is unclear whether livestock are currently accessing the project area, and if so, how that disturbance will be accounted for in the study. It is also unclear in the application what the timing, duration, and amount of livestock use will be within the project area.
- The application does not describe how the drone data will be analyzed; clarification provided during the site visit indicated OSU will be analyzing this data.
- The two-year project timeline may be too short for answering the proposed monitoring questions. Site access could be difficult depending on precipitation levels due to the remote locations in high elevation. It may take a longer timeframe to access sites and collect the data needed to answer the monitoring questions.
- It is not clear what type of pre-project data is available to accurately characterize pre-fire vegetation conditions that can be used to compare with post-fire seeding treatments and evaluate the effectiveness of these treatments.

## **Concluding Analysis**

The proposed monitoring is designed to answer key questions regarding the effectiveness of post fire aerial seeding to control erosion compared to naturally revegetating areas not seeded. The data from this project is likely to provide valuable information that will be used to inform adaptive management and restoration actions in fire scarred areas.

## **Review Team Recommendation to Staff**

Fund

## **Review Team Priority**

4 of 4

## **Review Team Recommended Amount**

\$252,269

## **Review Team Conditions**

N/A

**Staff Recommendation**  
**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$252,269

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Central Oregon (Region 4)

**Application Number:** 223-4030-23034

**Project Type:** Monitoring

**Project Name:** Assessing the Long-Term Effectiveness of Juniper Removal on Water and Vegetation Response

**Applicant:** OSU Office of Sponsored Research & Award Admin

**Region:** Central Oregon

**County:** Crook

**OWEB Request:** \$239,694

**Total Cost:** \$323,877

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**Application Description** This project will be conducted at the long-term Camp Creek Paired Watershed Study (CCPWS), 60 miles southeast of Prineville, OR. The CCPWS started in 1994 and has continuously provided essential information regarding the implications of juniper removal in the hydrology and the ecology of the site. Numerous producers, SWCDs, and state and federal agencies use this study as a reference for planning and decision-making regarding juniper removal.

Juniper stand reduction in one of the watersheds in 2005 has resulted in significant and sustained vegetation and water response benefits. However, in recent years we have observed a decline in the hydrologic response, as indicated by lower soil moisture and groundwater levels. Severe drought conditions in several parts of the state and noticed re-establishment of juniper in the treated sites add significant stress to the restored landscape.

At 20 years post-treatment, we are a critical time to improve the understanding of the expected longevity of the treatment and identify critical thresholds that warrant discussing adaptive management strategies to maintain the health of restored ecosystems as we move forward. This project aims to assess the long-term effectiveness of juniper stand reduction on soil, water, and vegetation variables in the treated areas compared to the untreated. We also look to replace failing equipment and install an enhanced sensor network to continue monitoring the hydrological response to juniper removal.

The main partners for this project are the OSU Department of Animal and Rangeland Sciences, Crook County, BLM-Prineville District, Hatfield Hyde Land Trust, and OSU-Extension.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- The proposed project will complement existing vegetation, soil and hydrologic data that has been collected since 1994.
- The applicant has been working on this project since 2013 with the staff that has worked on this project since it began in the 1990's.
- The applicant has the necessary qualifications and experience to complete this project as proposed.
- The applicant is working with many technical experts, landowners, and land managing organizations in the broader geographic area.

- The letters of support demonstrate a high level of engagement to share monitoring results and inform future land management approaches related to juniper management and removal.

### **Monitoring Team Concerns**

- The application poses several monitoring questions and there is a lack of detail, particularly on the data analyses to understand how they will be answered.
- The application doesn't describe how the new data that is being added to the project will be analyzed in the Before After Control Impact (BACI) study design framework.
- It is not clear how they will analyze the data to parse out the impacts of drought and juniper reestablishment.
- The timeline to collect, analyze and report the results is unlikely to be met with data collection and analysis occurring in September 2025 and a final report being completed in the same month.
- It is not clear why the professor's hourly rate is different than what was proposed in a separate application that was submitted.

### **Monitoring Team Comments**

N/A

### **Review Team Evaluation**

#### **Strengths**

- The application provides a clear need to answer key questions about the lifespan of juniper treatments and understand when it is necessary to retreat landscapes to maintain ecological benefits.
- The proposed project is a continuation of an existing monitoring program led by the applicant and partners to assess the long-term effectiveness of juniper removal on water and vegetation response.
- Ecologically important data relevant to managing western juniper-dominated landscapes, including soil type, soil moisture, vegetation type, and moisture uptake, will be evaluated to inform adaptive management, such as the best timing and method for secondary juniper treatment.
- The applicant has capacity and technical capabilities to carry out and report on monitoring results.
- Partner and agency engagement is demonstrated by their involvement in project development and letters of support.

#### **Concerns**

- The two-year project timeline may be too short for answering the proposed monitoring questions. If the two years are similar in weather and precipitation conditions, it may be difficult to determine if the data is indicating a landscape response to juniper treatment or drought conditions.
- It is unclear whether pre-treatment data exists for groundwater that can adequately characterize current conditions and be used to compare with post-treatment impacts on groundwater levels. It is unclear whether the methods can effectively answer the monitoring question related to juniper treatment effects on groundwater conditions.

## **Concluding Analysis**

The proposed monitoring will continue efforts initiated in 1994 to understand Western juniper impacts on hydrology and vegetation. This long-term project has provided a plethora of data that has been published in scientific journals, which are utilized and referenced by land managers. The data will be used to assess the long-term effectiveness of juniper stand reduction in restoring the ecological and hydrological conditions in sagebrush and perennial grass communities and inform decisions related to secondary juniper treatment.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 4

### **Review Team Recommended Amount**

\$239,694

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$239,694

### **Staff Conditions**

N/A

## **Open Solicitation-2023 Spring Offering** Central Oregon (Region 4)

**Application Number:** 223-4031-23055

**Project Type:** Monitoring

**Project Name:** Hood River Basin Partnership  
Restoration Effectiveness Monitoring Plan

**Applicant:** Hood River WS Group

**Region:** Central Oregon

**County:** Hood River

**OWEB Request:** \$77,480

**Total Cost:** \$99,063

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**Application Description** This project will develop a restoration and conservation effectiveness monitoring plan for the Hood River Watershed. The Hood River Basin Partnership (Partnership) seeks to develop a monitoring plan to evaluate the effectiveness of projects identified for implementation in Watershed 2040: Hood River Basin Partnership Strategic Action Plan (SAP). Strategies and projects identified in the SAP range from instream fish habitat and floodplain restoration, to water quality improvement, and restoration of instream flows. Projects occur on both public and private lands with multiple project sponsors and funding opportunities.

The Partnership proposes to develop a robust monitoring plan that will enable members to measure progress in implementing restoration, conservation, and water quality projects, get feedback on restoration techniques, evaluate the effectiveness of cumulative actions in achieving ecological outcomes, and implement adaptive management to improve restoration. Monitoring plan metrics will build off what partners currently collect, and add or refine metrics, methodologies, and spatial and temporal distribution of sites where gaps exist. Pre-existing metrics (e.g., continuous temperature monitoring, stream habitat data) and protocols will be reviewed and described in the monitoring plan to ensure consistent application and transparency. New metrics will provide data that are robust and repeatable and focus upon ecologically relevant outcomes. Additional deliverables will include the development of a relational database, methods and an application for data analysis and display, and programmed tablets for field data collection.

Project partners are the Hood River Watershed Group, the Hood River Soil and Water Conservation District, Confederated Tribes of the Warm Springs, US Forest Service Hood River Ranger District, East Fork Irrigation District, Middle Fork Irrigation District, Farmers Irrigation District, and Oregon Department of Fish and Wildlife.

### **Monitoring Team Evaluation**

#### **Monitoring Team Strengths**

- This project will develop a monitoring plan that will incorporate existing monitoring data in the Hood River basin to evaluate future restoration actions.

- The applicant uploaded a monitoring plan developed by the same contractor to demonstrate how the plan could be organized and the metrics that can be generated to monitor restoration projects.
- The applicant is working with several partners that have developed a Strategic Action Plan to guide future restoration efforts.
- The contractor that provided a cost estimate is highly qualified and has experience developing monitoring plans for organizations and partnerships that are evaluating similar restoration actions in the Pacific Northwest.
- The applicant will engage technical experts that are participating in the Hood River Basin Partnership through two new committees they plan to form, including the habitat and water conservation technical advisory committees.
- The budget was developed with a consultant that has developed a similar monitoring plan recently following a similar process.

### **Monitoring Team Concerns**

- The application lacked detail on many of the tasks to be completed and were not well connected to the contractor's proposal that was uploaded to the application, which contained more details.
- The application proposes to have the contractor develop a single database to handle all the different types of data to be collected. Developing a single database for different types of data can be a big undertaking and it was not clear if the contractor had the necessary qualifications for this task.
- It is unclear if the budget is adequate to incorporate the different existing data sets and build a database that can manage the existing and new data.

### **Monitoring Team Comments**

N/A

### **Review Team Evaluation**

#### **Strengths**

- The application clearly demonstrates a need for developing a monitoring plan to evaluate whether the Partnership's restoration and conservation actions are leading to the intended ecological outcomes.
- Developing a monitoring plan will be cost-effective by reducing redundant efforts by partners in the basin.
- The data analysis protocols are clearly defined and outlined in the application.
- The selected contractor has the appropriate skill set and tools to develop the plan. The example monitoring plan uploaded to the application was completed by the contractor and developed for similar types of restoration work in the Grand Ronde watershed.
- The applicant and partners have a long history of working collaboratively in the Hood River basin.
- Previous project evaluations concerns are addressed by including additional details on data types, database structure, and the Shiny application development, which is an interactive application that summarizes data for sharing with the public.

#### **Concerns**

- There are no concerns.

### **Concluding Analysis**

A monitoring plan will be developed for the Hood River watershed to quantify the effectiveness of restoration actions that will be completed over the next 20 years by the applicant and its partners. Data will be used to evaluate whether the Hood River Basin Partnership's restoration and conservation actions are leading to intended ecological outcomes, including optimal stream flows, quality instream and riparian habitats, and improved water quality for salmon and steelhead at all freshwater life history stages.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 4

### **Review Team Recommended Amount**

\$77,480

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$77,480

### **Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Central Oregon (Region 4)

**Application Number:** 223-4032-23058

**Project Type:** Monitoring

**Project Name:** Response of a threatened amphibian to drought and bullfrog removal

**Applicant:** Trout Unlimited Inc

**Region:** Central Oregon

**County:** Klamath

**OWEB Request:** \$282,149

**Total Cost:** \$352,718

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**Application Description** Drought and invasive species degrade wetlands and impact a variety of aquatic species including the threatened Oregon Spotted Frog (*Rana pretiosa*; OSF). Our proposed project extends data collection via partnership with an engaged landowner, USGS, and Crater Lake National Park (CLNP), to better understand OSF recovery through drought and removal of invasive Bullfrogs (*Lithobates catesbeianus*; BF). The original project (2019-2023) collected data on abundance, distribution, and habitat use by OSF and BF near Fort Klamath, Oregon. This period included 3 of the driest recent years in the area, affording the opportunity to document shifts by OSF from breeding in ponds during early wetter years to breeding in a small perennial creek in dry later years. This response underscores the value of refuge habitats of longer hydroperiods to support drought resilience. Recent pond drying also bolstered BF control success, and along with our removal of >750 BF of multiple life stages, they are nearly eliminated from the site. In this current project we are requesting support to continue removing BF from the one ditch where they remain in this key area - it is the upstream-most breeding in the subdrainage, and restored wetlands further up host only native frogs. We will monitor OSF breeding and adult use of the creek and ponds on the main study site with a focus on documenting recolonization in the ponds they left during the driest years. We will use breeding surveys and mark-recapture sampling of OSF to quantify abundance, survival, and recolonization/dispersal. Extended study capitalizes on an experienced team of partners, a robust multi-year dataset, and the installation by CLNP of 2 pairs of PIT tag antennae along the creek. Data from the passive arrays are yielding valuable insights on timing and intensity of use by tagged OSF in the creek. Results will inform OSF recovery efforts in the Klamath basin and across the species' range.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This project complements the monitoring data that has been collected with an OWEB monitoring grant and leverages the existing PIT tag arrays operated by the National Park Service (NPS).
- The application includes an explanation of how the existing data has been applied to learn which bull frog life cycle stage to focus on to effectively remove them from the study area.
- The applicant applied their knowledge from the previous monitoring effort to guide their proposed objectives.

- The applicant will evaluate the quality and confidence in the data by their ability to detect frogs during the surveys.
- The applicant will follow established methods and quality assurance/quality control procedures that have been established by the USGS.
- The applicant will provide regular updates to the project partners and Oregon Spotted Frog (OSF) working groups in OR and WA.
- The data will be submitted annually to ODFW and to the USFWS as part of the scientific data collecting permit and recovery permit requirements.
- The applicant will produce a technical USGS publication or peer reviewed journal article summarizing results and interpreting the findings.
- The contractor working on this project is highly qualified and has over four years of experience collecting data in the same project area working with the landowner.
- There are several technical experts from the NPS and USGS working on this project.

### **Monitoring Team Concerns**

- The application does not include a thorough explanation of monitoring methods.
- The study design does not explain why bullfrog removal ends in 2026 but field data including OSF breeding survey extends into mid-2028. The study design also does not describe why other OSF sampling including abundance and mark-recapture sampling ends in 2027.
- The application does not describe how the data will be analyzed to understand how each monitoring question will be answered, especially the first question posed in objective one.
- It is not clear how this project will document the water irrigation and use by the landowner to interpret the water year type's influences on habitat conditions, frog abundance and distribution.
- The application mentioned briefly a SNOTEL site on how past years snowpack conditions varied over the last 15 years, but it was not clear how this data will be incorporated into the proposed project.
- The application doesn't describe how the drone data will be collected and how the imagery will be processed to assist in completing objective two.
- The application did not describe how community stakeholders are engaged.
- The contractor's ability to complete final technical reports in a timely manner has been historically unreliable.
- The budget and justification do not include expenses to perform the drone monitoring and it is not clear if there are adequate resources to complete objective 2.
- The field crew expenses are the same across all five years, yet the amount of data collected varies across the project management schedule – for instance only OSF breeding surveys extend into 2028 and all the other work ends in 2027.

### **Monitoring Team Comments**

N/A

### **Review Team Evaluation**

#### **Strengths**

- The proposed project will leverage PIT tag arrays established in Sun and Annie Creeks by Crater Lake National Park staff to track Bull trout. These PIT tag arrays can also be used to record passing tagged frogs. This collaboration will track valuable insights on the timing and intensity of habitat use by tagged Oregon spotted frog (OSF) in the creek.
- Drought conditions have caused OSF to move out of historic pond habitat and into creek habitats. Monitoring information has helped researchers understand the species adaptability. Additional data collection will provide a better understanding of OSF responses to drought and the value of refugia habitat in dry years.
- Bull frogs are almost eliminated from the project area through OWEB funded grants. Additional funding to extend monitoring will capitalize on the robust dataset already collected for OSF and provide information on the effectiveness of removing Bull frogs. The results can be used to inform future management strategies for removing this predator from OSF habitats.
- The applicant and USGS have a long history of working on similar projects in the Klamath basin geography.
- The proposed work addresses conservation actions identified in the 'Conservation Agreement for the Oregon Spotted Frog in the Klamath Basin of Oregon' interagency plan and the Oregon Conservation Strategy.

### **Concerns**

- The project costs seem high for monitoring across a small geographical area.
- It is not clear why additional PIT supplies is needed for this project, information describing supplies needed to achieve the monitoring objectives would be helpful for evaluating whether costs are reasonable and necessary for the proposed work.
- It is unclear if or how engagement with neighboring landowners is occurring, particularly around Bull frog presence on neighboring ranches.

### **Concluding Analysis**

The Oregon spotted frog (OSF) is listed as a threatened species on the Endangered Species Act list and populations in the Upper Klamath Basin are at serious risk. The project will continue to gather valuable data on OSF habitat use during all life stages, and the species adaptability during drought conditions and response to Bull frog removal. Extending the monitoring allows the OSF dataset to reach a duration that will enable a more detailed analysis of OSF survival in relation to drought and reduction in Bull frog distribution that can inform how and where to implement conservation measures.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 4

### **Review Team Recommended Amount**

\$282,149

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$282,149

**Staff Conditions**

N/A

# Eastern Oregon - Region 5 Spring 2023 Funding Recommendations



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**Funding Recommendation**

- Staff Recommendation For Funding (SRF)
- Below Funding Line (BFL)

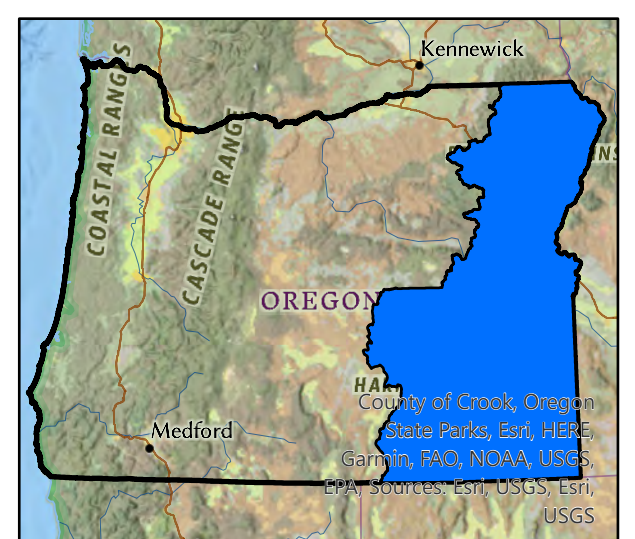
**Previous Grants 1998 - Spring 2022**

- Land Acquisition
- ◆ Restoration
- ▲ Region 5 Cities
- Region 5 Streams
- ▭ OWEB Region 5 Boundary



775 Summer St, NE Suite 360  
 Salem, OR 97301-1290  
 (503) 986-0178  
<https://www.Oregon.gov/OWEB/>

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Oregon Watershed Enhancement Board: Region 5 Restoration, Technical Assistance, Stakeholder Engagement and Monitoring

<b>Region 5 - Eastern Oregon Restoration</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-5030	Powder Basin WC	Johnny-Bill Irrigation Efficiency Project	Irrigation efficiency improvements, streamside fencing, and livestock watering will be installed on a farm near Halfway to benefit bull trout, redband trout, and water quality.	302,006
223-5029	Eagle Valley SWCD	Boulder Flat Irrigation Phase I	An irrigation ditch will be piped and flood irrigation will be converted to sprinkler application to improve water quality and bull trout habitat in Clear and Pine Creeks near Halfway.	275,101
223-5039	OSU Office of Sponsored Research & Award Admin	East Moraine Community Forest (EMCF) Virtual Fence Project	Virtual fence technology will be installed to improve grazing management to restore native vegetation, conserve cultural-use areas important to tribal gatherers, and improve wildlife movement on a community forest near Joseph.	80,112
223-5026	Keating SWCD	Clover Creek Irrigation Round 2	Flood irrigation on sixty-five acres near Keating will be converted to sprinkler application to improve water quality and stream flow in Clover Creek, a tributary to the Powder River.	64,436
223-5027	Keating SWCD	Skinner Irrigation	Water quality and stream flow in Balm Creek near Baker City will be improved by converting sixty-six flood irrigated acres to sprinkler irrigation.	83,920
223-5028	Owyhee WC	Dry Creek Phase III WQ Improvement	Seventy-seven flood irrigated acres will be converted to sprinkler application to improve water quality in Dry Creek, Jordan Creek, and the upper Owyhee River.	51,183
223-5033	Owyhee WC	Willow Water Quality Improvement	Flood irrigation on seventy-six acres near Adrian will be converted to sprinkler application to improve water quality in the Kingman drain, a tributary to the Snake River.	144,305
223-5038	Malheur WC	Pivoting on South Road G revised	Flood irrigation on 122 acres will be converted to sprinkler application to improve water quality in Willow Creek, a tributary to the Malheur River.	116,007
<b>Total Restoration Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>1,117,070</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-5031	Malheur WC	Steely Eyed Water Quality Improvement	Water quality in Bully Creek, a tributary to the Malheur River, will be improved by converting seventy-five flood irrigated acres to sprinkler irrigation.	153,221
223-5034	Malheur WC	In the Hart of Jacobsen Gulch	Twenty flood irrigated acres will be converted to sprinkler application to improve water quality in Jacobsen Gulch, a tributary to the Snake River.	43,655
223-5040	Malheur SWCD	Pounds of Efficiency II	A leaking irrigation delivery pipe will be replaced and forty wheel line irrigated acres will be converted to pivot application to improve water quality in the lower Malheur River.	71,586

