



Kate Brown, Governor



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Agenda Item O 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 O – Fall 2018 Open Solicitation Grant Offering
April 16-17, 2019 Board Meeting

I. Introduction

This staff report describes the Fall 2018 Open Solicitation Grant Offering and funding recommendations. Staff request the board approve the funding recommendations outlined in Attachment C to the staff report, including funding for 46 restoration grants, 21 technical assistance grants, 13 monitoring grants, and 6 stakeholder engagement grants.

II. Fall 2018 Grant Offering Background and Summary

A. Applications Submitted

A total of 146 applications were received requesting \$19 million. Attachment A shows applications submitted by region, project type, and funding request.

B. Applications Withdrawn

Following the application deadline, three applications (219-1013, 219-2048, and 219-4027) were withdrawn by the applicant.

C. Review Process

Staff sent eligible grant applications for review to the agency's six Regional Review Teams (RRTs). Staff scheduled site visits to as many proposed projects as possible. Per OWEB process, all RRT members were invited on these 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, including the board's new TA rules adopted in 2018. Monitoring applications were also reviewed by the Oregon Plan Monitoring Team to assess benefit to the Oregon Plan and likelihood of success prior to the RRT meeting. After classifying applications as "Fund" or "Do Not Fund," the RRTs then prioritized the projects recommended for funding by application type.

The RRTs' evaluations and recommendations in summary form are distributed to all applicants whose proposals were reviewed by that team. Prior to the board meeting, staff will forward to the board any written comments received from applicants regarding the RRT and staff recommendations.

III. 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 directed to improve greater sage-grouse habitat. For the Fall 2018 Open Solicitation Grant Offering, there are four projects (219-5029, 219-5034, 219-5039, and 219-5040) recommended for funding that meet these criteria, requesting \$240,057. Total funding awarded to sage-grouse projects in all categories since April 2015 is \$6,995,302. If the recommended projects are awarded funding from the board, the new four-year total will be \$7,235,359, including investments through the Focused Investment Partnership Program.

IV. Funding Recommendations

The funding recommendations for the Fall 2018 Open Solicitation Grant Offering are shown in Table 1.

Table 1: 2017-19 Spending Plan and Spring 2018 Grant Offering Staff Funding Recommendations

| Grant Type | Spending Plan Total | Previously Awarded | Grant Funds Available | Staff Recommendations | Recommended Grant Funds Remaining |
|------------------------|---------------------|--------------------|-----------------------|-----------------------|-----------------------------------|
| Restoration | \$32,000,000 | \$24,031,715 | \$7,968,285 | \$7,760,592 | \$207,693 |
| Technical Assistance | \$4,000,000 | \$2,635,064 | \$1,364,936 | \$1,229,307 | \$135,629 |
| Monitoring | \$3,100,000 | \$1,783,942 | \$1,316,058 | \$1,324,817 | (\$8,759) |
| Stakeholder Engagement | \$700,000 | \$632,336 | \$67,664 | \$240,015 | (\$172,351) |
| TOTAL | \$39,800,000 | \$29,083,057 | \$10,716,943 | \$10,554,731 | \$162,212 |

OWEB staff considered the RRT recommendations and the funding availability in the 2017-2019 spending plan in developing the staff funding recommendation to the board. Attachment B includes the number of applications recommended for funding by RRTs and staff by region and type, and the funding requests recommended by staff by region and type.

In order to fund staff recommended applications, staff recommend the board make the adjustments to the 2017-19 Spending Plan shown in Table 2. If the spending adjustments are approved, staff recommend the board fund the applications listed in Attachment C.

Table 1: Recommended 2017-19 Spending Plan Adjustments

| Spending Plan Line Item | Adopted Amount (\$ millions) | Recommended Change | New Spending Plan Amount (\$ millions) |
|-------------------------|------------------------------|--------------------|--|
|-------------------------|------------------------------|--------------------|--|

| | | | |
|---|--------|--------|--------|
| Open Solicitation: Restoration | 33.000 | -0.175 | 32.825 |
| Open Solicitation: Technical Assistance | 4.000 | -0.130 | 3.870 |
| Open Solicitation: Monitoring | 3.100 | +0.010 | 3.110 |
| Open Solicitation: Stakeholder Engagement | 0.700 | +0.175 | 0.875 |
| Land and Water Acquisition | 9.900 | +0.580 | 10.580 |
| Land and Water Acquisition TA | 0.600 | -0.450 | 0.150 |

Attachments

- A. Grant Applications Submitted
- B. RRT and Staff Funding Recommendations
- C. Regions 1-6 Funding Recommendations

Oregon Watershed Enhancement Board

October 29, 2018 Open Solicitation Offering

Applications Received by Type

| | Monitoring | Stakeholder Engagement | Technical Assistance | Restoration | Totals |
|----------|------------|------------------------|----------------------|-------------|--------|
| Region 1 | 7 | 1 | 8 | 12 | 28 |
| Region 2 | 7 | 1 | 9 | 15 | 32 |
| Region 3 | 2 | 4 | 2 | 13 | 21 |
| Region 4 | 4 | 1 | 6 | 7 | 18 |
| Region 5 | 4 | 1 | 6 | 13 | 24 |
| Region 6 | 3 | 2 | 3 | 15 | 23 |
| Totals | 27 | 10 | 34 | 75 | 146 |

Dollar Amounts by Application Type

| | Monitoring | Stakeholder Engagement | Technical Assistance | Restoration | Totals |
|----------|-------------|------------------------|----------------------|--------------|--------------|
| Region 1 | 287,770 | 24,690 | 459,800 | 2,562,796 | \$3,335,056 |
| Region 2 | 830,147 | 55,087 | 580,001 | 3,524,983 | \$4,990,218 |
| Region 3 | 96,530 | 251,218 | 149,929 | 2,548,336 | \$3,046,013 |
| Region 4 | 541,408 | 55,167 | 338,891 | 2,201,573 | \$3,137,039 |
| Region 5 | 359,787 | 42,609 | 274,793 | 1,302,139 | \$1,979,328 |
| Region 6 | 413,856 | 64,496 | 138,610 | 1,893,555 | \$2,510,517 |
| Totals | \$2,529,498 | \$493,267 | \$1,942,024 | \$14,033,382 | \$18,998,171 |

**RRT and Staff Funding Recommendations
for the Fall 2018 Open Solicitation Grant Offering**

| Region | Restoration | | | Technical Assistance | | | Monitoring | | | Stakeholder Engagement | | |
|--------------|-------------|-----------|------------|----------------------|-----------|------------|------------|-----------|------------|------------------------|----------|-------------|
| | RRT | Staff | % | RRT | Staff | % | RRT | Staff | % | RRT | Staff | % |
| Region 1 | 6 | 6 | 100% | 5 | 5 | 100% | 4 | 4 | 100% | 1 | 1 | 100% |
| Region 2 | 11 | 6 | 55% | 8 | 5 | 63% | 4 | 2 | 50% | 0 | 0 | - |
| Region 3 | 9 | 6 | 67% | 2 | 2 | 100% | 1 | 1 | 100% | 2 | 2 | 100% |
| Region 4 | 5 | 5 | 100% | 5 | 4 | 80% | 2 | 1 | 50% | 1 | 1 | 100% |
| Region 5 | 11 | 11 | 100% | 5 | 4 | 80% | 3 | 3 | 100% | 1 | 1 | 100% |
| Region 6 | 12 | 12 | 100% | 2 | 1 | 50% | 2 | 2 | 100% | 1 | 1 | 100% |
| Total | 53 | 46 | 87% | 27 | 21 | 78% | 16 | 13 | 81% | 6 | 6 | 100% |

| Region | Restoration | Technical Assistance | Monitoring | Stakeholder Engagement |
|--------------|--------------------|----------------------|--------------------|------------------------|
| Region 1 | \$890,991 | \$333,217 | \$100,828 | \$24,690 |
| Region 2 | \$1,571,123 | \$311,698 | \$308,626 | \$0 |
| Region 3 | \$1,376,667 | \$149,929 | \$48,152 | \$90,027 |
| Region 4 | \$1,573,089 | \$218,045 | \$195,483 | \$55,167 |
| Region 5 | \$1,100,410 | \$171,308 | \$339,552 | \$42,609 |
| Region 6 | \$1,248,312 | \$45,110 | \$332,176 | \$27,522 |
| Total | \$7,760,592 | \$1,229,307 | \$1,324,817 | \$240,015 |

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1013-16610

Project Type: Restoration

Project Name: Brush Creek Large Wood Enhancement

Applicant: Scappoose Bay WC

Region: North Coast

County: Columbia

OWEB Request: \$153,204

Total Cost: \$196,614

Application Description *(from application abstract)*

This project is located in Brush Creek, a tributary to North Scappoose Creek in the southern third of Columbia County. North Scappoose flows into Scappoose Bay, the Multnomah Channel and the lower Columbia River. The project addresses key salmon-production limiting factors identified in the Lower Columbia River Conservation and Recovery Plan (ODFW, 2011) and the Scappoose Creek Limiting Factor Analysis (SBWC, 2012): 1) lack of physical habitat quality and complexity, including low quantity of instream large wood and loss of pools and refuge habitat, and loss of floodplain connectivity; 2) low numbers of riparian conifers for future wood recruitment and poor riparian vegetation; and 3) temperature limitations in mainstem North Scappoose. This project also stems directly from the Scappoose Bay Watershed Strategic Action Plan (SBWC, 2018), which identified restoration actions that address areas with high potential for ecological benefits. The project will install 180 log pieces along 1.5 miles of creek in summer 2019, and plant 5000 native confers, small trees and shrubs during winter 2019-2020. Project is supported by ODFW, Weyerhaeuser, and Scappoose Bay Native Plant Nursery.

Review Team Evaluation Strengths

- N/A

Concerns

- N/A

Concluding Analysis

Application was withdrawn by applicant prior to review.

Review Team Recommendation to Staff

Withdrawn

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

Withdrawn

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1014-16613**Project Type:** Restoration**Project Name:** Bessey's North Fork Siuslaw & McLeod Creek Floodplain Restoration**Applicant:** Siuslaw SWCD**Region:** North Coast**County:** Lane**OWEB Request:** \$527,393**Total Cost:** \$842,248

Application Description *(from application abstract)*

The project area is located at the confluence of the North Fork (NF) Siuslaw River and McLeod Creek, extending into each of the Upper and Lower NF Siuslaw 6th Field HUC's, both of which are identified as priority watersheds for restoration in the Siuslaw Strategic Action Plan (SAP). The Siuslaw SAP (Siuslaw Coho Partnership (SCP), 2018) identifies the major stresses limiting Coho production in the Lower NF Siuslaw 6th Field HUC as decreased lateral connectivity, altered riparian function, and increased water temperatures. The Siuslaw SAP also identifies the major stresses in the Upper NF Siuslaw 6th Field HUC as decreased lateral connectivity and lack of in-stream complexity. The Federal Recovery Plan For Oregon Coast Coho (NOAA, 2016) recognized the primary habitat related limiting factors as lost habitat (especially floodplain habitat), reduced complexity, and degraded water quality. Stream complexity and water quality were also determined to be the primary and secondary limiting factors in Oregon's Coastal Coho Assessment (ODFW, 2005). The NF Siuslaw River is listed under section 303(d) of the Clean Water Act as being water quality limited by temperature and sedimentation. This effort will address each of the major stresses and limiting factors for Oregon Coastal (OC) Coho identified in each of the fore mentioned local, state, and federal plans; which is why it was ranked #3 overall out of the hundreds of proposed projects identified within the Siuslaw SAP. Measurable objectives: • Hydrologically reconnecting ~15 acres of floodplain. • Establishing ~15 acres of native riparian vegetation. • Developing ~ .5 mile of anastomosing off-channel habitat. • Increasing in-stream complexity to .5 stream mile. Partners: • Siuslaw National Forest and their Regional Assistance Team (RAT's) • NOAA • Wild Salmon Center (WSC) • Siuslaw Collaborative Watershed Restoration Program (SCWRP) • McKenzie River Trust (MRT) • Siuslaw Watershed Council (SWC)

Review Team Evaluation

Strengths

- The project is a top-ranked project in the Siuslaw Strategic Action Plan and addresses key limiting factors for Oregon coast coho salmon.
- The project will build upon other nearby work in the basin.
- This restoration application is the result of a previously funded OWEB Technical Assistance grant, and the applicant followed earlier recommendations by the review team to consider watershed processes more broadly when developing a design.

- The application has the appropriate level of detail describing the importance of this reach for anchor habitat for all life stages of coho.
- The project approach is innovative and focused on restoring system processes rather than solely addressing symptoms.
- In the long term, the project could reduce sediment in the system with its design encouraging deposition within the reach. The stage 8 design methodology could increase the pace of elevational evolution.
- The partners involved have an excellent track record for implementing restoration projects in the Siuslaw basin.

Concerns

- The design approach is new and limited monitoring data is available to determine the potential ecological benefits. The lack of monitoring occurring with similar projects has resulted in a lack of clarity on effectiveness of this technique.
- Projects of this nature have typically been implemented on larger parcels with landscape-level benefits, and there is potential for reduced ecological benefit on a smaller site such as the proposed project location. The application would benefit from more information addressing the spatial scale of this type of work and resulting expected benefits.
- The design work only included 3 cross sections, which seemed minimal considering the amount of heavy earthwork proposed on site along with the adjacent infrastructure of the county road.
- The cost estimates for some of the budget items are questionable; the application would benefit from more detail as to how costs were arrived at within the budget.
- The Siuslaw River is 303d limited for sediment, and the proposed method and implementation timing results in a large area of the site being bare going into the winter. Rebuilding a fluvial plain could take many years, and it is unclear what the risks of increased sedimentation are to the system in the interim.
- The application would benefit from some additional clarity; parts of the narrative were repetitive and lacked clear information about the stage 8 approach.

Concluding Analysis

The design approach constructs an inset floodplain within a heavily incised reach of the river and was partially funded by a previous OWEB Technical Assistance grant. The innovative design looks beyond traditional bank stabilization techniques and effectively addresses the dynamic nature of this site, where McLeod Creek enters the North Fork Siuslaw River. This project could be a great opportunity to employ the stream evolution-based stage 8 restoration technique on private landownership, but there may be risks to this method that are unknown due to lack of monitoring for similar projects. The application proposes limited effectiveness monitoring and would be strengthened by a detailed and thorough monitoring plan which could benefit not only this project but provide valuable lessons for other similar projects.

The project design team is highly qualified and respected and has implemented other successful projects; however, the submitted designs were lacking in engineering detail for the level of earthwork and project scale involved. The applicant is encouraged to consider resubmitting the project with an

effectiveness monitoring plan, more detail on design calculations, and more information addressing the potential for temporary impacts with regards to water quality.

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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1015-16616

Project Type: Restoration

Project Name: Kilchis Porter Tidal Wetland
Restoration Project

Applicant: The Nature Conservancy

Region: North Coast

County: Tillamook

OWEB Request: \$396,935

Total Cost: \$1,288,584

Application Description *(from application abstract)*

The Kilchis Porter project is located in the lower Kilchis River estuary on the east side of Tillamook Bay in Tillamook County near Bay City. The 60.26 acre project area lies between Stasek Slough to the south and Hathaway Slough to the north and borders the Kilchis Estuary Preserve to the south, a TNC preserve that is undergoing active restoration. The Porter project will restore former tidal wetlands that were converted to pastures, thereby providing critical off-channel rearing habitat for salmon and other species dependent upon tidal wetlands. The restoration will remove dikes, recreate tidal channels, fill agricultural ditches and restore tidal wetland vegetation through planting of wetland species. Weedy species will be reduced across the site to encourage native wetland habitats. In addition the restoration will provide for a more active connection between Stasek Slough and Hathaway Slough by removing a constricting culvert and re-designing a connecting ditch to better function as a natural tidal channel. This new channel will foster better drainage of farmlands that are along Stasek Slough upstream and east of Highway 101; the new channel will also provide enhanced tidal flow onto the existing Kilchis Estuary Preserve to the south of the Porter project. Project partners include Tillamook Estuaries Partnership, ODFW and USFWS. Access will be maintained across the new channel via a constructed bridge for the purposes of maintaining restoration plantings and an easement to private property. A second bridge will be constructed to allow for management access to the northern portion of the site along Hathaway Slough.

Review Team Evaluation

Strengths

- The project will restore and enhance 60 acres of estuarine habitat, a high priority in the north coast basin.
- The applicant has a good track record of success having implemented a similar restoration project on the adjacent property.
- The project builds on adjacent restoration work in the Kilchis, expanding the habitat connectivity and ecological benefits in the basin.

Concerns

- The planting densities are high and increase the cost of the project. Dense planting on a similar project required thinning to ensure success.
- The site preparation and plant establishment techniques rely on a heavy application of herbicide for success. On the site visit, it was confirmed that native wetland plant communities are also treated with herbicide in order to establish shrub species.
- The planting plan is heavy on shrub species while the Tidal Wetland Prioritization for the Tillamook Bay Estuary (2012) identifies marsh habitat as a target for this area.
- The need to establish an artificial connection between the two sloughs was not clear.
- At the time of grant submittal, only a draft design report was available for review. Review of the final analysis would have been preferable.
- The project includes a timber bridge to be constructed for site access, and large wood is proposed immediately near the bridge. There is the potential for the wood to rot and undermine the abutments.

Concluding Analysis

The project represents a good opportunity to create and enhance 60 acres of both existing and new estuarine habitat, a high priority for the north coast basin. The adjacent Kilchis project designed and implemented by the same applicant appears to be functioning well, and this project would increase the landscape-level benefits provided to the watershed. The proposed planting plan for this project however, raised some concerns as it seemed not to have considered the lessons learned on the adjacent property. It is recommended that the next submission of this application include the final analysis from the technical assistance grant, some cost-mitigating measures, as well as a better focus that includes lessons learned from the previously completed 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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1016-16626**Project Type:** Restoration**Project Name:** Bummer Creek Tributary Fish
Passage and Wetland Restoration**Applicant:** MidCoast WC**Region:** North Coast**County:** Benton**OWEB Request:** \$46,410**Total Cost:** \$93,610

Application Description *(from application abstract)*

This project is located approximately 1.5 miles south of the town of Alsea on Bummer Creek, the largest 4th order tributary of the South Fork Alsea River. Bummer Creek is designated a high priority "Anchor Habitat" for the recovery of listed Oregon Coast coho (OCC) within the Alsea basin. However, a BLM assessment ranked Bummer Creek as the most at-risk 6th field in the South Fork Alsea watershed. In response to the ranking, a 2005 OWEB funded Limiting Factors Analysis (LFA) was conducted at the location. The LFA identified two major co-limiting factors for coho production: 1) limited availability of high-quality spawning gravel, and 2) excessive summer temperatures. The 2016 coho recovery plan notes that for the Alsea independent population, the primary limiting factor for the population is listed as stream complexity, with water quality (excessive summer temperatures) identified as a secondary limiting factor. This project addresses these temperature factors by restoring fish passage by installing a box culvert and placement of large wood and stream bed material to arrest headcutting and to improve access to 0.85 tributary miles with cold water refugia and extensive rearing habitat in a perennial wetland complex. Additionally, the 4.4-acre seasonal wetland restoration (to be funded with matching grants) will allow storage of seasonal runoff and provide for cooler water temperatures through hyporheic flow, and restore habitat for native amphibians and migratory birds. This work compliments past and on-going work in the sub-basin. Project partners are the landowners, US Fish and Wildlife Service (North American Wetlands Conservation Act grant) and the Oregon Wildlife Foundation.

Review Team Evaluation

Strengths

- The project supports a unique life history of resident cutthroat trout and if implemented could enhance the resiliency of this population in the lower Nehalem. Brook lamprey are also present in the system above the falls.
- The project appeared straightforward and well-planned.
- Timing of the project is opportune with the landowner planning forest operations that can be timed with the restoration work to maximize cost efficiency.
- The project presents a good opportunity to work with a major landowner.
- The project partners have a successful track record implementing similar types of projects.

- The stream can benefit from some additional habitat complexity. The proposed large wood placements are well-described and appropriate for accomplishing this goal.

Concerns

- The application lacks detail about the proposed aquatic organism passage design features appropriate for resident cutthroat trout. Limited information was provided on the stream simulation and weirs.
- Objectives are unclear and some are not measurable.
- The discussion on alternatives within the application is limited and it was unclear whether there might be a more cost-effective approach available.
- The designs appeared unchanged from the previous submittal with little additional information provided regarding justification for sizing.

Concluding Analysis

This application is a resubmittal. Previous concerns included the lack of design features related to Aquatic Organism Passage. Grassy Lake Creek is a resident cutthroat stream. While design features necessary for other anadromous fish may not be appropriate, it is still important to design projects considering the specifications of the target species. The previous review expressed concern regarding the design standard and the sizing proposed for the structures, and this application had only limited additions with regards to the culvert replacement components of the project.

The large wood project components, however, are valuable and necessary for the health of the fish population in the creek. The large wood components of the application provide the appropriate amount of detail and articulate the expected ecological benefits and geomorphological goals of the proposed work. The addition of instream habitat complexity will address limiting factors for this population of resident cutthroat trout, and the review team recommended funding the habitat component of the 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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1017-16632**Project Type:** Restoration**Project Name:** Grassy Lake Creek Tributary
Culvert Replacements and Habitat Enhancement**Applicant:** Lower Nehalem WC**Region:** North Coast**County:** Clatsop**OWEB Request:** \$52,776**Total Cost:** \$125,704**Application Description** *(from application abstract)*

LOCATION:Grassy Lake Creek encompasses 5.53 square miles with 39 stream miles, located in the North Fork Nehalem watershed north of the city of Nehalem off of North Fork Road. The crossings being addressed in this proposal are on an unnamed fish bearing tributary to Grassy Lake Creek. There are two undersized culverts both located on Weyerhaeuser property. During the Lower Nehalem Watershed Council's 2015 culvert inventory, these two pipes were identified as "medium" priority candidates for replacement. **PROJECT NEED**This project addresses critical habitat and passage needs essential for the long-term maintenance and survival of an isolated population of indigenous Coastal Cutthroat trout. This summer (2017) Lower Nehalem Watershed Council reached out to Weyerhaeuser to determine whether any culverts that were identified as candidates for replacement in the culvert inventory lined up with any near-term harvest actions. Weyerhaeuser has a harvest scheduled for Grassy Lake Creek in 2018. Both of these culverts proposed for replacement are on Soapstone Mainline which will be used during harvest actions. **PROPOSED WORK**This project proposes to remove the existing undersized pipes with fish passage issues and replace them with appropriately sized culverts. The project also proposes to install large wood in the stream to enhance habitat conditions for these same fish. **PROJECT PARTNERS/ROLES**1. Lower Nehalem Watershed Council providing project management, photo documentation, project permitting and grant reporting2. Weyerhaeuser providing engineering survey and designs, permitting assistance, construction contracting and construction management 3. Oregon Department of Fish and Wildlife providing large wood layout and project construction oversight

Review Team Evaluation**Strengths**

- The project supports a unique life history of resident cutthroat trout and if implemented could enhance the resiliency of this population in the lower Nehalem. Brook lamprey are also present in the system above the falls.
- The project appeared straightforward and well-planned.
- Timing of the project is opportune with the landowner planning forest operations that can be timed with the restoration work to maximize cost efficiency.
- The project presents a good opportunity to work with a major landowner.

- The project partners have a successful track record implementing similar types of projects.
- The stream can benefit from some additional habitat complexity. The proposed large wood placements are well-described and appropriate for accomplishing this goal.

Concerns

- The application lacks detail about the proposed aquatic organism passage design features appropriate for resident cutthroat trout. Limited information was provided on the stream simulation and weirs.
- Objectives are unclear and some are not measurable.
- The discussion on alternatives within the application is limited and it was unclear whether there might be a more cost-effective approach available.
- The designs appeared unchanged from the previous submittal with little additional information provided regarding justification for sizing.

Concluding Analysis

This application is a resubmittal. Previous concerns included the lack of design features related to Aquatic Organism Passage. Grassy Lake Creek is a resident cutthroat stream. While design features necessary for other anadromous fish may not be appropriate, it is still important to design projects considering the specifications of the target species. The previous review expressed concern regarding the design standard and the sizing proposed for the structures, and this application had only limited additions with regards to the culvert replacement components of the project.

The large wood project components, however, are valuable and necessary for the health of the fish population in the creek. The large wood components of the application provide the appropriate amount of detail and articulate the expected ecological benefits and geomorphological goals of the proposed work. The addition of instream habitat complexity will address limiting factors for this population of resident cutthroat trout, and the review team recommended funding the habitat component of the project.

Review Team Recommendation to Staff

Fund Reduced with Conditions

Review Team Priority

6 of 6

Review Team Recommended Amount

\$24,858

Review Team Conditions

Remove culvert replacement from budget and scope of services.

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

N/A

Staff Recommendation

Fund Reduced with Conditions

Staff Recommended Amount

\$24,858

Staff Conditions

Remove culvert replacement from budget and scope of services.

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1018-16638**Project Type:** Restoration**Project Name:** Clatskanie Headwater Stream Fish Passage Restoration**Applicant:** Columbia SWCD**Region:** North Coast**County:** Columbia**OWEB Request:** \$152,047**Total Cost:** \$192,117**Application Description** *(from application abstract)*

The project is located on an unnamed tributary of the Clatskanie River, in Columbia county, OR. It is one of two headwater streams that join near Pittsburg Road to form the mainstream Clatskanie River. The culvert was identified by Oregon Department of Fish and Wildlife (ODFW, Dave Stewart) as a fish passage barrier several years ago but as there were culverts downstream that prevented passage, this culvert replacement was delayed. Now, those culverts have been replaced and provide year- round fish passage and the focus can be moved to this tributary. The current culvert is undersized and perched, and acts as a fish passage barrier at low and high flow discharges throughout the year. It blocks access to spawning habitat to Endangered Species Act listed Coho salmon as well as steelhead. It is also a barrier to migration for resident Coastal Cutthroat and Western Brook Lamprey. The culvert is on Hancock Forest Management, Inc. (HFM) property. HFM is systematically replacing all problem culverts on their land holdings in Oregon. HFM began partnering with the Columbia SWCD and ODFW to tackle problem culverts in 2016. This culvert replacement will be the second project undertaken. The proposed work would replace the old culvert, (a 60-inch corrugated metal pipe), with a bridge, spanning 55 feet. A bridge of this size would allow for the creek, which has an average bankfull width of 15.5ft, to pass unencumbered through the road crossing and allow for up and downstream migration of native fish species. It would also restore hydraulic connectivity providing natural downstream movement of water and sediment. The project is a collaboration between HFM, ODFW, and the Columbia SWCD. Engineers at HFM will be designing the bridge crossing and the implementation of the project will be supported by the Columbia SWCD and ODFW.

Review Team Evaluation**Strengths**

- The Clatskanie watershed is a priority location for restoration supporting ESA-listed salmon and steelhead.
- There is a strong partnership between the landowner and the Columbia SWCD. The site visit clearly demonstrated that the project team had given significant consideration to the site's challenges and designed the project accordingly.
- The design carefully considers the value of the adjacent wetland and endeavors to retain this function.

- Fish passage is a limiting factor for the Clatskanie River and this project will remove the final barrier.
- The project's team has successfully implemented similar projects, including the Dribble Creek project which the team toured after the site visit.

Concerns

- The new crossing was not designed to meet federal fish passage standards. There was limited detail provided on the aquatic organism passage design specifications that would be incorporated in the project.

Concluding Analysis

Implementation of this project will restore fish access through the last barrier on the Upper Clatskanie, addressing a key limiting factor for salmonids in this basin. The project's partners have developed a thoroughly planned and well-designed fish passage project that addresses site-specific challenges.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

5 of 6

Review Team Recommended Amount

\$152,047

Review Team Conditions

Bridge design to achieve 1.5:1 ACW (active channel width) and conduct pebble counts to inform stream simulation design.

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

N/A

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$152,047

Staff Conditions

Bridge design to achieve 1.5:1 ACW (active channel width) and conduct pebble counts to inform stream simulation design.

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1019-16652**Project Type:** Restoration**Project Name:** Cleveland Creek Highway 36
Culvert Replacement**Applicant:** Siuslaw WC**Region:** North Coast**County:** Lane**OWEB Request:** \$295,483**Total Cost:** \$1,327,354

Application Description *(from application abstract)*

Cleveland Creek is a salmon bearing tributary of the Siuslaw River in the Lower Siuslaw 5th Field Watershed. The creek passes through a culvert under Highway 36 in the community of Tide between Swisshome and Mapleton in Lane County, Oregon. Project partners include Siuslaw Watershed Council (SWC), Oregon Department of Transportation (ODOT), and OBEC Consulting Engineers, Inc. (OBEC). The Highway 36 culvert on Cleveland Creek is undersized and a complete barrier to juvenile aquatic species passage, including ESA threatened Oregon Coast ESU Coho Salmon, Oregon Coast DPS steelhead, cutthroat trout, and Pacific lamprey. The culvert restricts natural stream processes, limiting stream complexity and potentially affecting fish habitat and water quality. The Siuslaw Watershed Council (SWC), working with the landowner (ODOT), will replace the existing, undersized barrier culvert with a bridge that will allow fish passage, reduce water velocity during high-flow events, and allow for natural simulation of the stream bed. A 70 foot span bridge meeting ODOT design requirements will be constructed in place of the current culvert. The new bridge will restore access for anadromous species to about 1.5 miles of high quality spawning and rearing habitat and provide cool water refugia from the mainstem Siuslaw River. The proposed project will address the identified limiting factors of temperature, dissolved oxygen, stream complexity, and water quality within the Siuslaw watershed.

Review Team Evaluation

Strengths

- The project replaces the last barrier on Cleveland Creek restoring access for all life stages of aquatic species to 1.5 miles of habitat.
- The project complements previous work implemented in Cleveland Creek with the design funded by an OWEB-funded technical assistance grant.
- Replacing the culvert provides access to critical cold water refugia habitat in the temperature-limited Siuslaw River.
- The upper Cleveland Creek watershed is in USFS-managed Late-Successional Reserve.
- Project partners have successfully implemented similar projects in the watershed.
- This is a cost-effective fish passage project considering its location on a state highway.

Concerns

- The budget lacks essential detail for some line items and as a result it is unclear what OWEB's contribution will be.
- The plan for addressing Aquatic Organism Passage (AOP) standards was not well-defined.
- The downstream boulder weirs were not analyzed as part of the design.

Concluding Analysis

Cleveland Creek provides important cold water refugia habitat in this priority reach of the Siuslaw River. Access to the stream is currently limited by a perched culvert under Highway 126. Addressing this issue has been a priority of the applicant who previously implemented an OWEB-funded project upstream to repair a crossing under a railroad. This project is the result of a technical assistance grant that has produced a comprehensive and straightforward application. More detail in the designs regarding the plan for AOP would have strengthened the application, but it is understood from conversations on the site visit that the final designs will address this omission and develop appropriate specifications.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 6

Review Team Recommended Amount

\$295,483

Review Team Conditions

None

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

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$295,483

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1020-16653

Project Type: Restoration

Project Name: Cathlamet Bay Watershed
Connectivity and Tidal Restoration Project

Applicant: North Coast WS Assn

Region: North Coast

County: Clatsop

OWEB Request: \$331,872

Total Cost: \$919,815

Application Description *(from application abstract)*

The Cathlamet Bay Watershed Connectivity and Tidal Restoration Project encompasses two sites located between River Mile 18 and 19 of the Columbia River Estuary (CRE) in Clatsop County, just east of Astoria. At The Mill Creek site, a historic logging road is slated for removal to improve access to foraging, rearing, and spawning habitat for ESA listed salmonids, while improving tidal inundation at the mouth for species utilizing the CRE. The second site, along John Day River Road, is designed to replace a pair of undersized culverts acting as a hydrologic and fish passage barrier to the upstream wetland complex. The culverts will be replaced with a bridge, improving access to foraging and rearing habitat for CRE salmonids, while benefiting the community by reducing severe seasonal flooding, an existing safety issue for residents near the project area. At Mill Creek, 1.9 miles of road will be decommissioned in both the fluvial and tidal reaches of the subbasin. 23 road crossings will be restored to natural hydrology, 12 of which are on identified ESA listed salmonid streams. Fish passage barriers to upstream spawning habitat will be removed, floodplains will be reconnected, and wetlands will be restored. At John Day, this project removes barriers to 22 acres of tidal wetlands for ESA listed salmonids utilizing the Lower Columbia River Estuary. Post-project, salmonids will have unrestricted access to high quality tidal wetlands and local residents will have year-round safe passage to their homes. When implemented, these projects will increase watershed resiliency to existing and predicted increases in storm events and build on the cumulative effort in and around Cathlamet Bay to restore natural watershed, wetland, and tidal processes that benefit ESA listed salmonids. This project is a partnership between NCWA, CREST, Clatsop County, and the Oregon Department of Forestry (ODF) applying for the National Coastal Wetland Conservation Grant.

Review Team Evaluation

Strengths

- The project has the potential to improve both fish passage and water quality in the Cathlamet Bay watershed.
- Decommissioning the road along Mill Creek will result in an improved forest management approach.
- The project will improve habitat connectivity in both Mill Creek and the lower John Day.
- The fish passage project is designed with climate resiliency in mind.

- The partnership team has essential capacity to implement the projects including an appropriate mix of local partners.
- The Mill Creek basin contains opportunities for educational outreach.

Concerns

- Road-decommissioning alternatives do not consider re-routing the road around the wetland entirely.
- The linkage between the two projects is unclear. Additional detail regarding the strategic approach to restoration in Cathlamet Bay would strengthen the application.
- The fish passage component has increased in cost since the previous OWEB restoration grant was awarded, thus reducing the overall cost-benefit of the project.

Concluding Analysis

Both projects that comprise this application, the John Day Crossing and the Mill Creek Road decommissioning, were awarded funding by OWEB in April 2018.. Since that time, both projects experienced unexpected cost increases and partners decided to pursue a Coastal Wetlands grant to compensate for the funding shortfall.

The projects continue to have a high potential for ecological benefit. They are technically sound with the partners having the capacity to successfully implement this project. It is recommended that OWEB pursue a Coastal Wetlands grant on behalf of the applicants to achieve the necessary funding levels to complete implementation.

Review Team Recommendation to Staff

Review Team Priority

N/A

Review Team Recommended Amount

\$0

Review Team Conditions

Proceed with Coastal Wetlands Grant application.

Staff Recommendation

Staff Follow-Up to Review Team

N/A

Staff Recommendation

Staff Recommended Amount

\$0

Staff Conditions

Proceed with Coastal Wetlands Grant application.

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1021-16655**Project Type:** Restoration**Project Name:** Upper Big Creek Road
Decommissioning**Applicant:** North Coast WS Assn**Region:** North Coast**County:** Clatsop**OWEB Request:** \$188,073**Total Cost:** \$272,682

Application Description *(from application abstract)*

Camp 7 Spur is a 1.2 mile stretch of legacy logging road adjacent to Big Creek that encroaches on the floodplain and needs to be abandoned. The project is located on Hampton Lumber forest land upstream of the Big Creek Fish Hatchery and the town of Knappa, 15 miles east of Astoria. This legacy haul-route roadbed constricts Big Creek's width, confining it to a much narrower floodplain and the basin's logging history has left the channel largely devoid of complexity and structure. Big Creek upstream from the ODFW fish hatchery is a priority stream for ESA listed species in the Nicolai-Wikiup Watershed because it is the only location in the watershed inaccessible to competition from hatchery fish. This project proposes to implement restoration actions to improve fish habitat and channel processes including: 1) obliterate sections of road that are in the stream floodplain including removing road fill, 2) remove existing cross drains and restore natural drainage, 3) remove tributary culverts and associated road fill, 4) plant conifer along road bed, 5) remove two bridges and abutments, saving one for re-use 6) install large wood placements to improve spawning and rearing habitat, promote floodplain connectivity, and increase off-channel refugia. This project has been identified by local residents and the Nicolai-Wikiup Watershed Council as the number one priority for implementation. This project is top priority for NCWA because there is strong community support to see it through, we need to take advantage of the landowner's willingness to move forward on the project, bringing in OWEB funds will allow us to install large wood structures along this vital stretch of spawning habitat that will no longer be accessible by road after abandonment, and this project will have downstream effects and multi-species benefit. Project partners include the private landowner, Hampton Resources and the North Coast Watershed Association (NCWA).

Review Team Evaluation

Strengths

- The project is a result of a previously funded OWEB Technical Assistance grant. The design effort capitalized on existing expertise from the landowner and supplemented it with a consultant to design habitat features.
- This is a high priority area to improve habitat for ESA-listed species in the Nikolai-Wikiup watershed.
- The project will remove and alter sections of a road from a riparian area, decreasing its impact on fish and wildlife and reducing the amount of sediment that enters the stream.

- A planned timber harvest in the basin will provide the necessary material for the large wood placements.

Concerns

- The fish in the affected reach do not have natural access to the project site and are trucked upstream of the fish hatchery facilities. ODFW's ability to safely transport fish in a timely manner could be a greater limiting factor than habitat complexity.
- Project designs provide limited detail, even though a technical assistance grant was previously awarded. There are no calculations or drawings provided for either the road fill removal or the large wood project components.
- The project's cost is high relative to the amount of proposed work.
- It is necessary to rebuild the road to bring wood in to the site. At the site visit the plan to rebuild the road and at what location was unclear.
- Portions of the project location are within a significant landslide area. It is unclear if the design process thoroughly addressed the potential of the project to destabilize the slope. Additional technical expertise might be needed when working within the landslide area.
- Detail regarding the plan for road decommissioning was lacking in the application. Maps or designs related to the road sections slated for removal would improve the application's clarity.

Concluding Analysis

The project site on Upper Big Creek is an appropriate area to improve habitat for wild fish populations in the Lower Columbia since hatchery fish do not have access to the project reach. ODFW is aware and engaged in the issue of passage for wild fish at the hatchery location with discussions regarding potential alternatives for trucking the wild fish. The forest road proposed for decommissioning restricts floodplain access and likely contributes sediment to the stream. It was not possible to adequately review this application without seeing the design details that were funded by a previous OWEB grant. The necessity of rebuilding the road prior to dismantling it to facilitate the wood structures increases the already high cost to benefit ratio.

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-2018 Fall Offering North Coast (Region 1)

| | |
|--|----------------------------------|
| Application Number: 219-1022-16682 | Project Type: Restoration |
| Project Name: Boneyard Ridge Forest Restoration | |
| Applicant: North Coast Land Conservancy | |
| Region: North Coast | County: Clatsop |
| OWEB Request: \$108,829 | Total Cost: \$137,334 |

Application Description *(from application abstract)*

1. Project Location: Boneyard Ridge Habitat Reserve, Seaside, Oregon. In 2016 NCLC acquired 340 acres of young forestland on Tillamook Head with a plan to restore the property to late seral forest habitat through long-term adaptive management. 2. Project Need: There is a 70-acre management unit on the property that is young, densely planted, even-aged, and ready for thinning. The stand contains a mix of 20-year-old spruce and hemlock, with 630 trees per acre. 3. Proposed Restoration Action: Local forest ecologists recommend we use hand crews to thin the stand to 280-350 trees per acre, favoring the healthiest trees and creating variable spacing. This prescription will allow dominant trees to grow larger quickly, increase spatial diversity, and improve forest health. Some of the resulting slash will be used to construct habitat piles that will create an immediate benefit to amphibians and songbirds. Cut trees will be installed into stretches of stream that fall within the unit to benefit fish habitat. Following the thinning treatment, western red cedar and bigleaf maple will be planted into some of the created gaps to restore species diversity that would have historically been at this site. 4. Project Partners: NCLC is working with other neighboring forest managers on Tillamook Head to share resources including Oregon State Parks and Recreation District (Ecola State Park and Elmer Feldenheimer State Natural Area) and Tareen Filgas Foundation (Ecola Ridge). NCLC will also work with the Necanicum Watershed Council to do community outreach through volunteer events and public tours. Numerous foresters and wildlife biologists have been consulted for project design and provide ongoing support to NCLC, including Northwest Natural Resource Group, Springboard Forestry, Lewis and Clark Natural Historical Park, OSU Extension Services, Celata Research Associates, Willapa National Wildlife Refuge, Oregon State Parks, and Integrated Resource Management.

Review Team Evaluation **Strengths**

- The proposed approach provides relevant detail and is well-considered. The applicant sought guidance from other foresters implementing similar types of work.
- Due to the current overstocked nature of the stand, the site cannot reach late-successional seral stage without reducing current stand density.
- The project has a sense of urgency -- conducting this type of work is possible and practicable at the current stage of forest development but will become increasingly more challenging as the forest ages.

- Manual hand-thinning as proposed will result in a minimal impact.
- The Boneyard property is contiguous with other conservation properties on Tillamook Head. The potential ecological benefit is high for wildlife corridors that can be expanded with the availability of more late-successional forest habitat.
- The project represents a good opportunity to demonstrate conservation forestry techniques on a publicly accessible site.
- The landscape will benefit from the restoration of a more diverse plant community proposed in the application.

Concerns

- Thinning will result in heavy accumulations of slash.
- The size of the habitat piles will be substantial, and the benefits not well described in the application.
- The project would benefit from leveraging available fish and wildlife agencies for technical support.
- The applicant does not have experience conducting this type of restoration work.

Concluding Analysis

Boneyard Ridge, an OWEB-funded acquisition, is located in a key location connecting conservation lands on Tillamook Head. The property itself suffers from poor forest conditions with many young stands at over 600 trees per acre. This project proposes to conduct ecological forestry in the young stands with the most dire stand conditions with the intent of getting the forests on a trajectory toward late successional habitat. The proposed habitat piles and associated monitoring will broaden the expected ecological benefits.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 6

Review Team Recommended Amount

\$108,829

Review Team Conditions

None

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

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$108,829

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1023-16683**Project Type:** Restoration**Project Name:** Punchbowl Creek Large Wood Enhancement Project**Applicant:** Lower Nehalem WC**Region:** North Coast**County:** Clatsop**OWEB Request:** \$73,319**Total Cost:** \$139,669

Application Description *(from application abstract)*

Punchbowl Creek, tributary to the North Fork Nehalem River, is located southeast of the rural community of Hamlet off Hwy 53 in Clatsop County. The stream is home to ESA listed coho salmon and also supports winter steelhead, coastal cutthroat trout, cottid species and lamprey. The project proposes to leverage a planned industrial timber harvest on Weyerhaeuser land to place large wood in the stream. The road is too far from the channel and the terrain too steep to allow access for ground based equipment. The large wood will be placed using a grapple and cable logging operation to build the structures. The project proposes to place 15 complex large wood structures along a one-mile channel reach. Each structure will be comprised of 7-9 logs with a minimum of four of the logs having rootwads attached. A total of 105-135 logs are anticipated for the overall project. Weyerhaeuser will provide construction contracting and some of the wood (30 whole trees). Oregon Department of Forestry (ODF) will supply the majority of the wood (up to 45 whole trees). Oregon Department of Fish and Wildlife (ODFW) will implement the project on the ground. Lower Nehalem Watershed Council will provide project management. OWEB funds will be used toward: project management, contracted services to tip and haul the wood and towards purchasing wood from ODF.

Review Team Evaluation

Strengths

- The project is a strong partnership between Weyerhaeuser, ODFW, and the applicant. Partners have the necessary expertise and successfully implemented similar projects.
- The project is cost-effective, leveraging an adjacent timber harvest to provide the material and contracting efficiency.
- Punchbowl Creek has beneficial coho and winter steelhead habitat with the proposed work addressing limiting factors. The stream is identified as a priority in the draft Nehalem Strategic Action Plan initiated by the Coho Business Planning process.
- This reach is an optimal location for habitat structures since there is no downstream infrastructure that can be potentially impacted by large wood movement.

Concerns

- The proposed method of placing logs by cable does not allow for a lot of flexibility with regards to placement locations.
- The benefit of the accompanying alder conversion work from an ecological standpoint is debatable. Many streams in the coast range are naturally hardwood-dominated.

Concluding Analysis

This project will increase habitat complexity in a priority stream, addressing limiting factors for Oregon coast coho salmon and winter steelhead. While the chosen method of log delivery has its limitations when it comes to site selection, the project team is experienced and capable and there is confidence a successful project will be implemented. The project is recommended for funding with the removal of the alder conversion components from the scope of services.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

4 of 6

Review Team Recommended Amount

\$73,319

Review Team Conditions

Remove alder conversion from scope of services

Staff Recommendation

Staff Follow-Up to Review Team

N/A

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$73,319

Staff Conditions

Remove alder conversion from scope of services

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1024-16710

Project Type: Restoration

Project Name: Upper Indian Creek Helicopter
Large Wood Placement, Phase 1

Applicant: Siuslaw WC

Region: North Coast

County: Lane

OWEB Request: \$236,455

Total Cost: \$986,655

Application Description *(from application abstract)*

The Upper Indian Creek Helicopter Large Wood Placement Project, Phase 1 (Project) plans to utilize a helicopter to add large wood to federally owned stream reaches (up to 10 total miles) of the following streams in the Upper Indian Creek 6th-field HUC: West Fork Indian Creek, Rogers Creek, Maria Creek, Herman Creek, Pyle Creek, Long Creek, and Upper Indian Creek. The project area is located 14 air miles northeast of Florence, Oregon (Map 1). Land use practices over the last 150 years have disrupted natural habitat-forming processes that support healthy populations of salmonids, including the delivery and retention of large wood in streams. Sufficient large wood in streams has been identified as a key component of high quality spawning and rearing habitat for Oregon Coast coho. The Upper Indian Creek 6th-field sub-watershed has been identified as a high priority for restoration to support recovery of Oregon Coast Coho Salmon (*Oncorhynchus kisutch*) by local, state and federal entities, based on high habitat intrinsic potential and existing anchor habitat characteristics. Streams proposed in this project have been prioritized for restoration actions by the USFS (Draft Indian Creek LMP, 2017) and the Siuslaw Coho Partnership (Siuslaw Coho SAP, 2018). Stream surveys in project reaches identified a lack of sufficient wood needed to create and maintain pools, retain and sort sediments, and generate connectivity with the floodplain, key components of high quality winter rearing habitat. Proposed work to address the lack of large wood includes tipping and cutting of 540 trees, from source locations and transporting them by helicopter and placing them into up to 10 miles of streams in Upper Indian Creek stream reaches, in structures that are placed and configured to mimic log jams resulting from natural processes. Project partners include the USFS - Siuslaw National Forest and the Siuslaw Watershed Council.

Review Team Evaluation

Strengths

- The project addresses limiting factors for Oregon coast coho salmon by improving habitat complexity within 10 miles of the Indian Creek basin, a sub-watershed identified as a high priority within the Siuslaw Coho Strategic Action Plan.
- Project implementation will achieve NOAA's benchmarks for large wood within the treatment reaches.
- The project is located on USFS lands managed as Late-Successional Reserves, ensuring future large wood recruitment to the streams.

- The application provides appropriate detail regarding expected habitat benefits as well as the location and selection process for the trees proposed for utilization in the project.
- The Siuslaw Watershed Council and the USFS have a strong partnership. The project team has a successful track record implementing similar projects in the watershed.
- The scope of the project is landscape-level and potential ecological benefits are high.
- The budget has good detail. The project is cost-effective for both the type of work proposed and the geographic scope of the treatment reaches.

Concerns

- There are no significant concerns.

Concluding Analysis

The treated reaches are within forests managed for late-seral characteristics. It is expected that this effort will be the last augmentation of large wood needed in the system. The surrounding riparian areas are expected to be able to deliver large wood to the stream by the time the project matures. The project team is highly capable and experienced with the implementation of similar projects, having recently implemented a successful companion effort within the North Fork Siuslaw watershed in 2018.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 6

Review Team Recommended Amount

\$236,455

Review Team Conditions

None

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

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$236,455

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1025-16588

Project Type: Technical Assistance

Project Name: North Coast Watershed Councils
Restoration Assistance

Applicant: Nestucca-Neskowin Watersheds
Council

Region: North Coast

County: Tillamook

OWEB Request: \$70,990

Total Cost: \$86,740

Application Description *(from application abstract)*

Since 2012, a coalition of North Coast watershed councils has collaborated to increase the collective number of grant applications submitted for restoration projects. This coalition encompasses watersheds from Nicolai-Wickiup on the lower Columbia River all the way south to Neskowin Creek, all of which are within Clatsop and Tillamook Counties. This proposal is intended to continue this very successful collaboration. With the assistance of OWEB funding, these councils share the resources of a highly qualified consultant for pre-project field work, project design solicitation, proposal drafting, and contract preparation. Each Council's needs are similar, so sharing the services of a highly qualified contractor effectively leverages each organization's ability to secure funding and move high-priority projects forward. This has resulted in a proven model that takes advantage of economies of scale with only one contract. Partners US Fish & Wildlife Service (USFWS), Oregon Department of Fish and Wildlife (ODFW), and Tillamook Estuaries Partnership (TEP) support this program, seeing the value in hiring a "third arm" for the participating Councils. The partners increase that value by providing additional match. This cooperative effort has demonstrated the efficiencies that can be created by sharing resources among Councils, and it is more important than ever considering the ongoing reductions in ODFW and Oregon Department of Forestry (ODF) staffing and budgets. The best way to maintain or increase restoration is to find efficiencies through contracting. Participating councils include: North Coast Watershed Council (NCWC), Necanicum Watershed Council (NWC), Lower Nehalem Watershed Council (LNWC), Tillamook Bay Watershed Council and Nestucca, Neskowin & Sand Lake Watersheds Council (NNSL). Deliverables include 8 submitted grant applications.

Review Team Evaluation

Strengths

- The project effectively leverages the capacity of watershed councils on the North Coast.
- The ability to hire a consultant to assist with project development is instrumental in submitting improved applications and getting projects on the ground.
- The project provides for consistency through periods of organizational transition.
- With the continued reduction in ODFW's staffing budget, there is increased demand for needed expertise among these watershed councils.

- The project has fostered collaboration and prioritization among the councils in the region.

Concerns

- The project's continuation over the years has possibly led to a reliance on the consultant by watershed councils.

Concluding Analysis

This ongoing project provided needed expertise and fostered collaboration among watershed councils in the north coast basin. The ability to help councils through transition times is an ancillary benefit with application quality remaining high and projects moving forward as scheduled. There is a concern that the unique skills of coordinators are not being utilized to their full potential. It would be beneficial to see council coordinators growing into a role of grant writing and project development to leverage the technical assistance provided by this project to a greater degree. A mentoring and coaching role that allows coordinators to foster new skills would add to the project's existing benefits and help build capacity among the organizations.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 5

Review Team Recommended Amount

\$70,990

Review Team Conditions

None

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

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$70,990

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1026-16597

Project Type: Technical Assistance

Project Name: Coastal Native Seed Partnership

Applicant: Institute for Applied Ecology

Region: North Coast

County: Lincoln

OWEB Request: \$74,602

Total Cost: \$233,453

Application Description *(from application abstract)*

Coastal ecosystems are among the most rare and impacted ecosystems in the Pacific Northwest. As a result, threatened species like the Oregon silverspot butterfly, coho salmon, western snowy plover, streaked horned lark, and other plant and animal species that make their home in these habitats are greatly imperiled. A diverse group of partners, including land managers, restoration practitioners, tribes, conservationists and private landowners, are working together to restore coastal grasslands, estuaries, and other habitats, and to recover the listed species that depend upon them. One barrier to successful restoration in this ecoregion is a lack of diverse, genetically appropriate, native plant materials available in sufficient quantities to implement large-scale restoration projects. This project will bring partners involved in coastal restoration together with native plant materials producers to increase the availability and affordability of native seed to restore Pacific Northwest coastal habitat. The group will develop a seed strategy that will establish a dependable and sustainable supply of native seed that is genetically and ecologically appropriate in sufficient quantities needed to accomplish restoration goals on a landscape scale and to provide a stable marketplace for both growers and land managers. As a starting point, the group will assess the wild seed already collected by partners, and if sufficient seed is available, move forward with establishing several high-priority species seed production fields.

Review Team Evaluation

Strengths

- The insufficient availability of genetically appropriate seed sources for the Oregon coastal area is a known limiting factor for restoration, particularly with the coastal prairie habitat.
- There is a sense of urgency to the effort, with Oregon Silverspot Butterfly populations on a steady decline.
- A similar ongoing effort in the Willamette Valley is now on track to becoming self-sustaining after a five-year time period.
- The previous concerns regarding the partnership's interaction with the existing native plant partnership (NORP) in the region have been addressed in this proposal. A letter of support from NORP is provided with this application.
- The project partners have an appropriate level of regional expertise and applicable experience with this type of effort.

- The project plans to bring growers into the partnership and establish production fields within the near future.
- The application is well-written, clear, and addresses previous review team comments.

Concerns

- Much of the seed may be produced in the Willamette Valley, and there is no discussion in the proposal about the potential impacts of growing seed in a different climate from which it will be planted.
- Coastal growers are not identified in the proposal and doing so would have strengthened the application.
- The application lacks a long-term funding plan and details regarding how the partnership will become self-sustaining.
- The budget includes match funding pre-dating the project and may not be valid.

Concluding Analysis

This resubmitted application successfully addressed previous concerns raised by the review team, particularly regarding the interactions of the new seed partnership with the existing regional native plant partnership. The need for genetically appropriate seed for the coastal region is well described in the application. Restoring coastal prairie due to the current trajectory of the Oregon Silverspot Butterfly and other species dependent on that habitat type is crucial. Availability of native seed could provide important contributions to biodiversity and the ecological health of the coastal landscape. The partnership should strongly consider utilizing coastal growers, when feasible, to ensure optimal biological benefits of growing seed in the climate where planted and to benefit local restoration economies.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 5

Review Team Recommended Amount

\$74,602

Review Team Conditions

None

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

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$74,602

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1027-16598**Project Type:** Technical Assistance**Project Name:** Upper Lewis and Clark Tidal Restoration Project**Applicant:** CREST**Region:** North Coast**County:** Clatsop**OWEB Request:** \$74,028**Total Cost:** \$241,346**Application Description** *(from application abstract)*

The Columbia River Estuary Taskforce (CREST) and the National Park Service are requesting technical assistance funding to complete the design phase of Upper Lewis and Clark Tidal Restoration Project. To complete design, a geotechnical investigation must first be completed in order to inform specifications for setback levee design. 30% designs and hydraulic modeling have already been completed for the proposed project. Project partners are proposing to restore salmonid habitat and tidal processes on a 29 acre floodplain known as East Bank Netul Landing. The proposed project is part of a cumulative effort on the Lewis and Clark River to restore a matrix of quality tidal marshplain habitat for juvenile salmonids. The proposed project is part of the Lewis and Clark National Historic Park. The site is located in Clatsop County Oregon on the Lewis and Clark River at River Mile 2.5. The site is currently hydrologically disconnected from the Lewis and Clark River and as a result, the habitat is degraded. The primary purpose of this project is to restore degraded estuary habitat critical to the recovery of threatened/endangered Columbia River and tributary salmon. The project will improve hydrologic connectivity, tidal processes and habitat quality in tidal scrub-shrub/forested marsh floodplain habitat by

- 1) Building a setback levee on an adjacent property to protect an adjacent landowner
- 2) Installing a fish-friendly tidegate at the setback levee location
- 3) Strategic marshplain lowering, channel creation (3 tidal channels) and levee breaches (three channel breaches) will improve onsite hydraulics
- 4) A flow-through channel would be constructed to provide both instream habitat benefits and recreational opportunities for the National Park Service through a portion of the site
- 5) LWD placement and native planting in riparian and wetland areas and invasive species management will improve habitat quality and complexity on the property.

Review Team Evaluation**Strengths**

- The project is located in a priority area and will restore 29 acres of critical estuarine habitat to the Lewis and Clark River, a habitat type that is imperiled with an estimated 95% lost over the last century.
- There are limited opportunities to restore tidally influenced habitat within the Lewis and Clark watershed.

- A future restoration project has the potential to improve water quality, especially dissolved oxygen, with the reconnection of tidal slough habitat.
- The project works cooperatively with an adjacent agricultural landowner and could be a showcase project in the north coast region, particularly with regards to the proposed tidegate replacement.
- Project partners have capacity to implement this type of work and prior experience with similar types of restoration. The application demonstrates effective leveraging of available resources within the partnership.

Concerns

- The site history of dredging and spoil placement and its relationship to the current restoration design is unclear.

Concluding Analysis

This application was previously submitted and recommended for funding, but fell below the staff-recommended funding line. This iteration demonstrated the strong project partnership and improved clarity describing the project's technical design specifications, particularly regarding tidegate replacement. This project, once implemented, could serve as a regional pilot project with regards to the interface of estuarine restoration and agricultural landscapes. Achieving 29 acres of new tidally influenced habitat along this stretch of the Lewis and Clark River is a significant opportunity with high ecological benefits.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 5

Review Team Recommended Amount

\$74,028

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$74,028

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1028-16599

Project Type: Technical Assistance

Project Name: South Scappoose Creek, Reach F Design

Applicant: Scappoose Bay WC

Region: North Coast

County: Columbia

OWEB Request: \$38,597

Total Cost: \$48,964

Application Description *(from application abstract)*

This project is located in South Scappoose Creek, a tributary to Scappoose Bay, the Multnomah Channel and Lower Columbia River. The site is approximately one mile above the confluence of the North and South Scappoose Creeks; less than three miles above tidal influence in Scappoose Bay. Project addresses key salmon-production limiting factors identified in the Lower Columbia River Conservation and Recovery Plan (LCRCP; ODFW, 2011), the Upper Willamette River Conservation and Recovery Plan (UWRCP; ODFW, 2011), and the Scappoose Creek Limiting Factor Analysis (SBWC, 2012): 1) lack of physical habitat quality and complexity, including loss of floodplain connectivity and cool-water pools and access to off-channel habitat; and 2) the loss of complex riparian vegetative function and stream shading. Project will complete surveys, hydraulic modeling, and a permit-level design with cost estimates to restore natural habitats on 0.2 miles of South Scappoose. This project supports restoration actions on 0.7 miles directly upstream, where 2018 construction completed stream layback, floodplain benches and additional side-channel reconnections. Partners include City of Scappoose, a private landowner, CSWCD, ODFW and BPA.

Review Team Evaluation

Strengths

- The proposed technical assistance will lead to restoration addressing key production limiting factors for ESA-listed fish species.
- The project complements recently completed adjacent stream channel restoration work.
- The highly visible location offers outreach opportunities to raise public awareness regarding stream restoration. The site provides a unique opportunity to showcase restoration in the urban-natural interface.
- The applicant has capacity to implement future restoration and recently completed the successful adjacent project.
- The proposed work on the private ownership has wide buffers, adding to the overall ecological benefits of the work.

Concerns

- Given the constraints of an urbanized setting, resulting restoration work could have a high cost to benefit ratio.

Concluding Analysis

This project was previously submitted and recommended but fell below the staff-recommended funding line. This technical assistance will lead to a unique opportunity to continue restoration addressing limiting factors in a highly visible urban location in Scappoose. On the site visit, the review team viewed the recently completed adjacent project which was functioning well. The project team has the capacity and experience to implement a successful project, and the community is engaged and committed to the effort.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 5

Review Team Recommended Amount

\$38,597

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$38,597

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1029-16618

Project Type: Technical Assistance

Project Name: Alder Creek Restoration and Enhancement Project

Applicant: Lower Nehalem Community Trust

Region: North Coast

County: Tillamook

OWEB Request: \$54,208

Total Cost: \$74,408

Application Description *(from application abstract)*

1) Project location: The project is located on Alder Creek - a direct tributary to Nehalem Bay in the town of Nehalem, Oregon. The majority of the project area is located on Lower Nehalem Community Trust owned lands. The project area is defined as Alder Creek and the associated floodplain from the culvert at Highway 101 - south to the mouth of Alder Creek at Nehalem Bay. 2) Project need: The project is needed to enhance and expand rearing habitat for Oregon Coast coho salmon within the Nehalem estuary and watershed. This habitat type is a limiting factor for recovery of the species and is in short supply within the basin. 3) Proposed Work: The proposed work is to develop a project design that will restore and enhance Alder Creek, the riparian corridor within the project area, and habitats within the adjoining floodplain. 4. Proposed Partners: Tillamook Estuaries Partnership, Lower Nehalem Watershed Council

Review Team Evaluation

Strengths

- The site location provides excellent potential for fish and wildlife habitat enhancement in the lower Nehalem. Engaging the right technical expertise will help develop a sound project.
- Alder Creek Farm was purchased in part with an OWEB acquisition grant. This project will build on prior conservation investments.
- The application demonstrates a more active initiative to managing the natural areas of the site for ecological benefits. The passive restoration techniques that have been utilized on the site to date have had limited effectiveness.
- The project's location is highly visible and a restoration effort could provide outreach benefits.
- The property will benefit from increased stewardship guidance and partnerships that a restoration project may provide.

Concerns

- The application would have been strengthened by more communication with state and federal wildlife agencies regarding site potential and opportunities.