<b>Projects Not Recommended for Funding by RRT</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Amount Requested</b>	
223-5032	Owyhee WC	Twirly Bird Water Quality Improvement	123,357	
223-5035	Powder Basin WC	Trout Creek Ecosystem Resiliency	177,776	
223-5036	High Desert Partnership	Malheur Lake and Blitzen River Aquatic Health Project	368,150	
223-5037	Malheur SWCD	The Last Two Pieces of the Puzzle	65,442	

<b>Region 5 - Eastern Oregon Technical Assistance</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-5046	Nez Perce Tribe	Chesnimnus Creek Williams Restoration Design	Construction designs, environmental permitting, and coordination will be completed to implement a 4.5 mile river restoration project on Chesnimnus Creek, an important steelhead bearing stream in Wallowa County.	74,250
223-5045	Owyhee WC	Lava Butte Upland Management Design	Survey and design will be completed for a livestock watering system near Jordan Valley to improve grazing distribution on 7,307-acres important to sage-grouse viability.	30,828

223-5043	Harney County Watershed Council	Cow Creek Floodplain Restoration Project	Preliminary designs will be completed to inform an irrigation water management and stream restoration project that will benefit migratory waterfowl, sage-grouse, and aquatic species.	75,000
<b>Total Technical Assistance Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>180,078</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-5044	Harney County Watershed Council	Soldier Creek Wet Meadow Restoration Project	Preliminary designs will be completed to inform an irrigation water management and stream restoration project that will benefit migratory waterfowl and aquatic species.	75,000

<b>Projects Not Recommended for Funding by RRT</b>				
Project #	Grantee	Project Title		Amount Requested
223-5041	Harney SWCD	Colony Creek Flood Irrigation		73,939
223-5042	Harney SWCD	Beaubien Diversion Structure		75,000

<b>Region 5 - Eastern Oregon Stakeholder Engagement</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-5051	Malheur WC	Engagement with Water	Malheur River watershed producers and irrigation districts will be engaged to develop water quality improvement, bull trout conservation, and streamside vegetation enhancement projects identified in local conservation plans.	148,267
<b>Total Stakeholder Engagement Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>148,267</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount
None				

<b>Projects Not Recommended for Funding by RRT</b>				
Project #	Grantee	Project Title		Amount Requested
None				

<b>Region 5 - Eastern Oregon Monitoring</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-5047	Malheur WC	Checking On Things: WQ Monitoring	Water quality monitoring will continue in the lower Malheur and Owyhee river basins to track past project accomplishments and inform upcoming water quality improvement work.	258,826
223-5048	Powder Basin WC	Powder Basin Macroinvertebrate Status and Trend Monitoring	Aquatic insect monitoring in Baker County will continue to identify impaired water quality, evaluate streams in need of restoration, and provide effectiveness data for prior implemented restoration work.	38,111
223-5049	Audubon Society of Portland	Ecological linkages between birds, water patterns, and vegetation	The relationships between nesting and migratory shorebirds, seasonal water patterns, and vegetation will be monitored in the Harney Basin to inform upcoming restoration work.	132,908
<b>Total Monitoring Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>429,845</b>

Projects Recommended but Not Funded in Priority Order				
Project #	Grantee	Project Title	Brief Description	Amount
None				

Projects <i>Not Recommended</i> for Funding by RRT			
Project #	Grantee	Project Title	Amount Requested
None			

<b>Region 5 Total OWEB Staff Recommended Board Award</b>	<b>1,875,260</b>
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<b>Region 1 - 6 Grand Total OWEB Staff Recommended Board Award</b>	<b>12,461,865</b>
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## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5026-22913

**Project Type:** Restoration

**Project Name:** Clover Creek Irrigation Round 2

**Applicant:** Keating SWCD

**Region:** Eastern Oregon

**County:** Baker

**OWEB Request:** \$64,436

**Total Cost:** \$124,004

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**Application Description** Located within the Keating Soil and Water Conservation District northeast of Baker City, as well as within the Lower Powder Strategic Implementation Area boundary, the Clover Creek Irrigation Round 2 project will address ongoing water quality and water use efficiency concerns in Clover Creek, a direct tributary to the Powder River.

Currently, 65 acres of agricultural farm ground is flood irrigated through a series of earthen ditches diverted out of Clover Creek, a perennial stream. Although it can be effective, flood irrigation at the project site contributes sediment, debris, organic matter, and inorganic matter directly into Clover Creek, negatively impacting water quality throughout the Powder River Watershed.

To mitigate the water quality concerns and to improve on-farm irrigation efficiency, the Clover Creek Irrigation Round 2 project is proposing to install one center pivot irrigation system, eliminating flood irrigation and tailwater at the project site. This project is a continuation of large grant #220-5026, Clover Creek Irrigation, which was approved for funding in the fall of 2019. The landowner was ready to implement the project in 2020; however, with the rapidly rising costs of material and fuel, we soon discovered that the original project budget would not be sufficient to complete the project in its entirety. Round 2 will complete the project by installing the pivot with a flow meter, mainline, bubbler, and new steel head gate. Project partners include the Keating SWCD and the landowner.

### Review Team Evaluation

#### Strengths

- The application clearly describes the irrigation conservation actions proposed on this 65-acre farm field, including previous delays in the project history.
- The maps uploaded with the application show that the work is within an Oregon Department of Agriculture (ODA) Strategic Implementation Area (SIA) and Oregon Department of Environmental Quality (DEQ) conducts water quality monitoring in the area, demonstrating this water quality improvement work is a priority for both agencies.
- Converting from flood to sprinkler irrigation will have water quality and quantity benefits to Clover Creek and the Powder River and both are priority streams for conservation in the Keating Valley.

- The application identifies three restoration alternatives, and the applicant will implement the appropriate alternative due to increased water savings, cost effectiveness, and field shape.
- When installed, this irrigation conversion may be a catalyst for other conservation projects in the Lower Powder SIA, which is an area where landowners have not completed many conservation practices in the past.
- The landowner is actively working to treat weeds, improve riparian conditions, and improve irrigation practices on their property indicating the irrigation system is likely to be implemented and operated as proposed.
- The project team, including the landowner, have the capacity to implement and maintain the project as proposed.
- The Keating SWCD has a proven track record of managing and completing projects as proposed and according to the project schedule.

### **Concerns**

- This application is a phase 2 project to complete work that was proposed in phase 1 and due to pipe price inflation in 2019 the original budget is not sufficient to complete the proposed work. The phase 2 budget does not clearly describe the new total project cost and while the site visit clarified the total cost is \$110,411, this information is lacking in the application.

### **Concluding Analysis**

Converting sixty-five acres from flood to sprinkler irrigation in the Keating Valley will reduce water diversion for current crop production and improve water quality in Clover Creek. The Partnership of the Keating SWCD and the landowner working to improve water resource conditions is in support of ODA's Lower Powder SIA program and may encourage additional on-farm conservation in the area. Irrigation water management is a top priority for the area and likelihood of success is high.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

4 of 11

### **Review Team Recommended Amount**

\$64,436

### **Review Team Conditions**

N/A

### **Staff Recommendation**

### **Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$64,436

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5027-22943

**Project Type:** Restoration

**Project Name:** Skinner Irrigation

**Applicant:** Keating SWCD

**Region:** Eastern Oregon

**County:** Baker

**OWEB Request:** \$83,920

**Total Cost:** \$183,463

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**Application Description** The Skinner Irrigation project is located within the Keating SWCD and within the Lower Powder Strategic Implementation Area (SIA); near Baker City, Oregon. This project will address 66 acres of flood-irrigated pasture ground that is currently causing erosion and untreated runoff on uneven terrain. Sourced from Balm Creek, which is in the Lower Powder SIA focus area, an irrigation ditch transports water to the project site where it is then diverted into a series of earthen ditches to irrigate the property. As flood irrigation water is “pushed” across the field it collects sediment, debris, E.coli, and organic and inorganic material adding it back into Balm Creek and ultimately into the Powder River. The completion of this project will convert 66 acres from flood irrigation to sprinkler by installing one center pivot. The landowner realized these water quality issues and is partnering with the Keating SWCD to mitigate these concerns.

### Review Team Evaluation

#### Strengths

- The application clearly describes the irrigation conservation actions proposed on this 66-acre farm field and review concerns from the previous application are addressed in this application.
- The maps uploaded with the application show that the work is within an Oregon Department of Agriculture (ODA) Strategic Implementation Area (SIA) and Oregon Department of Environmental Quality (DEQ) conducts water quality monitoring in the area, demonstrating this water quality improvement work is a priority for both agencies.
- Converting from flood to sprinkler irrigation will have water quality and quantity benefits to Balm Creek and the Powder River and both are priority streams for conservation in the Keating Valley.
- A conversion from flood to pivot irrigation will use less water at the point of application in the field for current crop production and may result in more water left in Balm Creek.
- When installed, this irrigation conversion may be a catalyst for other conservation projects in the Lower Powder SIA, which is an area where landowners have not completed many conservation practices in the past.
- The project team, including the landowner, have the capacity to implement and maintain the project as proposed.
- The Keating SWCD has a proven track record of managing and completing projects as proposed and according to the project schedule.

#### Concerns

- No concerns were expressed at review.

### **Concluding Analysis**

Converting sixty-six acres from flood to sprinkler irrigation in the Keating Valley will reduce water diversion for current crop production and improve water quality in Balm Creek. The Partnership of the Keating SWCD and the landowner working to improve water resource conditions is in support of ODA's Lower Powder SIA program and may encourage additional on-farm conservation in the area. Irrigation water management is a top priority for the area and likelihood of success is high.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

5 of 11

### **Review Team Recommended Amount**

\$83,920

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$83,920

### **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5028-22957

**Project Type:** Restoration

**Project Name:** Dry Creek Phase III WQ Improvement

**Applicant:** Owyhee WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$51,183

**Total Cost:** \$170,644

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**Application Description** The Dry Creek III Water Quality Improvement project is located 2 miles South of Arock. The project area consists of 77 acres of hay/pasture cropland irrigated with gated pipe. Tailwater containing sediment, nutrients and bacteria flow off the project area into Dry Creek, Jordan Creek, and the Upper Owyhee River. The proposed work includes converting 77 acres from gated pipe to sprinkler irrigation through the installation of 1 pivot system, 8-inch pipeline and required electrical connections. Project partners include the landowner, Owyhee Watershed Council and Agrilines Irrigation.

### Review Team Evaluation

#### Strengths

- The application has clearly defined project goals and objectives.
- Maps included in the application provide ample detail for understanding the project vicinity and proposed restoration components, along with its proximity to prior implemented projects.
- Pivot irrigation is appropriate for the topography in the project area. The irrigation system will serve as a demonstration to other landowners in the area and may encourage future water conservation projects.
- The application identifies four restoration alternatives, and the applicant will implement the appropriate alternative based on field shape and economic feasibility.
- The new irrigation system will reduce sediment, nutrient, and bacteria runoff from the project site, and improve water quality in Dry Creek, Jordan Creek, and the Upper Owyhee River.
- The project team, including the landowner who has completed several conservation projects on the farm, have the capacity to implement and maintain the project as proposed.
- The Owyhee Watershed Council has a proven track record of managing and completing projects as proposed and according to the project schedule.

#### Concerns

- The application identifies benefit to sage-grouse, and it is unclear how the proposed work will benefit this species. The proximity of sage-grouse leks to the work area is not identified and this benefit may be overstated.

### Concluding Analysis

Converting 104 flood irrigated acres to pivot irrigation will reduce irrigation wastewater in the project area and reduce sediment, nutrient, and bacteria runoff. The project is likely to succeed in continuing work in the Jordan Valley area that implements Oregon Department of Agriculture (ODA) and the Department of Environmental Quality (DEQ) water quality improvement objectives for the Upper Owyhee River.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

6 of 11

**Review Team Recommended Amount**

\$51,183

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$51,183

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5029-22958

**Project Type:** Restoration

**Project Name:** Boulder Flat Irrigation Phase I

**Applicant:** Eagle Valley SWCD

**Region:** Eastern Oregon

**County:** Baker

**OWEB Request:** \$275,101

**Total Cost:** \$491,477

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**Application Description** The Boulder Flat Irrigation Phase I Project is located in northeast Baker County, within the Eagle Valley SWCD boundary, approximately five miles north of Halfway, Oregon. The project site is situated between the main Pine and Clear Creek and represents a high-priority area for bull trout recovery actions in Pine Creek Basin; specifically for water quality and fish habitat improvements.

The project site currently hosts flood irrigation practices on 249 acres of pasture/hay ground. All tailwater from the flood-irrigated pasture empties into Clear Creek and then into Pine Creek a few short miles downstream. Flood irrigation is inefficient, and the resulting runoff contains excess nutrients, sediment, E. Coli, debris, and organic matter that are negatively impacting water quality and critical native fish habitat downstream from the site.

The Phase I proposed project will convert 81 acres from flood to a more efficient sprinkler irrigation method by installing two center pivots, one new “community” headbox, two off-channel watering troughs, and 8,500 feet of pipe to convert from an open earthen ditch to a closed pipe system. The landowner has already applied for funding for part of this project through Idaho Power’s Pine Creek Water Efficiency Program. The project was reviewed by a 12-member panel and awarded funding to be used towards an expanded project detailed in this application. The landowner has partnered with Eagle Valley SWCD in this application and expanded the project to provide additional benefits to water efficiency and quality Clear Creek and Main Pine Creek.

### Review Team Evaluation

#### Strengths

- The application has clearly defined project goals and objectives.
- Maps and photos included in the application provide ample detail for understanding the project vicinity and proposed restoration components, along with its proximity to prior implemented projects.
- The application identifies two restoration alternatives, and the applicant will implement the appropriate alternative based on topography and cost effectiveness.
- The proposed project will address Oregon Department of Environmental Quality (DEQ) and Oregon Department of Agriculture (ODA) priorities for improving water quality and the restoration approach comprehensively addresses water quality, water quantity, soil conservation and priority bull trout habitat.
- The letter of support from five landowners demonstrates that stakeholders are engaged in the project.

- The project has secured funding from Idaho Power demonstrating applicant engagement with appropriate partners to complete the work.
- The project team, including the landowner, has the capacity to implement and maintain the project as proposed.
- The Eagle Valley SWCD has a proven track record of managing and completing projects as proposed and according to the project schedule.
- The work completed in this phase 1 project will contribute to work in an upcoming phase and this is a cost-effective approach.
- Project costs are commensurate with the anticipated watershed benefits resulting from water conservation for current crop production and improved water quality.

### **Concerns**

- The application focuses on benefits to water conservation and water quality improvement and does not describe how this conservation work contributes to bull trout habitat improvement, which is a species prioritized for restoration in the Eagle Valley.

### **Concluding Analysis**

Converting eighty-one flood irrigated acres to pivot irrigation will reduce irrigation wastewater in the project area and reduce sediment, nutrient, and bacteria runoff. The project is likely to succeed in continuing work in the Eagle Valley that implements ODA and DEQ water quality improvement objectives.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 11

### **Review Team Recommended Amount**

\$275,101

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

**Staff Recommended Amount**

\$275,101

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5030-22966

**Project Type:** Restoration

**Project Name:** Johnny-Bill Irrigation Efficiency Project

**Applicant:** Powder Basin WC

**Region:** Eastern Oregon

**County:** Baker

**OWEB Request:** \$302,006

**Total Cost:** \$400,006

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**Application Description** The Johnny-Bill Irrigation Efficiency Project is located within the Powder Basin in the Pine Creek Watershed. The project site is in Baker County, approximately 1.8 miles Northeast of Halfway, Oregon.

This project encompasses 135 acres of flood irrigated hay and pastureland. Flood irrigation on this property is inefficient due to deteriorated ditches which have widened and incised. Flood tail waters run directly into East Pine Creek, carrying sediment and waste. Water quality and quantity are both concerns for East Pine Creek. East Pine Creek is 303(d) listed as impaired for temperature year-round, supports a small population of federally threatened Bull Trout, and supports native Redband Trout.

The goal of this project is to improve water quantity and quality in East Pine Creek by converting 135-acres of flood irrigation to sprinkler irrigation. 1 half center pivot will be installed in conjunction with 5 wheel lines, and a mainline pipe will be installed to facilitate the sprinkler system. Sprinkler systems will improve water efficiency, allowing more water to remain in East Pine Creek throughout the irrigation season, reducing water temperature and improving fish habitat. Sprinkler irrigation will improve water quality by eliminating flood tail water runoff into the creek. Riparian fencing will be installed on unfenced portions of the creek and off-channel watering sites will be developed to further eliminate erosion, sedimentation, and to protect riparian vegetation.

The Johnny-Bill Irrigation Efficiency project is a collaborative endeavor between the landowners, Idaho Power Company, and the Powder Basin Watershed Council, and potentially OWEB. This project is part of Idaho Power's 2023 Water Efficiency Program (WEP). This project was submitted to the WEP Review Team for evaluation and was elected for funding in March 2023. This will be the 4th WEP project undertaken by the landowner in partnership with Idaho Power.

### Review Team Evaluation

#### Strengths

- The application has clearly defined project goals and objectives.

- Maps and photos included in the application provide ample detail for understanding the project vicinity and proposed restoration components, along with its proximity to prior implemented projects.
- The application references survey data for redband and bull trout in the project reach and a grazing management plan is uploaded with the proposal, making it clear how the project area will be managed to improve fisheries habitat post implementation.
- The application identifies three restoration alternatives, and the applicant will implement the appropriate alternative based on ranch grazing rotation, topography, adjacent ranch infrastructure, and cost effectiveness.
- Improved irrigation methods, additional fencing, and a livestock watering system are needed on the property to manage livestock and reduce irrigation wastewater. The proposed work will contribute to improved aquatic habitat and water quality in the project reach.
- The proposed project will address Oregon Department of Environmental Quality (DEQ) and Oregon Department of Agriculture (ODA) priorities for improving water quality and the restoration approach is comprehensive addressing water quality, water quantity, soil conservation and priority bull trout habitat.
- The project has secured funding from Idaho Power demonstrating applicant engagement with appropriate partners to complete the work.
- The project team, including the landowner who has completed previous OWEB-funded restoration projects, has the capacity to implement and maintain the project as proposed.
- The Powder Basin Watershed Council has a proven track record of managing and completing projects as proposed and according to the project schedule.
- Project costs are commensurate with the anticipated watershed benefits resulting from water conservation and improved water quality.

### **Concerns**

- Fence maintenance is identified as match in the budget, but this work is not described in the application, and it is unclear how the maintenance will contribute to the longevity of this restoration investment.

### **Concluding Analysis**

Converting 135 flood irrigated acres to sprinkler irrigation and improving livestock management on the property will reduce irrigation wastewater and reduce sediment, nutrient, and bacteria runoff. The project is likely to succeed in continuing work in the Eagle Valley that implements ODA and DEQ water quality improvement objectives, as well as bull trout recovery for East Pine Creek near Halfway.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 11

### **Review Team Recommended Amount**

\$302,006

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$302,006

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5031-22981

**Project Type:** Restoration

**Project Name:** Steely Eyed Water Quality Improvement

**Applicant:** Malheur WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$153,221

**Total Cost:** \$309,978

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### Application Description

1) The project is located in the Vale Bench priority area, roughly 10 air miles from Vale.

2) Water quality improvement in the Malheur Basin is one of the top restoration priorities. Water quality improvement is achieved through on-farm irrigation infrastructure improvements and management. Malheur Watershed Council in cooperation with irrigation districts and private landowners has been systematically improving water quality through irrigation system conversions over the past 20 plus years across the Malheur Basin. This is one of our first projects in our new priority area in the Vale Bench. We were just successful in obtaining a BOR WaterSmart grant to pipe canals in this area.

3) We plan to improve water quality in Bully Creek and the Malheur River by converting 75 acres of flood irrigated pasture and hay fields to sprinkler irrigation by installing:

- Pivot 1
- Pivot 2
- 20 HP pump
- 5 HP pump
- pivot tie in (2)
- pump station 1
- pump station 2
- electrical allowance
- 2400 feet of conduit
- 2400 feet of 6-inch pipe
- 7624 feet 4-inch pipe
- 1180 feet 10-inch pipe
- 8224 feet trench lay and back fill
- 19 Risers
- 6 gun carts
- fitting allowance
- Flow meter

- Idaho Power hook up
- Water Right Transfer

4) Project partners include the landowners, Vale Irrigation District, NRCS and the Malheur WSC.