- NRCS holds a conservation easement and any proposed work needs to adhere to the terms of their easement; however, NRCS has not been apprised of this effort at the time of application.
- The farm has a significant amount of existing infrastructure directly adjacent to the stream which was not addressed in the application.
- The goals and objectives of the resulting technical designs are unclear. The proposed requirement that the designs “create” new habitat raises concerns about the project’s viability.
- The applicant and landowner may not currently have the capacity to implement or manage a restoration project since the project manager is a volunteer with the organization.

Concluding Analysis

Alder Creek Farm in the Lower Nehalem watershed is an excellent place to implement restoration for fish and wildlife habitat. The site’s location is directly on the Nehalem Bay. The application lacked clarity on the goals, objectives, and outcomes of the project, including what type and scale of restoration will be achieved and where it would be located. The infrastructure constraints around the farm area and upstream along neighboring properties are not adequately addressed. More clarity defining desired future conditions in the natural areas will result in a stronger application. Additional feedback from local partners to provide technical expertise about the site’s potential and expanding the partnership will enhance a future 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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1030-16690

Project Type: Technical Assistance

Project Name: Arch Cape Community Forest:
Water and Sediment Assessment and Action Plan

Applicant: Sustainable Northwest

Region: North Coast

County: Clatsop

OWEB Request: \$30,575

Total Cost: \$38,251

Application Description *(from application abstract)*

1) The Arch Cape Domestic Water Supply District ('the District') manages a drinking water treatment plant and storage facility for the benefit of 200 permanent and more than 1,000 seasonal residents of this rural beachfront community in Clatsop County. The District's drinking water source area lies within the Necanicum sub-basin and its 1,250 acres feeds two creeks - Asbury and Shark. 2) In the past, the District faced water quality problems as a result of upstream forest management and is now exploring land acquisition for watershed protection. The watershed is now owned by a conservation bridge buyer, Ecotrust Forest Management (EFM), and half of the property is under option to the North Coast Land Conservancy for permanent protection in its Rainforest Reserve. The lower half of the EFM property encompasses the entirety of the Arch Cape drinking water source area and the District is engaging the public in a dialogue around the creation of a Community Forest. However, there is still uncertainty about the link between forest cover loss and watershed functioning - specifically with regards to water and sediment yield following clearcut logging. 3) Sustainable Northwest is requesting support from OWEB to fund the Arch Cape Community Forest: Water and Sediment Yield Assessment and Action Plan. This technical assistance will include performing a detailed watershed analysis, collecting data about current watershed conditions and identifying erosion and sedimentation hot-spots. The resulting plan will inform stakeholder planning efforts and set an ecological baseline for future forest management. 4) Project partners include the Arch Cape Domestic Water Supply District, the landowner Ecotrust Forest Management, the campaign project partner North Coast Land Conservancy, the neighboring Ecola Creek Watershed Council, and other technical assistance providers such as Ecotrust's Knowledge Systems team, the Pinchot Institute and Springboard Forestry.

Review Team Evaluation

Strengths

- The partnership implementing the project has good capacity to accomplish the work and has been effective with other similar projects.
- The proposed modeling work is a standard, technically sound tool. The model will identify potential sources of sediment as well as predict the sediment load.
- The resulting data could be an effective tool for building stakeholder engagement with the Community Forest concept.

Concerns

- The data collected may be duplicative of other similar efforts. There may not be a need to build a new model with new techniques, given the wide availability of other similar types of tools.
- The goals of the resulting forest landscape and whether or not harvest will be a component of management are currently unclear. As a result, it is unknown if this data collection and modeling effort is appropriate for OWEB's technical assistance program.
- It is unclear what will be done with the data/models after collection. The application would benefit from more detail about the resulting restoration or land management changes, if any.

Concluding Analysis

The data collection and analysis proposed could benefit future land management of the Arch Cape Community Forest; however, questions exist about the need for this type of work and what type of restoration work will occur as a result. The plans for forest management on the property are unclear at this time. The application would have benefitted from more information about the need and the proposed uses for the data.

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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1031-16696**Project Type:** Technical Assistance**Project Name:** Nestucca NWR-Bay Unit
Restoration and Infrastructure- Design Project**Applicant:** Ducks Unlimited Inc**Region:** North Coast**County:** Tillamook**OWEB Request:** \$75,000**Total Cost:** \$132,574

Application Description *(from application abstract)*

1. This project area is approximately 104 acres, located in the Bay Unit of Nestucca Bay National Wildlife Refuge, 2.75 miles southeast of Pacific City. This site is bounded by the Little Nestucca River to the west, Nestucca Bay to the north, and Highway 101 to the east. 2. The project need is to improve habitat conditions and water quality for wintering geese and other migratory birds; aquatic species, including anadromous fish including the federally and state threatened Oregon Coast Coho salmon; and other wildlife utilizing the Bay Unit. Technical assistance funds would be used to design and evaluate alternatives for: (1) Replacement of the current water management system (i.e. tidegate) with a modern muted tidal regulator (MTR) to improve fish access and prevent entrapment, (2) interior enhancements to drainage ditches, swales, and depressional wetlands to improve off-channel / juvenile rearing habitat to salmonids, particularly Coho, and 3) develop agricultural setbacks and riparian restoration plans. The technical design would address features that improve natural hydrology and water quality, and restore historic channels. 3. A. Collect data on fish and amphibian use, habitat availability, water quality, and fish habitat conditions on site. B. Develop aquatic species habitat improvement alternatives for project area. C. Collect and disseminate hydrologic and topographic data and develop a hydrologic model for project design to include culvert sizing, tide gate configuration, tidal channel construction, LWD structures, and riparian planting. D. Work with ODFW to develop fish passage plan. E. Develop conceptual project design alternatives for review by Technical Committee. F. Initiate Joint (COE/DSL) permitting requirements/application, and consultation with NOAA fisheries Biological Opinion. G. Prepare final engineering drawings and construction level contracting documents for project implementation. 4. USFWS, NNWC, DU, CTSI, ODFW, NOAA, OWEB

Review Team Evaluation Strengths

- The technical assistance work will result in a restoration project that improves tidal exchange, fish access, and water quality at the Nestucca Bay National Wildlife Refuge.
- The resulting restoration work will address limiting factors for anadromous fish species while upholding the Refuge's management goals for geese.
- Project planning shows foresight for considering future conditions as a result of climate change.

- Implementation of a tide gate replacement at this location and with this landowner may lead to a potential monitoring project that could yield much needed information regarding the effectiveness of tide gate restoration.
- The applicant and project team have good capacity and experience to successfully implement a project resulting from the proposed technical assistance work.

Concerns

- Given that this is a federally managed wildlife refuge, fully restored conditions that maximize the ecological benefit and potential of the site would be preferable.
- The application suffers from poor clarity. The attached maps are limited in detail and there are typographical errors throughout.
- The cost-effectiveness of the resulting restoration project may be low given the expected ecological benefit. In particular, water quality benefits of the proposed tide gate replacement work may be overstated.

Concluding Analysis

The restoration project resulting from this technical assistance work could provide new habitat opportunities at the Refuge for aquatic species, particularly Oregon coast coho salmon. While fully restored tidal hydrology at the site would be optimal, the management constraints surrounding the property are understood. The proposed work is a good compromise that meets the needs of geese populations and local producers while improving conditions for fish. The resulting project should include a sound monitoring program, including collection of baseline data.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 5

Review Team Recommended Amount

\$75,000

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$75,000

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1032-16656**Project Type:** Technical Assistance**Project Name:** Page Creek, Final Fish Passage**Applicant:** Columbia SWCD**Region:** North Coast**County:** Columbia**OWEB Request:** \$41,800**Total Cost:** \$57,200

Application Description *(from application abstract)*

The Page Creek watershed has undergone a number of restoration treatments to expand amount of available habitat for needs local salmon populations. Proposal provides resources to expound upon success of previous restoration efforts to maximize the ecological potential of the Page Creek subwatershed in the Clatskanie Basin (RM 8.8). Currently deteriorating culvert and road crossings impede access to over 9 miles of upstream habitat and contributing to excessive velocities for migrating juveniles. Funds will be used for technical services related to replacing perched, degraded culvert structure with a bridge that will span entirety of channel corridor and allow for 100% access for spawning and rearing needs of salmonid species. This includes pre-design support in the form of topographic and geotechnical services necessary for understanding existing condition as well as informing design needs. Funds will also be used to solicit proposals from established engineering firms, and overall project management to ensure regulatory and local community needs are met. Scope of engineering services include but not limited to 30% design sets, hydrologic and hydraulic analysis relevant to fish passage, flood hazard management, and climate change resiliency experience. Selected firm will work collaboratively with watershed council and partners to incorporate baseline information and local knowledge into design process. Firm will also be responsible for assisting watershed council in vetting design concepts with regulatory community and provide input to necessary permitting applications. Project also represents a unique project management structure that partnering with ODFW expertise as well as timber companies local knowledge, equipment, and materials to maximize restoration effort and project cost-effectiveness.

Review Team Evaluation

Strengths

- The Clatskanie basin is a high priority for ODFW in which to work to restore habitat for Lower Columbia fish.
- The technical assistance work will lead to the replacement of the last remaining barrier on Page Creek and complement previous investments downstream.
- The landowner is willing and engaged in the project.

Concerns

- This is a challenging site with a steep gradient and a headcut associated with the existing structure on the downstream side.
- The design work will require a geotechnical investigation, which is noted in the application but not differentiated in the budget. The proposed budget may be low for the necessary work involved.
- The budget included only one lump sum amount and it was not clear what deliverables would be accomplished or how the applicant arrived at the estimate.
- The proposed deliverables are conceptual designs, and it is unclear how the applicant will proceed to final designs and restoration funding.
- The application is lacking in proposal clarity and was not written in complete sentences.
- It is unclear whether this site is eligible for support and technical design under the NRCS RCPP program, which covers this area.

Concluding Analysis

The Clatskanie watershed is a high priority for Lower Columbia anadromous fish species in addition to cutthroat trout and lamprey. There are key partners that could leverage additional technical expertise who may not be engaged. More communication with other local partners is encouraged in a resubmittal, along with an explanation of how the project fits in with a larger regional prioritization of fish passage projects.

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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1040-16631

Project Type: Stakeholder Engagement

Project Name: Siuslaw Coho Partnership Story Map for Stakeholder Engagement

Applicant: Siuslaw WC

Region: North Coast

County: Lane

OWEB Request: \$24,690

Total Cost: \$37,923

Application Description *(from application abstract)*

Through this project, SWC and its partners in the Siuslaw Coho Partnership will create a Story Map that: (1) illustrates past examples of restoration projects; (2) explains how restoration efforts benefit the health of ecosystems, local communities, and local economies; and (3) creates opportunities for SWC to work with local landowners and other stakeholders on future restoration. This project will harness the knowledge, skills, and expertise of our partners at Ecotrust, the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians, the U.S. Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the Siuslaw Soil and Water Conservation District. Together, we will create an interactive story map to both elevate awareness about our work and engage our stakeholders in restoration projects identified in the Siuslaw River Coho Recovery Strategic Action Plan (Siuslaw SAP) 15 priority 6-field HUC watersheds within the Siuslaw River and Coastal Lakes watersheds. This project is needed so that SWC and its partners can more effectively communicate with others about the Siuslaw SAP's priority restoration projects. If we are to advance our work and complete future restoration projects, we must better communicate exactly why these projects are necessary, including sharing information about the positive economic, ecological, and social potential that these projects bring. This project is linked to the Siuslaw SAP, funded in part by OWEB. The products created by this project will strengthen the SAP and supports the goals of creating a Strategic Action Plan in order to more effectively and efficiently carry out restoration projects in targeted sub-basins. With the additional investment in this project by OWEB we believe we can better complete the goals within the SAP and more effectively involve restoration project stakeholders and recruit additional landowner and community support of Coho Salmon restoration.

Review Team Evaluation

Strengths

- The proposed project is the result of a recently completed Outreach Plan for the Siuslaw Coho Partnership and addresses an identified knowledge gap. The approach is basin-wide and broad in scope.
- The StoryMap format can be a good communication tool, and combine the information that developed the prioritization in the Strategic Action Planning process in an understandable format for landowners and other stakeholders.
- Specific outcomes and identified numbers of engaged landowners will make this effort successful.

- The applicant has skill with social media and using digital formats as tools, ensuring that the StoryMaps will be effectively utilized.
- There is a strong partnership and the outside expertise of EcoTrust provides a high benefit.

Concerns

- The application did not clarify the approach to maintaining and managing the StoryMap long-term.
- Relying on this digital format may not be an effective engagement tool for all landowners.

Concluding Analysis

The application is a resubmittal from a previous round where the proposal was not recommended for funding. This iteration presents a more focused and improved project, with a focus solely on compiling existing data and developing StoryMaps as an engagement tool. The effort is a part of a larger engagement strategy designed by the Siuslaw Coho Partnership. There is some concern about relying on web-based methods given the importance of face-to-face contact with landowners; however, StoryMap is only one of a suite of methods that will be employed in the engagement strategy. There is high confidence that the project team will implement a successful project.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 1

Review Team Recommended Amount

\$24,690

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$24,690

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1033-16645**Project Type:** Monitoring**Project Name:** Columbia SWCD Water Quality Monitoring Program**Applicant:** Columbia SWCD**Region:** North Coast**County:** Columbia**OWEB Request:** \$25,012**Total Cost:** \$50,162**Application Description** *(from application abstract)*

The Columbia SWCD and partners seek funding to continue and expand the level of water quality monitoring in four key subbasins in Columbia County. These include: Clatskanie River and Beaver Creek which drain to the lower Columbia River (LCR) and Scappoose and Milton Creeks which drain into the Multnomah Channel and then to the LCR. These important watersheds provide spawning, rearing and refugia habitat for state and federally listed threatened species of salmon and steelhead. The LCR Conservation and Recovery Plan lists degraded water quality- elevated temperatures and excessive fine sediments- as limiting factors to Coho, Chinook, steelhead and Chum species using these watersheds. This project will collect and analyze comprehensive and scientifically sound water quality data that will complement the limited existing data, fill data gaps and improve watershed conditions by addressing these limiting factors. This project will build on existing data from 2008-2011 (Scappoose/Milton) and 2017-2018 (all subbasins) and collect continuous data and/or monthly grab samples in discrete upper, middle and lower watershed locations to measure bacteria, temperature, turbidity, conductivity, and water depth. The project will also collect and analyze macroinvertebrate samples and evaluate riparian land cover. Results will be used to analyze watershed status and trends, detect changes, identify water quality issues and potential sources, and determine priority stream reaches for restoration. A water quality report will be produced, and information will be included in the CSWCD's Annual Report, distributed to the community to educate and engage in conservation, restoration and best management practices. Local partners and municipality stakeholders will be engaged in a presentation highlighting water quality results and issues. Project partners include: Lower Columbia River Watershed Council, Scappoose Bay Watershed Council, Lower Columbia Estuary Partnership and Oregon DEQ. The Columbia SWCD and partners seek funding to continue and expand the level of water quality monitoring in four key subbasins in Columbia County. These include: Clatskanie River and Beaver Creek which drain to the lower Columbia River (LCR) and Scappoose and Milton Creeks which drain into the Multnomah Channel and then to the LCR. These important watersheds provide spawning, rearing and refugia habitat for state and federally listed threatened species of salmon and steelhead. The LCR Conservation and Recovery Plan lists degraded water quality- elevated temperatures and excessive fine sediments- as limiting factors to Coho, Chinook, steelhead and Chum species using these watersheds. This project will collect and analyze comprehensive and scientifically sound water quality data that will complement the limited existing data, fill data gaps and improve watershed conditions by addressing these limiting factors. This project will build on existing data from 2008-2011 (Scappoose/Milton) and 2017-2018 (all subbasins) and

collect continuous data and/or monthly grab samples in discrete upper, middle and lower watershed locations to measure bacteria, temperature, turbidity, conductivity, and water depth. The project will also collect and analyze macroinvertebrate samples and evaluate riparian land cover. Results will be used to analyze watershed status and trends, detect changes, identify water quality issues and potential sources, and determine priority stream reaches for restoration. A water quality report will be produced, and information will be included in the CSWCD's Annual Report, distributed to the community to educate and engage in conservation, restoration and best management practices. Local partners and municipality stakeholders will be engaged in a presentation highlighting water quality results and issues. Project partners include: Lower Columbia River Watershed Council, Scappoose Bay Watershed Council, Lower Columbia Estuary Partnership and Oregon DEQ.

Monitoring Team Evaluation

Monitoring Team Strengths

- This is a straight-forward, well-written proposal to collect basic water quality data.
- The applicant has a successful track record and a DEQ-approved Sampling and Analysis Plan (SAP).
- This application builds off of previous water quality monitoring efforts and an example of the data summary was provided as an upload.
- The application has a good description of the selected monitoring sites, sampling methods, and data analyses.
- The applicant is working closely with the Lower Columbia Estuary Partnership to review results and create final report.

Monitoring Team Concerns

- Macroinvertebrate sampling locations in low gradient channels may not match well with the PREDATOR model given those were developed from samples collected in riffle habitats.
- The macroinvertebrate data may not be the best fit to identify watershed issues, pollution sources, and potential restoration actions.
- It is unclear who will be performing the lab bacteria analysis; in addition, the budget line item for this appears high.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The application is well-written with detailed descriptions of monitoring locations and protocols to be used.

- There is a high likelihood of success and the applicant has a successful track record of implementing monitoring work in the region.
- This work complements previous water quality monitoring efforts. All of the chosen monitoring locations were previously monitored.
- Data collection for five years is a reasonable target indicating an appropriate level of planning for the monitoring proposal.
- The riparian cover analysis proposed will prove useful in evaluating priority restoration areas.

Concerns

- The plan to collect macroinvertebrate data is not cost-effective and does not propose sampling in riffles. The resulting data may be of minimal use in meeting the project's goals and objectives.
- The monitoring plan would benefit from sampling bacteria year-round.
- Objective #4, which refers to using the results to identify watershed issues, sources, and prioritize restoration actions, needs clarification. The sampling network may not be of a fine enough scale to get to the project prioritization level.

Concluding Analysis

This project will build on past monitoring efforts in the lower Columbia by collecting status and trend data with the goal of a five-year data collection period. The project will help fill data gaps in the region. As an alternative to collecting macroinvertebrate data, there is value in collecting bacteria data in the subject watersheds at a larger scale than is currently in the application. The application is recommended for funding at the requested budget amount without the macroinvertebrate survey work, shifting those resources to increasing the level of bacteria monitoring.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

3 of 4

Review Team Recommended Amount

\$25,012

Review Team Conditions

Remove macroinvertebrate sampling from scope of services and shift resources to collection of additional bacteria data.

Staff Recommendation

Staff Follow-Up to Review Team

N/A

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$25,012

Staff Conditions

Remove macroinvertebrate sampling from scope of services and shift resources to collection of additional bacteria data.

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1034-16651**Project Type:** Monitoring**Project Name:** Mid Coast Monitoring Project Oct 2018**Applicant:** Lincoln SWCD**Region:** North Coast**County:** Lincoln**OWEB Request:** \$69,574**Total Cost:** \$90,149

Application Description *(from application abstract)*

The Mid Coast region is an important area for salmonid production, but the future status of these populations is uncertain as climate change and changing land use patterns continue to alter conditions for salmonid life history. Consequently, many ongoing and proposed Watershed Enhancement and Restoration Projects within the Mid Coast focus on improving the status of coho and other salmonids. These projects seek to improve environmental conditions in freshwater spawning and rearing habitats, and they depend on monitoring data to identify restoration sites and evaluate effectiveness of restoration goals after projects are completed. The Mid Coast Monitoring Project (MCMP) is a long-term data collection program in the Salmon, Siletz, Yaquina, Alsea, and Yachats River Basins of Lincoln County, along with many ocean outfall creeks. Partners of the program include ODFW, the Confederate Tribe of Siletz Indians, Mid Coast Watersheds Council, USDA-NRCS, Salmon-Drift Watershed Council, Siletz Watershed Council, Lincoln SWCD, and private landowners. MCMP activities focus on 1) supplementing ODFW efforts to track salmonid population dynamics, and 2) monitoring habitat conditions, such as pre- and post-project Aquatic Habitat Inventory (AQI). Spawning data collected by MCMP is used to set recommended harvest levels and deadlines for local streams. Also, roughly 20 of 28 spawning survey segments surveyed routinely by MCMP have been enhanced (e.g. LWD, culvert replacement, riparian plantings), and these data can be used to monitor effectiveness of restoration work. The 20-year compilation of data provides a unique and valuable dataset that can be used evaluate population trends on a local and regional level. Habitat data collected by the MCMP crew is used as an effectiveness monitoring tool and determine utility of sites and identify priority areas. MCMP will continue to work closely with partners in filling information gaps and explore collaborative efforts in the region. The Mid Coast region is an important area for salmonid production, but the future status of these populations is uncertain as climate change and changing land use patterns continue to alter conditions for salmonid life history. Consequently, many ongoing and proposed Watershed Enhancement and Restoration Projects within the Mid Coast focus on improving the status of coho and other salmonids. These projects seek to improve environmental conditions in freshwater spawning and rearing habitats, and they depend on monitoring data to identify restoration sites and evaluate effectiveness of restoration goals after projects are completed. The Mid Coast Monitoring Project (MCMP) is a long-term data collection program in the Salmon, Siletz, Yaquina, Alsea, and Yachats River Basins of Lincoln County, along with many ocean outfall creeks. Partners of the program include ODFW, the Confederate Tribe of Siletz Indians, Mid Coast Watersheds Council, USDA-NRCS, Salmon-Drift Watershed Council, Siletz Watershed Council, Lincoln

SWCD, and private landowners. MCMP activities focus on 1) supplementing ODFW efforts to track salmonid population dynamics, and 2) monitoring habitat conditions, such as pre- and post-project Aquatic Habitat Inventory (AQI). Spawning data collected by MCMP is used to set recommended harvest levels and deadlines for local streams. Also, roughly 20 of 28 spawning survey segments surveyed routinely by MCMP have been enhanced (e.g. LWD, culvert replacement, riparian plantings), and these data can be used to monitor effectiveness of restoration work. The 20-year compilation of data provides a unique and valuable dataset that can be used evaluate population trends on a local and regional level. Habitat data collected by the MCMP crew is used as an effectiveness monitoring tool and determine utility of sites and identify priority areas. MCMP will continue to work closely with partners in filling information gaps and explore collaborative efforts in the region.

Monitoring Team Evaluation

Monitoring Team Strengths

- The project supplements some of ODFW's key fish datasets and in some cases (e.g., early-run Chinook) has provided for continuation of long-term datasets that have been used to guide management in plans like the Coastal Multi-Species Conservation and Management Plan.
- Since the end of effectiveness monitoring associated with the Western Oregon Stream Restoration Program, this is some of the only programmatic project-scale habitat restoration effectiveness monitoring left on the coast.
- The project has been a good and long-term local/state agency partnership.

Monitoring Team Concerns

- The proposal contains some discussion about how ODFW makes use of the data, but it is less clear about how the applicant uses the data to inform restoration strategies or methods.
- The application notes tribal participation, but was not clear what exactly the information was being collected for meeting tribal goals and objectives.
- The project may overstate the utility of using the individual spawning ground surveys as a means to evaluate restoration effectiveness.
- The application didn't list all of the previously funded monitoring grants that are related to this monitoring effort.
- The application schedule does not account for data analysis or data management, and does not describe how the data will be analyzed or utilized in consultation with ODFW.

Monitoring Team Comments

Recommendation:

- Describe how the data will be analyzed to evaluate effectiveness of restoration in near- and long-term, and include this analysis and information in a final report.

Review Team Evaluation

Strengths

- The project has a successful track record with many years of continuous status and trend monitoring.
- Collected data is beneficial for fishery management.
- The Aquatic Habitat Inventory data collected is an important indicator of watershed health and effectiveness of restoration projects.
- The project is the product of a strong partnership between the applicant, ODFW, and the watershed councils.

Concerns

- After 20 years of monitoring, it is unclear how the cooperating organizations utilize the data beyond anecdotal reports of site conditions leading to opportunistic restoration projects.
- Effectiveness monitoring results from previously implemented restoration projects have not been distributed or made available to practitioners.
- The program seems to be without a driving strategy or a long-term plan.
- Project coordination and communication with partners could be improved.
- The project has increased its staffing level and associated cost, but the amount of work completed has not increased.
- The work is prioritized for the Mid-Coast watersheds only, and the type of data collected would be valuable on a broader regional scale.

Concluding Analysis

Notwithstanding many years of successful monitoring, the project appears to lack a long-term vision. It is unclear how the effectiveness monitoring data is being used by partners prioritizing and implementing restoration projects. Currently, project partners are summarizing data collected over the 20 years as a funding condition in a previous grant agreement; however, that report is not complete and is unavailable for review. An OWEB grant awarded in April 2018 for the same project has not yet been utilized.

While the current request is less than previous awards, the application covers a shorter time period than previous grants and overall project costs have gone up with the increase in staffing. The project should be reassessed to ascertain how the program can best fulfill regional monitoring needs. The review team recommends the formation of a workgroup to guide the project into the future and improve communication between partners involved, and to consider expanding the effectiveness monitoring to other parts of the North Coast region.

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-2018 Fall Offering North Coast (Region 1)

| | |
|--|---------------------------------|
| Application Number: 219-1035-16654 | Project Type: Monitoring |
| Project Name: Lower Columbia Watershed Rapid BioAssessments | |
| Applicant: Columbia SWCD | |
| Region: North Coast | County: Columbia |
| OWEB Request: \$66,550 | Total Cost: \$92,170 |

Application Description *(from application abstract)*

Recently the Lower Columbia River Watershed Council is pivoting toward a more strategic approach to developing restoration projects. Draft technical goals have been drafted to provide more direction to project opportunities and partnerships with local community groups. This proposal along with emerging water quality data will bolster spatial resolution of selecting project types and their location in the context of the broader watershed scale. Funding will provide resources to identify existing gaps in stream survey information and target areas for additional field investigations. The Council will form and facilitate technical group that will develop a solicitation package to established consulting firms to assess their qualifications to develop an approach to prioritize areas to address uncertainties about fish distribution patterns in selected reaches of the Lower Columbia watersheds. Technical group will meet regularly with consultant team to review data summaries and how it gets translated into information for needs of emerging Strategic Action Plan (SAP). Spatially-explicit products from this effort will overlaid with existing basemaps and emerging monitoring information to refine existing Limiting factors as well as identify salmonid habitat previously not documented. These include anchor habitats, side channel-confluences, and groundwater seeps. Scope of field investigations will also include inventorying additional constraints Outreach priorities have also been identified in an outreach plan and new partnerships have emerged from that effort. Elements of the Rapid-BioAssessment will also be sput off into experiential learning opportunities with local schools. Lesson plans will be developed that work toward exposing students to watershed health topics in their community. Recently the Lower Columbia River Watershed Council is pivoting toward a more strategic approach to developing restoration projects. Draft technical goals have been drafted to provide more direction to project opportunities and partnerships with local community groups. This proposal along with emerging water quality data will bolster spatial resolution of selecting project types and their location in the context of the broader watershed scale. Funding will provide resources to identify existing gaps in stream survey information and target areas for additional field investigations. The Council will form and facilitate technical group that will develop a solicitation package to established consulting firms to assess their qualifications to develop an approach to prioritize areas to address uncertainties about fish distribution patterns in selected reaches of the Lower Columbia watersheds. Technical group will meet regularly with consultant team to review data summaries and how it gets translated into information for needs of emerging Strategic Action Plan (SAP). Spatially-explicit products from this effort will overlaid with existing basemaps and emerging monitoring information to refine existing Limiting factors as well as identify salmonid habitat previously not documented. These

include anchor habitats, side channel-confluences, and groundwater seeps. Scope of field investigations will also include inventorying additional constraints. Outreach priorities have also been identified in an outreach plan and new partnerships have emerged from that effort. Elements of the Rapid-BioAssessment will also be sput off into experiential learning opportunities with local schools. Lesson plans will be developed that work toward exposing students to watershed health topics in their community.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application proposes to collect data to inform the development of a strategic action plan.
- The applicant is transitioning from opportunistic to strategic restoration prioritization.
- RBA data can be used to identify where juvenile fish are distributed and can be used for informing restoration prioritization and future monitoring efforts.

Monitoring Team Concerns

- The applicant's information need is not clear, and it is not clear that RBAs are the solution. The application proposes to use funds to develop a solicitation package for a consulting firm that would develop the approach to prioritizing areas for addressing uncertainties about fish distribution.
- The applicant seems to be unclear what information RBA surveys can provide. It was unclear how "productivity" will be determined from juvenile densities without collecting additional information.
- It is difficult to assess the budget without more information about the specific questions the consultant will be required to address, the geographic scope of the monitoring, and details of the RBAs.
- This application may be premature based on information contained in the application. The applicant should perform more planning work to complete an initial assessment of existing data. This can inform a monitoring approach that may or may not include a RBA. This work should be done prior to releasing a RFP.
- The timing of the final product for this monitoring grant may not be soon enough to inform the development of the strategic action plan.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- Rapid BioAssessment (RBA) surveys can have utility in planning future restoration activities.
- The Clatskanie High School teachers are engaged in the project and provide a unique applied learning opportunity to the community.

Concerns

- Proposed survey locations are not identified as part of the proposed work and it is unclear how the consultant would be tasked with identifying locations. There is no clear justification why the monitoring reaches were not previously identified nor how the applicant determined the suggestion that 4-6 areas will be selected by the consultant.
- School lesson plan development is not eligible for a monitoring grant.
- The application is challenging to read and poorly written.
- Given the early stage of work on a strategic action plan, the project may be premature. It is unclear whether RBA surveys are the best tool to provide the council with the information needed.

Concluding Analysis

RBA surveys can be a useful tool for strategic action planning, but it is unclear whether that survey method is the most appropriate to meet the applicant's needs. More targeted location information and a greater level of detail is needed to evaluate whether RBA surveys are an appropriate methodology for achieving the council's goals and objectives.

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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1036-16664**Project Type:** Monitoring**Project Name:** Siletz & Salmon River Estuaries,
Ocean Acidification and Hypoxia Baseline Data
Acquisition 2019/21**Applicant:** Salmon Drift Cr WC**Region:** North Coast**County:** Lincoln**OWEB Request:** \$50,818**Total Cost:** \$96,593**Application Description** *(from application abstract)*

Ocean Acidification and Hypoxia (OAH) are growing global concerns, which due to ocean circulation patterns are expected to have particular impact on the waters along the Oregon Coast. These waters include estuaries which are the nursing grounds for many fish species. Estuaries are also home to many invertebrates, mollusks, and a myriad of other flora and fauna. Ocean acidification and the exacerbating impacts of hypoxia put much of these species at risk. Given that a paucity of data exists on the estuaries of the Siletz and Salmon Rivers that can be used to assess potential changes in these systems as they relate to OAH, the Salmon Drift Creek Watershed Council (SDCWC) proposes a study establishing a baseline dataset. Specifically, SDCWC proposes collecting continuous Dissolved Oxygen, Temperature, pH, and Conductivity (as a surrogate for Salinity) at three spots in the Salmon River Estuary and a fourth in the Siletz River Estuary over the initial course of two years. Additionally, we propose collecting and analyzing grab samples for Alkalinity, which collectively with our other parameters will enable us to confine the carbonate system, exposing any changes to the carbon chemistry over time. These estuaries are of particular interest due to their proximity to one of Oregon's premier Marine Reserves and Marine Protected Areas ~ Cascade Head. Project partners include the Confederated Tribes of Siletz Indians, the City of Lincoln City, Oregon DEQ, and Robertson Environmental.