## **Review Team Evaluation**

### **Strengths**

- Pivot irrigation is appropriate for the topography in the project location. The irrigation system will serve as a demonstration to other landowners in the area and may encourage future water conservation projects.
- The new irrigation system will reduce sediment, nutrient, and bacteria runoff from the project site, and improve water quality in Bully Creek and the Malheur River.
- Reducing sediment, nutrient, and bacteria laden runoff from the property will contribute to water quality benefits to the Malheur Basin, and flood to sprinkler irrigation conversion is a Oregon Department of Environmental Quality (DEQ) Total Maximum Daily Load (TMDL) action plan priority.
- The applicant has secured funding from the BOR Water Smart program to implement irrigation water management work in the Vale Bench, demonstrating that the applicant is engaging with appropriate partners to implement water conservation.
- The project team has the capacity to implement and maintain the project as proposed.
- The Malheur Watershed Council has a proven track record of managing and completing projects as proposed and according to the project schedule.

### **Concerns**

- The application is overly succinct and lacks necessary detail including why two pumps are necessary to operate the pivot irrigation system, how the recently acquired BOR Water Smart funds will contribute to upcoming work in the Vale Bench priority area, and why this property is strategic in the Vale Bench.
- A brief alternative analysis is included in the application, but it does not describe the selection process or why the proposed alternative is selected.
- The project goal and objective are not clearly stated, and information is lacking about how the restoration work will be accomplished, making it difficult to determine if the project will be implemented using clearly defined methods appropriate for addressing the watershed problem.

### **Concluding Analysis**

Converting 75 irrigated acres from flood to sprinkler application will reduce irrigation wastewater. The proposed irrigation conversion in the Vale Bench area will further efforts to implement Oregon Department of Agriculture and DEQ water quality improvement objectives by reducing sediment, nutrient, and bacteria delivery to Bully Creek and the Malheur River. The application narrative lacks necessary details, and, if resubmitted, the applicant is encouraged to write applications that fully answer each application question and address the noted concerns.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

9 of 11

**Review Team Recommended Amount**

\$153,221

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5032-22982

**Project Type:** Restoration

**Project Name:** Twirly Bird Water Quality Improvement

**Applicant:** Owyhee WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$123,357

**Total Cost:** \$158,678

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**Application Description** The Twirly Bird Water Quality Improvement project is located 7.5 miles South of Adrian near the Oregon/Idaho Border. The project area consists of 21 acres of gated pipe irrigated hay/pasture farmland. Tailwater containing sediment, nutrients and bacteria flow off the project into the 5.7 Canal and the Snake River. The proposed work includes converting 21 acres from gated pipe irrigation to sprinkler irrigation through the installation of 36 solid set sprinklers and all required water conveyance and electrical infrastructure. Project partners include the landowner, Owyhee Watershed Council and Agrilines Irrigation.

### Review Team Evaluation

#### Strengths

- The application has clearly defined project goals and objectives.
- Maps included in the application provide ample detail for understanding the project vicinity and proposed restoration components.
- Solid set irrigation is appropriate for the topography in the project area. The irrigation system may serve as a demonstration to other landowners in the area and may encourage future water conservation projects.
- The application identifies four restoration alternatives demonstrating the project team considered other options and the selected alternative is based on topography, field shape, and cost effectiveness.
- The new irrigation system will reduce sediment, nutrient, and bacteria runoff from the project site.
- The project team has the capacity to implement and maintain the project as proposed.
- The Owyhee Watershed Council has a proven track record of managing and completing projects as proposed and according to the project schedule.

#### Concerns

- The irrigation delivery ditch is in poor condition and carries sediment, nutrients, and bacteria to the project site and the Snake River. It is not clear if converting from flood to sprinkler irrigation will reduce contaminated irrigation wastewater contributions to the Snake River.
- The project site is not close to other water conservation projects, is not in a water quality improvement priority area, and the work appears opportunistic rather than strategic.
- Project costs are not commensurate with the anticipated watershed benefits resulting from water conservation and improved water quality.

## **Concluding Analysis**

Converting Twenty-one flood irrigated acres to sprinkler irrigation will reduce irrigation wastewater and reduce sediment, nutrient, and bacteria runoff at the project site. While water quality benefits will be realized at the project site, the delivery ditch continues past this property and contributes contaminated wastewater to the Snake River, and the likelihood of water quality improvement in the basin is unknown.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

### **Staff Recommended Amount**

\$0

### **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5033-22983

**Project Type:** Restoration

**Project Name:** Willow Water Quality Improvement

**Applicant:** Owyhee WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$144,305

**Total Cost:** \$303,792

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**Application Description** The Willow Water Quality Improvement project is located 1 mile NW of Adrian along Mendiola Road. The project area consists of 76 acres of furrow irrigated row crop farmland. Tailwater containing sediment, nutrients and bacteria flow off the project area through a small drainage, into the Kingman Irrigation Drain and the Snake River. The proposed work includes converting 76 acres from furrow irrigation to sprinkler irrigation through the installation of 2 pivot systems, solid set handlines in pivot corners and all required water conveyance and electrical infrastructure. Project partners include the landowner, Owyhee Watershed Council and Agrilines Irrigation.

### Review Team Evaluation

#### Strengths

- The application has clearly defined project goals and objectives.
- Maps included in the application provide ample detail for understanding the project vicinity and proposed restoration components, along with its proximity to prior implemented projects.
- Pivot irrigation is appropriate for the topography in the project area. The irrigation system will serve as a demonstration to other landowners in the area and may encourage future water conservation projects.
- The application identifies four restoration alternatives, and the applicant will implement the appropriate alternative based on cost effectiveness, crop rotation, and water quality improvement outcome.
- The new irrigation system will reduce sediment, nutrient, and bacteria runoff from the project site, and improve water quality in Kingman Drain and the Snake River.
- Reducing sediment, nutrient, and bacteria laden runoff from the property will contribute to water quality benefits to the Snake River, and flood to sprinkler irrigation conversion is a DEQ Total Maximum Daily Load (TMDL) action plan priority.
- The project team, including the landowner, have the capacity to implement and maintain the project as proposed.
- The Owyhee Watershed Council has a proven track record of managing and completing projects as proposed and according to the project schedule.
- Project costs are commensurate with the anticipated watershed benefits resulting from water conservation and improved water quality.

#### Concerns

- A large terrace will be removed to accommodate pivot #2 and this cost is not included in the application budget.

### **Concluding Analysis**

Converting seventy-six flood irrigated acres to pivot irrigation will reduce irrigation wastewater in the project area and reduce sediment, nutrient, and bacteria runoff. The project is likely to succeed in continuing work in the Adrian area that implements ODA and the DEQ water quality improvement objectives for the Snake River.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

7 of 11

### **Review Team Recommended Amount**

\$144,305

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$144,305

### **Staff Conditions**

N/A

## **Open Solicitation-2023 Spring Offering** Eastern Oregon (Region 5)

**Application Number:** 223-5034-22984

**Project Type:** Restoration

**Project Name:** In the Hart of Jacobsen Gulch

**Applicant:** Malheur WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$43,655

**Total Cost:** \$91,603

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### **Application Description**

1) The project site is about 5 miles from Ontario. It is within the Jacobsen Gulch priority area and very near the Snake River.

2) Water quality improvement in the Malheur Basin is one of the top restoration priorities for the Malheur Watershed Council. Willow Creek has been a focus area for the Council and other agencies since the late 1990s. Improved water quality is achieved through on-farm irrigation infrastructure improvements and management. The Council in cooperation with irrigation districts and private landowners has been systematically improving water quality through irrigation system conversions over the past 20 plus years across the Malheur Basin. This project complements several recently completed and on-going water quality improvement projects in the Jacobsen Gulch priority area.

3) The proposed project will convert 20 acres of flood irrigated fields to sprinklers by installing:

- One 15 HP pump
- Electrical panel for the pump
- One filter
- One flow meter
- 600 feet of 6-inch 125# pipe
- 800 feet of 4-inch 125# pipe
- 400 feet of 3-inch 125# pipe
- 60 feet of 10-inch 80# pipe
- 1,800 feet dig lay and backfill pipe
- Misc valves and tees
- 1,360 feet of wheel lines
- Handlines to irrigate poplar trees and corners
- Idaho Power hook-up
- Water Right Transfer

4) Partners are the landowner, NRCS, Owyhee Irrigation District and the Malheur WSC.

## **Review Team Evaluation**

### **Strengths**

- Water quality monitoring data collected in Jacobsen Gulch is summarized and uploaded with the application, clarifying the strategic nature of the proposed work in the Jacobsen Gulch priority area.
- Maps included in the application provide ample detail for understanding the project vicinity and proposed restoration components, along with its proximity to prior implemented projects.
- Hand and wheel line sprinkler irrigation is appropriate for the topography in the project location. The irrigation system will serve as a demonstration to other landowners in the area and may encourage future water conservation projects.
- The poplars on the property, while not native or in a natural configuration, provide limited wildlife habitat and the irrigation system will maintain this valuable habitat until the trees are harvested.
- The new irrigation system will reduce sediment, nutrient, and bacteria runoff from the project site, and improve water quality in the Snake River.
- Irrigation water management in Jacobsen Gulch is a priority for the Malheur Watershed Council, the Owyhee Irrigation District, and the Natural Resources Conservation Service (NRCS) demonstrating the strategic nature of the proposed work.
- Reducing sediment, nutrient, and bacteria laden runoff from the property will contribute to water quality benefits to the Snake Basin, and flood to sprinkler irrigation conversion is a DEQ Total Maximum Daily Load (TMDL) action plan priority.
- The project team has the capacity to implement and maintain the project as proposed.
- The Malheur Watershed Council has a proven track record of managing and completing projects as proposed and according to the project schedule.

### **Concerns**

- The poplar grove will be irrigated with hand lines, and it is questioned if this is a viable irrigation method in a planted forest.

### **Concluding Analysis**

Converting twenty irrigated acres from flood to sprinkler application will reduce irrigation wastewater. While limited in scale, the proposed irrigation conversion in the Jacobsen Gulch priority area will further efforts to implement ODA and DEQ water quality improvement objectives by reducing sediment, nutrient, and bacteria delivery to the Snake River.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

10 of 11

### **Review Team Recommended Amount**

\$43,655

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund; falls below staff-recommended funding line

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5035-22986

**Project Type:** Restoration

**Project Name:** Trout Creek Ecosystem Resiliency

**Applicant:** Powder Basin WC

**Region:** Eastern Oregon

**County:** Baker

**OWEB Request:** \$177,776

**Total Cost:** \$244,508

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**Application Description** This project is on Trout Creek in the North Fork Burnt River watershed, approximately 45 miles southwest of Baker City, southeast of Whitney Valley on lands administered by the Whitman Ranger District of the Wallowa Whitman National Forest. Watershed issues addressed are: 1) degraded groundwater recharge and water storage functions, 2) limited water table maintenance supporting narrower riparian vegetation communities, 3) limited zones for water quality filtering, and 4) excessive bank erosion resulting in streambeds with abundant fine silts. Throughout the 2.5-mile project reach, the creek is incised, not connected with its broad historic floodplain, and beaver are not present. The result is a stream with an altered potential riparian vegetation community including upland species, simplified aquatic habitat and one that is more efficient at routing water out of the system. Both Trout Creek and the North Fork Burnt River experience very low summer base flows and water temperatures that exceed state water quality standards (303d water quality impaired for water temperature). We propose to utilize low-tech process-based restoration techniques (beaver dam analogues – BDAs) to reconnect Trout Creek with its historic floodplain and facilitate restoration of the native willow community by fencing to exclude ungulates from five one-acre protection areas and developing upland water sources for domestic livestock. This is a collaborative project between the Powder Basin Watershed Council and Wallowa Whitman National Forest. OWEB funds will be used to support PBWC staff, pay work crews to implement the work, contract upland water developments, and purchase fencing materials, PPE, equipment and tools.

### Review Team Evaluation

#### Strengths

- The applicant proposes to use low-tech process-based restoration techniques including beaver dam analogs (BDA) and post assisted log structures (PALS) to improve water storage function, riparian vegetation communities, and water quality on Trout Creek and these methods are appropriate for the valley type.
- Upland livestock watering systems will be installed providing infrastructure to help keep domestic livestock away from Trout Creek and increase the chance of stream restoration success.
- The project concept is based on a similar project on Camp Creek in Baker County that is being administered by the Powder Basin Watershed Council.

## Concerns

- The project does not have a design making it difficult to determine if project objectives will be met, if implementation methods are appropriate, or if the project is ready for implementation.
- The project will require environmental compliance review and construction permits from several agencies. The proposed work is in a conceptual phase making it difficult to determine if the environmental compliance package is likely to be achieved.
- It is unclear in the application how many livestock watering systems will be installed or the location of each system making it difficult to determine the effectiveness of this livestock management tool.
- Conditions upstream of the project area are not clearly described in the application and it is difficult to determine how the proposed work may be affected by stream and floodplain processes upstream.
- The youth labor force proposed to construct the project is an untested model at the time of this application. The application does not describe the scope of work to be completed by youth crews, therefore it is unknown if the work can be completed as proposed.

## Concluding Analysis

The Powder Basin Watershed Council proposes to restore a 2.5-mile reach of the Trout Creek aquatic and valley bottom ecosystem 45-miles southwest of Baker City. The work will provide ecosystem services by distributing cold and clean water temporally and spatially, providing abundant quality fish and wildlife habitat, and increasing resiliency to wildland fire. The application lacks design and completed environmental compliance, the youth labor force model is untested, and the project is not ready for implementation. If the application is resubmitted the applicant is advised to address the concerns identified in this evaluation.

### Review Team Recommendation to Staff

Do Not Fund

### Review Team Priority

N/A

### Review Team Recommended Amount

\$0

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5036-22987

**Project Type:** Restoration

**Project Name:** Malheur Lake and Blitzen River  
Aquatic Health Project

**Applicant:** High Desert Partnership

**Region:** Eastern Oregon

**County:** Harney

**OWEB Request:** \$368,150

**Total Cost:** \$492,450

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**Application Description** The project will take place in the Harney Basin, within the Donner und Blitzen (Blitzen) river watershed. The project proposes to install an electronic fish barrier (E-barrier) near the mouth of the Blitzen river where it reaches Malheur lake. The goal of the project is to assist the management of invasive common carp (carp) that are negatively effecting water quality in the Malheur lake and the Blitzen river. During low water years (~6 out of 10 years) This barrier will be used to stop carp from 1) spawning in the river which is their only viable location on dry years. 2) using the river as a refugia when the lake water quality, depth, ice make it uninhabitable to carp. 3) Use the electronic barrier to easily capture and remove huge amounts of carp from the watershed. The project will require design, installation, and effectiveness monitoring of the proposed barrier. Project partners will include Malheur National Wildlife Refuge, High Desert Partnership, Oregon Department of Fish and Wildlife and Friends of the Malheur National Wildlife Refuge.

### Review Team Evaluation

#### Strengths

- Carp removal from the Malheur Lake and Blitzen River is an effective method to treat the cause of poor water quality in the system, improve submergent and emergent aquatic vegetation, and improve Pacific Flyway migratory bird habitat.
- The partnership has successfully trapped and removed large amounts of carp from the system in the past and these removal efforts have led to improved lake habitat conditions.

#### Concerns

- The application does not clearly state the project objectives or provide information on how the objectives will be met. The narrative does not describe how the barrier will be powered, operation procedures are not included, it is unclear who will operate the system, and the barrier design is conceptual and based on communication with the manufacturer from two years ago.
- The project schedule shows many steps to implement the project, but the proposal narrative does not describe each step and it is unclear if the applicant will use clearly defined methods appropriate for addressing the carp problem in the system.
- Carp removal alternatives are not included in the application narrative, and it is unclear if the proposed barrier is a viable and preferred solution.

- It is unclear why some adult carp will be PIT tagged, why adult carp tracking through the barrier system is necessary, or how this method provides benefit to the project.
- Given the lack of proposal clarity and uncertain technical soundness it is unclear whether the proposed solution is cost effective in terms of watershed benefits.
- The budget lacks sufficient detail to determine whether costs are reasonable.

### **Concluding Analysis**

The High Desert Partnership proposes to install a carp barrier on the Blitzen River near its confluence with Malheur Lake. The barrier will keep adult carp from entering the Blitzen River system and this will limit carp spawning during low water years when the river is the only viable spawning area. The application lacks elements essential to determine the likelihood of project success, and if the application is resubmitted the applicant is advised to address the concerns identified in this evaluation.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

### **Staff Recommended Amount**

\$0

### **Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5037-22990

**Project Type:** Restoration

**Project Name:** The Last Two Pieces of the Puzzle

**Applicant:** Malheur SWCD

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$65,442

**Total Cost:** \$110,874

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**Application Description** 1. The proposed project is located approx. 3 miles northwest of Vale and less than 3.5 miles from the Malheur River.

2. Poor water quality is the primary limiting factor for the Malheur River. The project will address water quality improvement for on-farm system. This project will take advantage of the pressurized system already in place on the farm.

3. Pasture Conversion -10 acre

1380 feet of 6 inch 100#Pip Pipe 720 feet of 4" inch 125#IPS Pipe 600 feet 3 inch 125# IPS Pipe  
2700 feet Dig/Lay Backfill

15 Riser Assembly w/ Senniger 8025 Gun 1 Manifold & Tie In

1257 ft of old 2 strand boundary fence removed on west side of pasture.

2626 ft of new 6 strand fence for three sides

230 lbs grass seed

Small Pivot-3 acre

540 feet 4" 125# Pip Pipe

1300 feet #4 Cable in Conduit w/Controls 1300 feet Dig/Lay/Backfill

1 Pivot Tie in w/4" valve

1 Tie into Existing Mainline 1 Pivot Pad

1 10 hp Pasco Pump 1 Pump Tie In

1 Electrical Service

1249 ft of new 6 strand fence

69 lbs grass seed

Additional fence removal of 2317 feet of old 2 strand fence on north side boundary fence with new 6-strand fence, and 2387 ft new 6 strand fence on east side of existing 40-acre pivot that will provide an alley for livestock to

move back and forth on non-irrigated land.

4. Working with landowner and Vale Oregon Irrigation for a water right transfer.

### Review Team Evaluation

## Strengths

- The solid set portion of the proposed irrigation system will reduce sediment, nutrient, and bacteria runoff from the project site, and improve water quality in the Malheur River.
- Reducing sediment, nutrient, and bacteria laden runoff from the property will contribute to water quality benefits in the Malheur River, and flood to sprinkler irrigation conversion is a DEQ Total Maximum Daily Load (TMDL) action plan priority.

## Concerns

- Two-strand fence exists on the property and the applicant proposes to replace this fence with six-strand fence. The fencing is not included in the attached map, and it is not clear how replacing an existing fence addresses limiting factors or watershed issues identified on the property or in the Malheur Basin.
- A pivot installation is proposed for an unirrigated three-acre field on the property. It is not clear how adding irrigation to this currently dry field addresses limiting factors or watershed issues identified on the property or in the Malheur Basin.
- The Malheur SWCD currently has eleven open grants and twenty-one grants in the monitoring phase with OWEB. It is unclear whether the grantee has the capacity to implement this project as well as complete their existing thirty-two OWEB projects that are open or in the monitoring phase.

## Concluding Analysis

Converting 10 irrigated acres from flood to sprinkler application will reduce degraded water quality runoff on the farm. Adding a pivot to three non-irrigated acres will not have water quality benefits and there is no clear rationale for replacing the existing fence on the property. The applicant is encouraged to seek OWEB funding for projects that have clear watershed benefits.

### Review Team Recommendation to Staff

Do Not Fund

### Review Team Priority

N/A

### Review Team Recommended Amount

\$0

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5038-23008

**Project Type:** Restoration

**Project Name:** Pivoting on South Road G revised

**Applicant:** Malheur WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$116,007

**Total Cost:** \$245,558

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**Application Description** 1) The project in the Willow Creek Focus Area. It is 0.9 miles from the town of Willow Creek.

2. Water quality improvement in the Malheur Basin is one of the top restoration priorities for the Malheur Watershed Council. Willow Creek has been a focus area for the Council and other agencies since the late 1990s. Improved water quality is achieved through on-farm irrigation infrastructure improvements and management. The Council in cooperation with irrigation districts and private landowners has been systematically improving water quality through irrigation system conversions over the past 20 plus years across the Malheur Basin. This project complements several recently completed and on-going water quality improvement projects in the area.

3. The proposed project will convert 122 acres of flood irrigated fields to sprinklers by installing:

- One pivot
- One Cornell 3 phase pump
- 1,520 feet of 10 inch 100# PIP pipe
- 1,540 feet Cable Wire
- Connection to pipeline
- Electrical Panel
- Flow Meter and
- Apply for a water right transfer if needed.

4. Partners are the landowner, NRCS, Vale Irr. Dist, and the Malheur WSC.

### Review Team Evaluation

#### Strengths

- The applicant addressed concerns from the previous evaluation in this application by adding a dry wheel package to the pivot design.
- The project objectives are clearly stated, the pivot installation methods are defined and appropriate for the location, and the project is ready to implement.

- The application includes information on work accomplished over the past 25 years in the Willow Creek area. This provides watershed context and demonstrates how this project will build upon a long standing and successful water quality improvement effort in the area.
- The new pivot irrigation system will connect to a piped lateral that replaced an open ditch delivery system, which demonstrates the strategic nature of the proposed work.
- Converting 122 flood irrigated acres to sprinklers will address water conservation priorities in the Willow Creek focus area.
- Reducing sediment, nutrient, and bacteria laden runoff from the property will result in water quality benefits to Willow Creek, and flood to sprinkler irrigation conversion is a DEQ Total Maximum Daily Load (TMDL) action plan priority.
- Ongoing water quality monitoring will document water quality trends in the watershed.
- The project team has relevant experience and a proven track record implementing irrigation water management projects.

### **Concerns**

- No concerns were expressed at review.

### **Concluding Analysis**

Converting 122 flood irrigated acres to pivot irrigation will reduce irrigation wastewater in the project area and reduce sediment, nutrient, and bacteria runoff. The project is likely to succeed in continuing work in the Willow Creek area that implements ODA and DEQ water quality improvement objectives for the Malheur River watershed.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

8 of 11

### **Review Team Recommended Amount**

\$116,007

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

**Staff Recommended Amount**

\$116,007

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5039-23025

**Project Type:** Restoration

**Project Name:** East Moraine Community Forest  
(EMCF) Virtual Fence Project

**Applicant:** OSU Office of Sponsored Research &  
Award Admin

**Region:** Eastern Oregon

**County:** Wallowa

**OWEB Request:** \$80,112

**Total Cost:** \$134,893

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**Application Description** This project focuses on Wallowa County's East Moraine Community Forest (EMCF), a unique locale recognized as the largest glacial moraine in North America. To protect this area from the pressures of development, the County purchased the moraine in 2021 as a community property to be managed and showcased as a multi-use landscape. Currently the 1791-acre EMCF hosts a multitude of plant and wildlife species (including the endangered Spalding's catchfly), rare plant communities utilized for cultural purposes by the Nez Perce Tribe, sustains a managed forest, serves as a grazing resource to livestock producers, and is visited by hundreds of people each year who navigate the six-mile-long trail system that overlooks majestic Wallowa Lake. This area is highly visible and serves as a showcase of how multiple uses can complement one another when thoughtful management tools are employed. This project seeks to utilize virtual fence technologies to implement an adaptive grazing system within EMCF to address a number of issues including: 1) improving upland condition, 2) protecting vulnerable populations of Spalding's Catchfly, 3) protecting cultural-use areas important to tribal gatherers and 4) reducing fencing infrastructure that impedes wildlife movement and recreational access. To accomplish this, we will manage livestock distribution and grazing pressure using virtual fence (VF) technologies in conjunction with improving upland water access and wetland protection. Prior to turn out, cattle will be fitted with VF collars and trained to respond to the auditory and stimulus cues. Using the technology, cattle grazing, and distribution can be set and adjusted in real time as needed to meet land management objectives. Cattle will be excluded from sensitive and important areas without the need to build physical fences, thereby improving the health and function of these upland ecosystems. Partners are Oregon State University, Wallowa Resources, and the Wallowa County Commissioners.

### Review Team Evaluation

#### Strengths

- The journal articles, grazing management plan, maps and photos included with the application add clarity to the project objectives and provide information on how the objectives will be met.
- The project will be implemented using clearly defined methods that are appropriate for improving natural resource conditions on the property and the work is ready for implementation.

- Virtual fence is a flexible and transportable grazing management system that can move livestock without the use of traditional permanent fence that is detrimental to native wildlife.
- Virtual fence has the capacity to both exclude domestic livestock from sensitive areas as well as contain stock in areas where grazing is intended.
- The project location is on public property owned by Wallowa County, the technology will be on display to the public, and this setting may encourage additional use of this method in the surrounding area.
- Spalding's Catchfly, an endangered plant species identified for preservation in local and regional conservation documents is present on the property, and the proposed livestock management methods will work towards the conservation of this plant.
- The purpose of the grazing management plan for the property is to protect sensitive areas, improve cultural uses of the property, and improve wildlife habitat which will improve watershed function and ecosystem processes.
- The project team has relevant experience and a proven track record implementing grazing management projects.
- Oregon State University has a proven track record of managing and completing projects as proposed and according to the project schedule.
- Project costs are commensurate with the anticipated watershed benefits resulting from the improved grazing management infrastructure on the property.

### **Concerns**

- The uploaded grazing management plan and virtual fence journal articles contain many pages of text and related information. The application does not indicate which sections of each document are relevant to the project, making it time consuming for reviewers to determine how each document supports the proposal narrative.
- Equipment line items in the budget for a 6x10 utility trailer with wood floor is entered twice and it is unclear why two trailers are needed. This issue was discussed at the site visit and the applicant clarified that equipment line items are for one trailer and one base station. The applicant is advised to review applications for errors prior to submission.

### **Concluding Analysis**

Improving grazing management on public property on Wallowa Lake's east moraine near Joseph is an important step to improve native fish, wildlife, and endangered plant habits in the area. The proposed virtual fence and upland water developments will improve domestic livestock distribution, allow for the removal of traditional permanent fence, and showcase an emerging livestock management technology. The project team has relevant experience and likelihood of success is high.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 11

### **Review Team Recommended Amount**

\$80,112

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$80,112

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5040-23044

**Project Type:** Restoration

**Project Name:** Pounds of Efficiency II

**Applicant:** Malheur SWCD

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$71,586

**Total Cost:** \$233,035

---

**Application Description** 1. Located 6.7 miles west of Ontario, in the Morgan Bench Priority Area.

2. 1320 feet of leaking irrigation lateral in the middle of the field makes it hard to meet the goal of partners in the Morgan Bench Priority Area, also known as NRCS 'Valley View Priority Area with zero runoff that will improve water quality.

3. The proposed work will replace 1320 ft of broken concrete pipe with 1320 Feet of 12" 125# IPS Pipe.. Replace wheel lines on 40 acres with two center swipe pivots. That will be pressurized with two pumps, two flow meters This Conversion from wheel lines to pivot system will improve efficiency by 15 %.

A water right transfer will be needed.

4. The partners for this project are the landowner, Malheur County SWCD, NRCS and Owyhee Irrigation District and Romans Precision Irrigation (RPI)

### Review Team Evaluation

#### Strengths

- Converting 40 wheel line irrigated acres to a pivot application system and replacing a 1,320-foot leaking irrigation lateral pipeline will address water conservation priorities in the area.
- The project is in the Morgan Bench Priority Area is a focus area for the Natural Resource Conservation Service (NRCS) to improve water quality in the Malheur River.
- Reducing sediment, nutrient, and bacteria laden runoff from the property will result in water quality benefits to the Malheur River and flood to sprinkler irrigation conversion is a DEQ Total Maximum Daily Load (TMDL) action plan priority.
- Ongoing water quality monitoring will document water quality trends in the watershed.
- The project is near previous and future on-farm irrigation improvements demonstrating the strategic nature of the proposed work.
- The project team has relevant experience implementing irrigation water management projects.

## Concerns

- Water quality monitoring is mentioned in the application, but a summary of past water quality data is not present in the application, making unclear the extent to which the proposed project will address water quality impairments.
- A brief alternative analysis is included in the application, but it does not describe the selection process or why the proposed alternative is selected.
- A conversion from the existing sprinkler irrigation to a pivot will not result in a significant reduction in irrigation wastewater, making it unclear if the project will achieve the stated watershed benefits.
- The Malheur SWCD currently has eleven open grants and twenty-one grants in the monitoring phase with OWEB. It is unclear whether the applicant has the capacity to implement this project as well as complete their existing thirty-two OWEB projects that are open or in the monitoring phase.

## Concluding Analysis

Converting 40 irrigated acres from wheel line to pivot application will improve irrigation efficiency by a maximum of only 15%. The proposed irrigation conversion in the Morgan Bench Priority Area may further efforts to implement ODA and DEQ water quality improvement objectives by nominally reducing sediment, nutrient, and bacteria delivery to the Malheur River. It is unclear how the proposed alternative was selected, and the magnitude of watershed benefit is unclear.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

11 of 11

## Review Team Recommended Amount

\$71,586

## Review Team Conditions

N/A

## Staff Recommendation

### Staff Follow-Up to Review Team

N/A

## Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

## Staff Recommended Amount

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5041-22969

**Project Type:** Technical Assistance

**Project Name:** Colony Creek Flood Irrigation

**Applicant:** Harney SWCD

**Region:** Eastern Oregon

**County:** Harney

**OWEB Request:** \$73,939

**Total Cost:** \$93,796

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**Application Description** 1) The Colony Creek irrigation system is located on Colony Creek, just 5 miles from the Nevada border in southern Harney County southeast of Fields, Oregon.

2) The existing structures need replacement due to their inability to adequately distribute surface water to historical wet meadow floodplains.

3) The requested funds will support survey and design for the replacement structure to improve water delivery. Funding will support a topographic survey and development of a digital elevation model, draft engineering design sufficient for permitting and cost estimating, and initiation of regulatory compliance.

4) Project partners are the Harney Soil and Water Conservation District, Oregon Department of Fish and Wildlife, Oregon Water Resource Department, Ducks Unlimited and the landowners/irrigators.

### Review Team Evaluation

#### Strengths

- Project design data will be collected to initiate environmental permitting that will be required for the restoration work this technical assistance seeks to design.
- The design work seeks to address habitat limiting factors for Pacific Flyway birds identified in regional conservation and recovery plans.
- Appropriate stakeholders are engaged in the project and the project team is qualified to accomplish the proposed technical assistance work.
- The Harney SWCD has the capacity to manage and implement the project as proposed.

#### Concerns

- The application lacks clarity and describes a generalized design approach for work at this remote location.
- It is unclear in the application how the proposed design work may be affected by water rights and how irrigation water is managed by Oregon Water Resources Department (OWRD) in the project area.

- The application narrative references two creeks in the project area; it is unclear where the irrigation point of diversion is located on Colony Creek, and the photos of a second creek nearby does not add clarity to the proposal.
- A design method alternative analysis demonstrating that a range of options will be considered is not articulated in the application, which is an important consideration given the remote location of the design work.
- Match funding from Ducks Unlimited (DU) is detailed in the application and it is unclear if DU will contribute this match if they are not awarded the design contract.
- The project objectives lack site specific detail for this remote work area, and it is unclear if project costs align with the work necessary to accomplish those objectives.

### **Concluding Analysis**

The Harney SWCD proposes to complete preliminary design sufficient to inform a restoration project budget and initiate regulatory compliance for an irrigation water delivery project near Fields. The application narrative and budget are generalized and not site specific to the work area making it difficult to determine if the design work is likely to succeed. The applicant is encouraged to write and budget future technical assistance applications that are site specific.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

### **Staff Recommended Amount**

\$0

### **Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5042-22971

**Project Type:** Technical Assistance

**Project Name:** Beaubien Diversion Structure

**Applicant:** Harney SWCD

**Region:** Eastern Oregon

**County:** Harney

**OWEB Request:** \$75,000

**Total Cost:** \$95,040

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**Application Description** 1). The project is located 3.5 miles east of Burns, Oregon in Harney County and is situated along the Foley Slough.

2). The project aims to replace the instream Beaubien diversion structure, which is the third irrigation diversion structure along the Foley Slough. The requested funds will be used to complete the necessary landowner outreach, ecological planning, survey and design, and permitting. The project will affect the adjacent floodplain to the north, west, east and south. The existing water diversion structure has caused significant erosion on the banks of the slough and no longer adequately and safely backs up water across the historic floodplain.

3). An 85% completed engineering design will be developed for review and consistent with the Harney Basin Wetland Initiative and its partnership.

4). Partners directly involved include the Harney County Watershed Council, Ducks Unlimited, Oregon Water Resource Department, Oregon Department of Fish and Wildlife, Harney Soil and Water Conservation District, and the private users.

### Review Team Evaluation

#### Strengths

- The design work proposed in the application is supported by several assessments stating that flood irrigated wet meadow restoration is critical in this area for Pacific Flyway migratory birds.
- Appropriate stakeholders are engaged in the project and the project team has accomplished similar technical assistance work.

#### Concerns

- The application lacks clarity and describes a generalized design approach for the Beaubien Diversion Structure.
- An alternatives analysis demonstrating that a range of options are considered is not articulated in the application, which is an important consideration to determine likelihood of success.
- Match funding from Ducks Unlimited (DU) is detailed in the application and it is unclear if DU will contribute this match if they are not awarded the design contract.

- During the site visit the review team visited an example diversion structure that is eroding on the downstream side of the structure; it is unclear if the applicant and design team are incorporating lessons learned into their design process.

### **Concluding Analysis**

The Harney SWCD proposes to complete preliminary design sufficient to inform a restoration project budget and initiate regulatory compliance for an irrigation water delivery project near Burns. The application narrative and budget are generalized and not site specific to the work area making it difficult to determine if the design work is likely to succeed. The applicant is encouraged to write and budget future technical assistance applications that are site specific.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

### **Staff Recommended Amount**

\$0

### **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5043-22972

**Project Type:** Technical Assistance

**Project Name:** Cow Creek Floodplain Restoration Project

**Applicant:** Harney County Watershed Council

**Region:** Eastern Oregon

**County:** Harney

**OWEB Request:** \$75,000

**Total Cost:** \$94,856

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**Application Description** 1). Cow Creek floodplain restoration site is about 17 miles northeast of Burns, Oregon in Harney County. It is located between the Malheur National Forest and Hwy 20. The Toelle Ranch owns the property where the project will take place.

2) Cow Creek needs restoration due to its (a) incising creek bed (b) inability to adequately flood into side channels (c) flood its historic floodplain footprint and d) provide adequate riparian and floodplain vegetation for wildlife.

3). The requested funds will support survey and design for restoration of the stretch of Cow Creek. Funding will support a topographic survey and development of a digital elevation model, drafted engineering design sufficient for permitting and cost estimation, and invitation of regulatory compliance.

4) Partners: Landowner, Harney County Watershed Council, Harney Soil and Water Conservation District, Ducks Unlimited, Oregon Water Resources, and Oregon Department of Fish and Wildlife.

### Review Team Evaluation

#### Strengths

- The design work proposed in the application is supported by several assessments stating that flood irrigated wet meadow restoration is critical in this area for Pacific Flyway migratory birds.
- The project location is in core sage-grouse habitat and the design work will lead to restoration actions that improve mesic habitat critical to sage-grouse survival.
- Appropriate stakeholders are engaged in the project and the project team has accomplished similar technical assistance work.
- Project actions align with the work necessary to accomplish the project objectives in this project location near Burns.
- The current ranch management is likely to support and maintain aquatic and upland habitat benefits implemented on this ranch.

#### Concerns

- The application does not describe current grazing management, how the riparian areas on the ranch are protected, or how sage-grouse viability is promoted through current management, all of which are helpful to determine likelihood of success.
- The application narrative is not clearly written, making review of the narrative challenging.
- An alternatives analysis demonstrating that a range of options are considered is not articulated in the application, which is an important consideration to determine likelihood of success.
- The restoration work resulting from this technical assistance to connect a down cut stream to its adjacent floodplain may be an opportunity to increase watershed resiliency and mitigate the effects of climate change; however, this potential benefit is not articulated in the application.
- It is unclear if the budget is adequate to accomplish the project objectives.

### **Concluding Analysis**

The Harney County Watershed Council proposes to complete preliminary design sufficient to inform a restoration project budget and initiate regulatory compliance for an irrigation water delivery and floodplain connection project near Burns. The application narrative and budget are generalized and not site specific to the work area. The resulting design, if the above concerns are addressed, is likely to lead to restoration that improves sage-grouse and Pacific Flyway bird habitats.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

3 of 4

### **Review Team Recommended Amount**

\$75,000

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$75,000

### **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5044-22973

**Project Type:** Technical Assistance

**Project Name:** Soldier Creek Wet Meadow Restoration Project

**Applicant:** Harney County Watershed Council

**Region:** Eastern Oregon

**County:** Harney

**OWEB Request:** \$75,000

**Total Cost:** \$94,856

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**Application Description** 1). Soldier Creek wet meadows is located about 9 miles northeast of Burns, Oregon in Harney County. It is located below the Malheur National Forest north of Hwy 20 and east of hwy 395. The Soldier Creek, LLC owns the property where the project will take place.

2). The Soldier Creek wet meadow habitat needs restoration. The objective is to improve its flood irrigation efficiency by upgrading the irrigation infrastructures: (a) Stop and reverse incising and erosion of meadow and channels that are disconnecting flow from floodplain; (b) Replace and improve floodplain infrastructure to effectively flood wet meadow habitat; (c) Improve forage for spring migratory waterbirds and improved habitat for local wildlife and neotropical nesting birds.

3). The requested funds will support survey and design for restoration of the Soldier Creek project area. Funding will support a topographic survey and development of a digital elevation model, drafted engineering design sufficient for permitting and cost estimation, and invitation of regulatory compliance.

4). Partners: Harney County Watershed Council, Harney Soil and Water Conservation District, Ducks Unlimited, Oregon Water Resources Department, and landowner/irrigator.

### Review Team Evaluation

#### Strengths

- The design work proposed in the application is supported by several assessments stating that flood irrigated wet meadow restoration is critical in this area for Pacific Flyway migratory birds.
- Appropriate stakeholders are engaged in the project and the project team has accomplished similar technical assistance work.
- The Harney County Watershed Council has the capacity to manage and implement the project as proposed.
- Project actions align with the work necessary to accomplish the project objectives in this project location near Burns.

## Concerns

- The application is not clearly written, making review of the narrative challenging.
- The application identifies that the project will affect sage-grouse but does not describe how sage-grouse will benefit from the proposed actions.
- An alternatives analysis demonstrating that a range of options are considered is not articulated in the application, which is an important consideration to determine likelihood of success.
- It is unclear whether the budget is adequate to accomplish the project objectives.

## Concluding Analysis

The Harney County Watershed Council proposes to complete preliminary design sufficient to inform a restoration project budget and initiate regulatory compliance for an irrigation water delivery project near Burns. The application narrative and budget are generalized and not site specific to the work area. The resulting design work, if the above concerns are addressed, is likely lead to restoration that improves Pacific Flyway bird habitats.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

4 of 4

## Review Team Recommended Amount

\$75,000

## Review Team Conditions

N/A

## Staff Recommendation

### Staff Follow-Up to Review Team

N/A

## Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

## Staff Recommended Amount

\$0

## Staff Conditions

N/A

# Open Solicitation-2023 Spring Offering

## Eastern Oregon (Region 5)

**Application Number:** 223-5045-22988

**Project Type:** Technical Assistance

**Project Name:** Lava Butte Upland Management Design

**Applicant:** Owyhee WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$30,828

**Total Cost:** \$39,828

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**Application Description** The Lava Butte Upland Management Design project is located approximately 14.5 miles NW of Jordan Valley in the Lower Cow Creek/Anawalt area of the Owyhee Uplands. The project area is in the Cow Lakes PAC and Core Sage Grouse habitat. Lack of water sources across 7,307 private land acres limits grazing distribution, degrades wildlife habitat, and impacts vegetative composition. The proposed work includes 100% survey/design of four livestock watering systems on two different properties by a licensed engineer, as well as development of livestock grazing/management plans. Project partners include the Owyhee Watershed, RSI Engineers, Cow Lakes Grazing Association and Skinner Ranches.