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DEQ, and Robertson Environmental.

Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant has an effective working relationship with DEQ, tribes, the local municipality, and landowners.
- Monitoring close to Cascade Head Preserve could provide valuable information for management, and could inform the dissolved oxygen TMDL over time.
- The applicant has a successful track record with similar data collection efforts to manage and report the data in a meaningful manner.
- The applicant is working with a reputable lab to collect the parameters of interest for ocean acidification.

Monitoring Team Concerns

- It was difficult to understand if this was an ocean acidification and hypoxia monitoring project or just a continuation of the dissolved oxygen work they performed to inform the development of the TMDL.
- It is unclear why the Salmon and Siletz rivers were chosen; there was not a compelling reason articulated for choosing this area for continued monitoring.
- It is unclear how the site selection lined up with the applicant's monitoring objectives.
- It is unclear why only one sampling site was chosen in the Siletz River. It appears that the majority of the sites are located in areas that do not characterize the broader estuaries.
- It is unclear that continuous year-round data collection of pH and dissolved oxygen was necessary. It will be challenging to operate continuous loggers during the winter period.
- The applicant proposes to sample continuous pH using equipment that does not prevent bio-fouling. The OPMT had concerns about the plan to service this equipment once a month. This could impact the quality of the data.
- The alkalinity preservative method described in the application is not preferred. This is a very toxic chemical and should not be used in the field.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The applicant has a successful track record with monitoring projects.
- The project employs creative thinking around an emerging topic of concern to our estuaries. The applicant has researched and is prepared to implement the project.
- The importance of this type of monitoring is understood and is well-described in the application.

- Cascade Head is the only marine reserve with an associated major river. Having data on ocean acidification and hypoxia could be helpful for management.

Concerns

- This type of monitoring is extremely new and just beginning to occur in pilot form in several estuaries along the coast. The application may be premature.
- The project lacks coordination with the Ocean Acidification and Hypoxia Working Group (OAHWG), who oversees the monitoring effort for coastal estuaries. Their expertise would be essential to a successful project.
- OAHWG has not selected the Salmon and Siletz Rivers as priority locations to conduct monitoring. There are other priority areas that would be more important to establish this type of monitoring, in particular the Yaquina.
- Since the type of pH equipment chosen can have an effect on carbonate chemistry, marine-based pH meters are needed since mixing fresh and salt-water is challenging to monitor.

Concluding Analysis

The application is well-researched and detailed and there may be benefit to establishing baseline monitoring for ocean acidification and hypoxia (OAH) in conjunction with the Cascade Head Marine Reserve. This type of monitoring in Oregon is only just beginning in a pilot form and coordinated by the team of scientists on the Ocean Acidification and Hypoxia Working Group, who are not a part of this project. The OAHWG was formed to prioritize monitoring locations, manage data collection methodologies, and coordinate resources statewide. The OAHWG's pilot efforts in Tillamook and Coos Bay are in preliminary stages and lessons are being learned as the projects are implemented. The timing may be premature to launch similar projects.

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-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1037-16674
Project Name: TEP Bacteria Volunteer Water
 Quality Monitoring Program

Project Type: Monitoring

Applicant: Tillamook Estuaries Partnership

Region: North Coast

County: Tillamook

OWEB Request: \$34,919

Total Cost: \$44,919

Application Description *(from application abstract)*

Bacteria concentrations in many streams, bays, and beaches in Tillamook County are at levels that exceed the State standards for recreational contact and shellfish harvest. These waterbodies usually occur lower in the watersheds and are associated with urban and agricultural landscapes. DEQ developed three Total Maximum Daily Loads (TMDLs) in the north coast of Oregon: the North Coast Subbasins, Tillamook Bay Watershed, and Nestucca Bay Watershed to address this problem. Tillamook Estuaries Partnership (TEP) monitors E. coli and enterococcus bacteria concentrations in Tillamook County as a part of its Volunteer Water Quality Monitoring Program (VWQMP). The goal of the VWQMP is to evaluate the status and trends for bacteria levels in the streams, sloughs and bays throughout Tillamook County. The ongoing monitoring effort includes 73 sites throughout Tillamook County. TEP uses citizen scientist volunteers to collect water sample at established monitoring locations throughout Tillamook County. Approximately eight volunteers collect water samples for TEP twice a month on a year-round basis. VWQMP water samples are brought to the TEP office where they are processed and analyzed for bacteria using IDEXX equipment and methods. Sample results are recorded by TEP staff and entered into an online database. Recent results are available to the public through an interactive map on TEP's website. Every two years, TEP compiles, formats, and rates all data per DEQ protocols for accuracy. Bacteria data are forwarded to DEQ, which compares the most recent two years' of data to the appropriate State water quality standards to determine the status of the streams, sloughs, and bays. DEQ also performs regression analysis for each site to determine if statistically significant changes (trends) in bacteria concentrations are present. TEP and DEQ use this information to inform partners and the general public about water quality improvements. Bacteria concentrations in many streams, bays, and beaches in Tillamook County are at levels that exceed the State standards for recreational contact and shellfish harvest. These waterbodies usually occur lower in the watersheds and are associated with urban and agricultural landscapes. DEQ developed three Total Maximum Daily Loads (TMDLs) in the north coast of Oregon: the North Coast Subbasins, Tillamook Bay Watershed, and Nestucca Bay Watershed to address this problem. Tillamook Estuaries Partnership (TEP) monitors E. coli and enterococcus bacteria concentrations in Tillamook County as a part of its Volunteer Water Quality Monitoring Program (VWQMP). The goal of the VWQMP is to evaluate the status and trends for bacteria levels in the streams, sloughs and bays throughout Tillamook County. The ongoing monitoring effort includes 73 sites throughout Tillamook County. TEP uses citizen scientist volunteers to collect water sample at established monitoring locations throughout Tillamook County. Approximately eight volunteers

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Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant has a successful track record collecting the same data and managing and reporting it in a meaningful manner.
- This monitoring project makes good use of volunteer efforts to collect the data over a broad area to help keep the costs to a minimum.
- The applicant responded to past review comments, including providing a description of volunteer activities and QA/QC measures to ensure the data they are collecting is done correctly.

Monitoring Team Concerns

- It is unclear how each site's data set has been reviewed to ensure long-term data collection is needed at every site. This information should be provided in subsequent applications.
- The application lacked letters of support and was unclear about the reasoning behind that.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The collected data effectively informs status and trends in the Tillamook basin. The applicant has been proactive sharing the results of the data and has engaged stakeholders in the watershed as a result.
- The website hosting the data is user-friendly and informative.
- The project is able to track the effectiveness of restoration projects over time.
- Incorporating volunteers in data collection engages the community in local water quality issues.

- Local partners including the Tillamook SWCD utilize the data to monitor the effectiveness of nutrient management systems.
- The application is extremely well-written and the methods proposed technically sound.

Concerns

- No significant concerns are identified.

Concluding Analysis

This is a highly successful monitoring program in the Tillamook basin that collects bacteria data in high-priority locations where the land use is a good fit for an ongoing project. The project is highly regarded and continuously delivers products used in the Tillamook Bay region for planning new restoration projects and tracking the effectiveness of restoration in each monitored watershed.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 4

Review Team Recommended Amount

\$34,919

Review Team Conditions

None

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

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$34,919

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

| | |
|---|---------------------------------|
| Application Number: 219-1038-16679 | Project Type: Monitoring |
| Project Name: NCWA Monitoring Network 2019 | |
| Applicant: North Coast WS Assn | |
| Region: North Coast | County: Clatsop |
| OWEB Request: \$5,665 | Total Cost: \$10,765 |

Application Description *(from application abstract)*

This project continues temperature monitoring in 4 watersheds in Clatsop County, namely: Youngs Bay, Skipanon, Nicolai-Wikiup, and Ecola Creek watersheds. This is the third year of monitoring in Youngs Bay and Skipanon and the second year in Ecola and Nicolai-Wikiup. Oregon DEQ has major data gaps in these watersheds and our continuous temperature monitoring assists DEQ in establishing TMDL data. NCWA uses the data to help inform restoration and support outreach where temperature limitation is a threat to salmon. Temperature is a limiting factor for salmonid survival and it doubles as an indicator of dissolved oxygen, another important parameter. This Project will:

1. Collect time-series temperature data from 4 identified watersheds during the summertime months
2. Deploy loggers at 22+ established sites (additional sites if access becomes available) in late spring (May/June)
3. Follow DEQ approved Sample & Analysis Plan
4. Audit data loggers in the office pre- and post- deployment
5. Conduct field audits with a NIST-certified thermometer approved by DEQ at least 2x/season (at deployment and retrieval)
6. Retrieve loggers between Sept 15-Oct 15
7. Upload data and maintain organized file system on NCWA computer, backed up to iCloud
8. Submit data to DEQ for processing and uploading to AWQMS
9. Make data publicly available on NCWA website once processed/vetted by DEQ and promote its availability to partners and community members
10. Incorporate data results into restoration planning (e.g. provide temp data to the Chum SAP, use in Chum Landowner Outreach conversations)

This project is a collaboration between NCWA, Oregon DEQ, ODFW, and council volunteers. This project continues temperature monitoring in 4 watersheds in Clatsop County, namely: Youngs Bay, Skipanon, Nicolai-Wikiup, and Ecola Creek watersheds. This is the third year of monitoring in Youngs Bay and Skipanon and the second year in Ecola and Nicolai-Wikiup. Oregon DEQ has major data gaps in these watersheds and our continuous temperature monitoring assists DEQ in establishing TMDL data. NCWA uses the data to help inform restoration and support outreach where temperature limitation is a threat to salmon. Temperature is a limiting factor for salmonid survival and it doubles as an indicator of dissolved oxygen, another important parameter. This Project will:

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9. Make data publicly available on NCWA website once processed/vetted by DEQ and promote its availability to

partners and community members¹⁰. Incorporate data results into restoration planning (e.g. provide temp data to the Chum SAP, use in Chum Landowner Outreach conversations) This project is a collaboration between NCWA, Oregon DEQ, ODFW, and council volunteers.

Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant has a successful track record and a DEQ approved Sampling and Analysis Plan (SAP).
- The application is well-written and addressed past reviewer comments.
- This project will continue to collect continuous water temperature data and contribute to generating a 10-year data set. These data will allow DEQ to perform adequate trend analyses to determine TMDL implementation and evaluate for delisting temperature impaired water bodies.

Monitoring Team Concerns

- It is unclear if there were adequate resources for the applicant to use the data for outreach to plan and implement restoration actions in the future.

Monitoring Team Comments

- The OPMT encourages the applicant to consider monitoring water temperature year-round (at least at a subset of sites) to adequately document thermal dynamics.
- In future applications consider requesting funds to collect data for more than one year.

Review Team Evaluation

Strengths

- This is a continuation of previous monitoring work that has been successful. The project has a positive track record of collecting high quality data and engaging volunteers.
- The project is the result of a successful partnership with oversight and participation from DEQ.
- The volunteers working on the project are knowledgeable about monitoring and have the necessary technical skillsets.
- The project recently expanded and now monitors all priority watersheds.

Concerns

- The project only focuses on temperature.
- The objectives stated in the proposal are challenging to interpret.

Concluding Analysis

The ongoing success of this relatively young volunteer monitoring program on the North Coast is acknowledged. This cost-effective project continually delivers high quality data collected by adept volunteers, working closely with DEQ to guide the project's sampling density and ensure a Sample Analysis Plan is followed. Given the cost-effectiveness and the continual low budget amounts, the review team recommends that the applicant will consider the efficiencies of scale and submit a request that covers more than one year of funding in the future.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 4

Review Team Recommended Amount

\$5,665

Review Team Conditions

None

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

N/A

Staff Recommendation

Fund

Staff Recommended Amount

\$5,665

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering North Coast (Region 1)

Application Number: 219-1039-16635**Project Type:** Monitoring**Project Name:** Agnes, Baldy, & Logan Creeks and Ocean Outfalls Baseline Data Acquisition ~ 2019 - 2020**Applicant:** Salmon Drift Cr WC**Region:** North Coast**County:** Lincoln**OWEB Request:** \$35,232**Total Cost:** \$77,694**Application Description** *(from application abstract)*

Salmon Drift Creek Watershed Council (SDCWC) proposes collecting baseline data of the smaller, understudied ocean tributaries and outfalls in our boundary. Project will focus on urbanized watersheds in Lincoln City. Project addresses the need to better understand current water quality of these systems as it relates to federal and state water quality standards, including those directly related to salmonid life cycles. Watersheds previously not studied include Baldy Creek, Agnes Creek, and Logan Creek plus outfalls at numerous sites along the seven miles of beaches of Lincoln City. Given the proximity, of particular interest are the systems which discharge directly into the Cascade Head Marine Reserve and/or Protected Areas which are coincidentally also within the recently redesignated United Nations Cascade Head Bioserve. Water quality data to be collected will include physical parameters of flow, dissolved oxygen, pH, conductivity, temperature, and turbidity along with biological parameters of bacteria as indicators of fecal contamination. Sampling will be primarily in the freshwater, however, marine samples will be taken from the nearshore for a comparative bacteria study. Data acquisition will include both routine and storm sampling to best characterize these lesser understood and potentially ecologically under-valued watersheds. Data will be used to determine impairments, prioritize future restorations for anadromous fish migration, and be of value to recreational users of area beaches and harvesters of shellfish (clams and mussels). Project partners include Oregon DEQ, Siletz Tribal Charitable Contribution Fund, Neighbors for Kids, Surfrider Foundation, and the City of Lincoln City.

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include both routine and storm sampling to best characterize these lesser understood and potentially ecologically under-valued watersheds. Data will be used to determine impairments, prioritize future restorations for anadromous fish migration, and be of value to recreational users of area beaches and harvesters of shellfish (clams and mussels). Project partners include Oregon DEQ, Siletz Tribal Charitable Contribution Fund, Neighbors for Kids, Surfrider Foundation, and the City of Lincoln City.

Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant addressed most previous application review comments.
- The applicant has a good track record with similar data collection efforts to manage and report the data in a meaningful manner.
- This project can provide important information to the Mid-Coast TMDL in urban areas.

Monitoring Team Concerns

- Despite the improvements to the application, it remains unclear how important these streams are to anadromous fish. It was unclear if the data are not available or if it was just not provided. Is there suitable habitat for spawning? Is there presence of juvenile salmonids?
- The application cites an incorrect internet link for the flow measurement method that should be followed.
- The application lacks a clear description of monitoring methods.
- The current SAP cited does not include flow monitoring and should be revised to include the correct methodology.
- The application includes volunteers as match, but the narrative doesn't describe what the volunteers will be doing to contribute to this project.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- This application demonstrates a stronger link to salmon habitat than the previous submittal.
- The proposed data collection will fill a gap in previous state monitoring and the data will have other benefits in addition to fisheries.
- This type of monitoring is recommended by the Ocean Acidification and Hypoxia Working Group (OAHWG).
- The proposed streams to monitor have a direct impact to human and marine health.

- The project benefits recreational users of the ocean shore.

Concerns

- The project emphasizes fish use, but is more likely to inform urban water quality issues. The project has greater human health benefits than it does ecological benefits.
- The streams proposed for monitoring have fish passage issues limiting habitat availability. It may not be cost-effective to provide fish passage given the size of the streams involved and extent of upstream habitat.
- Focusing on turbidity may not be useful in these streams. Examining metals or nutrients affecting aquatic organisms may be more valuable.
- The application lacks a clear description of monitoring methods. The grab samples proposed may have limited value.

Concluding Analysis

Monitoring work in ocean outfalls is lacking along the Oregon coast, and this proposed work will fill data gaps in state monitoring efforts. There is value in monitoring overlooked streams in the urban environment and the project may provide benefits to human and marine health. The applicants are encouraged to coordinate with the Lincoln SWCD to be more cost-effective and efficient in getting the samples to the lab in a timely manner.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 4

Review Team Recommended Amount

\$35,232

Review Team Conditions

None

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

N/A

Staff Recommendation

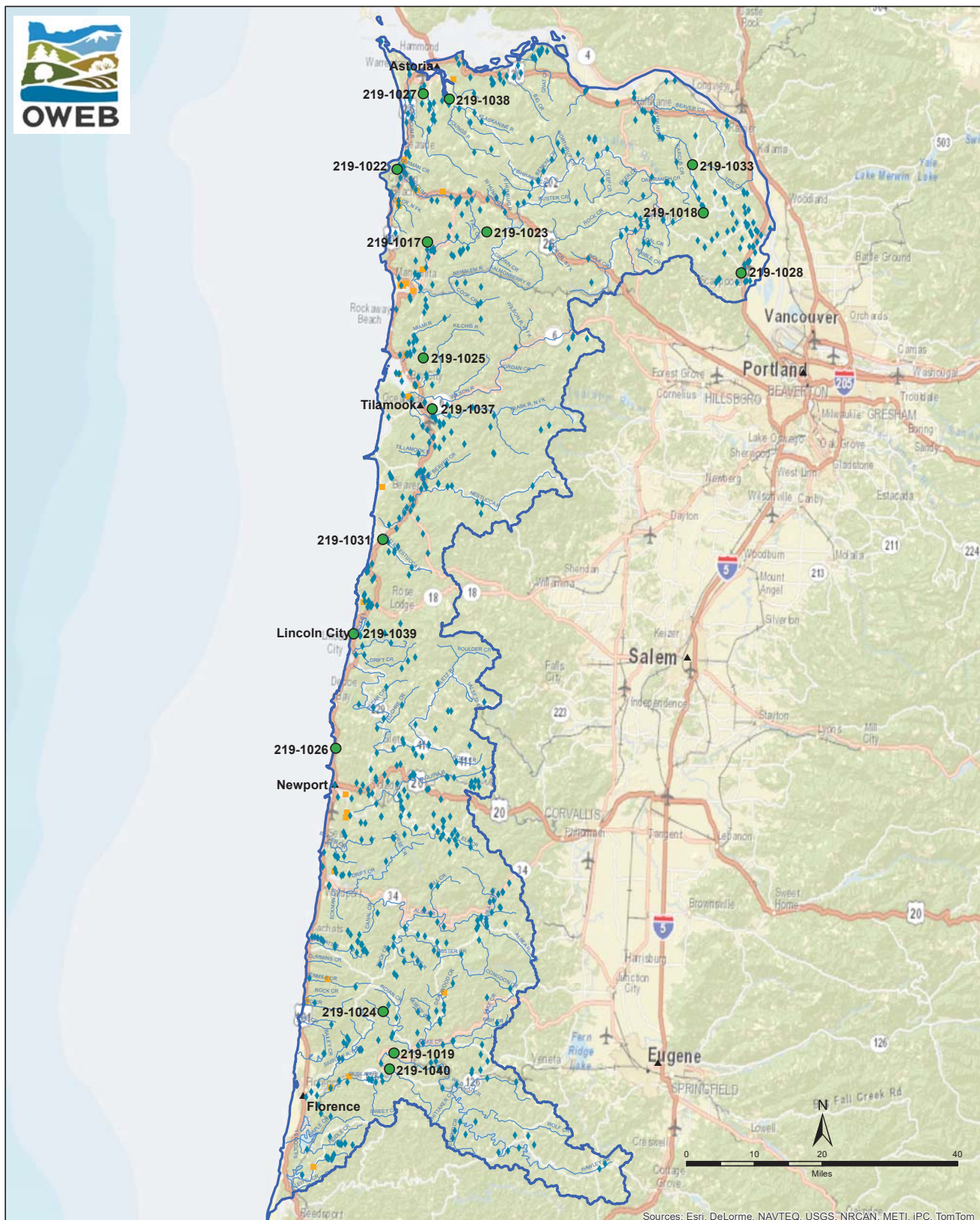
Fund

Staff Recommended Amount

\$35,232

Staff Conditions

N/A



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ESRI ArcMap 10.6 NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20190314

Sources: Esri, DeLorme, NAVTEQ, USGS, NRCAN, METI, IPC, TomTom

Funding Recommendations

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

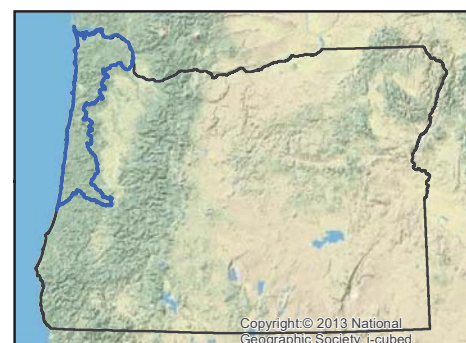
Previous Grants - 1998-Spring 2018

- ◆ Restoration Acquisitions
- Stream Acquisitions
- Region Boundary

Oregon Watershed Enhancement Board

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Region 1 - North Coast

Restoration Projects Recommended for Funding in Priority Order

| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
|---|------------------------------|--|--|--------------------|----------|
| 219-1024 | Siuslaw WC | Upper Indian Creek Helicopter Large Wood Placement, Phase 1 | Large wood will be added to 10 miles of stream in the Upper Indian Creek area of the Siuslaw watershed with the goal of improving habitat complexity for aquatic species, including Oregon coast coho salmon. | 236,455 | Lane |
| 219-1019 | Siuslaw WC | Cleveland Creek Highway 36 Culvert Replacement | A barrier culvert under Highway 36 will be replaced and fish passage will be restored to 1.5 miles of high quality spawning and rearing habitat in Cleveland Creek, a tributary of the Siuslaw River. | 295,483 | Lane |
| 219-1022 | North Coast Land Conservancy | Boneyard Ridge Forest Restoration | Forest health thinning on a conservation property on Tillamook Head will increase spatial diversity, improve biodiversity, and work to restore late-seral forest conditions with adaptive long term management. | 108,829 | Clatsop |
| 219-1023 | Lower Nehalem WC | Punchbowl Creek Large Wood Enhancement Project | Large wood will be placed within a one mile reach of Punchbowl Creek in the Lower Nehalem watershed, improving habitat complexity for aquatic species. | 73,319 | Clatsop |
| 219-1018 | Columbia SWCD | Clatskanie Headwater Stream Fish Passage Restoration | This project will replace the last barrier in the headwater streams of the Clatskanie River, restoring access for migration of native fish species to 1.7 miles of spawning and rearing habitat. | 152,047 | Columbia |
| 219-1017 | Lower Nehalem WC | Grassy Lake Creek Tributary Culvert Replacements and Habitat Enhancement | Critical habitat and passage needs will be addressed to benefit an isolated population of indigenous Coastal Cutthroat trout. Two undersized culverts will be replaced and large wood installed over a one mile reach. | 24,858 | Clatsop |
| Total Restoration Projects Recommended for Funding by RRT and OWEB Staff | | | | 890,991 | |

| Restoration Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
|--|------------------------|---|-------------------|--------------------|-----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Restoration Projects Recommended for Funding by RRT | | | | 890,991 | |
| | | | | | |
| Restoration Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-1014 | Siuslaw SWCD | Bessey's North Fork Siuslaw & McLeod Creek Floodplain Restoration | | 527,393 | Lane |
| 219-1015 | The Nature Conservancy | Kilchis Porter Tidal Wetland Restoration Project | | 396,935 | Tillamook |
| 219-1016 | MidCoast WC | Bummer Creek Tributary Fish Passage and Wetland Restoration | | 46,410 | Benton |
| 219-1021 | North Coast WS Assn | Upper Big Creek Road Decommissioning | | 188,073 | Clatsop |
| | | | | | |

| Technical Assistance (TA) Projects Recommended for Funding in Priority Order | | | | | |
|---|--------------------------------------|---|---|--------------------|-----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-1027 | CREST | Upper Lewis and Clark Tidal Restoration Project | Final designs will be completed for a 29-acre estuary restoration project on the Lewis and Clark River in Clatsop County. | 74,028 | Clatsop |
| 219-1026 | Institute for Applied Ecology | Coastal Native Seed Partnership | This project will bring partners involved in coastal restoration together with native plant materials producers to increase the availability and affordability of native seed to restore Oregon coastal habitats. | 74,602 | Lincoln |
| 219-1031 | Ducks Unlimited, Inc. | Nestucca NWR-Bay Unit Restoration and Infrastructure- Design Project | A technical design will be developed that upgrades a tidegate to meet fish passage criteria, enhances interior aquatic habitat, and develops agricultural setbacks and riparian restoration plans on the Nestucca Bay National Wildlife Refuge. | 75,000 | Tillamook |
| 219-1025 | Nestucca-Neskowin Watersheds Council | North Coast Watershed Councils Restoration Assistance | A coalition of North Coast watershed councils will share the resources of a highly qualified consultant for pre-project field work, project design solicitation, proposal drafting, and contract preparation. | 70,990 | Tillamook |
| 219-1028 | Scappoose Bay WC | South Scappoose Creek, Reach F Design | Surveys, hydrologic modeling, and permit level designs will be produced for a floodplain reconnection and riparian project on South Scappoose Creek, a tributary to Scappoose Bay. | 38,597 | Columbia |
| Total TA Projects Recommended for Funding by RRT and OWEB Staff | | | | 333,217 | |
| Technical Assistance Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total TA Projects Recommended for Funding by RRT | | | | 333,217 | |
| Technical Assistance Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-1029 | Lower Nehalem Community Trust | Alder Creek Restoration Enhancement Project | | 54,208 | Tillamook |
| 219-1030 | Sustainable Northwest | Arch Cape Community Forest: Water and Sediment Assessment and Action Plan | | 30,575 | Clatsop |
| 219-1032 | Columbia SWCD | Page Creek, Final Fish Passage | | 41,800 | Columbia |

| Stakeholder Engagement Projects Recommended for Funding in Priority Order | | | | | |
|---|------------|---|--|--------------------|--------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-1040 | Siuslaw WC | Siuslaw Coho Partnership Story Map for Stakeholder Engagement | An interactive story map will be created to engage stakeholders in the restoration projects identified in the Siuslaw River Coho Recovery Strategic Action Plan. | 24,690 | Lane |
| Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff | | | | 24,690 | |
| Stakeholder Engagement Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Stakeholder Engagement Projects Recommended for funding by RRT | | | | 24,690 | |
| Stakeholder Engagement Projects <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| None | | | | | |

| Monitoring Projects Recommended for Funding in Priority Order | | | | | |
|--|---------------------------------|--|--|--------------------|-----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-1037 | Tillamook Estuaries Partnership | TEP Bacteria Volunteer Water Quality Monitoring Program | This ongoing monitoring effort evaluates the status and trends for bacteria levels in the streams, sloughs, and bays throughout Tillamook County. | 34,919 | Tillamook |
| 219-1038 | North Coast WA Assn | NCWA Monitoring Network 2019 | Temperature monitoring will be conducted in 4 watersheds in Clatsop county: Youngs Bay, Skipanon, Nicolai-Wickiup, and Ecola Creek. | 5,665 | Clatsop |
| 219-1033 | Columbia SWCD | Columbia SWCD Water Quality Monitoring Program | The project will build on existing data and collect new data in locations throughout the Lower Columbia watershed to measure bacteria, temperature, turbidity, conductivity, and water depth. | 25,012 | Columbia |
| 219-1039 | Salmon Drift Cr WC | Agnes, Baldy, & Logan Creeks and Ocean Outfalls Baseline Data Acquisition ~ 2019 -2020 | Baseline water quality data will be collected in smaller, understudied ocean tributaries in Lincoln City. Flow, dissolved oxygen, pH, conductivity, temperature, and turbidity data will be collected in urbanized streams and ocean outfalls. | 35,232 | Lincoln |
| Total Monitoring Projects Recommended for funding by OWEB Staff | | | | 100,828 | |
| Monitoring Projects Recommended but Not Funded in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Monitoring Projects Recommended for funding by RRT | | | | 100,828 | |
| Monitoring Applications Not Recommended for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-1034 | Lincoln SWCD | Mid Coast Monitoring Project Oct 2018 | | 69,574 | Lincoln |
| 219-1035 | Columbia SWCD | Lower Columbia Watershed Rapid BioAssessments | | 66,550 | Columbia |
| 219-1036 | Salmon Drift Cr WC | Siletz & Salmon River Estuaries, Ocean Acidification and Hypoxia Baseline Data Acquisition 2019/21 | | 50,818 | Lincoln |
| Region 1 Total OWEB Staff Recommended Board Award | | | | 1,349,726 | 13% |
| Regions 1-6 Grand Total OWEB Staff Recommended Board Award | | | | 10,554,731 | |

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2019-16601**Project Type:** Restoration**Project Name:** Railroad Creek Fish Passage Improvement and Instream Restoration**Applicant:** Smith River WC**Region:** Southwest Oregon**County:** Douglas**OWEB Request:** \$120,711**Total Cost:** \$265,285

Application Description *(from application abstract)*

Railroad Creek is a tributary of the Lower Smith River located 25 miles east of Reedsport, Oregon. Currently, fish passage on Railroad Creek is restricted by an undersized culvert at a riparian road crossing. The current culvert is 7' in diameter, constraining the 18' active channel width, and perched at its downstream end. The constriction of the channel has altered hydrological processes, posing a migration barrier to fish and impeding substrate transport. Substrates above the culvert are directing summer flows subsurface under the riparian road bed, leaving the channel dry and impeding upstream access to juveniles in the summer. This project will replace the culvert with a bridge allowing a 27' stream channel at the crossing, designed in accordance with ARBO II and exceeding the required state and federally average active channel width requirements. The bridge will free the channel from constriction, allowing for fish to access to an additional 3 miles of spawning and rearing habitat, wildlife passage, and the restoration of hydrological processes. 15 instream log and boulder placements will be implemented below the current crossing in order to trap the large amount of material that has accumulated above the culvert, as these are expected to move after the culverts replacement. Photo point monitoring will take place for three years post-project. Smith River Watershed Council will work with the US Forest Service Siuslaw Nation Forest Biologist and Hydrologist, ODFW biologists, Roseburg Resources Engineers, and Rayonier Timber Company. Roseburg Resources have agreed to check the bridge after high flows and remove debris if needed, though no regular maintenance is expected for this project.

Review Team Evaluation

Strengths

- ESA-listed coho, Chinook and steelhead would benefit from the proposed habitat restoration conditions.
- Project partners have substantial experience with instream habitat restoration and coordinate well on projects.
- The project objectives are clearly articulated. The large wood structure placement design and material size is appropriate for the stream.
- The budget is detailed and reasonable for the project location and the activities proposed.
- The replacement of the culvert with a bridge would allow for adult Chinook passage as well as juvenile salmonids.

Concerns

- The application did not identify or describe if there would be a low flow channel designed under the bridge. Without such a consideration, there could be a barrier during those flow conditions.
- As designed, the inside wall along the stream channel could have a short lifespan.
- Coordination with NOAA on Fish Passage has not yet occurred. It is likely that designs could change during NOAA review which could increase the costs of the structure. The rationale for boulder and log placements was unclear.

Concluding Analysis

The project components would benefit a diverse number of salmonid species including ESA-listed coho. The large wood component is sound and designed appropriately for the site. There were several concerns identified related to the proposed bridge which could impact the design approach, as well as the cost. The applicant needs to work closely with NOAA to make sure the approach meets fish passage criteria.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

9 of 11

Review Team Recommended Amount

\$120,711

Review Team Conditions

The Applicant must coordinate with NOAA on bridge designs.

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2020-16602**Project Type:** Restoration**Project Name:** Ashland Creek Fish Passage Improvement**Applicant:** Rogue River WC**Region:** Southwest Oregon**County:** Jackson**OWEB Request:** \$117,527**Total Cost:** \$200,248**Application Description** *(from application abstract)*

The proposed fish passage project is on Ashland Creek, a tributary to Bear Creek in the upper Rogue Basin in Jackson County, OR. Ashland Creek's perennial flow and relatively cold water is both unique and considerably important to the Bear Creek watershed. The creek provides habitat for Coho Salmon, steelhead trout, and other native aquatic organisms. Near rivermile 1.2 on Ashland Creek is an actively used irrigation structure called the Smith-Myer-Roper Diversion. This channel spanning, concrete dam is approximately 2.5 feet in height and impairs access to approximately 2 miles of valuable Coho Salmon and steelhead spawning and rearing habitat. The dam is also considered a near complete barrier to upstream migrating juveniles that seek cold water refuge in summer and high flow refuge in winter. This proposal requests funding to remove the dam, reprofile the channel, install an irrigation water collection box, remove 0.25 acre of blackberry and replace with native riparian plant species, and install interpretive signs. Project partners include the City of Ashland, Oregon Department of Fish & Wildlife, Rogue River Watershed Council (RRWC), Cascade Stream Solutions, and private landowners and water users.

Review Team Evaluation**Strengths**

- The project is straightforward with sound design information presented in the application. The project engineer is experienced working on passage issues at diversion structures with similar approaches.
- The barrier is the top fish passage priority in the Bear Creek system.
- The project is in a highly visible public location providing a good outreach opportunity.
- The project would build on other passage and habitat restoration in this watershed.
- Invasive species removal and planting is a value-added component to the project and will help benefit water quality.
- The applicant has consulted with NOAA on fish passage design.
- The City of Ashland is supportive of the project.
- Ashland Creek is a primary cold water refugia and provides critical habitat for salmonids, including ESA-listed coho.

Concerns

- The long term maintenance of blackberry removal will be undertaken by volunteers. This will require diligence on the part of the applicant to ensure the work is completed correctly and according to schedule.
- The project reach is constrained on all sides by housing, a sewer line, and a park. Due to the constraints of the surrounding infrastructure, the approach will not address the altered hydrologic function of the stream.

Concluding Analysis

There is a limited amount of cold water refugia in this system and this stream provides a primary cold water source to Bear Creek. Restoring passage to these valuable habitats is important for recovery of ESA-listed species and other native aquatic organisms. While the design will not restore the stream to a more naturally functioning state, the engineered roughened channel will improve the channel function from the current state, as well as improve passage to upstream habitat. The addition of a bio-swale, the removal of invasive vegetation, and the replanting of riparian areas with native species will help benefit water quality in the project area as well as downstream.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 11

Review Team Recommended Amount

\$117,527

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$117,527

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2021-16608

Project Type: Restoration

Project Name: Elk Creek RM 5.6 Floodplain and Side Channel Enhancements

Applicant: Rogue River WC

Region: Southwest Oregon

County: Jackson

OWEB Request: \$173,400

Total Cost: \$616,300

Application Description *(from application abstract)*

The proposed project seeks to address degraded aquatic habitat conditions in Elk Creek, a large tributary to the upper Rogue River in Jackson County, Oregon. Elk Creek provides habitat for Coho Salmon, Chinook Salmon, steelhead, Cutthroat Trout, Pacific Lamprey, Klamath Smallscale Suckers, Speckled Dace, Western Pond Turtle, and other native aquatic species. The proposed project reach is managed by the US Army Corps of Engineers (ACOE). A long history of restoration exists in the Elk Creek watershed. Most restoration projects completed in the Elk Creek watershed have been successful because of collaboration and teamwork among land management agencies, NGO's and private interests. The proposed project is yet another example of this collaborative approach. The degraded habitat conditions this project seeks to address are the result of historic land management actions. In summary, these conditions include simplified channel and floodplain habitat and lack of habitat connectivity within the river mile 5.0 - 5.7 reach. More specifically, project managers aim to reconnect Elk Creek and its floodplain, create complex habitat in side channels and on floodplains, and increase inundation frequency of off channel habitats - all with the primary goal of improving rearing conditions for juvenile salmonids. This project proposal originates from a technical assistance grant awarded in 2014 by OWEB (214-2006) to the former Upper Rogue Watershed Association (URWA), now Rogue River Watershed Council (RRWC), in 2014. It represents the culmination of input from OWEB's Regional Review Team (via two prior applications) and a technical team of hydrologists, biologists, fluvial geomorphologists, and resource managers. Partners include: ODFW, BLM, ACOE, and RRWC.

Review Team Evaluation

Strengths

- The project was selected by a multi-interdisciplinary team through a prioritization process.
- The proposal addresses concerns from the previous review including riparian restoration and the incorporation of levee materials into instream structure work.
- This stream provides important spawning and rearing habitat for ESA-listed coho.
- The project will restore more natural stream function and floodplain connectivity along the project reach.
- The project is a high priority for BLM and will build on previous restoration efforts in the watershed.

Concerns

- No concerns were identified.

Concluding Analysis

The proposal is a resubmission and was designed through an OWEB Technical Assistance grant. The stream is important to ESA-listed coho and is identified in NOAA's SONC Coho Salmon Recovery Plan and the draft Upper Rogue Coho Salmon Strategic Action Plan as a high priority area for restoration. Historically, the project area was a highly dynamic floodplain and project activities will help to restore this function to the project reach, representing a timely and important restoration opportunity.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 11

Review Team Recommended Amount

\$173,400

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$173,400

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

| | |
|---|----------------------------------|
| Application Number: 219-2022-16611 | Project Type: Restoration |
| Project Name: Marlow Creek Habitat Restoration | |
| Applicant: Coos Watershed Association | |
| Region: Southwest Oregon | County: Coos |
| OWEB Request: \$421,967 | Total Cost: \$560,375 |

Application Description *(from application abstract)*

In Coos County, Marlow Creek is the furthest downstream of the three main tributaries to the East Fork Millicoma River and has been heavily impacted by past land management practices, which has degraded in-stream habitat throughout the basin. Marlow Creek provides important habitat to fall chinook, chum and coho salmon and steelhead trout, along with other important aquatic species (e.g. Pacific lamprey). For over the last two decades, the Marlow Creek subbasin has been a focal area of previous habitat restoration in the Coos basin near Coos Bay, Oregon, with its high spawning and rearing activity, but there is still room for habitat improvements. The Marlow Creek Habitat Restoration project is a multi-faceted project that seeks to address a lack of stream complexity and fish passage by proposing to 1) place nearly 90 pieces of wood over 4 miles, 2) replace an undersized, perched culvert with a bridge to open 0.2 miles of tributary habitat and release a large amount of coarse sediment into the newly added wood on Marlow Creek, 3) improve passage through the boulder falls near the 5 Mile Marker on the 1000 Rd to open 2 miles of habitat, and 4) improve and maintain the 1000 Road surface and current drainage to reduce chronic sediment input into Marlow Creek. OWEB funds will be used for project management, travel, contracted services, materials & supplies, and indirect costs. The Coos Watershed Association (CoosWA), Oregon Department of Forestry (ODF), Weyerhaeuser Timber Company, Department of State Lands (DSL), and Oregon Department of Fish & Wildlife (ODFW) will be providing match that includes engineered designs, contracted services, materials & supplies, and technical assistance.

Review Team Evaluation

Strengths

- The project is a resubmittal and the applicant addressed concerns from the previous review by providing design information on the instream structures and the fish passage work.
- Marlow Creek is a highly productive stream that supports important ESA-listed coho spawning and rearing habitat. The project addresses critical limiting factors impacting coho related to simplified instream habitat conditions and passage issues.
- The proposal demonstrates a strong working relationship among partners through involvement in design, implementation, and funding.
- The project continues the restoration momentum on this stream, building on completed instream and passage restoration work downstream.
- The existing riparian area has the potential for recruitment of large wood.

- Marlow Creek is the only consistent stronghold for chum salmon in this system.

Concerns

- The high cost of the bridge does not have a favorable cost to benefit ratio. The project will result in an additional 900 feet of accessible habitat and will improve sediment transport; however, the cost seemed to outweigh the benefits.

Concluding Analysis

The project partners have established a great track record of implementing this type of restoration. The project builds on restoration activities implemented downstream of the project reach and has the potential to increase the productivity in this stream for ESA-listed coho and other aquatic species, although at a high cost for the habitat benefit.

Review Team Recommendation to Staff

Fund

Review Team Priority

8 of 11

Review Team Recommended Amount

\$421,967

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2023-16617**Project Type:** Restoration**Project Name:** Spencer Creek_Instream
Restoration**Applicant:** Smith River WC**Region:** Southwest Oregon**County:** Douglas**OWEB Request:** \$130,975**Total Cost:** \$322,892**Application Description** *(from application abstract)*

Spencer Creek is a tributary of the Lower Smith River located 25 miles east of Reedsport, Oregon. Historical and current timber practices have greatly impacted the natural function of streams throughout the Smith River Watershed. These impacts have led to bedrock dominant systems lacking substrates, decreased subsurface flow leading to high peak summer temperatures, a lack of large wood recruitment, and ultimately a limited production of anadromous trout, salmon, lamprey, and other aquatic species. This project seeks to maximize ecological uplift by providing a trajectory for rehabilitating stream processes formally present. Funding will be used to mitigate environmental impacts, increasing anadromous species production and improve overall habitat and stream function through instream restoration structures. Instream log/boulder placements have been designed by SRWC and an ODFW Western Oregon Habitat Restoration Biologist. 47 structures containing 507 logs and 1640 boulders will be placed over 4.5 miles of stream. Spencer Creek falls will be modified to improve fish access to 8.5 miles of stream habitat. This was a low flow barrier to anadromy that was modified by the BLM and the Oregon Fish and Game Commission. We will remove a boulder, concrete sill, exposed rebar and concrete/rebar pieces from a failed fish ladder. Project partners are the Coos Bay District BLM, Roseburg Resources Company, Oregon Department of Fish and Wildlife and Trout Unlimited.

Review Team Evaluation**Strengths**

- Spencer Creek is important habitat for ESA-listed coho and the project will help address primary limiting factors for coho.
- Project partners have a good deal of experience with large wood placement in the basin.

Concerns

- The designs for fish passage have not yet been provided to ODFW or NOAA.
- There is no back up plan for addressing the fish passage issues if the proposed approach at the falls is unsuccessful or if modification is necessary.

- The applicant should consider whether the falls area needs to undergo an archaeological assessment.
- Placement of large wood and boulder structures above the bedrock falls might be better timed after the passage issue is addressed.

Concluding Analysis

The bedrock falls pose a challenging fish passage problem with multiple factors to consider. The current design approach appears to be based on several assumptions and not from a sound technical foundation. The project would be a good candidate for a Technical Assistance project to provide the information needed to develop alternatives for consideration in addressing passage at the site.

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-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2024-16620

Project Type: Restoration

Project Name: Quarter Creek Water Quality Improvement Project

Applicant: Jackson SWCD

Region: Southwest Oregon

County: Jackson

OWEB Request: \$36,019

Total Cost: \$110,052

Application Description *(from application abstract)*

Quarter Creek is a tributary to 303(d) listed, TMDL-developed Antelope Creek and Little Butte Creek, just outside of Eagle Point, Oregon. Little Butte Creek joins with the Rogue River just beyond the city of Eagle Point and has been the focus of several projects in recent years. Like many previous projects, this project focuses on converting from flood irrigation to sprinkler irrigation in order to prevent contaminated tailwater from reaching important aquatic habitat for endangered species. In this project, an irrigation bulge pond will be dug and approximately 17 acres of pasture/hayground will be converted from flood to sprinkler irrigation. Jackson SWCD is the primary organization on this project. Although this particular project is just outside the current JSWCD/NRCS CIS it will provide cumulative and similar results.

Review Team Evaluation

Strengths

- The project involves the right partners needed to develop a solution to the water quality issues resulting from flood irrigation.
- The work is fairly low cost for the watershed benefit and has direct support and involvement by the landowners.
- An irrigation and pasture management plan will be developed.
- While Quarter Creek is seasonal and does not support coho, the stream it flows into does contain habitat for steelhead and ESA-listed coho. Reducing fine sediment runoff is important to improving water quality.
- The applicant has the capacity to guide implementation and is experienced in developing solutions for irrigators.

Concerns

- There is shallow bedrock in the area and there have been no geological investigations to determine if there is adequate depth for pond construction.
- The use of a “big gun” sprinkler may still result in erosion issues considering the slope of the pasture. Alternative irrigation delivery methods should be considered.
- Although the budget for pond construction was based on bids, it appears high and without better detail in the budget description it is hard to determine whether this cost is reasonable.

Concluding Analysis

Irrigation water delivery to the property is provided on a 14-day schedule. By building a pond or “bulge” in the system, the irrigator will be able to utilize more efficient irrigation methods rather than the current flood approach. Severe erosion resulting from flooding on the heavy clay soils prompted the landowner to seek assistance for conversion to a more efficient high pressure system. The pond component is key to that conversion; however, there needs to be more assurance that the pond approach will work with the potential shallow bedrock issue. The project has the potential to improve irrigation efficiencies for the landowner, as well as help reduce run-off into the stream and improve water quality. The application would have been stronger if it had examined the potential for conserving water instream.

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-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2025-16627**Project Type:** Restoration**Project Name:** Williams River Quarry Falls Fish Passage Improvement**Applicant:** Coos Watershed Association**Region:** Southwest Oregon**County:** Douglas**OWEB Request:** \$394,340**Total Cost:** \$496,890

Application Description *(from application abstract)*

In the Coos basin near Coos Bay, Oregon, the Williams River is a major tributary to the South Fork Coos River and provides important habitat for chinook and coho salmon, steelhead, cutthroat, and Pacific lamprey, among other aquatic species. In the 1960's, road building and quarry operations constrained the Williams River at the Five Mile Creek Quarry in Douglas County against a massive bedrock hillslope, drastically increasing the stream gradient and establishing the Quarry Falls. These falls are a major topic of concern and are the last barrier on the ODFW Statewide Fish Passage Priority List on the Millicoma Tree Farm within the Coos watershed. Coos Watershed Association (CoosWA) and Weyerhaeuser have collaborated to tackle the other major barriers on the Tree Farm (OWEB #212-2047 & #216-2012), and we are now focusing on tackling the last major barrier, the Quarry Falls. To address this, we propose to shift the 5000 Road nearly 50 feet to the northeast, widen the channel by up to 45 feet, and plant 400 trees and shrubs along 700 feet of stream. These activities will improve stream complexity, provide a future source of shade and wood, and improve adult and juvenile access to nearly 21 miles of the furthest extent of anadromous fish habitat in the Coos basin and habitat recently restored (OWEB # 214-2035). OWEB funds will fund project management, travel, supplies, contracted services, and indirect costs. Weyerhaeuser, CoosWA, and OR Department of Fish & Wildlife (ODFW) will be providing match to cover project designs, permitting, road relocation activities, technical assistance, and some indirect costs.

Review Team Evaluation

Strengths

- The project is a resubmittal and the applicant addressed concerns from the previous evaluation related to the design approach and engineering. Additionally, a planting component was added to the project.
- A letter of support was provided by ODFW describing the importance of addressing the barrier, which may cause delays in the timing of spawning under certain flow conditions.
- This is the final barrier in the system and builds on other fish passage and extensive instream habitat restoration work both upstream and downstream of the site.
- The project will facilitate passage for multiple species including ESA-listed coho, with juveniles benefiting the most from the project.

- Project partners have experience in successfully addressing challenging fish passage projects. The application demonstrates strong working partnerships and commitment necessary to design, fund and undertake a project of this magnitude.

Concerns

- Fish passage is not a priority limiting factor for coho in this watershed.
- There is a high cost relative to the expected fish benefit.
- The application described that the technical team involved in project development was split on what design alternatives to pursue. Additional information on those issues and how they were resolved would help in better understanding the selected alternative.
- It was not clear if the project was “shovel ready” or if it might take additional time to get to that stage.
- The attached landowner letter of support was for a different project.

Concluding Analysis

This project is a resubmittal. The approach to improve fish passage at the site should lessen gradient and flow velocity and assist in both adult and juvenile passage for multiple species. While passage is not a critical limiting factor in this system, the project will complete fish passage restoration efforts and connectivity between upstream and downstream habitats.

Review Team Recommendation to Staff

Fund

Review Team Priority

11 of 11

Review Team Recommended Amount

\$394,340

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2026-16636

Project Type: Restoration

Project Name: Lower Wasson Creek Riparian
Restoration

Applicant: Smith River WC

Region: Southwest Oregon

County: Douglas

OWEB Request: \$76,505

Total Cost: \$163,007

Application Description *(from application abstract)*

The Wasson Creek drainage is located 15 miles NE of Reedsport OR and is majority federally owned and managed. The project area is located 19 miles up Smith River Rd, and occurs on private property bordered by the Siuslaw NF to the West, East and the South. The primary issue here is Riparian Process and Function. Multiple watershed and terrestrial functions will be benefited by addressing noxious weeds and restoring the riparian areas to native plant dominated forested lands. This project will remove and suppress Himalayan Blackberry (HBB) over 17.7 acres, by manual, mechanical and chemical means. Pretreatment will remove the bulk of the HBB biomass over a two year period. Larger tree stock will be planted, 2-3 foot stock. Post-planting treatments will be combined manual removal and herbicide treatments and will occur twice during year 3 and once for years 4-6. The need for subsequent treatments will be evaluated during years 5 and 6 to ensure escapement for plantings to the free to grow stage. SRWC and partners will continue to monitor plantings and treat HBB for a minimum for 4 years following tree planting. Project partners include: ODFW, USFS and Ecotrust Forest Management. Post-planting treatment is aimed at ensuring trees escape HBB influence and form a canopy capable of shading out future HBB growth. OWEB funds will be used for contracted services for the treatment of HBB, replanting of native species and in-house personnel.

Review Team Evaluation

Strengths

- The project is a resubmittal and the applicant addressed the previous review concerns regarding inconsistencies in the application metrics.
- The application includes a concise description of the watershed's limiting factors and the discussion of restoration alternatives was helpful in understanding how the proposed solution will address the limiting factors.
- The site preparation approach and the planting plan are reasonable and tailored to the site conditions.
- The resulting restoration of the riparian area will help improve riparian function, benefit water quality, and support future large wood recruitment to the stream.

Concerns

- The concern remains about the plant establishment timeline. With the magnitude of the berry infestation, six years of plant stewardship proposed in the application may not be enough time to get the plantings to the free-to-grow state. The application would have been stronger if it had included a contingency plan in case additional time is needed after six years of plant stewardship efforts.

Concluding Analysis

The project provides an opportunity to help restore native riparian function in this project reach and provide connectivity to healthy habitats upstream. The proposed restoration actions will benefit riparian function, as well as help improve water quality and restore future large wood recruitment to the area to benefit ESA-listed coho and other native salmonids. The challenging nature of the existing conditions may require additional post-restoration plan stewardship.

Review Team Recommendation to Staff

Fund

Review Team Priority

10 of 11

Review Team Recommended Amount

\$76,505

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering

Southwest Oregon (Region 2)

Application Number: 219-2027-16642 **Project Type:** Restoration
Project Name: Cattle Creek Instream Restoration
Applicant: Partnership for the Umpqua Rivers
Region: Southwest Oregon **County:** Douglas
OWEB Request: \$74,561 **Total Cost:** \$189,261

Application Description *(from application abstract)*

Instream fish habitat restoration work is proposed for Cattle Creek, a tributary to Cow Creek in the Lower Cow Creek 5th field watershed. Cattle Creek is located in South Umpqua Basin southwest of Riddle, in southern Douglas County. Cattle Creek is an important tributary of Cow Creek, providing low gradient habitat used by Oregon Coast coho, winter steelhead and other native fish. Cattle Creek has a medium to high intrinsic potential to support coho and a high relative spawner abundance, but lacks instream wood and has a bedrock and cobble dominated streambed. Rearing habitat is limited during both summer and winter. Cattle Creek is identified in the Lower Cow Creek Watershed Assessment (2003) and PUR Action Plan (2007) as needing instream work to help recover coho. Partners prioritized wood placement in Cattle Creek after the Horse Prairie fire burned through it in 2017. Across 1.2 miles of BLM and private timberland, instream restoration is proposed in Cattle Creek to improve the fish habitat quality by placing 113 logs and 22 trees at 31 sites. Moving quickly to improve stream habitat is allowing us to capitalize on the opportunity to use fire-killed and road hazard trees, felled during and after the fire in 2017, before they rot. This project is proposed to span across BLM and Roseburg Forest Products ownership and include the entire extent of coho habitat in Cattle Creek.

Review Team Evaluation

Strengths

- The stream contains critical habitat for ESA-listed coho and the proposed actions have been identified in an action plan for the watershed.
- The project will address habitat complexity, a secondary limiting factor for coho.
- The project is ready for implementation with completed designs, making the project highly likely to succeed. The applicant has become proficient in implementing similar projects.
- There is gravel moving through the project reach. The proposed log jams are needed to capture spawning gravels.
- The project is time sensitive. Fire damaged logs will deteriorate if not placed in the upcoming field season.

Concerns

- The project does not address the primary limiting factor of water quantity for this stream.
- Any wood placed directly above road crossings needs to have special attention to make sure it is well-placed and anchored.

Concluding Analysis

The application laid out a project designed and ready for implementation. While the project does not address the primary limiting factor for the stream - water quantity, it does address an important secondary limiting factor and will help preserve stream integrity while the system recovers from recent wildfires.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 11

Review Team Recommended Amount

\$74,561

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$74,561

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2028-16670

Project Type: Restoration

Project Name: Upper Phillips Dam Fish Passage and Irrigation Efficiency Project

Applicant: Applegate Partnership, Inc.

Region: Southwest Oregon

County: Jackson

OWEB Request: \$270,234

Total Cost: \$376,657

Application Description *(from application abstract)*

The Upper Phillips Fish Passage and Irrigation Efficiency Project will restore fish passage at Upper Phillips Dam; install a new headgate and fish screen; and conserve water through piping 0.2 miles of irrigation ditch that serves 10 properties in Jackson County in the Rogue River Basin. The Upper Phillips Ditch diversion has 2 dams: a 5-foot concrete structure with a 4-foot pushup dam upstream. Improvements to the diversion will eliminate the pushup dam and a bypass channel will be created around the concrete structure. These dams are located on the Little Applegate River, a high priority, major tributary of the Applegate River. This project will provide fish passage to 49 miles of essential rearing and cold water habitat, improve water quality, and increase instream flows for Endangered Species Act-listed and State-listed species Coho salmon, steelhead, Pacific lamprey, and cutthroat trout. Irrigation structure efficiencies will reduce the amount of water diverted and conserved water will be left instream for the benefit of aquatic species in a DEQ-listed flow-limited stream. Two fish passage barriers below the dams have been removed and this project continues the momentum for restoring passage upstream. Designs for this project were developed under a 2015 OWEB Technical Assistance Grant and the project is a result of a decade-long partnership between the Upper Phillips Ditch Association and the Applegate Partnership and Watershed Council (APWC) and other partners, including Steve and Priscilla Weaver (landowners), Jackson County SWCD, OWRD, BLM, ODFW, Middle Rogue Steelheaders, Trout Unlimited, and the Rogue Basin Partnership.

Review Team Evaluation

Strengths

- The project has the potential to gain an instream water right through use of the allocation of conserved water statute. Instream water will be protected downstream to the confluence with the Applegate River, a distance of approximately seven miles. Water quantity is a critical limiting factor in this watershed for ESA-listed coho.
- The project is a resubmittal. The amount of piping was reduced in this proposal. Project partners plan to leverage OWEB funding as match to help secure funding from other sources for piping the ditch.
- Besides benefiting the stream, the project will increase the efficiency of the water users.
- Fish passage barriers below this project have already been addressed. The next diversion point is 1,000 feet upstream and is a partial passage barrier and on the list for the applicant to address.

- The current plan is to combine the Upper and Lower Phillips Ditch Points of Diversion. This will create efficiencies as well as maximize the potential for conserved water instream.
- The applicant and Ditch associations are coordinating closely with OWRD.

Concerns

- The designs provided were the same ones provided with the previous submission. The applicant plans on working with NOAA to make sure designs meet fish passage criteria.
- It was still unclear how much water is currently diverted and how much would be diverted after implementation. Determining conserved water will be part of a second phase after the fish passage and ditch piping work is completed.
- It is unclear if the fish passage designs would be complete in time for implementation in the upcoming season. It may make sense to phase the project and do the headgate and fish screen work first.
- It is unclear if landowners support the plan to merge the two ditches.

Concluding Analysis

The project has potential to build on the instream flow improvements that have already been realized from previous projects downstream. Potential savings from this project have not been determined and would likely not be established until after the project was implemented, making it difficult to determine the cost/benefit. Fish passage designs need to meet both ODFW and NOAA fish passage criteria and advance coordination with these two agencies is critical. The applicant should consider if a Technical Assistance application to support fish passage design, work with land owners on ditch merger, and quantify water savings would be helpful in moving the project forward.

Review Team Recommendation to Staff

Fund

Review Team Priority

7 of 11

Review Team Recommended Amount

\$270,234

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2029-16681**Project Type:** Restoration**Project Name:** Jack and Hardscrabble Creeks
Restoration**Applicant:** Elk Creek WC**Region:** Southwest Oregon**County:** Douglas**OWEB Request:** \$342,703**Total Cost:** \$592,919

Application Description *(from application abstract)*

This project addresses key watershed problems in Jack and Hardscrabble Creeks, the two major tributaries of the Middle Elk Creek sub-watershed in the Elk Creek 5th-field watershed of the Umpqua Basin, west of Drain in North Douglas County, Oregon. Past and current land management practices have contributed to degraded instream coho habitat, riparian habitat and water quality, as well as fish passage barriers. The project is based on the recommendations of the Fish and Stream Habitat Inventory Findings and Restoration Action Plans for Jack Creek (2015) and Hardscrabble Creek (2016). Restoration components include:

- Culvert replacement on Johnney Creek (Jack Creek tributary) to improve access to 1.75 miles of high intrinsic potential coho habitat
- Culvert replacement on Hardscrabble Creek before its failure impacts water quality
- Low-water bridge replacement on Hardscrabble Creek to improve access to 2.5 miles of high intrinsic potential coho habitat
- 67 instream fish habitat structures along 3 miles of Jack and Hardscrabble Creeks (313 logs, 700 boulders, 20 whole trees, 200 Christmas trees) to increase instream habitat complexity
- Brush removal, 1200 native trees, 504 native shrubs, and a 3-year herbicide regime to restore 12 riparian acres along 1.3 miles of Jack and Johnney Creeks
- 2.6 miles of wildlife-friendly riparian fencing, a railcar bridge and an off-channel livestock water system to completely exclude livestock from 1.3 miles of Jack and Johnney Creeks.
- 5000 willow cuttings to provide shade, capture bedload and enhance beaver habitat

The Woolley family (Hardscrabble Ranch, LLC) owns the land and is a key contributor to this project. Other partners include OWEB, BLM, ODFW, Douglas Soil and Water Conservation District and the Umpqua Fish Enhancement Derby.

Review Team Evaluation

Strengths

- The landowner and property manager are committed to making the project successful. The application demonstrates that effective partnerships are in place to develop, implement, and maintain the work for restoration benefits. The project will also help increase the landowner's effectiveness in managing the property for both agricultural and forestry purposes.
- The landowner has rapport with other landowners in the watershed and is open to using the project as an outreach tool.
- The project will benefit ESA-listed coho and other native salmonid habitat as well as help to improve water quality.

- The buffer setbacks are wider than is typical and all fencing is wildlife friendly.
- The applicant recognizes the need to get ODFW & NOAA involved early for approval on fish passage projects.
- The designs for instream structures on areas of bedrock are site-appropriate.
- ODFW & Douglas SWCD are supportive of the project.

Concerns

- The geotechnical work has not been done for the crossing replacements.
- The size of some of the logs seem small for the site. The applicant will need to work closely with ODFW to make sure key pieces meet sizing criteria.

Concluding Analysis

The project has a high likelihood of achieving project objectives and improving both instream habitat for ESA-listed coho, as well as helping to improve water quality. The project will serve as a great opportunity for outreach to the local agricultural community demonstrating a wide variety of approaches to stream restoration and how restoration can support the management of the property. Working closely with partner agencies and the landowners is key to bringing this project to fruition.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

5 of 11

Review Team Recommended Amount

\$342,703

Review Team Conditions

Coordinate with ODFW on instream log sizing.

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

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$342,703

Staff Conditions

Coordinate with ODFW on instream log sizing.

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2030-16687

Project Type: Restoration

Project Name: Little Butte Creek River Mile 13
Instream and Riparian Habitat Restoration Project

Applicant: The Freshwater Trust

Region: Southwest Oregon

County: Jackson

OWEB Request: \$357,866

Total Cost: \$489,899

Application Description *(from application abstract)*

The proposed project is located on private lands at river mile 13 of Little Butte Creek in Jackson County near Eagle Point. Little Butte is a tributary of the Rogue River and is considered a priority stream at the state and federal level for endangered coho salmon recovery. The Creek also has a 303(d) listing for temperature, bacteria, and sedimentation. Other limiting factors include: reduced large wood supply; lack of channel complexity and aquatic habitat; sediment impacted spawning surfaces due to erosion; degradation of riparian forests; and high water temperatures due to irrigation withdrawals and lack of shade. The proposed work will include placement of 11 large wood structures to increase fish and wildlife habitat and reduce erosion by stabilizing a portion of exposed bank. Riparian revegetation will occur on 2.3 acres with seven years of plant establishment and noxious weed suppression. Native plants will provide shade, reduce bank erosion, filter nutrients, and become large wood recruitment in the future. The project is part of a larger effort along with the voluntary landowners and City of Medford, and builds on an adjacent project previously funded with an OWEB Restoration Grant.