### Review Team Evaluation

#### Strengths

- Project goals and objectives are clear in the application, and the maps provide ample detail of the project vicinity.
- Additional watering troughs on the 7,307-acre ranch will facilitate proper grazing management, which will provide opportunity to graze invasive annual grasses (IAG) to reduce their presence and promote native vegetation that will benefit sage-grouse and other native wildlife.
- Current grazing management is flexible and does not appear to have negative impacts to sage-grouse habitat. The addition of permanent water sources will add grazing rotation flexibility, which will help improve native bunchgrass understory species.
- Appropriate stakeholders are engaged in the project and the project team has accomplished similar technical assistance work in remote locations.
- The Owyhee Watershed Council has the capacity to manage and implement the project as proposed.
- The budget rates are reasonable given the remote project location, and the overall project cost is commensurate with the expected design result.

#### Concerns

- An alternatives analysis demonstrating that a range of options are considered is not articulated in the application, which is an important consideration to determine likelihood of success.

#### Concluding Analysis

The Owyhee Watershed Council is proposing to design a stock watering system for a 7,307-acre rangeland grazing area near Jordan Valley. The resulting restoration work will improve grazing operations and provide the tools needed to properly manage this sage-steppe plant community in sage-grouse habitat. With this improved management the likelihood of project success is high.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

2 of 4

**Review Team Recommended Amount**

\$30,828

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$30,828

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5046-22997

**Project Type:** Technical Assistance

**Project Name:** Chesnimnus Creek Williams  
Restoration Design

**Applicant:** Nez Perce Tribe

**Region:** Eastern Oregon

**County:** Wallowa

**OWEB Request:** \$74,250

**Total Cost:** \$191,700

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**Application Description** The Chesnimnus Creek Williams Restoration Project is part of a multi-phased effort proposing to complete designs, permitting, and all necessary documents to implement a thoroughly vetted instream and floodplain restoration project benefitting limiting life stages of ESA listed steelhead between RM 4.6 and 9.1 in Chesnimnus Creek. Chesnimnus Creek is a tributary of Joseph Creek, located in the northern end of Wallowa County. Although the Joseph Creek steelhead population is among the most viable in the region, its headwaters do not originate in high elevation snowpack dominated mountains, which makes this watershed extremely susceptible to changes in temperature and hydrologic regimes.

With legacy logging effects, roads, agricultural practices, and other anthropogenic influences within the Joseph Creek watershed, current habitat conditions in Chesnimnus Creek are significantly deviated from its historic ecosystem function. This departure has negatively impacted many physical and biological aspects of the watershed, resulting in various life stage impairments to steelhead and Pacific lamprey, of which this project aims to improve through a suite of priority restoration actions.

In addition to the Nez Perce Tribe, the Grande Ronde Model Watershed (GRMW), the landowners, project funders, the Oregon Department of Fish & Wildlife (ODFW), and other Atlas Implementation Team partners will be instrumental in the successful completion of this project.

### Review Team Evaluation

#### Strengths

- The application describes a clear need to design restoration along a 4.5-mile reach of Chesnimnus Creek to improve Endangered Species Act (ESA)-listed steelhead habitat and improve watershed resiliency to mitigate the effects of climate change.
- Work proposed in the application addresses limiting habitat factors identified in the Wallowa Atlas strategic action plan and other regional steelhead recovery plan documents.
- An alternatives analysis demonstrating that a range of options are considered is included in the application, which is an important consideration to determine likelihood of success.
- Project objectives are sequential and clearly written and include scheduled design review check-in intervals with the Atlas team and the landowner.
- Appropriate data will be collected to inform project designs and professionally accepted engineering approaches will be applied to accomplish the final design and environmental compliance documents.

- The landowner, state and federal agencies, the Nez Perce Tribe, and the watershed council are engaged in the project and the project team has accomplished similar technical assistance work in remote locations.
- The Nez Perce Tribe has the capacity to manage and implement the project as proposed.
- Ample project match is secured from a variety of partners demonstrating that appropriate stakeholders are engaged in the project and committed to project implementation.
- The budget rates are reasonable given the remote project location, and the overall project cost is commensurate with the expected design result.

### **Concerns**

- No concerns were expressed at review.

### **Concluding Analysis**

The Nez Perce Tribe proposes to complete design and all permitting requirements for a project addressing degraded aquatic, floodplain, and riparian habitat on Chesnimnus Creek near Enterprise. The resulting restoration guided by this design work will occur in steelhead habitat, restore habitat necessary for beaver colonization, and guide future restoration that addresses Oregon Department of Environmental Quality concerns.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 4

### **Review Team Recommended Amount**

\$74,250

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$74,250

**Staff Conditions**

N/A

## **Open Solicitation-2023 Spring Offering** Eastern Oregon (Region 5)

**Application Number:** 223-5051-22995

**Project Type:** Stakeholder Engagement

**Project Name:** Engagement with Water

**Applicant:** Malheur WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$148,267

**Total Cost:** \$185,863

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### **Application Description**

1) Our proposed project will cover the Malheur River Watershed.

2) The Basin has several natural resource issues. The river has the some of the worst water quality in Oregon. One of the primary contributors is irrigation induced erosion. Bull trout, a federally listed species, is in the upper reaches of the Malheur River. It requires riparian areas in good condition and the Vale Irrigation District needs help to maintain a minimum pool in Beulah Reservoir. Weeds in riparian areas are an ever increasing problem. We need to engage landowners directly to address this specifically.

3) We are proposing to hire a Engagement Project Manager. Their responsibilities will be to engage the producers in the basin, conduct 4 workshops/townhall meetings to discuss irrigation efficiency opportunities, weed management in riparian areas, and present eco-friendly bank stability methods. We will contract with a local company to produce two newsletters distributed both in print and electronically, continuous updates of our website, and develop electronic media publications twice a year for 2 years.

4) Partners include NRCS, Vale Irrigation District, Mesa Communications, Malheur Basin residents, and local natural resource agencies.

### **Review Team Evaluation**

#### **Strengths**

- The Malheur Watershed Council (MWC) will hire an engagement project manager who will conduct workshops, town hall meetings, contribute to the watershed council newsletter, provide updates to their website, and contribute to other electronic media publications, which will engage landowners, agencies, and the public in the Malheur watershed.
- The stakeholder engagement methods are designed to reach local, state, and federal agencies, private landowners, and public land managers, as well as nonagricultural producers in the Malheur watershed.

- The engagement methods described in the application will encourage multi-directional communication between stakeholders in the basin. The proposed work builds on work ongoing since the late 1990s, when the council began water quality, weed management, and riparian improvement work in the basin.
- The proposed stakeholder engagement work is timely and will result in the development of eligible restoration projects, especially in the Vale Bench priority area where the Bureau of Reclamation (BOR) Water Smart program will fund the conversion from open irrigation ditch delivery to piped delivery systems.
- There is not a dedicated MWC staff member working on stakeholder engagement in the basin, there is a need for this service, and the proposed work will improve relationships between agencies, landowners, and the interested public.
- MWC has the necessary experience and a proven track record of implementing the proposed stakeholder engagement activities.

### **Concerns**

- Additional information linking the engagement activities to eligible restoration will add clarity to the application, especially regarding riparian weed control in the basin.
- The project schedule details multiple engagement events, and the budget has one line item for outreach materials making it difficult to determine if costs are reasonable and necessary for the proposed work.
- Travel is not detailed in the budget and this cost is necessary to complete the proposed stakeholder engagement work.

### **Concluding Analysis**

The MWC proposes to hire an engagement project manager who will initiate stakeholder engagement efforts in the Malheur watershed regarding irrigation water, riparian weed, and aquatic habitat management. The proposed work will highlight the importance of improved water quality, aquatic, and upland habitats and how private landowners and public land managers can facilitate these improvements.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 1

### **Review Team Recommended Amount**

\$148,267

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$148,267

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5047-22993

**Project Type:** Monitoring

**Project Name:** Checking On Things: WQ  
Monitoring

**Applicant:** Malheur WC

**Region:** Eastern Oregon

**County:** Malheur

**OWEB Request:** \$258,826

**Total Cost:** \$348,826

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### Application Description

1) Location. Priority areas for irrigation improvement activities in the lower Malheur and Owyhee River Basins. We propose to sample at 9 sites on the Malheur River, Bully Creek, Willow Creek, and drains that flow into these streams. We will sample in the Owyhee Basin at 2 sites on the Owyhee River and 6 important drains. These are all sites where we have monitored for many years

2) NRCS and the Malheur WSC have identified priority areas for irrigation/water quality improvement projects and the Owyhee WSC has identified focus areas as well. We are applying for grant funds to implement on farm conversions to sprinkler irrigation and to pipe dirt ditch laterals for better water management. We need to assess if our efforts are successful in improving water quality in the Malheur River, Bully and Willow Creeks, and the Owyhee River. This monitoring is an important component of our recently awarded BOR WaterSmart grant for piping laterals in the Vale Bench.

Continued monitoring is necessary to quantify water quality improvements and to characterize further changes in water quality related to changes in land and irrigation management over time. Continued monitoring is critical to show agricultural producers that current agricultural practices are contributing to water quality impairment and to demonstrate that their efforts to improve land and irrigation management can be effective and worthwhile. This message is important and of great interest to producers in these basins.

3) We are proposing to sample water from 17 locations twice a month from May to October.

Sample parameters will be:

-- Total and ortho Phosphorus

-- E. coli

-- Total Suspended Solids (TSS)

We propose to install flow gauges at 7 sites and use data from 3 permanent sites to calculate pollution loads.

4) Project partners are the NRCS, Vale Oregon Irrigation District, Owyhee Irrigation District, BOR Lab in Boise, Idaho Power, and the Malheur and Owyhee WSCs.

### Monitoring Team Evaluation

## Monitoring Team Strengths

- This proposed project will collect data that will complement the historic data collected at many of the sites since the 1990s.
- The applicant is working with experienced contractors to collect and analyze the data, the uploaded report demonstrates the ability to collect and report the data as proposed.
- This project will share results with a technical team that consists of OWEB, OWRD, ODA and DEQ and have them review the final data analysis report before it is completed.
- Findings from this monitoring project will be presented in watershed council meetings, to landowners and featured in outreach efforts in their newsletter.
- The application includes a detailed budget that describes how expenses were estimated across this three-year project.

## Monitoring Team Concerns

- The application doesn't show a clear plan to describe how irrigation efficiency projects and agricultural practices will be quantified to interpret water quality results.
- The application doesn't describe how this monitoring project connects to the BOR Water Smart grant to focus their efforts in the Vale area.
- The application justifies monitoring stream water level every four hours because it is cheaper than standard methods to collect it every 15 minutes. It was not clear how they determined that 6 water level measurements every day is sufficient to meet their data analytical needs that ultimately allows them to answer their monitoring questions.
- The application cites multiple methods for measuring streamflow, including the velocity index method for estimating flow at gaging stations but it was not clear how they would determine which sites this method would be applied.
- The monitoring protocols detailed in the "Water Quality Monitoring Guidebook" that is cited is over 20 years old and is considered outdated. This document does not include monitoring methods for total suspended solids or E. coli.
- The data management approach includes storing their data in a master excel file and relies on the BOR lab to back up their water quality data. It is not clear what approaches are taken to store their streamflow data to ensure it is backed up.

## Monitoring Team Comments

### Review Team Evaluation

#### Strengths

- The application addresses concerns identified in the previous application by describing how long-term water quality trends will be determined and describing methods to engage the agricultural community.
- The summarized water quality data, maps, and photos included with the application help describe the proposed water quality and flow monitoring work.
- Three years of monitoring are proposed in this application, which is appropriate and necessary to inform priority areas for water quality improvement and to identify eligible restoration work.

- Previous data indicates Bully Creek, Willow Creek, the Malheur River, and the Owyhee River have impaired water quality. Data collection using Department of Environmental Quality (DEQ) approved methods for temperature, flow, phosphorus, E. coli, and total suspended solids will contribute critical data that will support the Malheur Total Maximum Daily Load (TMDL) implementation.
- The West Bench, Harper, Little Valley, and Willow Creek areas are prioritized by Oregon Department of Environmental Quality (DEQ), Oregon Department of Agriculture (ODA), Natural Resources Conservation Service (NRCS), and Bureau of Reclamation (BOR) for irrigation water management improvement. The proposed monitoring will track water quality changes and help prioritize upcoming restoration work in these geographies.
- The proposed water quality data collection will be used to demonstrate the need for future restoration work that will be proposed in funding applications to NRCS, BOR, and Oregon Water Resources Department (OWRD).
- The applicant has a proven track record collecting, analyzing, distributing, and presenting water quality data for the Malheur and Owyhee basins.
- The project team consisting of the Malheur and Owyhee Watershed Councils, Vale Oregon Irrigation District (VOID), BOR, NRCS, Owyhee Irrigation District (OID), and Idaho Power have successfully partnered on past monitoring projects.
- Incorporating existing stream flow data from BOR, Idaho Power, and U.S. Geological Survey is a cost-effective approach.
- Project costs are commensurate with the expected water quality data collection, analysis, and distribution benefits.

### **Concerns**

- The application does not describe why the proposed monitoring is necessary for the implementation of the BOR Water Smart grant recently awarded to the Malheur Watershed Council.
- Water quality monitoring in the winter months will add clarity to the overall water quality picture in the basin, and it is unclear why monitoring is not conducted during this time.

### **Concluding Analysis**

The Malheur Watershed Council proposes to monitor flow and water quality in the Lower Malheur and Owyhee River basins where improved irrigation water management is a priority. The data collection will inform and prioritize conservation work, document before and after conditions, and facilitate restoration partnerships.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 3

### **Review Team Recommended Amount**

\$258,826

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$258,826

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5048-23000

**Project Type:** Monitoring

**Project Name:** Powder Basin Macroinvertebrate  
Status and Trend Monitoring

**Applicant:** Powder Basin WC

**Region:** Eastern Oregon

**County:** Baker

**OWEB Request:** \$38,111

**Total Cost:** \$51,932

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**Application Description** This project proposes continued status and trend macroinvertebrate monitoring by the Powder Basin Watershed Council (PBWC) to assess water quality and condition in the Powder, Burnt, and Brownlee sub-basins. Previous macroinvertebrate surveys in 2018 found results showing significant impairments in biodiversity throughout many of the sampled stream reaches, particularly lower elevation reaches. Given the changes in hydrological conditions and restoration actions in the basin since 2018, identifying trends in macroinvertebrate biodiversity is a high priority for the PBWC and provides baseline data to address several important watershed issues. First, this project allows the council to assess the changes in biodiversity at reference sites between 2018 and 2024, and to correlate them to water quality metrics, allowing us to identify important or limiting water quality variables and sites where these issues can be addressed through restoration efforts. Next, the council is looking to use this project to identify changes in macroinvertebrate biodiversity in and near restoration sites by establishing baseline data at current and future restoration projects and at nearby natural beaver dams. The Council is also using this project to help our organizational partners use macroinvertebrate samples to identify and inform management activities in the basin. Wallowa-Whitman National Forest will partner in this project with a focus on monitoring the impact of forest management activities in the Baker City Municipal Watershed. Oregon Department of Environmental Quality will also partner with an interest in using this data to establish status and trends in the Powder Basin as part of their ongoing monitoring and TMDL assessment efforts. Finally, the Council's intention is that the data generated by this project will be useful in identifying reaches where restoration efforts to improve water quality and habitat conditions for macroinvertebrates, fish, wildlife, and people.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This proposed project will complement the macroinvertebrate data that was collected in 2018 and the long-term water quality monitoring data set.
- The application clearly states the different monitoring questions they are trying to answer with the collection of macroinvertebrates.
- The data will be submitted to DEQ to be stored in their database and shared with the Wallowa-Whitman National Forest.

- This project will engage volunteers to assist in data collection that will assist in community engagement.
- The project will follow the same targeted riffle field methods for the sites that will be repeated and will follow the multi-habitat sampling field methods to evaluate the effectiveness of beaver dam analogs which are appropriate given the different objectives proposed in the application.
- The application provides a thorough description of the analyses they will complete for each of the monitoring questions that are proposed in the application.
- The staff listed in the application have the necessary qualifications and experience and are working with a qualified contractor to process the macroinvertebrate samples.
- The budget costs are appropriate for the work necessary to complete the objectives proposed in the application.

### **Monitoring Team Concerns**

- The application lacked details on the previously funded monitoring grant that is referenced and informed the development of this project.
- The value of using macroinvertebrate data across the three different objectives may be different based on which questions they are asking.
- It is not clear how the applicant will incorporate available streamflow data to characterize the variable flow conditions across the 2018 and 2024 sampling periods to assist in interpreting the results.
- The applicant doesn't describe how the results of the thinning project will be communicated with interested community partners beyond the Wallow-Whitman National Forest.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- Monitoring proposed in this application is timely and relevant because the Powder Basin Watershed Council (PBWC) previously collected macroinvertebrate data in Baker County, and this follow up monitoring may inform future restoration project locations.
- Monitoring locations are strategically selected to resample locations with prior collected macroinvertebrate data, as well as the addition of sites to characterize the results of implemented restoration work.
- The Oregon Department of Environmental Quality (DEQ) is engaged with the monitoring design and the applicant will seek volunteer assistance to gather the macroinvertebrate data, demonstrating engagement with community stakeholders.
- DEQ will assist with the data analysis and the PBWC will submit the data to the DEQ database demonstrating that the data will be properly stored, reported, and made publicly available.
- Project costs are commensurate with the proposed monitoring data collection, analysis, and distribution and the use of volunteers to collect the data is a cost-effective approach.

## Concerns

- It is unclear how the proposed macroinvertebrate monitoring ties into the larger water quality monitoring effort conducted by the PBWC in Baker County.
- The application proposes status and trend monitoring but describes effectiveness monitoring (EM) for low tech restoration work in the basin and it is unclear if the monitoring as proposed can accomplish EM objectives.

## Concluding Analysis

The PBWC proposes to sample macroinvertebrates in Baker County where improved water quality is a priority. The data collection will inform Oregon Department of Agriculture and DEQ water quality improvement planning in the Powder Basin and will inform future restoration work.

### Review Team Recommendation to Staff

Fund

### Review Team Priority

2 of 3

### Review Team Recommended Amount

\$38,111

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Fund

### Staff Recommended Amount

\$38,111

### Staff Conditions

N/A

## Open Solicitation-2023 Spring Offering Eastern Oregon (Region 5)

**Application Number:** 223-5049-23054

**Project Type:** Monitoring

**Project Name:** Ecological linkages between birds, water patterns, and vegetation

**Applicant:** Audubon Society of Portland

**Region:** Eastern Oregon

**County:** Harney

**OWEB Request:** \$132,908

**Total Cost:** \$273,855

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**Application Description** The Harney Basin is a snowpack-dependent closed-lake basin in southeastern Oregon. As with other regions in the west, increasingly variable weather patterns (i.e. prolonged drought and wetter wet years) has created concern for myriad migrating and breeding bird species which depend on a gradient of wetlands habitat. Much attention has been paid to migrating waterfowl use of the Harney Basin during migration, less attention has been paid to nesting birds and migrating shorebirds, for whom stopover habitat (rest and refueling locations) is diminishing at an alarming rate.. Several species of landbirds (bird species that depend primarily on terrestrial habitats) have experienced population declines and are predicted to experience shifts in distribution and abundance associated with climate change, particularly in woody riparian and upland habitats. Understanding temporal and spatial use patterns of birds in the Harney Basin is essential to prioritizing, developing and evaluating the efficacy of restoration projects in this region.

For over a decade, Portland Audubon has worked with Harney Basin partners, largely through the Harney Basin Wetlands (HBWC) and the Comprehensive Conservation Plan Collaboratives to inventory and monitor bird populations at Malheur National Wildlife Refuge (MNWR). In 2019, we expanded our efforts to the Silvies Floodplain. As our work expands, continued funding for our on-the-ground staff (including seasonal staff) has become increasingly important to implement projects to understand the ecological linkages between birds, water patterns, and vegetation.

This project will fund our continued work to assist with monitoring migrating and breeding birds in the Harney Basin by supporting both a seasonal and permanent staff working on these projects. Data collected and a report summarizing findings will be provided to project partners as an outcome to this project.

Primary partners on this project include USFWS and HBWC partners .