Review Team Evaluation

Strengths

- This project will build on similar restoration work in the area undertaken by the applicant and other partners.
- The project area is water quality limited and suffers from high summer stream temperatures. The riparian restoration work will help improve water quality.
- The watershed provides critical habitat for ESA-listed coho.

Concerns

- The application presented no clear proposed action and lacked design information for large wood and bank stabilization activities.
- Without design information it was unclear whether the cost to benefit ratio was reasonable.
- The application would have been stronger if it had included assurances the project would be protected and maintained for the long term.

Concluding Analysis

The project has potential to build on other restoration efforts in the area. Actions to improve water quality, such as restoring the riparian area, are important in this water quality limited system which contains critical habitat for ESA-listed coho. However, without design information it was difficult to assess the project and its likelihood of success. Including design information will strengthen the application if resubmitted.

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-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2031-16688**Project Type:** Restoration**Project Name:** Page Creek Aquatic Restoration
Activities Phase 1**Applicant:** Illinois Valley WC**Region:** Southwest Oregon**County:** Josephine**OWEB Request:** \$145,243**Total Cost:** \$219,096

Application Description *(from application abstract)*

A tributary of the East Fork Illinois River, Page Creek is approximately 12 miles south of Cave Junction near the town of Takilma. The East Fork is a primary contributor to the Illinois River basin salmonid population. At least 50% of the Rogue River basin coho production comes from the Illinois River (FS/BLM, 2000). The Illinois River has a core, functionally independent population of SONCC coho salmon at high risk of extinction. Altered hydrologic function and degraded riparian forest conditions are the documented key limiting stresses for that species in the subbasin (NOAA, 2014). Negative effects of historic land use practices in Page Creek include channel modification, alteration of the riparian vegetative community (including introduction of invasive species), decreased off-channel habitat features, and reduced large wood recruitment. The straightened and simplified channel is mostly disconnected from it's floodplain. Two barriers to aquatic organism passage are located in the Phase 1 project reach, limiting access to one mile of Page Creek that is designated high Intrinsic Potential (high IP) for SONCC coho salmon. Funding is sought to collaboratively implement the recommended restoration strategy recently developed for the project (OWEB funded) reach that directly addresses key limiting stresses for stream and habitat restoration for a one-half mile reach of Page Creek. Specifically, 11 large wood structures will be constructed, a culvert removed, invasive plants treated, native riparian plants established, and a roughened channel constructed to replace a fish passage barrier. These recommended activities directly address stresses and recovery strategies of the Final Recovery Plan for the SONCC ESU of Coho Salmon (NOAA, 2014) and priority restoration actions of the Forest's Watershed Restoration Action Plan for the East Fork Illinois River watershed (USFS, 2014). Phase 1 project partners include the applicant, the USFS, and a private landowner.

Review Team Evaluation Strengths

- The landowner is engaged and highly supportive of the project.
- The contractor selected for the instream work has a proven track record.
- The project is the result of an OWEB Technical Assistance grant.

- Fish passage restoration is a high priority for the Rogue River. Improving passage at the diversion point will provide access to fish habitat above the site. Two culverts approximately one half mile upstream, which currently impede fish passage, are scheduled for removal or replacement.
- The Illinois River system is a stronghold for ESA-listed coho. This cold water stream provides critical habitat for this species and other native fish.
- The site has an intact riparian plant community with diverse species and age classes.

Concerns

- The application is incohesive and unclear.
- The design approach will improve passage; however, the approach does not address altered hydrologic function. More information on the design and why it was selected would be helpful to the review.
- The application identified another agricultural user of the ditch, but there was no evidence that producer was supportive of the project.
- Some of the large wood pieces appear to be too small for this stream. The applicant is encouraged to work with ODFW to assure key pieces are sized appropriately.
- The wrap-up section of the application is incomplete and there is no discussion of design alternatives. Additional design detail would have been helpful in the evaluation process.
- The need and description for the riparian work was unclear and lacked detail.

Concluding Analysis

The project builds off other restoration efforts in the sub-watershed. There is an expectation that projects resulting from a Technical Assistance grant will have a higher caliber of detail and explanatory information as a result of the investment. Future submissions would be strengthened by including more information on design and design alternatives; support letters from the USFS and the other irrigators using this ditch; more clarity on the current situation and the ecological uplift expected from restoration work; and reviewing the budget for inconsistencies.

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-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2032-16692

Project Type: Restoration

Project Name: West Fork Evans Creek Large Woody Debris Project

Applicant: Applegate Partnership, Inc.

Region: Southwest Oregon

County: Jackson

OWEB Request: \$773,145

Total Cost: \$1,134,290

Application Description *(from application abstract)*

The West Fork Evans Creek Large Woody Debris (LWD) Project will improve spawning and rearing habitat along approximately 11 miles of the West Fork Evans and Sand Creeks in Jackson County through a partnership between Olympic Resource Management, Silver Butte Timber Company, Lone Rock Resources, BLM, Seven Basins Watershed Council, and the Applegate Partnership & Watershed Council. West Fork Evans Creek is designated as a “core area” and the highest priority for restoration under the Final Recovery Plan for SONCC Coho salmon. In addition to ESA-listed Coho salmon, the project will benefit fall Chinook salmon, summer and winter steelhead, and cutthroat trout. Current BLM and ODFW surveys have indicated a decline in the coho population of West Fork Evans Creek. Past management practices in the watershed have reduced the amount of LWD instream, habitat complexity, and pool habitat; modified instream habitat; and increased sedimentation. This project will install 152 instream LWD structures and 18 blockades to exclude OHV use from the creek and adjacent riparian area. These actions will increase the quality and quantity of over-summer and over-winter rearing habitat for juveniles, improve migration and spawning habitat for adults, increase macroinvertebrate populations, improve habitat and stream channel complexity, increase the accrual and retention of spawning gravels, improve riparian health, and reduce sedimentation. These factors will increase spawning success and juvenile survival rates thereby supporting fish populations. This proposal will support fish population recovery for ESA-listed and state-listed species and address DEQ-listed limiting factors. Partners include Olympic Resource Management, Silver Butte Timber Company, Lone Rock Resources, BLM, Seven Basins WC, ODFW, Rogue Basin Partnership, and Middle Rogue Steelheaders.

Review Team Evaluation

Strengths

- Engaging private timber companies has been difficult in the Rogue Basin. This project involves three industrial timber companies in a meaningful way which will help open up future opportunities for restoration collaboration.
- West Fork Evans Creek is a cold water stream which provides important habitat to ESA-listed coho.
- OHV use is high in this watershed and the decomposed granitics common in this system are subject to severe erosion in the unmanaged high-use areas. Activities to address this problem on a large scale are needed.

- There is a good cost to benefit ratio for the instream restoration work and the amount of habitat to be treated.
- The project match from BLM is time-sensitive and will be lost if not used in this upcoming field season.

Concerns

- It is not clear that the access restriction by installing the ditch and large rock “tank traps” will be effective in reducing usage long-term. Off-road use will need to be closely monitored into the future.
- Due to the high cost of the request, the applicant offered a phased project alternative to reduce costs. However, this approach may come with loss of efficiencies through additional mobilization.
- The scope of the project may be larger than necessary. Some upper reaches have started to naturally recruit wood and trees will continue to come down on their own accord.

Concluding Analysis

The stream is important for ESA-listed coho and is identified in NOAA’s SONC Coho Salmon Recovery Plan and the draft Upper Rogue Coho Salmon Strategic Action Plan as a high priority area for restoration. Project activities will help benefit habitat as well as help improve water quality. OHV use has impacted this watershed for a long time. While the application includes appropriate measures to reduce impacts, along-term comprehensive management plan with a strong outreach approach is needed to address OHV use and help mitigate for the impacts. The project is a great opportunity to approach restoration across a large number of stream miles and spanning four land ownerships in a meaningful way.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 11

Review Team Recommended Amount

\$773,145

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$773,145

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

| | |
|--|----------------------------------|
| Application Number: 219-2033-16716 | Project Type: Restoration |
| Project Name: Cedar Creek Enhancement | |
| Applicant: Curry SWCD | |
| Region: Southwest Oregon | County: Curry |
| OWEB Request: \$89,787 | Total Cost: \$225,090 |

Application Description *(from application abstract)*

The project is located in the Cedar Creek subwatershed of Elk River, on the southern Oregon Coast. Cedar Creek is a tributary to the Elk River estuary that originates on the uplifted coastal terrace that separates the Elk River and Sixes River. The stream quickly descends from the coastal terrace and forms a short stream valley that then opens onto the Elk River floodplain. This project is needed to restore floodway capacity along 3700 feet of the Cedar Creek stream corridor so that the channel can develop hydrologic floodplain connectivity and complex instream habitat without diverting onto adjacent pastureland. Project components include the construction of a contiguous floodway and new segments of stream channel, the installation of log structures, the construction of grade control on the new channel to preserve existing wetland and off-channel habitat features, the replacement of a road crossing with a bridge, and the fencing and planting of a riparian reserve. Project partners include: ODFW, the Wild Salmon Center, the NOAA Restoration Center, the Wahl Family (landowner), the Wild Rivers Coast Alliance, the Pacific Marine and Estuarine Partnership, and the Elk River Coho Business Plan Partnership.

Review Team Evaluation

Strengths

- The landowner is highly engaged and supportive of the project. There is a conservation easement in place to protect riparian areas on the property and the project builds on previous restoration work. The landowner is conservation minded and this is clearly reflected in the approach to management of the property, which provides high ecological benefit on working lands.
- Strong partnerships and commitment to project success are clearly demonstrated in the application.
- The proposed design aligns with the project objectives. The project designer has completed a topographic survey and incorporated wetland connectivity into the approach. The design also allows beaver activity to continue.
- The NOAA engineer reviewed the designs and has no fish passage concerns with the approach.
- This stream provides critical habitat for ESA-listed coho and the project will address key limiting factors in the stream – lack of complexity and water quality.
- A comprehensive monitoring strategy is proposed, including four years of post-project pre-smolt trapping and aquatic habitat inventory work.
- The design will break up gully-forming flows.

Concerns

- The project focused on the hydrology and drainage. The application would have been further strengthened by including more discussion on the current fish use and other increased benefits from project implementation.
- The site has constraints caused by human use; the project maintains an artificial channel.

Concluding Analysis

The landowner's commitment and support for the project and demonstrated conservation approach to land management will ensure the project's long-term success. The project can serve as a demonstration opportunity to showcase how agricultural producers can maintain a livelihood while also providing ecological benefits. The project is consistent with actions identified in the Elk River Coho Salmon Strategic Action Plan.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 11

Review Team Recommended Amount

\$89,787

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$89,787

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Southwest Oregon (Region 2)

Application Number: 219-2034-16585

Project Type: Technical Assistance

Project Name: White Ditch Sucker Creek Flow Restoration & Fish Passage Study

Applicant: Illinois Valley SWCD

Region: Southwest Oregon

County: Josephine

OWEB Request: \$68,145

Total Cost: \$146,045

Application Description *(from application abstract)*

This project will address low flow conditions and fish passage on Sucker Creek of the Illinois River basin, near Cave Junction in Josephine County. The project area is the White Ditch irrigation conveyance system, which diverts an approximated allowable 7.9cfs of water from Sucker Creek. Sucker Creek is DEQ 303(d) listed as water quality impaired for not meeting the temperature standard, and is also limited by summer low-flow conditions. The large pushup dam at the point of diversion, known as the White-Brown pushup dam, is a passage barrier for 26 miles of upstream habitat and summer temperature refugia for juvenile salmonids. The White Ditch is an inefficient water delivery system, with users citing difficulty accessing their water rights, and an open and unlined design that allows for water losses. This proposed project will research and map the water rights served by the ditch, examine and analyze existing infrastructure (including topographic and ditch loss surveys), develop alternatives (for conveyance, on-farm irrigation, and pushup dam), select the preferred alternative, and develop preliminary designs and cost estimates for the preferred alternative. The preferred alternative will meet irrigator needs, allow conserved water to remain instream, and improve fish passage. Project partners include landowners, Trout Unlimited, Natural Resources Conservation Service, Oregon Department of Agriculture, Rogue Basin Partnership, Bureau of Land Management, and Southern Oregon Fly Fishers.

Review Team Evaluation

Strengths

- Landowner interest is high for developing alternatives to the current water delivery system. The project provides a great opportunity to work with irrigators on allocation of conserved water. The oldest water right is 1858.
- There are multiple users associated with the diversion. The application clearly lays out the issues and need for a Technical Assistance project to develop alternative solutions. The approach to the problem is clear and likely to achieve project objectives.
- The structure is a seasonal push-up dam which is in place during the summer irrigation season and blocks upstream juvenile migration to 26 miles of habitat. This barrier is ranked number two in the Illinois River watershed for remediation by ODFW and is the lowest barrier on Sucker Creek.
- The resulting restoration project will address ESA-listed coho population limiting factors of altered hydrological function and water quality concerns related to temperature and sediment.

- Using infiltration galleries as alternatives to push-up dams has proven successful in the Illinois River watershed .
- NRCS is seeking support to develop a focus area to improve irrigation systems in the area.

Concerns

- Before design options can be determined, the associated water rights need to be clarified. Assurance is needed that the allocation of conserved water statute will be included in the final product.
- Alternatives for improving the current system could be expensive due to the characteristics of the geography and the conveyance systems that will need to be built.

Concluding Analysis

White Ditch is an open and unlined 4.5 mile irrigation conveyance. The point of diversion is a large seasonal push-up dam that restricts upstream fish passage for juveniles. Multiple water users on White Ditch have issues with reliably receiving water due to inefficient infrastructure, lack of clarity on individual water rights, and changes in agricultural crops. Most users flood irrigate with a few that utilize more efficient systems. Before solutions to the current irrigation system can be determined, clarification of water rights associated with the ditch, their rates and priority dates, and which lands they serve is needed. Once this is completed, an alternate diversion approach and conveyance system can be designed and irrigation systems can be upgraded. The application clearly described the issues associated with the current scenario and posed a reasonable approach to developing implementable restoration projects on working lands.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

2 of 8

Review Team Recommended Amount

\$68,145

Review Team Conditions

Grantee must investigate and attempt to quantify the potential for allocation of conserved water.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$68,145

Staff Conditions

Grantee shall investigate and quantify the potential for allocation of conserved water and include findings and recommendations in the project completion report.

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

| | |
|--|---|
| Application Number: 219-2035-16596 | Project Type: Technical Assistance |
| Project Name: Coaledo Drainage District Tidegate Replacement and Fish Passage | |
| Applicant: Coquille Watershed Association | |
| Region: Southwest Oregon | County: Coos |
| OWEB Request: \$74,816 | Total Cost: \$207,589 |

Application Description *(from application abstract)*

Lack of slow-water refugia and off-channel habitat has been identified as one of the most critical limiting factors affecting Oregon Coast ESU coho salmon recovery. In the Coquille Basin, these habitats, including tidal wetland habitats, have been converted to pasture using tidegate infrastructure to the extent that less than 5% of the historic acreage of wetlands currently exists. Restoration of tidal wetlands is a top priority for coho recovery in federal, state and local action plans. The Coaledo Drainage District Tidegate Replacement and Fish Passage Project (Coquille, OR, Coos County) will address this limiting factor by creating technical designs to restore fish passage to a 9,100 acre sub-watershed containing 11.4 miles of coho habitat and 490 acres of tidal wetland habitat, of which 289 acres are a natural wetland owned and protected by ODFW. Prioritized as a high potential restoration project by a tidegate survey and optimization model, this project is the first step in implementing habitat restoration for coho while also providing improved pasture infrastructure and water management for the Coaledo Drainage District. To achieve this, the CoqWA is partnering with ODFW, Coos SWCD, USFWS and the Coaledo Drainage District. OWEB funds are needed to 1) create and finalize structural and geotechnical engineering designs for tidegate replacement to meet fish passage requirements; 2) create and approve a water management plan with the drainage district and project partners; 3) write and submit permits for tidegate replacement; 4) coordinate meetings between project partners and stakeholders to ensure adequate input at all stages of the design process. Together these actions will result in a fish passage restoration project and working landscapes initiative that is ready for implementation. Additionally, this project will serve as a catalyst for the development of additional restoration and working lands projects within the Coaledo Drainage District.

Review Team Evaluation Strengths

- The project builds on the momentum of China Camp Creek and Winter Lake restoration projects and improves access to additional tidal wetland habitats.
- The resulting restoration project will address the number one limiting factor for ESA-listed coho: lack of slow-water refugia and off-channel habitat.

- The applicant has a track record of successfully working with partners and regulatory agencies to find solutions to tide gate issues. Additionally, the applicant has demonstrated ability and capacity to understand landowners needs and concerns, as well as those of the natural resources they are working to restore.
- A tide gate inventory undertaken by project partners ranked this tide gate as the number #3 priority in the Coquille River watershed.

Concerns

- The application did not include information about the habitat quality of the acreage behind the tide gate structure.
- The data needed to inform the engineering design was not clearly defined.
- The resulting restoration project will be expensive due to the characteristics of the site and the systems that will need to be built.
- It is critical that a water management plan be developed as a deliverable of this proposal.

Concluding Analysis

Addressing failing tide gate infrastructure in a way that benefits fish access and restores tidal wetland habitats is a high priority. This proposal builds on recent momentum within the Coquille River drainage and on the Oregon coast to address tide gates and tidal restoration. The project clearly laid out the link to The Coquille Subbasin Plan (CIT, 2007) and the NOAA Recovery Plan for ESA-listed coho and was identified as a priority through a habitat modeling and tide gate prioritization process. The habitats behind these tide gates provide important refuge for ESA-listed coho during winter months, improving their chances for survival. The products from this technical assistance work have a high likelihood of resulting in a restoration proposal.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

1 of 8

Review Team Recommended Amount

\$74,816

Review Team Conditions

A Water Management Plan must be developed as a final product of the project.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$74,816

Staff Conditions

The project completion report shall include a water management plan.

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2036-16622

Project Type: Technical Assistance

Project Name: Rogue Basin Partners Collaboration
for Engineering & Technical Services

Applicant: Rogue Basin Partnership

Region: Southwest Oregon

County: Jackson

OWEB Request: \$74,800

Total Cost: \$151,466

Application Description *(from application abstract)*

This project will take place in three priority Rogue Basin watershed council geographies: Applegate, Seven Basins and Rogue River. The Rogue River Basin has over a thousand human built barriers that inhibit native fish passage and sediment transport, which in turn impacts the long-term viability of the fisheries of the Rogue Basin including: native spring and fall Chinook salmon, ESA listed "threatened" coho salmon, winter and summer steelhead, cutthroat trout, rainbow trout and Pacific lamprey, among other native fishes. The project proposes to contract with qualified engineering contractors to obtain engineering design and technical assistance to develop alternatives, 30% engineering designs, water rights investigation and irrigation system designs for up to 6 priority dam removals (2 in each geography: Applegate, Seven Basins, Rogue River) and enable partners to reduce the time it takes to move projects from idea to implementation. The Rogue Basin Partnership (RBP) Fish Passage Working Group is coordinating efforts with support and participation from working group members: Applegate Partnership & Watershed Council and Rogue River Watershed Council. Each organization works to address priority fish passage projects, including dam removal and culvert replacements. These barriers are primarily located on privately owned land and require significant landowner communication to reach agreement on how to improve fish passage.

Review Team Evaluation

Strengths

- Restoring fish passage in the Rogue River watershed is a significant need and priority. There has been a great deal of work and success on this effort.
- Engineering can be a bottleneck for getting projects developed and implemented, especially in a manner responsive to the interest and needs of landowners. This project will provide the opportunity to react quickly to restore fish passage opportunities in three different basins.
- The resulting restoration will help address a key limiting stress of altered hydrological function for ESA-listed coho.
- Four of the six barriers identified are considered high priority barriers in the Rogue River system.

Concerns

- It was unclear how the project locations were prioritized, and whether identified priority fish barriers factored into the prioritization.
- Without site-specific details for prospective project sites, it is unclear how the applicant will determine in advance whether there is sufficient time and budget for each proposed barrier.
- With such a widespread effort, there were no letters of support provided.
- More detail on the outreach portion of the proposal would have been beneficial to the review. It was unclear whether the landowners associated with the identified barriers had already been contacted.
- Two of the barriers identified are not a high priority for ODFW.
- 30% designs may be insufficient for developing sound restoration project budgets.
- The application did not include a contingency plan for addressing all six locations in the event of cost overruns.

Concluding Analysis

This project builds on the momentum of successful fish passage projects in the Rogue basin and presents a proactive option of providing engineering services for passage projects in a timely manner. The proposal was more difficult to evaluate than traditional technical assistance projects which generally focus on one location and provide site specific details. Being responsive to potential fish passage projects in priority streams allows project partners to capitalize on landowner interest to develop successful restoration projects.

Review Team Recommendation to Staff

Fund

Review Team Priority

8 of 8

Review Team Recommended Amount

\$74,800

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2037-16623**Project Type:** Technical Assistance**Project Name:** Winter Lake Phase 3: Hydrologic Enhancement Design**Applicant:** Coos SWCD**Region:** Southwest Oregon**County:** Coos**OWEB Request:** \$74,659**Total Cost:** \$112,458**Application Description** *(from application abstract)*

The Coos Soil and Water Conservation District (Coos SWCD) & team are developing the Winter Lake Phase III tidal floodplain hydrologic connectivity project. The project is within the Beaver Slough Drainage District (BSDD) floodplain (River Mile 20.5) of the Coquille River, 2.5 miles west of Coquille, Coos County, OR. Historical water management through installation of tidegates, berms, and channel excavation in the early 1900's has disconnected fish access to over 14,000 acres of tidal floodplain habitat in the Coquille River basin has severely truncating production potential for coho. Early tidegate infrastructure has changed little since tidegates were installed in the early 1900's. Oregon Coast (OC) coho have declined from ~150,000 average /412,000 peak adult fish prior to Euro-settlement to ~18,000 annually today. Tidegate infrastructure was installed to drain wetland habitats, and does reduce water levels sufficiently for modest pasture grass production, however, there has been limited ability to deliver water inflow to pastures for irrigation. In 2017 the largest tidegate infrastructure within the Pacific Coast was installed with the C3P tidegate project on the BSDD (Winter Lake Phase I). In 2018 installation of ~8.0 miles of tidal channel was completed in Unit 2 of Winter Lake (Phase II). Coos SWCD in coordination with Oregon Department of Fish and Wildlife, BSDD, The Nature Conservancy (TNC), and landowners are proposing to develop engineering and design for replacement of undersized culverts and installation of swale channels/grassed waterways that will critically enhance the capacity of BSDD Units 1 and 3 to produce OC coho juveniles and pasture grass due to enhanced hydrologic connectivity. This project will provide the infrastructure necessary to fully utilize the investment developed through Phase I and II. The project team includes: SWCD, ODFW, TNC, and BSDD; with additional partnership from the Coquille Watershed Council and Coquille Tribe.

Review Team Evaluation**Strengths**

- The project is within the footprint of the China Camp Creek Tidegate Replacement Project. The land behind the completed project includes three units with extensive channel and riparian restoration completed in Unit 2. Units 1 and 3 were reserved primarily for agricultural purposes. This project will result in designs for channel restoration compatible with agricultural practices in Units 1 and 3.
- The applicant and regulatory agencies are engaging early with the landowners.

- The project will result in additional habitat for over wintering ESA-listed coho, as well as help landowners manage and irrigate their agricultural properties during the summer months.
- The project addresses critical habitat for a number of fish species. About 5% of historic tidal wetlands remain in the Coquille valley, making landowner interest in restoring these valuable habitats notable.
- A Water Management Plan is already in place and allows water exchange with the tide cycle. During winter months coho can access units 1 & 3. The design work proposed would enhance access to habitat in these two units by replacing existing gated culverts with slide gates and providing additional channel systems for fish access as well as improving their ability to move back to the mainstem as winter flows recede.
- NRCS has done preliminary work to explore water quality projects with landowners through the EQIP program.
- The fencing plan will help protect improvements to the channel system.

Concerns

- The current Water Management Plan will need to be updated.
- The existing infrastructure and proposed channel work will be designed to maximize landowner benefits. The resulting channel network design will be more simplified than in Unit 2 and may not provide high benefits for fish and tidal wetlands.
- The archeological cost appeared to be under budgeted because of project size and potential sites of cultural significance.
- The resulting restoration application will be expensive based on the costs of creating the new channel network for the Unit 2 restoration.

Concluding Analysis

Units 1 and 3 were designated as primarily agricultural units under the China Camp Creek project and the Water Management Plan was designed accordingly taking into account that coho would have access to these units during the winter months. The resulting restoration work will be costly based on costs from the Unit 2 channel restoration work and project partners will have to develop a strategy to raise those funds early on. A clear articulation of the watershed benefits of the proposed restoration will help determine the cost effectiveness.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 8

Review Team Recommended Amount

\$74,659

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2038-16643

Project Type: Technical Assistance

Project Name: Olalla Creek and Tributaries Fish Passage and Enhancement Design

Applicant: Partnership for the Umpqua Rivers

Region: Southwest Oregon

County: Douglas

OWEB Request: \$26,408

Total Cost: \$33,808

Application Description *(from application abstract)*

Olalla Creek and three tributaries, located in the southern part of the 103,000 acre Olalla-Lookingglass Creek Watershed, are identified as needing improved fish passage and fish habitat enhancement. According to Oregon Department of Fish and Wildlife (ODFW) High Intrinsic Potential (HIP) maps, Olalla Creek, Byron Creek, and Bushnell Creek have high potential to provide quality spawning and rearing habitat for coho salmon and steelhead. Old Lane Creek was not surveyed for HIP, but it does have spawning surveys that ODFW conducts and the ODFW Habitat Restoration Biologist confirmed that the creek is suitable for coho salmon. Gordon Hanek, Byron Creek Estates Road Master, identified two deteriorating culverts maintained by his rural home owners association. After discussing this with other residents, he recruited two more landowners interested in participating in stream restoration work. Working with ODFW and PUR staff, the group formulated a plan to not only replace the culverts, but also restore fish habitat. To address limiting factors to fish production in Olalla Creek, Byron Creek, Bushnell Creek, and Old Lane Creek we are seeking OWEB TA funds to 1) complete site surveys at the two culverts, 2) produce culvert designs, 3) work with PUR Monitoring Coordinator to develop a monitoring plan, 4) work with the landowners on selecting materials for instream placement, 5) design instream fish habitat structures on Olalla and Byron Creek to enhance habitat, 6) work with Byron Creek Estates on outreach for future restoration projects and 7) prepare the OWEB restoration grant application for submission. Partners for this Technical Assistance Grant includes ODFW, Byron Creek Estates, Gordon Hanek, Melissa Garcia Perry and Heather Robbins-Hinton.

Review Team Evaluation

Strengths

- Above the barrier there are two miles of medium to high intrinsic value habitat for ESA-listed coho, indicating high potential for restoration given the current poor habitat quality.
- The project will add instream habitat structures to 0.5 miles of stream to help address instream complexity which is a secondary limiting factor for ESA-listed coho.
- NRCS selected this sub-watershed as one of 16 in the nation for implementing drinking water source protection plans through the National Water Quality Initiative Project.
- The project partners have a sound track record of turning Technical Assistance projects into successful on-the-ground restoration.

- Project support by the landowners is clearly high based on the impressive letters of support provided in the application.
- A Professional Engineer has been identified to undertake the bridge designs.

Concerns

- The primary limiting factor for this sub-basin is water quality yet the project does not describe any activities to address that concern.

Concluding Analysis

The project partners have a track record of designing and implementing successful fish passage and fish habitat enhancement projects. The project will address a stream reach with high intrinsic potential habitats but in need of actions to improve instream complexity to increase productivity. The project will result in implementable designs to improve stream conditions and restore fish access to two miles of spawning and rearing habitat.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 8

Review Team Recommended Amount

\$26,408

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$26,408

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

| | |
|---|---|
| Application Number: 219-2039-16660 | Project Type: Technical Assistance |
| Project Name: Sykes Creek Fish Passage Project | |
| Applicant: Applegate Partnership, Inc. | |
| Region: Southwest Oregon | County: Jackson |
| OWEB Request: \$67,580 | Total Cost: \$85,278 |

Application Description *(from application abstract)*

The project is located on Sykes Creek, a tributary of Evans Creek. Sykes Creek provides habitat for summer and winter steelhead and cutthroat trout. Currently fish passage is limited by man-made barriers. Removal of the barriers will provide passage for adult and juvenile steelhead for 1.7 miles of habitat and 2.7 miles of cutthroat trout habitat. Over-summering fish will have passage to critical cold water habitat during low summer flows which will increase survival. Additionally, passage will be provided for adult fish to spawning habitat. This project will develop designs for removal of 7 concrete barriers consisting of 4 small dams, 2 concrete fords, and a box culvert along 0.5 miles of on Sykes Creek, a tributary of Evans Creek in Jackson County, Oregon. One dam is located at River mile 2.5, the 6 other barriers are located on contiguous properties between river mile 3 and 3.4. The barriers will be removed and the box culvert will be replaced with a bridge. Additionally, irrigation designs (pump systems) will be provided for two of the dams that currently irrigate, and we will work with landowners to develop designs that will improve fish habitat and riparian areas along the project reach. The APWC and SWCD will provide outreach to landowners and assist in developing on site irrigation efficiency projects and the water rights from 1 dam will be donated as an instream lease. Project partners include landowners, Jackson County Soil & Water Conservation District, Seven Basins Watershed Council, United States Forest Service, Bureau of Land Management, Oregon Department of Fish & Wildlife, Oregon Water Resources Department, Rogue Basin Partnership, and Middle Rogue Steelheaders.

Review Team Evaluation

Strengths

- The project will address the last set of barriers on Sykes Creek, restoring both fish passage and sediment transport to downstream reaches. Additionally, the effort incorporates an instream flow restoration component with the land owners in support.
- The application is well written, organized and clearly described the project need and design approach.
- This stream is a source of cool water refugia for both summer and winter runs of steelhead and cutthroat trout.
- The applicant has demonstrated the capacity and ability to successfully implement fish passage projects - from the design phase through implementation.