### Monitoring Team Evaluation

### Monitoring Team Strengths

- This proposed project will complement the existing data set on Malheur National Wildlife Refuge and in surrounding areas that were funded in a previous OWEB monitoring grant.
- The applicant will follow established bird monitoring methods that are cited in the application.
- The applicant describes how the different data sets will be managed and stored in a variety of databases depending on the data type ensuring long term data storage and availability.
- The data will be reported in official reports to OWEB, through social media, peer reviewed journals, and Audubon publications which will help in making the data widely available to a variety of audiences.
- The applicant has experience collecting bird data in the area for 5 years and working with volunteers that have experience with the monitoring methods.
- The applicant engaged a variety of technical experts and community partners that are working in the area to provide input on the sites to be selected, monitoring questions to be answered and how data will be used.
- The applicant will incorporate training and overlapping surveys to ensure the data that is collected by volunteers is useful.

### **Monitoring Team Concerns**

- The applicant does not describe how the monitoring that was completed with the previous OWEB monitoring grant informed restoration to demonstrate how additional monitoring can inform future restoration or acquisition projects.
- It was not clear what data is needed to feed the WET model to understand if this is a useful tool to understand how wetland extent and transitions are occurring.
- The application was challenging to understand all the different bird monitoring efforts and the accompanying study design that will be followed to answer the monitoring questions posed in the application.
- The application only provides study design details (site selection, parameters and frequency) for the song meter data collection and the Project IBiS surveys, there is no information provided for the bird monitoring projects at Malheur National Wildlife Refuge, the Silvies Floodplain and in the Harney Basin, Silvies and Harney Lake Breeding Bird Surveys.
- The monitoring methods for collecting drone data are not described or cited.
- The application doesn't describe how data will be analyzed to determine long term population trends of key bird species, how the proposed drone imagery will be incorporated into the hydroperiod and vegetation data analysis or how they plan to compare bird use of wet meadow and riparian habitat in the Buena Vista unit to the southern end of Blitzen Valley.
- The application doesn't include a description of staff qualifications or experience with vegetation monitoring and analyses.
- The application doesn't include a description of the work to justify the \$16,000 in the budget to purchase a drone.

### **Monitoring Team Comments**

### **Review Team Evaluation**

## Strengths

- The proposed monitoring data will support a long-term bird species inventory and contribute to building an improved monitoring plan for the Malheur National Wildlife Refuge (refuge).
- There is a clear need for the monitoring work and the data is relevant, applicable, and timely and will inform future restoration projects.
- Data and results from the monitoring is identified as needed in local strategic planning documents, the data will be stored appropriately, and results will be made publicly available.
- The applicant has the organizational capacity to implement the project as proposed and has relevant experience implementing similar monitoring work.
- The monitoring work incorporates bird song meters that can gather a large volume of data. The song meters operate remotely without project staff attendance, and this is a cost-effective method for gathering bird presence information.

## Concerns

- The application is unclear regarding why a drone purchase is necessary to complete the monitoring as proposed. The use of a federally approved drone is required for use on the refuge, and while not articulated in the application, this issue was clarified during the project site visit.
- It is unclear in the application how the proposed monitoring complements past monitoring accomplished during the Harney Basin Wetlands Focused Investment Partnership (FIP) and how this monitoring is guided by past monitoring results.
- The need, relevance, applicability, and timeliness of the proposed monitoring is not clearly linked to future restoration, and it is unknown how past monitoring has led to restoration on the refuge.
- The budget does not clearly describe how salary match contributes to the monitoring goals and objectives.

## Concluding Analysis

The Audubon Society of Portland proposes to continue monitoring migrating and breeding birds in the Harney Basin and this work is a priority to inform conservation and habitat restoration. The monitoring will identify needed habitat types, help the partnership prioritize restoration locations, and facilitate restoration partnerships.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

3 of 3

## Review Team Recommended Amount

\$132,908

## Review Team Conditions

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$132,908

**Staff Conditions**

N/A

# Mid-Columbia - Region 6 Spring 2023 Funding Recommendations



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**Funding Recommendation**

- Staff Recommendation For Funding (SRF)
- Below Funding Line (BFL)

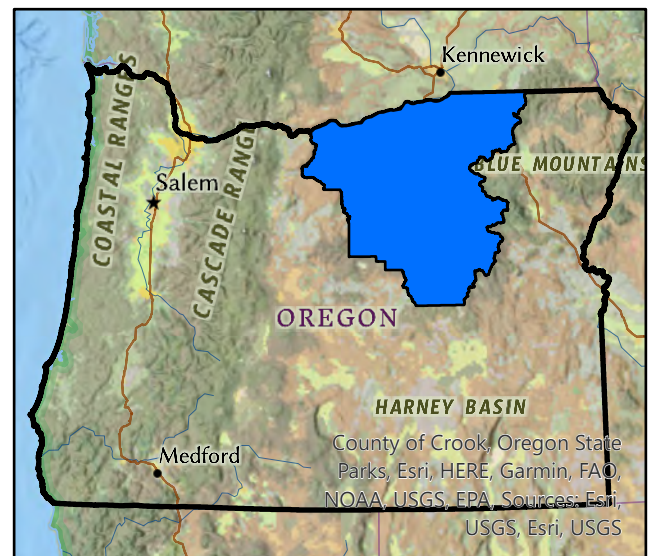
**Previous Grants 1998 - Spring 2022**

- Land Acquisition
- ◆ Restoration
- ▲ Region 6 Cities
- Region 6 Streams
- ▭ OWEB Region 6 Boundary



775 Summer St, NE Suite 360  
 Salem, OR 97301-1290  
 (503) 986-0178  
<https://www.Oregon.gov/OWEB/>

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Oregon Watershed Enhancement Board: Region 6 Restoration, Technical Assistance, Stakeholder Engagement and Monitoring

<b>Region 6 - Mid-Columbia Basin Restoration</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-6024	North Fork John Day WC	Sixmile Creek Habitat Restoration	A suite of restoration actions will be implemented to improve fish habitat and watershed function on Sixmile Creek, a tributary to the Middle Fork John Day River.	139,460
223-6020	Monument SWCD	Upper Cottonwood Creek Instream Restoration	Large wood, beaver dam analogs, and fencing will be installed to improve floodplain connection and increase streamside vegetation on Cottonwood Creek, near Monument.	141,907
223-6022	Gilliam SWCD	Rock Creek Riparian Fencing, Planting, and Livestock Distribution	Native vegetation and grazing management will be improved by installing streamside fencing, plantings, and off-channel livestock water on Rock Creek in Gilliam County.	208,279
223-6018	Grant SWCD	Jones SF Long Creek Fence	Streamside fencing will be installed to improve steelhead habitat on the South Fork Long Creek, a tributary to the Middle Fork John Day River.	165,837
223-6019	South Fork John Day WC	High Izee Enhancements	Rangeland health and wildlife habitat will be improved in the Pine Creek watershed, a tributary to the South Fork John Day River, by thinning forests, treating aspen and mahogany communities, and developing upland water sources.	124,263
223-6021	Wheeler SWCD	Cottonwood - Butte Creek Upland Renovation	Rangeland health and water quality will be improved in the Cottonwood-Butte Creek watershed near Fossil by removing juniper and installing livestock water developments.	99,766
<b>Total Restoration Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>879,512</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Recommended</b>
None				

<b>Projects Not Recommended for Funding by RRT</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Amount Requested</b>	
223-6015	Morrow SWCD	Morrow County Grassland Restoration of Annual Grass-Invaded Habitat	191,950	
223-6016	South Fork John Day WC	Battle Creek Upland Improvements	106,428	
223-6017	Wheeler SWCD	Gable and Thompson Creek Hydrologic Improvement	103,928	
223-6023	Wheeler SWCD	Thirtymile Watershed Forest Management	311,686	

<b>Region 6 - Mid-Columbia Basin Technical Assistance</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
223-6027	Wheeler SWCD	West Branch Bridge Creek Aquatic Inventory and Fish Passage Assessment	Aquatic habitat surveys will be conducted on West Branch Bridge Creek to assess current conditions and identify watershed restoration actions in Wheeler County.	74,656
223-6026	Walla Walla Basin Watershed Foundation	Strategic Action Plan Update	An updated strategic action plan will be developed for the Walla Walla River basin that incorporates climate change impacts.	54,796
<b>Total Technical Assistance Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>129,452</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Brief Description</b>	<b>Amount Recommended</b>
None				

<b>Projects Not Recommended for Funding by RRT</b>				
<b>Project #</b>	<b>Grantee</b>	<b>Project Title</b>	<b>Amount Requested</b>	
223-6025	Walla Walla Basin Watershed Foundation	Big and Little Meadow Canyon Creeks Assessment and Action Plan	70,527	

**Region 6 - Mid-Columbia Basin Stakeholder Engagement**

<b>Projects Recommended for Funding in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-6030	Walla Walla Basin Watershed Foundation	Dry Creek and Lower Pine Creek Assessment Stakeholder Engagement	Landowners will be engaged through outreach materials and events to build support for a watershed assessment on Dry and Lower Pine Creek near Milton-Freewater.	24,517
223-6029	Walla Walla Basin Watershed Foundation	Watershed Stewardship Workshops	Urban and Hispanic community members in Milton-Freewater will be engaged through workshops and meetings that are focused on urban watershed issues to identify future restoration actions in the Walla Walla basin.	62,834
<b>Total Stakeholder Engagement Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>87,351</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

<b>Projects Not Recommended for Funding by RRT</b>				
Project #	Grantee	Project Title	Amount Requested	
None				

<b>Region 6 - Mid-Columbia Basin Monitoring</b>				
<b>Projects Recommended for Funding in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
223-6028	Walla Walla Basin Watershed Foundation	Hydrological Trend Monitoring in the Walla Walla Basin	Data will be collected to continue long-term monitoring efforts measuring water temperature, stream flow, and aquifer levels that will be used to inform watershed planning in the Walla Walla basin.	113,273
<b>Total Monitoring Projects Recommended for Funding by RRT and OWEB Staff</b>				<b>113,273</b>

<b>Projects Recommended but Not Funded in Priority Order</b>				
Project #	Grantee	Project Title	Brief Description	Amount Recommended
None				

<b>Projects Not Recommended for Funding by RRT</b>				
Project #	Grantee	Project Title	Amount Requested	
None				

<b>Region 6 Total OWEB Staff Recommended Board Award</b>	<b>1,209,588</b>
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<b>Region 1 - 6 Grand Total OWEB Staff Recommended Board</b>	<b>12,461,865</b>
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# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6015-22911

**Project Type:** Restoration

**Project Name:** Morrow County Grassland  
Restoration of Annual Grass-Invaded Habitat

**Applicant:** Morrow SWCD

**Region:** Mid Columbia

**County:** Morrow

**OWEB Request:** \$191,950

**Total Cost:** \$280,700

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**Application Description** Our proposed project is focused on restoring grassland habitat located within the Columbia Plateau Ecoregion, specifically the foothills to the north of the Umatilla National Forest. This area is identified by Oregon Department of Fish and Wildlife as a conservation opportunity area extending from Rock Creek to Butter Creek. Historically this habitat was comprised of lush bunchgrass prairies and healthy riparian corridors. It has since been degraded by agriculture, over grazing, fire, urban growth, changing climate, and encroachment by invasive species including exotic annual grasses. Invasive annual grasses have out competed desirable species, reduced native species diversity, suppressed forage production, decreased the nutritional quality of forage, and disrupted the historical fire regime. These shifts have negatively impacted livestock and wildlife species by reducing the quantity and quality of available forage resulting in poor production and population declines. Research conducted throughout our county over the last 4 years found that annual grass selective herbicides applied in a moderately infested area can be an effective way to restore rangeland habitat and improve the quantity, quality, and composition of vegetation. Given these results we propose the Morrow County Grassland Restoration of Annual Grass Invaded Habitat project. The proposed project aims to restore 3,500 acres of annual grass invaded rangeland habitat using the selective herbicide Rejuvra. Project partners contributing financially and with project implementation include Morrow Soil and Water Conservation District, Oregon Department of Fish and Wildlife, Natural Resource Conservation Service, Morrow County Weed Department, and Heppner Rural Fire District.

### Review Team Evaluation

#### Strengths

- Invasive grass control is a top priority for landowners in this area and there is support for treatment from the owners of 3,500 acres.
- The applicant is engaging appropriate partners, including the Weed Department, Fire District, ODFW and NRCS.
- The applicant has a successful track record of implementing and managing OWEB grants.
- The budget is appropriate for the identified project components. Estimates are based on local vendor quotes and neighboring counties to develop accurate costs.

## Concerns

- Priority areas for treatment are unclear. Without this information it is not possible to understand the watershed context for the proposed work.
- A more strategic approach is needed before the work proceeds. The treatment areas appear to be scattered across the County.
- The application lacks a grazing plan post invasive annual grass treatment. One year of rest may be insufficient to maximize treatment success.
- Without locations selected it is unclear if work will occur near areas of high infestation, which may negate benefits of the work.
- The map in the application is unclear regarding values the colors represent.

## Concluding Analysis

Invasive annual grasses have outcompeted desirable species and reduced native species diversity in the area. Using Rejuvra© to combat invasive annual grasses has shown to be effective. Morrow SWCD proposes to treat 3,500 acres of annual grasses by selecting acres for treatment within Morrow County using an application and ranking process. Applications will include multiple screening questions and SWCD staff will then rank them based on selection criteria. The proposed project lacks a strategic approach to identifying treatment areas.

### Review Team Recommendation to Staff

Do Not Fund

### Review Team Priority

N/A

### Review Team Recommended Amount

\$0

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Mid Columbia (Region 6)

**Application Number:** 223-6016-22953

**Project Type:** Restoration

**Project Name:** Battle Creek Upland Improvements

**Applicant:** South Fork John Day WC

**Region:** Mid Columbia

**County:** Grant

**OWEB Request:** \$106,428

**Total Cost:** \$142,077

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**Application Description** The Battle Creek Ranch is located in Grant County, Oregon, approximately 2.5 miles West of the town of Dayville. This property includes the Battle Creek watershed, with multiple side tributaries. The Battle Creek Ranch is approximately 1,462 acres with approximately 5,000 acres of BLM allotted ground intermixed with the private land. The South East corner of the property is bordered by the ODFW Phillip W. Schneider Wildlife Area, and classified as critical winter range habitat for mule deer.

Battle Creek is listed as a Critical Habitat Stream for Mid-Columbia Steelhead and is also listed on the DEQ 303d list for temperature with a 7-day average of daily maximum of 74.5 with 122 days exceeding temperature standards.

Vernoy Walker recently purchased this property in 2022, and we have toured the property multiple times with many partners in order to assist in developing a master restoration plan for the ranch. This property is dealing with legacy livestock use issues, degraded upland vegetation, stream channel incision, Juniper encroachment, and invasive species (annual grass and noxious weeds). With the assistance of the landowner, Grant SWCD, and NRCS, we are approaching this property with a phased approach. We will first address the Juniper encroachment issue, so that Grant SWCD Weed Control can treat noxious weeds, and annual grasses. Then we will begin a low-tech process based riparian restoration effort for Battle Creek.

### Review Team Evaluation

#### Strengths

- The project as proposed is technically sound, with a well laid out plan to remove juniper and other invasive plants from the property.
- The work described in the application will implement specific actions in prioritized geographies identified in local and regional planning documents.
- Juniper is outcompeting desirable native grasses, forbs, and shrubs and the removal of juniper will help ameliorate this condition.
- The applicant has a proven track record of implementing similar projects and continues to improve their restoration approach by incorporating lessons learned from previous projects.

## Concerns

- Bureau of Land Management (BLM) lands are interspersed in the project area, and it is unclear how treatment on BLM lands will be integrated with treatment on private land.
- As a project component listed in the application, the landowner completed work on the reservoir to increase capacity, but the dam that feeds the reservoir is a partial passage barrier, potentially negating the project's habitat benefits.

## Concluding Analysis

The South Fork John Day Watershed Council is working with a new landowner to address legacy land management issues in the Battle Creek watershed. The project proposes to improve upland health in critical mule deer winter range by removing juniper in Mid and Lower Battle Creek. In addition to annual grass and noxious weed control, future efforts are planned to include low-tech process-based restoration; however, watershed benefits from work to increase capacity on the reservoir is not clear.

## Review Team Recommendation to Staff

Do Not Fund

## Review Team Priority

N/A

## Review Team Recommended Amount

\$0

## Review Team Conditions

N/A

## Staff Recommendation

### Staff Follow-Up to Review Team

N/A

## Staff Recommendation

Do Not Fund

## Staff Recommended Amount

\$0

## Staff Conditions

N/A



# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6017-22954

**Project Type:** Restoration

**Project Name:** Gable and Thompson Creek  
Hydrologic Improvement

**Applicant:** Wheeler SWCD

**Region:** Mid Columbia

**County:** Wheeler

**OWEB Request:** \$103,928

**Total Cost:** \$136,295

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**Application Description** 1) This project is located in the southern portion of Wheeler County, in the Bridge Creek Watershed, near the headwaters of Gable Creek and the confluence of Thompson Creek, on privately owned property, west of the town of Mitchell, OR. 2) The landowner farms all agriculture fields across the property through an 11-line pivot system that is all gravity fed from a pond; however, Western Juniper expansion in the uplands and riparian areas has resulted in encroachment on all the agricultural production and the multiple perennial stream systems that feed into the ESH listed portion of Gable Creek and Bridge Creek. Juniper encroachment, with an effect of reduced precipitation infiltration, has increased over the years due to historical wildfire suppression. This has created a limitation on stream and aquifer availability creating water quality and quantity issues, as well as a loss of native vegetation with increasing annual grass invasions that degrade wildlife habitat and their food source. In addition, the spring sources are in need of redevelopment as the springs were developed many years ago and no longer function as desired. The pipeline that feeds into a series of troughs have become clogged with algae matter restricting the flow and creating water quality and quantity concerns for livestock and wildlife. Also, the trough system lacks storage and stability causing sedimentation from ground disturbance by heavy animal use under wet conditions. 3) This project seeks to strategically conduct mechanical and hand cut Juniper treatments along priority northern slopes, excellent for producing forage and groundcover essential for wildlife species. This release of sequestered upland water supply will restore the upland conditions and the watersheds dynamic function. In addition, two springs will be developed to distribute grazing and provide terrestrial wildlife upland water source. 4) Project partners include OWEB, Wheeler SWCD, and the landowner.

### Review Team Evaluation

#### Strengths

- The application includes detailed maps and photos with descriptive captions, which is useful in reviewing the project objectives.
- The applicant has the capacity to manage and implement OWEB-funded projects.
- Applicant staff are getting trained on developing grazing management plans.

## Concerns

- It is not clear how the proposed work will improve ecological conditions, rather than improve forage for domestic livestock on the property.
- The application does not address the “why” each juniper stand will be treated, which is needed to evaluate the technical soundness of the application.
- Spring developments are not always exempt from regulation by OWRD. The proposed spring developments must be coordinated with OWRD to ensure regulatory compliance.
- It is unclear how the proposed work fits with the larger RCPP effort in the area.
- The stated benefits of carbon sequestration and improved water flow may be overstated in the application.
- Streambanks on the property are severely altered by livestock management on the property and there are no grazing management strategies articulated in the application.

## Concluding Analysis

Wheeler SWCD proposes to remove 399 acres of Western juniper in Gable and Thompson Creek watersheds. The proposed project may provide some upland ecological benefits by removing juniper and developing springs as upland water sources; however, water quality and quantity benefits from the project are unclear based on the information provided in the application.

### Review Team Recommendation to Staff

Do Not Fund

### Review Team Priority

N/A

### Review Team Recommended Amount

\$0

### Review Team Conditions

N/A

### Staff Recommendation

#### Staff Follow-Up to Review Team

N/A

### Staff Recommendation

Do Not Fund

### Staff Recommended Amount

\$0

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Mid Columbia (Region 6)

**Application Number:** 223-6018-22959

**Project Type:** Restoration

**Project Name:** Jones SF Long Creek Fence

**Applicant:** Grant SWCD

**Region:** Mid Columbia

**County:** Grant

**OWEB Request:** \$165,837

**Total Cost:** \$227,229

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**Application Description** This project includes the construction of approximately 5.5 miles of 4-strand wire fence, water gaps, stream crossings, and riparian escape gates, to improve riparian conditions around approximately 2.75 miles of the South Fork of Long Creek; this reach provides spawning and rearing habitat for ESA-listed summer steelhead. The allotment contains multiple other water sources including developed and undeveloped springs, intermittent streams, and stock ponds. Fence construction will be consistent with the Oregon Department of Fish and Wildlife's fencing specifications. Title II funds will support construction costs for approximately 3 miles of fence; Oregon Watershed Enhancement Board looks to support the remaining 2.5 miles. The Oregon Watershed Enhancement Board will supply all materials, for 5.5 miles of fence.

Without a riparian fence, cattle tend to loiter near the stream causing degraded streambanks, lack of diverse channel morphology, diminished riparian vegetation, degraded water quality, lack of fish and wildlife habitat, and uneven distribution of grazing through the allotment. A riparian fence would address these issues by excluding cattle from the stream allowing the natural vegetation to regrow and banks to heal.

The South Fork of Long Creek is a perennial tributary of Long Creek, a tributary of the Middle Fork John Day River. Project partners include the landowner, the permittee, the Malheur National Forest, and Grant SWCD. Unrestricted livestock access to the creek and associated riparian areas have degraded site conditions affecting aquatic habitat, water temperatures, and streamside vegetation.

### Review Team Evaluation

#### Strengths

- The application articulates the project benefits of excluding livestock grazing in the riparian area of the South Fork Long Creek, including improved channel morphology and riparian vegetation.
- The area is a high priority for restoration of steelhead habitat and actions are supported by several restoration plans.
- The applicant is experienced and qualified for this type of work.
- Fencing cost and installation rates are reasonable for the work proposed.

- The project cost is commensurate with expected watershed benefit in this active steelhead spawning and rearing area.

### **Concerns**

- It is unclear if NEPA and environmental compliance has been initiated for the project, which is important to complete the project in a timely manner.
- The application provides detailed fence specifications, but it is unclear whether the design meets ODFW wildlife friendly specifications.
- A map showing this project and past projects would help determine how the proposed project fits within the watershed context.

### **Concluding Analysis**

The application proposes to protect 2.75 miles of South Fork Long Creek in an area that is critical habitat for steelhead. Proposed work will protect spawning and rearing habitat; however, there is no letter of support from the USFS which would help demonstrate support for this project on public lands. Additional information on required project maintenance would strengthen the application.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

4 of 6

### **Review Team Recommended Amount**

\$165,837

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$165,837

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Mid Columbia (Region 6)

**Application Number:** 223-6019-22962

**Project Type:** Restoration

**Project Name:** High Izee Enhancements

**Applicant:** South Fork John Day WC

**Region:** Mid Columbia

**County:** Grant

**OWEB Request:** \$124,263

**Total Cost:** \$198,353

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**Application Description** The High Izee Ranch is approximately 14,000 acres that includes the headwaters of Pine Creek (a main tributary to the South Fork John Day River) and is within winter range for both Rocky Mountain Elk and Mule Deer. The ranch is located about 5 miles west of the junction between the South Fork Road and Izee-Paulina Hwy.

The High Izee Ranch has a recent new landowner that reached out to the South Fork John Day Watershed Council to improve their natural resources. They are hoping to maximize their efforts with this grant from already secured projects through the NRCS Sage Grouse Initiative which includes forestry thinning on 2000 acres (Crooked River watershed) and the South Fork John Day Watershed Regional Conservation Partnership Program (RCP) entailing forestry thinning on 202 acres. This project is just one piece of the ongoing efforts with hopes of continued restoration in the form of low-tech process-based restoration on the property streams.

We are requesting funds to cut, pile, and burn 100 acres of mixed conifer as well as develop 2 spring sources including protective fencing and wildlife escapement ramps. The forestry unit is on a north facing slope with species of Ponderosa pine, Douglas fir, Grand fir, and Western Juniper. About 5 acres of aspen and 10 acres of large mountain mahogany are included in the 100-acre thinning project to promote healthy stands.

Project partners include the South Fork John Day Watershed Council (SFJDWC), High Izee Ranch, and the Natural Resource Conservation Service (NRCS).

### Review Team Evaluation

#### Strengths

- The proposed project includes forest thinning with a future phase addressing process-based stream restoration through consideration of beaver dam analogs (BDAs), a phased approach will make work more achievable and a higher likelihood of success.
- The proposed actions are supported by conservation plans in the area and are prioritized in the NRCS-funded Regional Conservation Partnership Program.
- Removing juniper and thinning conifers may result in improved stream flows, although technical evidence for this should be referenced in the proposal.

- This project complements Regional Conservation Partnership Project (RCPP) funding in the South Fork John Day to remove Western juniper, thin overstocked forest, and promote native vegetation including the protection of aspen.
- The landowner has completed similar work and has worked with the applicant for assistance on projects providing watershed benefits on their properties.

### **Concerns**

- Addressing invasive annual grasses following forest thinning may be needed and is not discussed in the application or included as an objective.
- The spring developments may provide more benefit to domestic livestock than native wildlife.
- There may not be enough troughs prescribed for the number of livestock on the property.

### **Concluding Analysis**

This project builds on efforts from the South Fork John Day Watershed Council to remove juniper and thin conifers, improving watershed health in the South Fork John Day. Proposed work will also improve aspen and mountain mahogany stands that are critical to wildlife in the project area. Future work is to include low-tech process-based restoration actions in streams on the property. In future applications, the applicant should clearly articulate expected watershed benefits.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

5 of 6

### **Review Team Recommended Amount**

\$124,263

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$124,263

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6020-22974

**Project Type:** Restoration

**Project Name:** Upper Cottonwood Creek Instream Restoration

**Applicant:** Monument SWCD

**Region:** Mid Columbia

**County:** Grant

**OWEB Request:** \$141,907

**Total Cost:** \$214,890

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**Application Description** 1) The proposed project is located in northwest Grant County approximately 13 miles south of the town of Monument, Oregon in the Cottonwood Creek drainage (HUC 170702020905).

2) Cottonwood Creek is critical spawning and rearing habitat for ESA listed Threatened Middle-Columbia River steelhead that drains into the North Fork John Day River.

3) This project will implement various low-tech process-based restoration (LTPBR) structures including beaver dam analogues (BDA) and large woody debris (LWD) within Cottonwood Creek. This will improve LWD retention, attenuate flows, improve floodplain connectivity, aggregate sediment, and increase riparian hardwood productivity. The increased physical complexity within the channel will be utilized by steelhead and benefit steelhead and their habitat. Along with instream restoration work 14,200 feet of riparian fence will be built. The area of Cottonwood Creek where instream habitat will be implemented, is currently protected by a riparian fence. However, a section of fence will be moved back farther from the stream to protect a wet meadow feature from cattle disturbances. Additionally, a 4 strand barbed wire fence will be built downstream of the project site in preparation of phase 2. This restoration action will limit the duration and extent of grazing on Cottonwood Creek. Cattle exclusion will result in reduced trampling of hydric soils, decreased soil compaction, increased soil porosity, and accelerated recovery of sensitive plant communities. This project will reroute ~ 400 feet of an access road that is at high risk of erosion; which will allow the landowner continued use of the access of road, minimize road related water quality concerns, and allow for natural erosion including good spawning gravels and fines. Lastly, the project includes the develop of 3 upland water sources (i.e. springs).

4) Partners for this project include Chad Engle (Landowner), Monument SWCD, The Warm Springs Tribe, USFWS, & ODFW.

### Review Team Evaluation

#### Strengths

- The treatment sites selected for this project will benefit from the proposed instream restoration work and riparian fence.

- The restoration plan uploaded with the application is helpful to determine project appropriateness and provides necessary background watershed data to inform the project development.
- The application cites information sources that supports the need for instream habitat.
- Local and regional conservation plans identify the need for the proposed work to improve fish habitat.
- Multiple funding partners are engaged demonstrating the capacity of the applicant and the project partnership.
- Monument SWCD is capable of managing, designing, and implementing this type of project.
- The landowner is an engaged natural resource steward and has implemented similar work on lands they manage.

### **Concerns**

- It would be helpful to know where mussels are in the project reach and to incorporate habitat and best management practices during construction.

### **Concluding Analysis**

Monument SWCD proposes to install low-tech process-based restoration structures within Cottonwood Creek. The proposed work will increase floodplain connectivity and channel complexity that will improve steelhead habitat. The need for improved fish habitat is clearly outlined in the restoration plan, as well as local and regional conservation plans. The applicant has the capacity to adaptively manage the project which improves the likelihood of success.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 6

### **Review Team Recommended Amount**

\$141,907

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

**Staff Recommended Amount**

\$141,907

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6021-22989

**Project Type:** Restoration

**Project Name:** Cottonwood - Butte Creek Upland  
Renovation

**Applicant:** Wheeler SWCD

**Region:** Mid Columbia

**County:** Wheeler

**OWEB Request:** \$99,766

**Total Cost:** \$206,531

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**Application Description** 1) This project is located in the Cottonwood - Butte Creek Watershed HUC 6 (170702040501) Southeast of Fossil, Oregon in Wheeler County. 2) Over the years Western Juniper encroachment has increased due to the restriction and suppression of fire creating issues both with water quality and water quantity. This has also created the loss of native bunchgrass communities, vegetation, increasing annual invasives that overall degrade and compromise wildlife habitat and their food source. 3) This project proposes to reduce the negative impacts that Western Juniper imposes on the watershed function by mechanically removing 318 acres of invasive Western Juniper, developing 7 springs, installing 9 600-gallon stock water tanks to improve water quantity and quality for distributing proportional livestock grazing. In addition, 155 acres of broadcast seeding will be dispersed throughout areas that were disturbed within the juniper treatments. 4) Project Partners include OWEB, NRCS, Wheeler SWCD, and the landowner.

### Review Team Evaluation

#### Strengths

- The project aligns with both the Natural Resources Conservation Service (NRCS) Conservation Implementation Strategy (CIS) in Butte Creek and the Lower John Day Canyons Restoration Initiative.
- The application includes a juniper management plan with a description of post-project maintenance.
- Treating the juniper while it is still small is both efficient and protects existing shrub and grass communities from becoming degraded by encroaching juniper competition.
- The landowner has completed similar projects with positive results that inform this project.
- Grazing will be managed post-project to improve native grass growth.
- NRCS Regional Conservation Partnership Program (RCPP) funds will be leveraged to expand the restoration footprint and multiply the benefits of the project.
- The budget uses NRCS rates and design standards and reflects current market values for the project components.

#### Concerns

- Some quantified benefit statements in the application are pulled from the literature, may not be appropriate for this location, and may be overstated.

## **Concluding Analysis**

This project focuses on upland health by removing 318 acres of Western juniper and developing spring sources. Proposed project components complement other NRCS work in the watershed focused on upland watershed health. The SWCD has successfully completed similar projects and is working with the landowner to manage the property to improve watershed conditions.

## **Review Team Recommendation to Staff**

Fund

## **Review Team Priority**

6 of 6

## **Review Team Recommended Amount**

\$99,766

## **Review Team Conditions**

N/A

## **Staff Recommendation**

### **Staff Follow-Up to Review Team**

N/A

## **Staff Recommendation**

Fund

## **Staff Recommended Amount**

\$99,766

## **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6022-23020

**Project Type:** Restoration

**Project Name:** Rock Creek Riparian Fencing, Planting, and Livestock Distribution

**Applicant:** Gilliam SWCD

**Region:** Mid Columbia

**County:** Gilliam

**OWEB Request:** \$208,279

**Total Cost:** \$498,159

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**Application Description** This project is located in Gilliam County on 3.2 miles of Rock Creek. The project begins on river mile 27 of Rock Creek on two landowners. This reach of Rock Creek remains one of few that have not been fenced, planted, and enrolled in the Conservation Reserve Enhancement Program (CREP). This project would enroll over 100 acres into CREP, install 38,680 feet of riparian fence, plant nearly 6,000 riparian plants, install 20,000 feet of cross fence, and develop seven sources of off-site water. The CREP contracts will be effective October 1st, 2023. This section of Rock Creek is nearly void of riparian vegetation, and the need for plantings and exclusion fencing is a priority.

Project partners include OWEB, Farm Service Agency, Natural Resources Conservation Service, Gilliam-East John Day Watershed Council, Gilliam SWCD, and private landowners.

### Review Team Evaluation

#### Strengths

- The proposed project is adjacent to similar work, both planned and completed, in Rock Creek.
- There is active steelhead spawning and rearing in the area, but steelhead habitat is lacking in the reach and the proposed work will help improve conditions.
- Enrolling in CREP will improve riparian, instream, and fish habitat conditions that will benefit steelhead.
- The landowner is engaged in the project and is willing to fence off productive farm ground with the riparian fence in order to achieve project objectives.
- The applicant is experienced and successful in their planting methods, which include tillage and weed control.

#### Concerns

- The application lacks clarity on the planting plan, it is unclear what the planting methods and locations are.
- The watering system appears large for the number of animals run on this operation; additional engineering input may provide clarity.

### Concluding Analysis

Gilliam SWCD proposes to exclude 3.2-miles of Rock Creek from grazing, plant the riparian area and develop off-site water. This project builds on over 30 miles of Rock Creek already enrolled in CREP, adding to the cumulative benefits for steelhead. The applicant is encouraged to consult with a professional engineer for the design of the stock water system to ensure proper sizing.

**Review Team Recommendation to Staff**

Fund

**Review Team Priority**

3 of 6

**Review Team Recommended Amount**

\$208,279

**Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$208,279

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6023-23022

**Project Type:** Restoration

**Project Name:** Thirtymile Watershed Forest Management

**Applicant:** Wheeler SWCD

**Region:** Mid Columbia

**County:** Wheeler

**OWEB Request:** \$311,686

**Total Cost:** \$418,994

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**Application Description** 1) This project is located in the Thirtymile Watershed, approximately 15 miles Northeast of the town of Fossil, OR in Wheeler County. Thirtymile Creek is one of the three highest priority areas in the Atlas Prioritization ranking {John Day Basin Partnership Strategic Action Plan pg 53}. 2) The expansion of Western Juniper, over-stocked forests, limited water availability, and the invasion of annual grasses has degraded the state of the Thirtymile Watershed. Historical wildfire suppression has allowed the encroachment of Western Juniper into forest stands and grasslands where the species previously did not inhabit. This encroachment has created a limitation on aquifer availability resulting in water quality and quantity issues, as well as the loss of native vegetation that degrades wildlife habitat and their food source. As Western Juniper has expanded into these forests stands, all deciduous species are compromised. This amount of canopy cover creates additional competition for water and nutrients, and increases fuels loads that risk catastrophic wildfires. This has also made these dense forest stands vulnerable to disease and pest infestation as canopy cover restricts healthy mature trees from thriving. 3) This project proposes to address the negative impacts Western Juniper imposes and thin overstocked forest stands to a healthy density to restore multiple functions in the Thirtymile Watershed. The project will also develop one spring and install pasture/crossing fencing to improve water storage capacity and help distribute grazing. 4) Project partners include OWEB, NRCS, ODF, and the landowner.

### Review Team Evaluation

#### Strengths

- The landowner is using a forest management plan for the property to improve forest health conditions including reducing beetle infestations and improving fire resilience.
- Similar work is occurring in the watershed through the Lower John Day Canyons Restoration Initiative RCPP.
- The proposed work addresses actions in a specific geography identified in local and regional planning documents.

#### Concerns

- The application is unclear regarding watershed benefits and if the project is improving flow or making the property more fire resilient.

- The application lacks clarity on what is needed on the property and what is proposed in the application.
- The capacity of the landowner to complete the work as proposed is unclear.
- Technical soundness is difficult to determine since it is unclear how the project objectives and actions will result in identifiable watershed benefits.
- The costs outlined in the budget seem high for forest thinning in the region.

### **Concluding Analysis**

The landowner has demonstrated commitment to pursuing restoration on the property; however, the proposed project may not be ready for implementation. The application lacks details necessary to evaluate the ecological benefits to fish and wildlife habitat. If resubmitted, the applicant is encouraged to address the concerns noted above.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Do Not Fund

### **Staff Recommended Amount**

\$0

### **Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Mid Columbia (Region 6)

**Application Number:** 223-6024-23032

**Project Type:** Restoration

**Project Name:** Sixmile Creek Habitat Restoration

**Applicant:** North Fork John Day WC

**Region:** Mid Columbia

**County:** Grant

**OWEB Request:** \$139,460

**Total Cost:** \$194,780

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**Application Description** 1) This project will take place on Sixmile Creek, a tributary of the lower Middle Fork of the John Day in Ritter, Oregon. Specifically this first phase of work will take place on the Titus property, above the 15 road culvert, and the upper half of the Kennedy property. 2) The Ritter Fish Habitat Assessment performed in 2021 identified several deficiencies in fish habitat on Sixmile Creek as well opportunities to improve hydrologic function and water storage. Limiting factors within the creek include Degraded riparian area, channel structure and complexity, floodplain degradation, altered hydrology, sediment, water quality, and low flows. A general lack of instream complexity driven by a lack of wood structures drives the vast majority of these factors. 3) This project proposes to improve fish habitat and watershed function in Sixmile Creek via the placement of large wood structures and construction of beaver dam analogues (BDAs) and post assisted log structures (PALS) . This project will also involve planting and fencing to improve stream shading and riparian conditions. 4) This project is a cooperative effort between the North Fork John Day Watershed Council (NFJDWC), the Ritter Land Management Team (RLMT), the Oregon Department of Fish and Wildlife (ODFW), and the United States Fish and Wildlife Service (USFWS). NFJDWC will be the project lead, providing primary project oversight, contract oversight, planting, some materials, and project monitoring. RLMT will assist with project oversight, planting, and maintenance, ODFW will provide direct assistance with implementation as well as consultation to project design and oversight of instream work. USFWS will provide assistance with permitting and funding for habitat improvements on two additional properties.

### Review Team Evaluation

#### Strengths

- The proposed work will add significant aquatic habitat within Sixmile Creek.
- Steelhead occupy Sixmile Creek below the culvert downstream of the project, with redband trout present throughout the creek.
- Project partners, including Ritter Land Management Team, ODFW, and USFWS, are appropriate and capable of completing the proposed work.
- The prescription for each property as described in the basis for design report, is appropriate and reflects the current conditions and restoration needs for each location.
- The letters of support and the site visit showed the landowners are engaged and enthusiastic for the proposed restoration work.

- The ODFW Habitat Program is a partner and will be involved in project implementation.
- Low-tech process-based restoration is new for the Council, but ODFW has appropriate experience and expertise and will assist in implementation.
- Project costs are commensurate with anticipated watershed benefits of instream and riparian improvements and protection.

### **Concerns**

- The watershed assessment was not uploaded with the application; it would have helped clarify the phases described in the application
- There is a downstream barrier that may preclude upstream access to one of the proposed locations, but the watershed council is starting to work with the landowner.

### **Concluding Analysis**

The North Fork John Day Watershed Council proposed to improve fish habitat and overall watershed process and function within Sixmile Creek. Appropriate partners are engaged, and landowners are enthusiastic to improve instream and riparian habitat. The watershed council is working on implementing actions identified in a 2021 fish habitat assessment and this project is likely to lead to additional work in the Sixmile Creek watershed addressing fish habitat needs.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 6

### **Review Team Recommended Amount**

\$139,460

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$139,460

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Mid Columbia (Region 6)

**Application Number:** 223-6025-22960

**Project Type:** Technical Assistance

**Project Name:** Big and Little Meadow Canyon  
Creeks Assessment and Action Plan

**Applicant:** Walla Walla Basin Watershed  
Foundation

**Region:** Mid Columbia

**County:** Umatilla

**OWEB Request:** \$70,527

**Total Cost:** \$105,321

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**Application Description** Big and Little Meadow Canyon Creeks are located approximately 12 miles southeast of Milton-Freewater in Umatilla County, Oregon. Both creeks are tributaries of the North Fork Walla Walla River, which flows into the mainstem Walla Walla River approximately 9 miles downstream of its confluence with Big and Little Meadow Canyon Creeks. The two creeks are neighboring sub watersheds with a smaller unnamed creek in between them. (See Big and Little Canyon Creek Assessment and Action Plan Map). The creeks originate where springs drain into two large wetted meadows in their uplands. The assessment area encompasses 4.86 square miles from their confluences with the North Fork Walla Walla River up to their headwater springs. The current conditions of aquatic habitat, water temperature and flow are unknown for these subwatersheds.

The Big and Little Meadow Creeks Assessment will complement other water quality and habitat improvement efforts in the basin. Several floodplain and habitat restoration, spring reconnection, fish passage, and riparian restoration projects downstream of this assessment area have been completed or are in the design stage, including the North Fork Sam's Rea five-mile restoration project.