Concerns

- The water rights associated with the diversions are junior rights (1974) thus any conserved water may not have instream flow benefits because they are subject to withdrawal by senior users.

Concluding Analysis

Restoring fish passage and flow restoration address primary limiting factors for ESA-listed coho as well as steelhead and cutthroat trout in the Rogue River basin. The project will design fish passage alternatives and incorporate instream flow restoration for the seven remaining barriers on 1½ miles of Sykes Creek. The project, once implemented, will improve fish passage to 1.7 miles of stream to anadromy and benefit in-stream habitat and water quantity for all life stages of fish species.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 8

Review Team Recommended Amount

\$67,580

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$67,580

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2040-16669

Project Type: Technical Assistance

Project Name: South Fork Coos River Road
Assessment and Project Development

Applicant: Coos Watershed Association

Region: Southwest Oregon

County: Coos

OWEB Request: \$68,942

Total Cost: \$90,130

Application Description *(from application abstract)*

The South Fork Coos River and its tributaries support numerous species of anadromous salmonids and resident fish. These tributaries are very important for refuge from high stream flows and unfavorable summer water temperatures. Surrounding these streams are a network of both private and federal forest roads. Fine sediment from these roads can have significant effects on aquatic habitat and water quality. Fish passage barriers and impediments can fragment stream reaches limiting access to valuable habitat. This grant will fund a road inventory to evaluate approximately 240 miles of roads that drain directly to the South Fork Coos River and its highly valuable tributary systems. We will use a protocol designed by the US Forest Service, the Geomorphic Road Analysis and Inventory Package (GRAIP). This protocol will help us to identify road conditions and identify problems. This project will provide two tools for reducing the effects of roads on streams: (1) a road features GIS database (2) a Fish Passage and Sediment Reduction Action Plan. These tools will help us to estimate road sediment yield and hydrological connectivity; identify needs, prioritization, and layouts for road improvements or decommissions; and be used for tracking sediment reduction actions and long term asset management. The Action Plan will identify the Top 10 sediment reduction actions and all of the fish passage issues in the project area. We anticipate seeking funding for at least three of the top projects in this area, and potentially other road improvements will be completed by our partners. Project partners are the US Forest Service, Bureau of Land Management (BLM), Weyerhaeuser and the Oregon Department of Fish and Wildlife (ODFW). Weyerhaeuser, BLM, and ODFW will help to develop future restoration projects. US Forest Service will provide training and support. OWEB funds will be used to conduct surveys, data analysis, project management, training, travel, equipment and supplies.

Review Team Evaluation

Strengths

- The project is a resubmittal. The applicant addressed the concerns raised in the previous review related to project prioritization, habitat capacity, and fish distribution.
- The project will survey 234 miles of road for the investment, showing a favorable cost benefit ratio.
- The project takes a watershed approach using an established methodology (GRAIP) to identify sediment sources. The applicant has successfully utilized GRAIP in other watersheds.

- The project will identify and prioritize project opportunities that address sediment from road crossings and fishing access, building on previous road improvements, instream habitat restoration, and fish passage improvements upstream from the project area.
- There is a strong partnership evidenced by extensive survey work previously undertaken in the Coos River watershed. Project partners have a history of collaborating to develop and implement projects once assessments are done.

Concerns

- No significant concerns identified.

Concluding Analysis

The project area focuses on the lower section of the Coos system encompassing main stem reaches that are primarily migration corridors connecting to tributary habitats. This work builds on road assessments upstream and the resulting restoration activities accomplished in other areas of the watershed.

Restoration work resulting from this project can improve water quality through the reduction of sediment and benefit habitat important to ESA-listed coho and other salmon and trout species utilizing the system; however, many areas are constrained by the configuration of the forest road network within the riparian area.

Review Team Recommendation to Staff

Fund

Review Team Priority

7 of 8

Review Team Recommended Amount

\$68,942

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2041-16707

Project Type: Technical Assistance

Project Name: Goose Point, Haynes Inlet Project Development

Applicant: Coos Watershed Association

Region: Southwest Oregon

County: Coos

OWEB Request: \$74,749

Total Cost: \$113,499

Application Description *(from application abstract)*

The project area totals 79.7 acres of wetland habitat, freshwater systems, and working lands on Goose Point in Haynes Inlet, north of Coos Bay in Coos County. The project site is directly below the confluence of Larson and Palouse creeks—both documented as two of the most historically productive salmon streams per stream mile on the Oregon coast. Winter rearing habitat has been identified as a limiting factor for both Larson and Palouse due to limited off-channel and tidal marsh habitat available during high winter flows. This project seeks to address the lack of nursery grounds by enhancing and creating a wetland complex that is compatible with the agricultural land use. This property will provide juvenile salmonids a variety of conditions to best suit their needs depending on environmental, spatial, and temporal variation, which will allow them to gain higher fitness before migrating to the ocean. The property is a small scale ranch, and the landowners maintains their EFU through light timber harvest, blueberry production, and grazing. This project represents an opportunity to demonstrate the potential to preserve agricultural values while maximizing habitat restoration and protection. The project has three major components: enhancement and connection of 68.6 acres of wetland habitat; water quality improvements and riparian restoration on 11.1 acres of pastureland; and the facilitation of easements to protect those critical ecological, cultural, and agricultural resources for the future. The deliverables of this phase are topographic surveys to assess current conditions, water level monitoring, a hydrologic model, conceptual designs and alternatives, a selected design approved by a Technical Advisory Team, archaeology surveys, rough cost estimates, and an evaluation of necessary permits. Partners include (see Appendix 1: Abbreviations) SSNERR, DU, DEQ, ODFW, USFWS, Coos Curry CREP, WRLT, CTCLUSI, SOU, and the landowner/retired wildlife biologist, Larry Mangan.

Review Team Evaluation

Strengths

- The landowner is highly supportive and engaged in the project development and is considering a conservation easement.
- The technical assistance requested will help design strategies maximizing the habitat potential of the property.
- The project presents an opportunity to implement several types of restoration resulting in multiple species and habitat benefits.

- The project location creates a great opportunity to showcase tidal wetland restoration on private lands.
- The resulting restoration project will benefit a critical habitat type important to ESA-listed coho.
- The application described strong partnerships and a technical advisory team to help guide the design of the project components. The ODFW shellfish team is involved in the project design.

Concerns

- The application presented a great deal of information, much of it through attachments, making it somewhat cumbersome and difficult to easily discern actions.

Concluding Analysis

This project represents a good opportunity to demonstrate the potential of preserving agricultural values while maximizing salt marsh habitat restoration and protection. Current habitats of this type are only a small fraction of what they were historically and opportunities to restore these valuable habitats are very rare. The resulting restoration will address a primary limiting factor for ESA-listed coho by creating critical rearing habitat in an area drained by two highly productive creeks with high quality spawning.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 8

Review Team Recommended Amount

\$74,749

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$74,749

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2042-16718

Project Type: Technical Assistance

Project Name: Elk Creek Watershed Limiting Factors Assessment and Restoration Action Plan

Applicant: Elk Creek WC

Region: Southwest Oregon

County: Douglas

OWEB Request: \$49,902

Total Cost: \$76,845

Application Description *(from application abstract)*

The Elk Creek Watershed Limiting Factors Analysis and Action Plan proposal consists of several parts. There is a substantial amount of historical, reach-scale data on stream habitat conditions in the watershed, though most is outdated (ODFW, 1993-1996). There is also a limited amount of more recent data: ODFW Aquatic Habitat Inventories, and Elk Creek Watershed Council bioassessment and habitat surveys (2015-16). None of this data has been systematically analyzed to guide prioritization of restoration actions in the watershed. All this data is currently being entered into a GIS database that can be queried to identify reach-scale limiting factors for habitat parameters affecting juvenile coho survival. (Cascade Environmental, August 2018). ODFW has developed a model (HabRate), based on ODFW benchmarks, that assesses the quality of stream habitat for each life stage contributing to coho survival at the reach scale. Using this model, individual reaches within the subwatersheds of the Elk Creek Watershed will be analyzed to identify specific factors limiting coho production. From this, Cascade will develop a strategic restoration plan that will guide and support the Council's restoration actions for the next 6 years. The final piece of this project will be the collection of survey data on the Big Tom Folley subwatershed in the summer of 2019. This survey, funded by the SW Oregon BLM RAC, will use the Watershed Council's "modified bioassessment protocols" to survey and enter a complete, current dataset for the entire 6th-field. This data will be used to develop a detailed, comprehensive restoration action plan for the subwatershed. The data analysis and plan for Big Tom Folley will be presented to Seneca-Jones Timber, who, along with BLM, owns nearly the entire watershed. Seneca has expressed an interest in understanding previous restoration work on their lands, and is willing to support projects that are compatible with their land management goals.

Review Team Evaluation

Strengths

- The project scope includes areas containing ESA-listed coho critical habitat.
- The project brings in new partnerships and the potential for new information on habitat and ESA-listed coho distribution.
- The applicant has the capacity to undertake the project and this work builds on previous rapid bio-assessment efforts in the watershed and will add information on ownerships not currently covered.

Concerns

- While much of the habitat has already undergone the bioassessment survey, the application did not identify how many miles of stream will be analyzed.
- The application did not provide any description of the "modified bioassessment protocols" which would be used in the survey work.
- The project does not focus on priority critical limiting factors related to water quality for ESA-listed coho. Instead, the bioassessment approach focuses on collecting stream habitat data and fish distribution and abundance, resulting in a habitat rating.
- The budget is expressed in lump sums, making it difficult to analyze the cost effectiveness.

Concluding Analysis

The project will provide important habitat and fish distribution data that could help inform actions to protect and restore habitats important to ESA-listed coho. However, without incorporating water quality related issues the resulting project deliverables are not as strong as they could be.

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-2018 Fall Offering Southwest Oregon (Region 2)

| | |
|---|---|
| Application Number: 219-2050-16706 | Project Type: Stakeholder Engagement |
| Project Name: SOLC Upper Bear Creek Ashland Watershed Engagement | |
| Applicant: Southern Oregon Land Conservancy | |
| Region: Southwest Oregon | County: Jackson |
| OWEB Request: \$55,087 | Total Cost: \$73,435 |

Application Description *(from application abstract)*

The geographic location comprises a portion of the upper Bear Creek Watershed, inclusive of the Ashland Watershed. This is a strategic focus area of the Southern Oregon Land Conservancy. The area includes both the forested mixed-conifer slopes of the western portion, and the oak-woodlands and grasslands of the eastern portion of the watershed, which also contains mixed conifer forests in the upper elevations. Specifically, the project will focus on privately-owned lands which contain high conservation values and at which conservation will contribute to watershed health. This area also captures a portion of the municipal watershed for the City of Ashland. The lands on the eastern side provide the scenic backdrop of the southern Rogue Valley and contain high wildlife connectivity values, and a mosaic of oak-pine and conifer forests, grasslands, and streams and springs. The Bear Creek watershed is susceptible to fragmentation and land conversion which degrades the integrity of the watershed. The stakeholder engagement objectives aim to ultimately result in acquisition projects on high-quality lands. Successful acquisition projects will conserve high-quality properties to abate the threats of subdivision and development; land conversion (e.g., land clearing); unsustainable and ecologically unsound forest and grazing practices; and protect open space and scenic view sheds. These threats are known to fragment the landscape and negatively impact the integrity of the watershed to support wildlife, fish habitat, and ecosystem functions. Activities to engage stakeholders will comprise open-house style events, direct mailings, social media, and other methods. Follow-up with interested landowners will consist of one-on-one meetings to discuss more specific aspects of conservation opportunities. Partners include Ashland Forest Resiliency (AFR), City of Ashland, USFS, and Lomakatsi. Potential partners include Selberg Institute, the Cascade Siskiyou National Monument.

Review Team Evaluation

Strengths

- The proposal's focal area is in the Upper Bear Creek watershed. This area is highly impacted by urbanization and a likelihood that it will continue.
- Acquisition is a sound strategy to help preserve and protect existing habitats in the watershed.
- The applicant has a proven track record with acquisition work, including monitoring of their current portfolio of properties. They are well known and respected in the community.

- There is the potential to develop projects that could protect a wide variety of habitats ranging from upslope to riparian.
- The methods proposed to approach potential landowners seem reasonable for the area and audience.

Concerns

- It is unclear how the applicant will prioritize lands or what a high-value conservation property will look like. This information is available but was not included in the application.
- It is unclear how limiting factors for ESA-listed salmonid species will be considered in prioritizing lands for acquisition.
- Missing from the application was how the concept of restoring watershed connectivity plays into the outreach focus.
- It is unclear whether the project will result in a strategic rather than an opportunistic approach to identifying candidate parcels for permanent protection.

Concluding Analysis

This proposal fits into the applicant's strategy for identifying and acquiring properties for conservation. Acquisition is a sound strategy to protect valuable habitats and will be effective in this urbanizing area; however, the pathway from Stakeholder Engagement to an eligible acquisition is unclear. The application would be strengthened by including an explanation of what is expected beyond the Stakeholder Engagement activities and how the project will result in developing acquisition projects, and subsequent restoration where needed.

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-2018 Fall Offering

Southwest Oregon (Region 2)

Application Number: 219-2043-16577**Project Type:** Monitoring**Project Name:** Eel Creek Pacific Lamprey Ramp
Effectiveness Monitoring 2019**Applicant:** Cascade Pacific RC&D**Region:** Southwest Oregon**County:** Coos**OWEB Request:** \$69,492**Total Cost:** \$104,454**Application Description** *(from application abstract)*

Pacific Lamprey are listed as a state sensitive species and are considered a “first-food” to the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians (CTCLUSI), and an important to link to their native culture. The historical lamprey harvest within the Eel Lake Basin has been eliminated for generations due to the decline in the lamprey population. Eel Lake and Eel Creek are located in Coos and Douglas Counties just south of Reedsport. Eel Lake is a natural lake formed by dunal sand encroachment. Historically this basin and streams supported robust runs of native fishes including Coho Salmon and Pacific Lamprey. In 1989, ODFW constructed a fish trap and weir on Eel Creek at the outflow of Eel Lake. While the design works well for Salmon, it is not conducive to Pacific Lamprey passage. As a result, Pacific Lamprey have not been able to access Eel Lake and the upper tributaries since 1988. CTCLUSI, ODFW, and TLBP (Tenmile Lamprey Group (TLG)) cooperated on the funding, design, and fabrication of a new lamprey ramp, which was installed at the Eel Lake Trap in August, 2018. This creates a unique opportunity to conduct effectiveness monitoring for Pacific Lamprey passage, while increasing knowledge of this species. TLG will evaluate the functionality and usability of the lamprey ramp for allowing passage and safely trapping lamprey for enumeration. Using radio telemetry and visual observations, TLG will also monitor the movements, holding habitats, barrier issues, and habitat use of Pacific Lamprey within the Eel Lake Basin, both above and below the ramp. Implementation of this monitoring project will also provide stakeholders with valuable information for Oregon Coast Pacific Lamprey. Funding this priority monitoring effort will complete several actions recommended in the Tenmile Lakes Basin 30 Year Pacific Lamprey Management Plan and supplement the creation of ODFW’s forthcoming Conservation Plan for Lampreys (CPL) with information on coastal lamprey. Pacific Lamprey are listed as a state sensitive species and are considered a “first-food” to the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians (CTCLUSI), and an important to link to their native culture. The historical lamprey harvest within the Eel Lake Basin has been eliminated for generations due to the decline in the lamprey population. Eel Lake and Eel Creek are located in Coos and Douglas Counties just south of Reedsport. Eel Lake is a natural lake formed by dunal sand encroachment. Historically this basin and streams supported robust runs of native fishes including Coho Salmon and Pacific Lamprey. In 1989, ODFW constructed a fish trap and weir on Eel Creek at the outflow of Eel Lake. While the design works well for Salmon, it is not conducive to Pacific Lamprey passage. As a result, Pacific Lamprey have not been able to access Eel Lake and the upper tributaries since 1988. CTCLUSI, ODFW, and TLBP (Tenmile Lamprey Group (TLG)) cooperated on the funding, design,

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Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant's continued focus on lamprey given the increased conservation interest and cultural importance of lamprey across the state.
- The information that will be collected will be useful in design of future fish ladders outside the Columbia Basin.
- The cooperative group working on this ongoing monitoring project has good representation and is building on momentum from past monitoring efforts in the area.
- The application has a good description of monitoring methods and leveraged existing resources to train monitoring partners to properly tag lamprey.
- The OPMT remarked that the information could be transferrable to other areas and the exportability of findings raises the value of this monitoring.

Monitoring Team Concerns

- The application described using the monitoring data for adaptive management but it's not clear how this will be done. There was no explanation to understand if it is possible to modify the ladder.
- The applicant described an interest in using the information for outreach, but there was no description of products to be produced and what audience they were targeting.
- The application lacked information on how they plan to use the larval distribution data.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The proposed scope of work will continue efforts to monitor Pacific lamprey usage of the Eel Lake

watershed.

- The effort has strong partner support and involvement as evidenced by the letters of support, wide variety of agencies and stakeholders involved, and secured match commitments to the project.
- The application was presented in a clear and complete manner.
- The project has a high benefit for the cost.
- The proposal is timely with respect to efforts by OFW and ODOT to remove barriers and improve access to upstream habitats for Pacific lamprey.
- Pacific lamprey are of cultural significance to Tribes and their decline is of great concern.
- ODFW's Lamprey Specialist is involved in the project and the work will be implemented in coordination with ODFW statewide conservation plan.
- Project partners have a successful track record on monitoring and addressing fish passage barriers.
- The approach and methodology is sound and the project has a high likelihood of success.

Concerns

- Differing numbers on trap effectiveness were presented in the application making the "findings to date" confusing.

Concluding Analysis

The project has high levels of commitment from the right mix of partnerships needed to make an effort like this successful. Understanding Pacific lamprey use of fresh water habitats and evaluating the effectiveness of projects designed to improve passage for them is important work and will help fill the gaps in the understanding of this species.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 4

Review Team Recommended Amount

\$69,942

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2044-16603**Project Type:** Monitoring**Project Name:** Smith River ARIS/DIDSON
Anadromous Salmonid Monitoring**Applicant:** Smith River WC**Region:** Southwest Oregon**County:** Douglas**OWEB Request:** \$62,511**Total Cost:** \$178,806**Application Description** *(from application abstract)*

The project location is in Douglas County on the main-stem Lower Smith River, 20 miles east of Reedsport, Oregon. The total monitoring area of the project includes the West Fork Smith River, Vincent Creek (6th field HUC), Upper Smith River (5th field HUC), and 40% of Spencer-Johnson Creek (6th field HUC). We have implemented the use of an Adaptive Resolution Imaging Sonar (ARIS) to estimate ESA listed Oregon Coast Coho, fall chinook, and winter steelhead run abundances. Escapement estimates will fill population data gaps, provide insight to population-level responses to restoration projects throughout the basin, and provide fishery managers with an improved base of information for managing these populations. Smith River and the streams throughout its basin have been heavily impacted by past land-use practices. Past timber harvest, large-scale fires, and subsequent timber salvage operations have simplified streams and dramatically reduced high quality spawning and rearing habitat for anadromous salmonids. In order to mitigate these issues, SRWC and others have carried out a multitude of restoration projects, enhancing 66.9 stream miles throughout the basin. Utilizing ARIS as a means to monitor salmonid populations is ideal for estimating the impacts restoration projects have on these populations. Though discontinued in 1996/97, the steelhead and chinook hatcheries in the basin once saturated streams with hatchery stock. Monitoring native steelhead and chinook runs will greatly contribute to our understanding of the population's trajectory since the hatcheries' termination. Project partners include Trout Unlimited (provided ARIS unit and all necessary equipment for project operation), the Oregon Department of Fish and Wildlife, and the Bureau of Land Management. OWEB funding will be used to employ a technician to collect and interpret data and remove ARIS during high flow events. Hired technician will also assist TU in maintaining and repairing equipment. The project location is in Douglas County on the main-stem Lower Smith River, 20 miles east of Reedsport, Oregon. The total monitoring area of the project includes the West Fork Smith River, Vincent Creek (6th field HUC), Upper Smith River (5th field HUC), and 40% of Spencer-Johnson Creek (6th field HUC). We have implemented the use of an Adaptive Resolution Imaging Sonar (ARIS) to estimate ESA listed Oregon Coast Coho, fall chinook, and winter steelhead run abundances. Escapement estimates will fill population data gaps, provide insight to population-level responses to restoration projects throughout the basin, and provide fishery managers with an improved base of information for managing these populations. Smith River and the streams throughout its basin have been heavily impacted by past land-use practices. Past timber harvest, large-scale fires, and subsequent timber salvage operations have simplified streams and dramatically reduced high quality spawning and rearing habitat for anadromous salmonids. In order to

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Monitoring Team Evaluation

Monitoring Team Strengths

- This technology is useful to help understand timing and abundance and will be especially useful for steelhead monitoring.
- This application can produce improved abundance estimates for this part of the Smith River.
- The information produced from this effort will provide some ancillary information about lamprey and striped bass.
- The applicant has already acquired the equipment and spent a year training staff to operate the equipment, reading the imagery, and developing protocols to determine species.
- The picket weir is likely to get better images of the fish and the applicant consulted with ODFW fish passage staff to install it according to legal requirements.

Monitoring Team Concerns

- Absent basin-wide estimates of smolt production, it would be difficult to focus a restoration effectiveness evaluation on the freshwater component of productivity of the Smith River solely with this information.
- Sonar technology has real possibilities and applications, but there are some unknowns. This proposal doesn't acknowledge the potential limitations of the technology.
- It will be challenging to estimate the Chinook and coho numbers, given the difficulty in separating them when they are present at the same time; also, there is no way to determine wild vs. hatchery origin.
- Some of the graphs provided in the application were confusing relative to describing how this information can leverage the life-cycle monitoring site on the WF Smith River.
- Setting the minimum size limit for steelhead to 60cm will reduce chances of misclassifying suckers as steelhead, but it also means that some smaller steelhead in the system will not be included in the count (see Figure2 in the report to BLM).
- The application says that it will allow ODFW to manage for harvest at Maximum Sustainable Yield.
- Retention of wild steelhead and coho is currently not allowed in the Smith River Management Area.
- Harvest limits for Chinook were established in the Coastal Multi-Species Plan, and the applicant did not discuss a direct path how this monitoring can be applied for any future revision of harvest limits.

Monitoring Team Comments

None

Review Team Evaluation**Strengths**

- Monitoring fish numbers is important information for restoration practitioners and fishery managers.
- This monitoring will complement other adult and juvenile salmonid sampling efforts.
- The data collected is stored, backed-, and made available to agencies and researchers.
- The equipment is in place and project staff are trained to use the equipment and analyze the information collected.
- The approach utilizes modern technology and employs sound methodology.
- The project costs appear reasonable for the proposed work.

Concerns

- By only looking at adult fish counts at only one location, it may be difficult for this data to evaluate productivity and associate it with the effectiveness of restoration efforts.
- The applicant should consider adding a juvenile estimates component.
- The cost to benefit ratio is hard to determine prior to seeing the data collected and analyzed.
- It will be difficult to differentiate between Chinook and coho during overlaps in the timing of their runs.
- The value of the project will be enhanced if field verification is included. Without it, applicability to restoration is almost impossible to determine.
- It is unclear if there is a back-up plan in case of possible equipment malfunction.

Concluding Analysis

The approach proposed to monitor returning adults has merit and employs technology that can track adults at times and flow conditions traditional survey methods cannot. This could prove cost-effective and useful in helping to understand the timing of returns, as well as numbers of returning adults. With overlaps in the timing of fish runs there will be challenges in determining the difference between the three main species targeted. The addition of field verification will enhance the accuracy, as well as help inform the analysis of the impacts of restoration work, as would adding a juvenile monitoring component.

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-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2045-16625**Project Type:** Monitoring**Project Name:** Umpqua Basin Stream Flow and Temperature Monitoring Project 2019**Applicant:** Partnership for the Umpqua Rivers**Region:** Southwest Oregon**County:** Douglas**OWEB Request:** \$31,958**Total Cost:** \$56,389**Application Description** *(from application abstract)*

This is a continuation of a long-term project which began in 1998 that monitors summer stream flow and stream temperature at sites across the Umpqua Basin (see map for locations). Flow measurements, taken at high priority sites, are used to regulate instream water rights to protect aquatic resources, model water supply and demand, and provide data of interest for PUR, agencies, and municipalities. Summer stream temperature measurements at five representative sites provide a long-term data set that is used by aquatic specialists in the basin to normalize for annual variability in stream temperature data for land management projects, burned area evaluations, and shorter-term baseline monitoring with smaller data sets. In addition, a trend analysis of the temperature dataset will provide analyses integral in understanding the effects of climate change on streams in the basin. The proposed addition of two North Umpqua temperature comparison sites (from historic sites) would expand the use of the Reference Temperature data into that subbasin. The data and analyses from the previous work on this project has been distributed and presented to natural resource professionals working in the basin. It has been widely used by both PUR and partners (OWRD, Douglas County, BLM, USFS, and DEQ) as well as by other groups (ODFW, City of Oakland, and The North Umpqua Hydroelectric Project (PacifiCorp)), and is of current interest to NOAA Fisheries. In addition to the aforementioned uses, it would continue to be used for corroboration of regional timing and trends of maximum stream temperatures; development of fishing regulations during low-flow periods; support of effectiveness monitoring; investigation of climate change impacts; evaluation of water allocation applications; implementation of TMDLs; and development of strategic plans. By maintaining a continuous period of record, this pivotal data is critical for the continued success of many programs in the Umpqua Basin.

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Monitoring Team Evaluation

Monitoring Team Strengths

- The project focuses on priority water availability basins in the Umpqua Basin.
- This ongoing project is the result of an effective partnership with OWRD and the county.
- The applicant addressed concerns identified in a previous evaluation.
- The application proposes to work with DEQ to perform trend analysis of water temperature and share the long-term dataset with them.
- The applicant has a successful track record and has a quality assurance plan in place.
- The flow information generated from this project is applied directly in water management decisions, and the water temperature information is helpful for other partners in the basin

Monitoring Team Concerns

- The applicant cited some outdated flow measurement methodologies – this is confusing and should be corrected.
- Some statements about how OWRD is using its data to develop water forecasting at the basin scale are incorrect.
- Some of the application objectives were redundant and could be refined to focus on what key work they are doing.
- It was unclear why the applicant only requested funding for one year and if the water temperature monitoring period was adequate.

Monitoring Team Comments

- The applicant should work with OWRD to evaluate pros/cons of installing select gaging stations in the future at some sites to meet objectives described in the application.
- The OPMT encourages applicants to consider monitoring water temperature data year-round to adequately document thermal dynamics.

Review Team Evaluation

Strengths

- The project is the continuation of a successful ongoing monitoring effort and the project demonstrates strong partnership between the applicant, OWRD, and Douglas County.
- The monitoring work focuses on identified priority water availability basins.
- Comprehensive QA/QC assurances are described in the application.
- The efforts provide valuable flow information, especially critical in drought years.
- There is a plan to work with DEQ to perform trend analysis and share the long-term dataset.
- The data can be used by forestry and agricultural partners to understand impacts and improvements from restoration.
- The project is very straight forward with a high benefit to cost ratio.

Concerns

- The application referenced outdated flow measurement methodologies. These will need to be updated.
- Partners need to work with relevant agencies and look at long-term strategies for ensuring commitment to maintain stream gauging sites as an important piece in monitoring long-term flow conditions in the Umpqua.

Concluding Analysis

The proposed project is a continuation of a successful program originated in 1998 to collect baseline flow data and temperatures in high priority water availability basins. The information collected is useful to project partners and helps support a variety of activities, including regulation of instream water rights to protect aquatic resources, model water supply and demand, and provide flow and temperature data for project partners and the community at large.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

4 of 4

Review Team Recommended Amount

\$31,958

Review Team Conditions

Applicant verify and provide documentation that Flow measurement methodology is current.

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2046-16657

Project Type: Monitoring

Project Name: Bird Monitoring to Evaluate Effectiveness of Riparian Restoration in the Rogue Basin

Applicant: Klamath Bird Observatory

Region: Southwest Oregon

County: Jackson

OWEB Request: \$33,607

Total Cost: \$49,807

Application Description *(from application abstract)*

Healthy riparian vegetation provides important ecological services, including critical habitat for birds and other terrestrial wildlife, yet many riparian habitats in the Rogue Basin have been lost or degraded. Riparian restoration implemented by The Freshwater Trust (TFT) in the City of Medford's Water Quality Trading Program in southwestern Oregon meets rigorous vegetation performance standards, but it is unknown whether other important ecological goals are being met: improving riparian areas for wildlife habitat as well as increasing shade. Birds are widely recognized as excellent ecological and management indicators, and are relatively easy and cost-effective to monitor. Klamath Bird Observatory (KBO) proposes a project partnering with TFT using avian monitoring data and a focal species approach to evaluate effectiveness of riparian restoration in the Rogue Basin. KBO will adapt existing standardized bird monitoring techniques (e.g. territory mapping, reproductive index, activity budgets), adapt their use for smaller-scale sites restored by TFT, and confirm the feasibility of achieving ecologically meaningful results that can be applied to adaptive management. This exciting collaboration will link a science-based conservation organization with an on-the-ground restoration practitioner, create a model of better communication between scientists and land managers that will benefit the Rogue watershed, and advance efforts to quantify benefits of restoration and inform future project design. This project provides a timely opportunity to demonstrate the efficacy of avian monitoring as a metric of habitat quality, ecosystem function, and restoration success that will be exportable to other sites, and can be included in the Rogue Basin Partnership's comprehensive basin-wide monitoring strategy. Healthy riparian vegetation provides important ecological services, including critical habitat for birds and other terrestrial wildlife, yet many riparian habitats in the Rogue Basin have been lost or degraded. Riparian restoration implemented by The Freshwater Trust (TFT) in the City of Medford's Water Quality Trading Program in southwestern Oregon meets rigorous vegetation performance standards, but it is unknown whether other important ecological goals are being met: improving riparian areas for wildlife habitat as well as increasing shade. Birds are widely recognized as excellent ecological and management indicators, and are relatively easy and cost-effective to monitor. Klamath Bird Observatory (KBO) proposes a project partnering with TFT using avian monitoring data and a focal species approach to evaluate effectiveness of riparian restoration in the Rogue Basin. KBO will adapt existing standardized bird monitoring techniques (e.g. territory mapping, reproductive index, activity budgets), adapt their use for smaller-scale sites restored by TFT, and confirm the feasibility of achieving ecologically meaningful results that can be

applied to adaptive management. This exciting collaboration will link a science-based conservation organization with an on-the-ground restoration practitioner, create a model of better communication between scientists and land managers that will benefit the Rogue watershed, and advance efforts to quantify benefits of restoration and inform future project design. This project provides a timely opportunity to demonstrate the efficacy of avian monitoring as a metric of habitat quality, ecosystem function, and restoration success that will be exportable to other sites, and can be included in the Rogue Basin Partnership's comprehensive basin-wide monitoring strategy.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application is based around monitoring of focal bird species that serve as indicators of habitat conditions. Species are selected for their association with particular habitat elements or features, or because of a special conservation need, and ease of monitoring.
- Information could potentially lead to a clearer connection between bird habitat and water quality benefits of riparian restoration actions.
- The application describes appropriate protocols and includes citations.
- The applicant is committed to applying the data in a meaningful manner and had a good description of how they plan to share the information with appropriate agencies and local partners
- The applicant provided information on previous success working on similar projects to describe their track record, and has the necessary skills to complete this project as proposed.
- The data will be archived through the Avian Knowledge Network. This is a data repository that helps to ensure that bird-related data are available to scientists, resource managers, and other conservation practitioners in the future.
- The application addressed concerns raised previously. One of the concerns identified by the review team last year was that monitoring for the presence of birds or their nests alone could be misleading as indicators of habitat quality. The applicant better addresses the issue by describing methods for territory mapping, indices of reproductive success, and activity budgets for focal species to understand how these species are using an area.