Big and Little Meadow Canyon Creeks have the potential to provide off-channel rearing habitat for ESA-listed steelhead, bull trout and redband trout and deliver additional spring and summer flow to the North Fork Walla Walla River. This assessment will allow us to understand current aquatic habitat conditions, temperature and flow rates for Big and Little Canyon Creeks. This will be done by conducting stream and habitat surveys as well as setting up two monitoring sites for flow and temperature. This assessment area is also located in a Strategic Implementation Area (SIA) designated by the Oregon Department of Agriculture, which focuses on implementing projects that improve water quality in local watersheds.

### Review Team Evaluation

#### Strengths

- There is a high likelihood for watershed restoration in the work area proposed, with multiple landowners already working with the watershed council on habitat restoration in the North Fork Walla

Walla River.

- The SWAT model mentioned in the application is an appropriate tool to accomplish project objectives.
- The applicant has the experience and capacity to implement the work as proposed.
- The watershed council is familiar with the survey protocols mentioned in the application and has completed similar analyses on other projects.

### **Concerns**

- Landowner maps would be helpful to understanding the geography of the project area.
- Upland stock watering/pond development may not fit well with the SWAT modelling proposed, as springs, ponds, and upland resources may be confounding factors to the SWAT model output.
- It is important for the habitat surveys to be completed at the same time of year across years.
- The application does not include an adequate calibration and validation approach for the SWAT model. The described use of the model may not lead to the results sought in the application. One year of stream flow is not sufficient to inform the resulting water balance.
- The project team may need more landowner buy-in to accomplish the work across the geography identified in the proposal.
- The proposal may be more compelling with participation from the upper most landowner. Additional stakeholder engagement may be necessary prior to developing the action plan.
- Mussels should be included as a variable to be considered during the planning and development phase.

### **Concluding Analysis**

The Walla Walla Basin Watershed Council is proposing to develop an assessment and action plan for Big and Little Meadow Canyon Creeks, tributaries to the North Fork Walla Wall River. The Big and Little Meadow Canyon Creeks Assessment will complement other water quality and habitat improvement efforts in the basin. While the applicant is familiar with the proposed SWAT modeling, the application lacked information to understand the calibration and validation approach for analysis.

### **Review Team Recommendation to Staff**

Do Not Fund

### **Review Team Priority**

N/A

### **Review Team Recommended Amount**

\$0

### **Review Team Conditions**

N/A

**Staff Recommendation**

**Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Do Not Fund

**Staff Recommended Amount**

\$0

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6026-22992

**Project Type:** Technical Assistance

**Project Name:** Strategic Action Plan Update

**Applicant:** Walla Walla Basin Watershed Foundation

**Region:** Mid Columbia

**County:** Umatilla

**OWEB Request:** \$54,796

**Total Cost:** \$74,124

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**Application Description** This strategic action planning effort will focus on the Walla Walla River Watershed in northeastern Oregon, with particular attention given to the impacts of climate change and the promotion of diversity and inclusivity in watershed management. The Walla Walla River Watershed area encompasses 1776 square miles, 487 square miles in Oregon, and 1288 square miles in Washington. The Walla Walla Basin Watershed Council (WWBWC) last updated its Strategic Action Plan (SAP) in 2014 (see ProposalLinks upload for a link to the current SAP). Since then, the watershed council and its partners have completed numerous projects in the basin that were identified in the prior SAP. Additionally, funding for watershed projects has evolved to focus on areas not currently covered in the existing SAP, including climate change adaptation, resilience measures, and inclusivity initiatives.

Critical components such as clear and concise Communications and Funding Plans are also missing from the current SAP. This proposal seeks to address the changes in the current conditions of the watershed, complete an update to the 2014 SAP, and produce a watershed council Communications and Funding Plan. The updated SAP will emphasize the need to address climate change impacts, such as increased drought, flooding, and wildfire risks, and promote the engagement of underrepresented communities in watershed management and decision-making processes.

The partners of this process include the current WWBWC Board of Directors, representing different sectors within the basin. These partners will work collaboratively to ensure that climate change adaptation and mitigation strategies are integrated into the updated SAP and that the plan fosters an inclusive, equitable, and diverse approach to watershed management.

### Review Team Evaluation

#### Strengths

- A varied and relevant list of actions are addressed in the application that will result from the planning effort.
- A data driven adaptive management strategy is described in the application and this will lead to relevant restoration in the future.
- Project objectives are sequential and relevant to achieving conservation and restoration work post planning.
- The application includes letters of support from relevant partners enhancing the capacity of the planning effort.

- The watershed council has a successful track record of implementing this type of project.

### **Concerns**

- The mission, goals, and objectives for the council are not articulated in the application.
- The application is unclear regarding how the watershed council will fully strategize with the Walla Walla 2050 planning effort.
- It is unclear how this planning effort will address climate change and flooding that is present and becoming more frequent in the Walla Walla basin.

### **Concluding Analysis**

The Walla Walla Basin Watershed Council is taking the next steps in updating their strategic action plan and identifying a roadmap for achieving the council's goals and objectives, which include the recovery of ESA-listed steelhead and bull trout populations. The watershed council is engaging the appropriate partners, and the team is working across state lines to accomplish planning for the Walla Walla basin in addition to the Oregon portion of the basin.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 2

### **Review Team Recommended Amount**

\$54,796

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$54,796

### **Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6027-23010

**Project Type:** Technical Assistance

**Project Name:** West Branch Bridge Creek Aquatic Inventory and Fish Passage Assessment

**Applicant:** Wheeler SWCD

**Region:** Mid Columbia

**County:** Wheeler

**OWEB Request:** \$74,656

**Total Cost:** \$136,545

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**Application Description** 1) This project will take place in the subwatershed of West Branch Bridge Creek HUC 12 (170702040302), located on 10.58 miles of West Branch Bridge Creek, where West Branch Bridge Creek leaves Ochoco National Forest entering privately owned property to the confluence of Bridge Creek. 2) As a result of topography and the elevation of its headwaters relative to its mouth, West Branch Bridge Creek subwatershed encompasses important climate refugia containing critical habitat for ESA listed Mid-Columbia O. mykiss and Redband Trout. Although past restoration activities towards the headwaters have improved parts of the system, the effects of channelization, floodplain degradation, and other upland problems remain. To lead into a ridgetop to ridgetop watershed restoration effort to ecologically restore the landscape; a full assessment of the system is needed. 3) Despite the relative importance of West Branch Bridge Creek in maintaining water quality and anadromous fish populations, no comprehensive assessment of the watershed has yet occurred. This proposed assessment will help landowners and managers understand the current watershed conditions and how land use practices may have affected watershed conditions and functions. In addition, USFS will be contributing to part of the assessment by taking inventory on 0.94 miles of West Branch allowing this project to have data from the headwaters to the confluence. The Wheeler SWCD views the assessment as a necessary first step in systematically working towards and accomplishing restoration goals. This assessment and subsequent action plan will facilitate the planning and prioritization of future projects. 4) Project partners include OWEB, Wheeler SWCD, ODFW AQI, USFS, and participating landowners.

### Review Team Evaluation

#### Strengths

- The narrative is complete in its description of the problems, partnerships, landowner support letters, goals and objectives.
- Proposed work will utilize the Oregon Department of Fish and Wildlife (ODFW) Aquatic Inventories Project (AQI) surveys that will result in a clear picture of habitat conditions on both USFS and private lands.
- The data gathered will be readily available to the public and agencies post data collection. The data will inform future restoration by assessing post-restoration effectiveness.
- The proposed work is in an Oregon Department of Agriculture (ODA) focus area and the water quality and fish habitat data will be analyzed in combination.

- Fish passage is a key issue addressed in the assessment.
- Multiple contributing partners including the Oregon Department of Fish and Wildlife Aquatic Inventories Project (ODFW AQI), the United States Forest Service (USFS), and landowners are identified in the application, showing support for the project.

### **Concerns**

- The survey methods described in the application would benefit from additional clarity in the narrative on how the different surveys will be integrated together.
- Mussels need to be part of the restoration planning baseline leading to restoration work so that restoration projects do not adversely affect mussel habitat.
- The budget for ODFW under contracted services is a lump sum, making it unclear how this budget item relates to project objectives and deliverables.

### **Concluding Analysis**

Bridge Creek is identified in many plans as a priority for conservation and restoration of steelhead habitat and other aquatic species. The proposed assessment leverages work already occurring within the ODA focus area to identify conservation and restoration actions aimed to improve water quality. The applicant is taking a strategic approach to the assessment, proposing additional fish habitat assessment utilizing ODFW AQI surveys.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

1 of 2

### **Review Team Recommended Amount**

\$74,656

### **Review Team Conditions**

N/A

### **Staff Recommendation**

#### **Staff Follow-Up to Review Team**

N/A

### **Staff Recommendation**

Fund

### **Staff Recommended Amount**

\$74,656

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Mid Columbia (Region 6)

**Application Number:** 223-6029-22998

**Project Type:** Stakeholder Engagement

**Project Name:** Watershed Stewardship Workshops

**Applicant:** Walla Walla Basin Watershed  
Foundation

**Region:** Mid Columbia

**County:** Umatilla

**OWEB Request:** \$62,834

**Total Cost:** \$152,208

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**Application Description** In the 29 years the Walla Walla Basin Watershed Council (WWBWC) has operated, the organization has effectively identified opportunities and engaged with rural stakeholders in pursuit of projects to improve multiple aspects of the watershed.

Demographically, past contacts allude to missed opportunities; previous partners have all been Caucasian, a fractional majority in our basin. Additionally, projects have historically not been performed within city limits. This not only overlooks important opportunities for beneficial projects, but also hinders the visibility of the work being done by WWBWC.

The WWBWC proposes to increase the number of urban and/or Hispanic stakeholders through a series of workshops, offered in both English and Spanish, that will focus on informing the community about our basin's issues including inadequate stream flow, high water temperatures and sediment loads, poor habitat complexity, groundwater declines, and fish passage obstructions, which impact the basin's populations of ESA-listed salmonids (summer steelhead and bull trout) and spring Chinook salmon. For increased accessibility, these will be recorded and uploaded to our website. As relationships with new, diverse stakeholders grow we will have more access to information from both urban and Hispanic basin water stewards. Community members will be able to engage with WWBWC staff and partners to identify future projects, volunteerism, and ecologically safe practices.

The WWBWC will partner with local, state, and tribal organizations to present topics such as water trusts/transactions/rights, river habitat restoration, basin groundwater, working with beavers, urban water conservation, pesticide stewardship, and living in a changing climate. This approach aims to foster a sense of unity while promoting shared responsibility and collaboration among diverse community members, empowering active participation in the protection and enhancement of our basin's health and sustainability.

### Review Team Evaluation

#### Strengths

- The project proposes to engage appropriate audiences, including underserved, urban, and Hispanic community members.
- The application specifies restoration actions in the watershed, including stream and riparian complexity, floodplain connection, and streamflow that would result from the engagement work.

- This model of engagement is new in the community and there is merit to testing this method to reach underserved populations.
- The applicant is coordinating with the library and other community institutions and facilities to engage the target audience.
- The proposed work is timely in combination with watershed council strategic planning and Walla Walla 2050 planning efforts in the basin.
- The budget is reasonable for the expected engagement of the Hispanic community in the Milton-Freewater area.
- All the concerns summarized in the previous application evaluation are addressed.

### **Concerns**

- A cohesive approach to engagement beyond Milton-Freewater is not clearly articulated in the application.
- Objectives are not quantifiable, and it is unclear how meaningful discussion will be evaluated.
- It is not clear how the Hispanic community will be effectively engaged in the proposed work.

### **Concluding Analysis**

The Walla Walla Basin Watershed Council proposes to engage underserved community members to identify future projects and present a variety of practices to enhance watershed health. Stakeholder engagement efforts to expand diversity, equity, and inclusion in outreach targeting water quality and restoration is important. The Watershed Council is taking the lead in addressing urban water quality improvement needs. However, there is concern that workshops and online surveys may not be the correct platform for the intended engagement. The application does not identify specific entry points to engage the Hispanic community.

### **Review Team Recommendation to Staff**

Fund

### **Review Team Priority**

2 of 2

### **Review Team Recommended Amount**

\$62,834

### **Review Team Conditions**

N/A

### **Staff Recommendation**

### **Staff Follow-Up to Review Team**

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$62,834

**Staff Conditions**

N/A

## Open Solicitation-2023 Spring Offering Mid Columbia (Region 6)

**Application Number:** 223-6030-23013

**Project Type:** Stakeholder Engagement

**Project Name:** Dry Creek and Lower Pine Creek  
Assessment Stakeholder Engagement

**Applicant:** Walla Walla Basin Watershed  
Foundation

**Region:** Mid Columbia

**County:** Umatilla

**OWEB Request:** \$24,517

**Total Cost:** \$31,998

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**Application Description** Project Location: The project's primary focus will be the Dry Creek subwatershed. However, Dry Creek is a tributary to Pine Creek, so this project will also encompass the lower ten miles of Pine Creek to ensure connectivity to the Walla Walla River (see attached project map). This is a bi-state project with 1353 acres of the total 32,469 acres located in Washington state. BPA funding will be used for work that's being conducted in Washington state.

**Project need:** The Dry Creek subwatershed faces numerous threats to its ecological health, including habitat fragmentation, lack of riparian vegetation, water quality degradation, loss of native anadromous fish populations, and fish passage barriers. The stakeholder engagement project is the first phase in a more significant subwatershed assessment planned to begin in the fall/winter of 2024.

**Proposed work:** The proposed work will focus on stakeholder engagement activities, including outreach events, educational materials, and one-on-one and group meetings with landowners to discuss the need for and potential benefits of a subwatershed assessment and the potential for restoration or water acquisition projects in the Lower Pine and Dry Creek subwatershed. The project will also include developing an outreach plan and identifying potential funding sources and other partners.

**Project partners:** Project partners will include the Umatilla County Conservation District, state and local government agencies, the Walla Walla Water 2050 Basin Advisory Committee (led by Oregon, Washington, and CTUIR), and other stakeholders interested in the health of the Dry Creek subwatershed and the Walla Walla River Watershed as a whole. These partners will be involved in planning and implementing stakeholder engagement activities and will help ensure the long-term sustainability of the proposed assessment and restoration or water acquisition projects.

### Review Team Evaluation

## Strengths

- Relevant participants including the Umatilla County Conservation District, the Walla Walla Water 2050 Basin Advisory Committee, and private landowners are involved.
- The proposed work is appropriate and a high likelihood that it will lead to restoration work in the watershed, with a clear line from engagement to technical assistance and restoration.
- Steelhead and Chinook use the lower watershed, while redband trout occupy the upper reaches; the proposed engagement will address limiting factors impacting fish populations including habitat fragmentation, water quality degradation, and fish passage barriers.
- This effort may lead to addressing known fish passage barriers in this system.
- The Walla Walla Basin Watershed Council has the necessary experience and is capable of the proposed work.

## Concerns

- Letters of support would be helpful to understand the need for community engagement and likeliness that engagement will result in restoration; it is unclear if there is a receptive audience for the proposed engagement.
- Success indicators may not be quantifiable as described in the narrative.

## Concluding Analysis

The Walla Walla Basin Watershed Council proposes to engage partners and local landowners to build support and increase participation in a sub watershed assessment. The proposed work is intended to increase participation in the assessment that will lead to identifying restoration actions in the Dry Creek and Lower Pine Creek watersheds. Addressing the need for partner and landowner engagement prior to implementing the watershed assessment is an appropriate action to strengthen the future assessment.

## Review Team Recommendation to Staff

Fund

## Review Team Priority

1 of 2

## Review Team Recommended Amount

\$24,517

## Review Team Conditions

N/A

## Staff Recommendation

## Staff Follow-Up to Review Team

N/A

**Staff Recommendation**

Fund

**Staff Recommended Amount**

\$24,517

**Staff Conditions**

N/A

# Open Solicitation-2023 Spring Offering

## Mid Columbia (Region 6)

**Application Number:** 223-6028-23006

**Project Type:** Monitoring

**Project Name:** Hydrological Trend Monitoring in the Walla Walla Basin

**Applicant:** Walla Walla Basin Watershed Foundation

**Region:** Mid Columbia

**County:** Umatilla

**OWEB Request:** \$113,273

**Total Cost:** \$185,566

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**Application Description** This project is located in the Oregon portion of the Walla Walla Basin in Umatilla County near the town of Milton-Freewater. The project will measure water temperature and stream flow in the Walla Walla River, its tributaries and distributaries, and also measure water levels in the underlying shallow alluvial aquifer during a 2 year period. Data are needed to guide current planning efforts aimed to address the Basin's inadequate water supply to meet the needs of aquatic life as well as agricultural and municipal uses. The Walla Walla Watershed is utilized by ESA-listed bull trout, summer steelhead, and reintroduced spring Chinook salmon, which are limited by lack of summertime flow and high water temperatures. Monitoring will document current conditions and describe trends to inform development of projects to restore watershed function and increase in-stream flows.

BPA will be the source of match for this project and project partners (non-match) include private landowners, Confederated Tribes of the Umatilla Indian Reservation, Oregon Water Resources Department, City of Milton-Freewater, Hudson Bay District Improvement Company, Walla Walla River Irrigation District, Fruitvale Water Users Association, and members of the Walla Walla Water 2050 project and Bi-State Flow Enhancement Study.

### Monitoring Team Evaluation

#### Monitoring Team Strengths

- This project will provide data that supports several efforts including the Walla Walla Water 2050 Plan, the Bi-State Flow Enhancement Study, and a basin-wide hydrology study led by the US Geological Survey (USGS).
- This project will complement the existing water temperature, ground water and surface water data that the applicant has collected over the last 20 years.
- The applicant provides a clear path on how the monitoring questions will be answered by continuing to collect data at existing sites for the next two years.
- The applicant follows established monitoring methods and are cited and described in the application.
- The applicant will update their existing Sampling and Analysis Plan and submit it to DEQ for review.
- The applicant is using specific software to manage the large amount of continuous data and will develop comprehensive annual reports that are posted on their website.

- The applicant has the necessary qualifications and experience to collect and report the data and has a proven track record to share the information with partners in the basin to inform on the ground actions.
- The applicant is engaging with technical experts from the Oregon Water Resources Department, Washington Department of Ecology, Confederated Tribes of Umatilla Indian Reservation and the USGS as part of the Walla Walla Water 2050 Plan.
- The applicant has a history of working with private landowners and partners within the community as demonstrated by the large number of monitoring sites on private land and the letters of support that were uploaded to the application.
- The budget is extremely cost effective given the number of sites to be monitored over two years.

### **Monitoring Team Concerns**

- The application mentions a need to collect more air temperature data to understand the impacts of the flood of 2020, but it was not clear how this additional data will be incorporated into the trend analyses.
- It was not clear if the applicant will be able to sustain collecting streamflow measurements every two to six weeks at all the 25 gaging stations over the next two years.
- It was not clear why funding is needed for a fiscal technician to complete this project as proposed.

### **Monitoring Team Comments**

### **Review Team Evaluation**

#### **Strengths**

- Data collected in this project is used by partners, such as the US Geological Survey (USGS), in the Walla Walla Water 2050 planning process that will lead to OWEB eligible restoration or acquisition projects.
- The applicant has access to multiple monitoring sites, demonstrating an effective working relationship in the community.
- The website and data sharing portal the applicant uses is important in distributing data to local users.
- The watershed council staff are qualified to implement the project and coordinate with multiple organizations, including across the state line in Washington.

#### **Concerns**

- It is not clear how the data collected has been used to inform water management over time.
- Some of the proposed data will be collected using methods that are not typically used and the data may not integrate with other agencies data sets.

## **Concluding Analysis**

The proposed project will provide data that supports several efforts, including the Walla Walla Water 2050 Plan, the Bi-State Flow Enhancement Study, and a basin-wide hydrology study led by the US Geological Survey (USGS). The applicant has a history of working with private landowners and partners within the community as demonstrated by the large number of monitoring sites on private land and the letters of support that were uploaded to the application. This project complements a long-term data set that has been collected over the last 20 years.

## **Review Team Recommendation to Staff**

Fund

## **Review Team Priority**

1 of 1

## **Review Team Recommended Amount**

\$113,273

## **Review Team Conditions**

N/A

## **Staff Recommendation**

### **Staff Follow-Up to Review Team**

N/A

## **Staff Recommendation**

Fund

## **Staff Recommended Amount**

\$113,273

## **Staff Conditions**

N/A