Monitoring Team Concerns

- The application does not specify criteria or thresholds for the metrics that would be considered success. It is unclear whether success is defined as trajectories toward values observed in reference sites or if reference values themselves are the desired outcome.
- The short-term data and the relatively young age of the restoration actions (1-6 yrs old) may not be appropriate to answer all of their questions.
- There is a lack of baseline, pre-treatment data to which to compare results.
- It is unclear how the varying aged sites distributed across a broad area will impact the results.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The project is a resubmittal and the proposal addressed the concern related to project objectives by providing an expanded discussion on them.
- The applicant has experience with bird monitoring and this project is based on work undertaken in the Klamath, adapting monitoring protocols from those efforts.
The process for implementing this project is clear and uncomplicated because the applicant is working with an organization that already has established long-term agreements with landowners.
- The use of bird presence and abundance monitoring is identified on the list of recommended parameters for effectiveness monitoring of riparian restoration in the Rogue Basin Restoration Plan.
- The project builds on monitoring The Freshwater Trust is implementing in areas that have already been planted, incorporating species diversity, survival and invasive species in the data collected.

Concerns

- The purpose of the project is confusing. It is not clear whether it evaluates riparian restoration effectiveness or refines bird monitoring methodology.
- The project statement about benefitting salmon and steelhead is questionable.
- It is unclear if this monitoring is necessary or if avian monitoring done in the Trinity River system for a ten- year period could be used to help identify tree species and bird responses, helping to further evaluate the effectiveness of plantings in providing avian habitats.
- The project focuses on evaluating smaller sized sites in mainstem settings. The work may be more effective on the smaller tributaries.

Concluding Analysis

There is value in understanding if plantings also benefit birds. The riparian projects to be evaluated are already established, making the collection of baseline data on these existing sites no longer feasible. That said, the sites have only been established in the last one to six years and the habitats may not yet be suitable to attract avian species. Additionally, the plant establishment efforts could, in the short-term, disrupt avian usage. The addition of this monitoring effort to projects already in place did not seem like a good fit.

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-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2047-16662**Project Type:** Monitoring**Project Name:** Umpqua Basin Collaborative
Monitoring 2019-2021**Applicant:** Partnership for the Umpqua Rivers**Region:** Southwest Oregon**County:** Douglas**OWEB Request:** \$220,356**Total Cost:** \$374,301**Application Description** *(from application abstract)*

1) Our project location is the Umpqua Basin, which encompasses 2,569,527 acres of land and 1,740 stream miles of anadromous fish habitat, the largest watershed draining into the Pacific Ocean south of the Columbia River. The Umpqua River system originates just north of Crater Lake in the Cascade Mountains, cuts through the Coastal Range, and enters the Pacific Ocean near the town of Reedsport.2) In our basin, there is a lack of water quality data on many streams. This information is essential to know for human, fish and wildlife survival. Identifying stream-specific limiting factors will permit planning to address issues in areas most in need of restoration. This also identifies areas most in need of preservation. 3) Activities under this grant consist of staff and volunteers performing standard monthly water quality monitoring runs in 5th field watersheds for three years in the Umpqua Basin plus monitoring reference sites from watersheds where three years of monitoring has been completed. All runs will be monitored once per month, collecting water quality data on temperature, turbidity, conductivity, dissolved oxygen (DO), pH, total coliform, E. coli bacteria, blue-green algae, total chlorophyll, and photo points at 15 to 20 sites per 5th field watershed. In addition, summer instream continuous temperature loggers (about 30 recording every 30') and DO loggers (four recording every 15') will be located throughout the watersheds. Also, we will deploy a multi-parameter Sonde that will be recording temperature, DO, conductivity, and pH every 15 minutes. 4) Bureau of Land Management (BLM), Department of Environmental Quality (DEQ), US Forest Service (USFS), Natural Resources Conservation Service (NRCS), Oregon Department of Fish and Wildlife (ODFW), Tribes, Soil and Water Conservation Districts (SWCD), Oregon Water Resources Department (OWRD), cities, county, water treatment plants and area residents.1) Our project location is the Umpqua Basin, which encompasses 2,569,527 acres of land and 1,740 stream miles of anadromous fish habitat, the largest watershed draining into the Pacific Ocean south of the Columbia River. The Umpqua River system originates just north of Crater Lake in the Cascade Mountains, cuts through the Coastal Range, and enters the Pacific Ocean near the town of Reedsport.2) In our basin, there is a lack of water quality data on many streams. This information is essential to know for human, fish and wildlife survival. Identifying stream-specific limiting factors will permit planning to address issues in areas most in need of restoration. This also identifies areas most in need of preservation. 3) Activities under this grant consist of staff and volunteers performing standard monthly water quality monitoring runs in 5th field watersheds for three years in the Umpqua Basin plus monitoring reference sites from watersheds where three years of monitoring has been completed. All runs will be monitored once per month, collecting water quality data on temperature, turbidity,

conductivity, dissolved oxygen (DO), pH, total coliform, E. coli bacteria, blue-green algae, total chlorophyll, and photo points at 15 to 20 sites per 5th field watershed. In addition, summer instream continuous temperature loggers (about 30 recording every 30') and DO loggers (four recording every 15') will be located throughout the watersheds. Also, we will deploy a multi-parameter Sonde that will be recording temperature, DO, conductivity, and pH every 15 minutes. 4) Bureau of Land Management (BLM), Department of Environmental Quality (DEQ), US Forest Service (USFS), Natural Resources Conservation Service (NRCS), Oregon Department of Fish and Wildlife (ODFW), Tribes, Soil and Water Conservation Districts (SWCD), Oregon Water Rescores Department (OWRD), cities, county, water treatment plants and area residents.

Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant has developed a well-established monitoring program in coordination with DEQ.
- The previously collected data has been adequately reported to various partners in the past.
- The application included several letters of support describing the different supporting agencies and organizations and reflects the effective partnership they have developed in collaboration with other agencies.
- There is good detail in the application and justification for their monitoring methods and study design to balance continuous and grab sampling efforts is provided.
- There was good detailed information to describe the expenses in the budget.
- Their method of monitoring fits well with DEQ's TMDL data needs and use of this data to target implementation actions. Future agricultural water quality status and trend reports will benefit from the data set proposed in this application.

Monitoring Team Concerns

- The application describes that they would like to identify water quality improvement projects, but there were no examples of projects being implemented from the water quality data that has been collected to date.

Monitoring Team Comments

- The OPMT encourages applicants to consider monitoring water temperature data year-round to adequately document thermal dynamics.
- Contact DEQ to talk about continuous pH data loggers.

Review Team Evaluation

Strengths

- The project will continue a successful monitoring effort and build on the existing long-term data sets.

- The applicant has the capacity and experience to make the project successful. The application presented a comprehensive explanation and justification for their approach to the data collection.
- Project partners work closely with DEQ. This work is necessary to help identify water quality impaired subwatersheds and includes an approved DEQ QA/QC plan.
- There is a great deal of support for the project demonstrated by the letters of support and match commitments.
- Past data collected is valuable and has been used to focus restoration work. For instance, data from the Lookingglass watershed helped NRCS develop a national-level water quality pilot project.

Concerns

- It would be useful to increase involvement from the agricultural and forestry sectors to help elevate awareness of the work and data collected. This in turn could help get more private land owners engaged in restoration.

Concluding Analysis

The proposal will continue long-term monitoring efforts and builds on an existing water quality data set compiled by project partners. The project is an example of how watershed councils and their professional staff can successfully organize and effectively engage volunteers in aspects of an important monitoring effort. The work is important to better understand and engage in restoring the aquatic health of watersheds in the Umpqua basin.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 4

Review Team Recommended Amount

\$220,356

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$220,356

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2048-16672**Project Type:** Monitoring**Project Name:** Ni-les'tun tidal wetland restoration effectiveness monitoring**Applicant:** Institute for Applied Ecology**Region:** Southwest Oregon**County:** Coos**OWEB Request:** \$323,953**Total Cost:** \$413,244**Application Description** *(from application abstract)*

With 418 acres of emergent tidal marsh and 12 acres of forested tidal swamp, the Ni-les'tun restoration project in the Coquille River watershed several miles northeast of Bandon (Coos County) is one of the largest tidal wetland restoration projects completed in Oregon to date. Periodic effectiveness monitoring is essential for evaluating project results and the rate of ecosystem change, but most essential monitoring parameters have been monitored only once since restoration (in 2013). This proposal builds on previous OWEB-funded monitoring to characterize: (1) the status of site hydrology; (2) plant community development; (3) soil conditions (plus links between soils, groundwater hydrology, and plant communities); (4) aquatic habitat availability, quality, and utilization by fish (plus fish prey); and (5) climate change adaptation potential of the restored site. Project partners include the Institute for Applied Ecology, Oregon State University, the Confederated Tribes of Siletz Indians, and the US Fish and Wildlife Service. Results of our monitoring will provide accountability for OWEB's prior investments in this project, and through outreach, will help advance restoration practices and guide similar restoration projects in Oregon. We will widely distribute project results to the public via a synthesis report, outreach activities, and user-friendly datasets. Project outcomes will include valuable data on wetland restoration effectiveness in the Coquille River Estuary a decade following restoration, data on how physical drivers relate to biotic communities, and restoration lessons learned for application to other restoration projects throughout Oregon.

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effectiveness in the Coquille River Estuary a decade following restoration, data on how physical drivers relate to biotic communities, and restoration lessons learned for application to other restoration projects throughout Oregon.

Monitoring Team Evaluation

Monitoring Team Strengths

- The OPMT acknowledged that there is a need for information about the effects of tidal wetland restoration, and this can inform future coastal restoration actions.
- The application has a good description of methods and protocols. These methods follow past monitoring efforts at this restoration site.
- The OPMT liked the description of how the data will be managed, analyzed and reported.
- The monitoring described in this application is a result of good partnerships and includes tribal and university participation.
- The applicant has a good track record of completing past monitoring, including reporting and sharing findings.

Monitoring Team Concerns

- The application lacked detail on what the OSU faculty member was implementing/completing to justify the lump-sum budget and why travel from UC Davis was relevant to the monitoring in Oregon.
- The application lacked detail on the methods for obtaining the aerial imagery using a drone and how that will be linked with on-the-ground data.
- It would have been helpful to have the entire budget broken out by objective like a portion of the budget was.

Monitoring Team Comments

The OPMT recommends surveying ground water levels when doing other RTK surveys on site to verify water levels and link to the datum.

Review Team Evaluation

Strengths

- This is a unique opportunity to look at large scale salt marsh restoration efforts, nearly nine years after the work began. The timing is good and the need is there for this effectiveness monitoring to help inform other tideland restoration efforts.
- The data collection methods are sound and highly likely to achieve project objectives.
- The project partnerships are long running and strong, as evidenced by the letters of support and project contributions.
- The proposal addresses concerns from the previous review, including discussion on timing of the work waiting longer to collect and documenting project support.

- Project managers and partners are experienced and have the capacity to do this monitoring.
- The macroinvertebrate sampling will be useful in determining water quality benefits.

Concerns

- The overall project cost is high related to the benefit. Perhaps interns or work study could be incorporated to help reduce the overall cost.

Concluding Analysis

Application was withdrawn by the applicant after review.

Review Team Recommendation to Staff

Withdrawn

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

Withdrawn

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

Application Number: 219-2049-16704

Project Type: Monitoring

Project Name: Coos Watershed Real-time Hydrological and Meteorological Monitoring 2019-2021

Applicant: Coos Watershed Association

Region: Southwest Oregon

County: Coos

OWEB Request: \$88,270

Total Cost: \$133,006

Application Description *(from application abstract)*

The Coos Watershed, located on the Southern Oregon Coast, is the home of an important population of the ESA listed coastal coho salmon. The ESA Recovery plan for the Oregon Coast coho salmon (NOAA 2016) cites the need for increased quantity and quality of freshwater and estuarine rearing habitat. Historically, the need for hydrological and meteorological data was identified in the IMST's Recovery of Wild Salmonids in Western Oregon Lowlands (2002), and in OWEB's Monitoring Strategy for the Oregon Plan for Salmon and Watersheds (2003). NOAA's A Strategic Plan for Enhanced Coastal Observational System and Predictive Hydrodynamic Model for Improved Management of the Coos Bay Estuary, Oregon (2005) ranked continuing gaging station operations as the highest priority. The lack of long term hydrological data has driven the Coos Watershed Association (CoosWA) to try and meet this need. Most recently, Oregon's 2017 Integrated Water Resources Strategy (OWRD 2017) recommends that the state continue and maintain the stream gage network, collaborate with other groups, and promote continuous monitoring of changing climates. OWEB funds will be used for staff to upgrade, operate, and maintain five real-time stream gaging/weather stations. Hydrological data will be analyzed and summarized by water year, and reported quarterly and annually on the CoosWA website. Discharge data will be further compiled into the long-term data set, flow duration estimates will be recalculated with the updated data. Meteorological data will be posted to our website in time-series format and summarized by water year. Instantaneous data will be available in real-time. Since 1999, CoosWA has partnered with OWEB, OWRD, ODEQ, U of O, Coos Bay/North Bend Water Board, and BLM to develop a Water Resources Program to develop a Hydrological and Meteorological data set large enough to perform meaningful statistical analysis for monitoring, assessment, research, and project effectiveness needs. The Coos Watershed, located on the Southern Oregon Coast, is the home of an important population of the ESA listed coastal coho salmon. The ESA Recovery plan for the Oregon Coast coho salmon (NOAA 2016) cites the need for increased quantity and quality of freshwater and estuarine rearing habitat. Historically, the need for hydrological and meteorological data was identified in the IMST's Recovery of Wild Salmonids in Western Oregon Lowlands (2002), and in OWEB's Monitoring Strategy for the Oregon Plan for Salmon and Watersheds (2003). NOAA's A Strategic Plan for Enhanced Coastal Observational System and Predictive Hydrodynamic Model for Improved Management of the Coos Bay Estuary, Oregon (2005) ranked continuing gaging station operations as the highest priority. The lack of long term hydrological data has driven the Coos Watershed Association (CoosWA) to try and meet this need. Most

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Monitoring Team Evaluation

Monitoring Team Strengths

- This program has done a good job leveraging funding from various sources.
- This is an ongoing long-term monitoring project with dedicated, consistent staff.
- The monitoring network provides long-term data set that is used by many agencies, researchers and other local groups.
- The application did a good job explaining how this monitoring informs the design of future restoration projects.
- The application addresses comments on previous application by explaining the streamflow monitoring methods and cites the USGS protocols.
- The data management, analysis and reporting is aided by the use of an appropriate time series management software (WISKI).

Monitoring Team Concerns

- The OPMT was questioning the use and value of the weather stations and the ability to use these to understand orographic effects due to these sites most likely suitable for documenting micro climates.
- It was unclear why are they moving the MET stations. More information and clarity about this is needed.
- The description of the gaging station history was difficult to follow and understand why some gages were being re-established.
- Past project completion reporting was limited and weather station data was of poor quality.
- The monitoring methods did not describe operation of weather station and parameters they want to collect.
- The application describes collecting continuous turbidity data at the streamflow gages for load duration calculations, but there was no description of the necessary suspended sediment monitoring to correlate the turbidity measurements to generate load estimates.

Monitoring Team Comments

- If funded, provide a final technical report summarizing data to generate products that align with their objectives and answering the monitoring questions posed in the application.
- Update QAPP to include operation of weather station and maintenance procedures.

Review Team Evaluation**Strengths**

- The proposal supports continuation of a long running data set.
- The project scope has been expanded to add additional collection sites and incorporates new partners bringing in new match contributions and additional technical support.
- The data collected is important. It is actively used and is vital for natural resource agencies, as well as the applicant, in work such as project development, effectiveness monitoring, outreach and modeling efforts.
- The project is technically sound and has a high likelihood of continued success. The work is coordinated with OWRD and utilizes standard OWRD and USGS protocols.

Concerns

- No concerns were identified.

Concluding Analysis

The project will continue a long running successful data collection effort that results in information readily available and used to support restoration planning and design, assessment, effectiveness monitoring and modeling efforts. The information also sees a great community use of the real-time stream gauging information to support recreational activities. The applicant does a superb job of sharing the information and using the data collected in outreach, as well as restoration efforts. Establishing regular check in meetings with OWRD and USGS will help with making sure collection efforts are always using the latest protocols and creating a forum for sharing lessons learned.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 4

Review Team Recommended Amount

\$88,270

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$88,270

Staff Conditions

None

Open Solicitation-2018 Fall Offering Southwest Oregon (Region 2)

| | |
|---|---|
| Application Number: 219-2050-16706 | Project Type: Stakeholder Engagement |
| Project Name: SOLC Upper Bear Creek Ashland Watershed Engagement | |
| Applicant: Southern Oregon Land Conservancy | |
| Region: Southwest Oregon | County: Jackson |
| OWEB Request: \$55,087 | Total Cost: \$73,435 |

Application Description *(from application abstract)*

The geographic location comprises a portion of the upper Bear Creek Watershed, inclusive of the Ashland Watershed. This is a strategic focus area of the Southern Oregon Land Conservancy. The area includes both the forested mixed-conifer slopes of the western portion, and the oak-woodlands and grasslands of the eastern portion of the watershed, which also contains mixed conifer forests in the upper elevations. Specifically, the project will focus on privately-owned lands which contain high conservation values and at which conservation will contribute to watershed health. This area also captures a portion of the municipal watershed for the City of Ashland. The lands on the eastern side provide the scenic backdrop of the southern Rogue Valley and contain high wildlife connectivity values, and a mosaic of oak-pine and conifer forests, grasslands, and streams and springs. The Bear Creek watershed is susceptible to fragmentation and land conversion which degrades the integrity of the watershed. The stakeholder engagement objectives aim to ultimately result in acquisition projects on high-quality lands. Successful acquisition projects will conserve high-quality properties to abate the threats of subdivision and development; land conversion (e.g., land clearing); unsustainable and ecologically unsound forest and grazing practices; and protect open space and scenic view sheds. These threats are known to fragment the landscape and negatively impact the integrity of the watershed to support wildlife, fish habitat, and ecosystem functions. Activities to engage stakeholders will comprise open-house style events, direct mailings, social media, and other methods. Follow-up with interested landowners will consist of one-on-one meetings to discuss more specific aspects of conservation opportunities. Partners include Ashland Forest Resiliency (AFR), City of Ashland, USFS, and Lomakatsi. Potential partners include Selberg Institute, the Cascade Siskiyou National Monument.

Review Team Evaluation

Strengths

- The proposal's focal area is in the Upper Bear Creek watershed. This area is highly impacted by urbanization and a likelihood that it will continue.
- Acquisition is a sound strategy to help preserve and protect existing habitats in the watershed.
- The applicant has a proven track record with acquisition work, including monitoring of their current portfolio of properties. They are well known and respected in the community.

- There is the potential to develop projects that could protect a wide variety of habitats ranging from upslope to riparian.
- The methods proposed to approach potential landowners seem reasonable for the area and audience.

Concerns

- It is unclear how the applicant will prioritize lands or what a high-value conservation property will look like. This information is available but was not included in the application.
- It is unclear how limiting factors for ESA-listed salmonid species will be considered in prioritizing lands for acquisition.
- Missing from the application was how the concept of restoring watershed connectivity plays into the outreach focus.
- It is unclear whether the project will result in a strategic rather than an opportunistic approach to identifying candidate parcels for permanent protection.

Concluding Analysis

This proposal fits into the applicant's strategy for identifying and acquiring properties for conservation. Acquisition is a sound strategy to protect valuable habitats and will be effective in this urbanizing area; however, the pathway from Stakeholder Engagement to an eligible acquisition is unclear. The application would be strengthened by including an explanation of what is expected beyond the Stakeholder Engagement activities and how the project will result in developing acquisition projects, and subsequent restoration where needed.

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



Document Path: Z:\oweb\Technical_Services\Information_Services\GIS\Maps\Review Team Meetings\2018Fall\Cycle\Projects\Region2_App\FundingStatus_11x17_2018Fall.mxd
ESRI ArcMap 10.6 NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20190320

Sources: Esri, DeLorme, NAVTEQ, USGS, NRCAN, METI, IPC, TomTom

Funding Recommendations

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

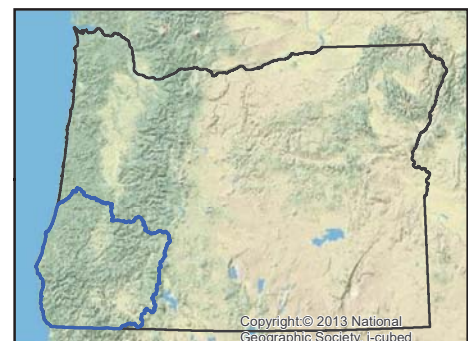
Previous Grants - 1998-2017

- ◆ Restoration
- Acquisitions
- ~ Streams
- ~ Region Boundary

Oregon Watershed Enhancement Board

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

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Region 2 - Southwest Oregon

Restoration Projects Recommended for Funding in Priority Order

| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
|---|-----------------------------------|---|--|--------------------|---------|
| 219-2033 | Curry SWCD | Cedar Creek Enhancement | Natural functioning stream condition will be restored on Cedar Creek, a tributary of Elk River near Port Orford, by establishing a meandering stream channel with a connected floodplain, adjacent wetland areas, and restored native plant community. | 89,787 | Curry |
| 219-2027 | Partnership for the Umpqua Rivers | Cattle Creek Instream Restoration | Instream habitat will be improved for salmonids by placing instream large wood habitat structures on Cattle Creek, a tributary to Cow Creek near Riddle. | 74,561 | Douglas |
| 219-2021 | Rogue River WC | Elk Creek RM 5.6 Floodplain and Side Channel Enhancements | Stream habitat conditions for rearing juvenile salmon will be improved on Elk Creek, a tributary to the Rogue River near Shady Cove. Breaching berms and placing instream large wood habitat structures will reconnect historic side-channels and the floodplain with the stream to restore natural river processes. | 173,400 | Jackson |
| 219-2020 | Rogue River WC | Ashland Creek Fish Passage Improvement | Fish passage will be improved for Coho Salmon on Ashland Creek, a tributary to Bear Creek in Ashland. A concrete irrigation diversion dam will be removed and replaced with a new irrigation withdrawal system designed to allow fish access to an additional two miles of stream habitat. | 117,527 | Jackson |
| 219-2029 | Elk Creek WC | Jack and Hardscrabble Creeks Restoration | Streamside and instream conditions will be improved on over four miles of Jack and Hardscrabble Creeks, tributaries of Elk Creek in the Umpqua Basin, near Drain. Replacing culverts blocking fish passage to stream habitat, restoring the streamside native plant community, and placing instream large wood habitat structures will support populations of coho salmon. | 342,703 | Douglas |
| 219-2032 | Applegate Partnership, Inc. | West Fork Evans Creek Large Woody Debris Project | Instream habitat will be improved on the West Fork Evans Creek, a tributary of the Rogue River near Wimer. Placing instream large wood habitat structures and constructing blockades to exclude off road vehicle use from the creek and adjacent riparian area will increase the quality and quantity of native fish habitat over 11 stream miles. | 773,145 | Jackson |
| Total Restoration Projects Recommended for Funding by RRT and OWEB Staff | | | | 1,571,123 | |

| Restoration Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
|---|-----------------------------|--|--|---------------------------|---------------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-2028 | Applegate Partnership, Inc. | Upper Phillips Dam Fish Passage and Irrigation Efficiency Project | Native salmonid fish will be provided access to 49 miles of stream habitat in the Litte Applegate River by constructing a by-pass channel and improving the water withdrawal system for irrigators at the Upper Phillips Dam located near Ruch. | 270,234 | Jackson |
| 219-2022 | Coos Watershed Association | Marlow Creek Habitat Restoration | Instream habitat will be improved on 4 miles of Marlowe Creek, a tributary to the Millicoma River located near Coos Bay. Placing instream large wood habitat structures, replacing failing culverts, and improving a road surface located adjacent to the stream will reduce chronic sediment input into the stream, which will improve stream habitat conditions for native fish. | 421,967 | Coos |
| 219-2019 | Smith River WC | Railroad Creek Fish Passage Improvement and Instream Restoration | Fish passage and instream habitat will be improved on Railroad Creek, a tributary of the Lower Smith River located near Reedsport. Replacing an undersized culvert with a bridge will enable fish to access an additional 3 miles of stream habitat, and placing large wood instream will improve habitat conditions for native fish. | 120,711 | Douglas |
| 219-2026 | Smith River WC | Lower Wasson Creek Riparian Restoration | Streamside habitat will be restored on a 17.7 acre section of Wasson Creek, a tributary to the Smith River near Reedsport. Invasive blackberries will be controlled and replaced with native trees to restore functions and services provided by streamside vegetation communities, including bank stability, erosion control, and shade to the stream. | 76,505 | Douglas |
| 219-2025 | Coos Watershed Association | Williams River Quarry Falls Fish Passage Improvement | Natural stream channel conditions will be restored at the Williams River quarry, located in the Coos basin. A major fish passage barrier listed on the ODFW Statewide Fish Passage Priority List will be addressed, which will result in improved fish access to 21 miles of stream habitat. In-stream habitat complexity and streamside riparian vegetation will also be restored to support native fish and aquatic species. | 394,340 | Douglas |
| Total Restoration Projects Recommended for Funding by RRT | | | | 2,854,880 | |
| Restoration Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-2023 | Smith River WC | Spencer Creek Instream Restoration | | 130,975 | Douglas |
| 219-2024 | Jackson SWCD | Quarter Creek Water Quality Improvement Project | | 36,019 | Jackson |
| 219-2030 | The Freshwater Trust | Little Butte Creek River Mile 13 Instream and Riparian Habitat Restoration Project | | 357,866 | Jackson |
| 219-2031 | Illinois Valley WC | Page Creek Aquatic Restoration Activities Phase 1 | | 145,243 | Josephine |

| Technical Assistance (TA) Projects Recommended for Funding in Priority Order | | | | | |
|---|-----------------------------------|--|---|---------------------------|---------------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-2035 | Coquille Watershed Association | Coaledo Drainage District Tidegate Replacement and Fish Passage | Alternatives will be developed for the replacement of a failing tide gate to restore fish passage, as well as providing improved pasture conditions and water management for the Coaledo Drainage District located near Coquille. | 74,816 | Coos |
| 219-2034 | Illinois Valley SWCD | White Ditch Sucker Creek Flow Restoration & Fish Passage Study | The White Ditch irrigation conveyance system will be examined to determine the quantity of water that could be conserved, and design alternatives for infrastructure improvements will be developed to address low stream flow and fish passage concerns on Sucker Creek, located near Cave Junction. | 68,145 | Josephine |
| 219-2039 | Applegate Partnership, Inc. | Sykes Creek Fish Passage Project | Designs will be developed to remove 7 fish passage barriers and provide fish access to over 1.7 miles of habitat on Sykes Creek, a tributary of Evans Creek near Rogue River. | 67,580 | Jackson |
| 219-2041 | Coos Watershed Association | Goose Point, Haynes Inlet Project Development | A restoration plan will be developed for an approximately 80-acre wetland habitat area located on working lands at Goose Point in Haynes Inlet, north of Coos Bay. Site plans will lead to restoration projects that increase and enhance salmonid habitat, improve water quality, and create a resilient and diverse tidal marsh system. | 74,749 | Coos |
| 219-2038 | Partnership for the Umpqua Rivers | Olalla Creek and Tributaries Fish Passage and Enhancement Design | Engineered designs will be created to replace two deteriorating culverts and improve instream habitat conditions on Olalla Creek and associated tributaries in Douglas County, which will enhance habitat conditions for native salmon. | 26,408 | Douglas |
| Total TA Projects Recommended for Funding by RRT and OWEB Staff | | | | 311,698 | |

| Technical Assistance Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
|--|----------------------------|---|---|---------------------------|---------------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-2037 | Coos SWCD | Winter Lake Phase 3: Hydrologic Enhancement Design | Engineered designs will be created to replace multiple undersized culverts and install swale-type grass channels in two agricultural sections of the Beaver Slough Drainage District within the newly completed China Camp Tidegate replacement project, which will build on recently completed habitat restoration benefiting Oregon coastal coho. | 74,659 | Coos |
| 219-2040 | Coos Watershed Association | South Fork Coos River Road Assessment and Project Development | Approximately 240 miles of roads that can negatively affect the South Fork Coos River and its tributary network will be inventoried and evaluated to identify road conditions that contribute sediments to the stream or disconnect stream corridors. The inventory will result in an action plan that identifies the top 10 sediment reduction actions and all of the fish passage issues in the project area. | 68,942 | Coos |
| 219-2036 | Rogue Basin Partnership | Rogue Basin Partners Collaboration for Engineering & Technical Services | Technical assistance work will result in engineering designs, alternatives, water rights investigation, and irrigation system designs for up to six priority dam removal projects in three priority Rogue Basin geographies. | 74,800 | Jackson |
| Total TA Projects Recommended for Funding by RRT | | | | 530,099 | |
| | | | | | |
| Technical Assistance Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-2042 | Elk Creek WC | Elk Creek Watershed Limiting Factors Assessment and Restoration Action Plan | | 49,902 | Douglas |
| | | | | | |

| Stakeholder Engagement Projects Recommended for Funding in Priority Order | | | | | |
|---|----------------------------------|--|-------------------|--------------------|---------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | None | | |
| Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff | | | | 0 | |
| Stakeholder Engagement Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | None | | |
| Total Stakeholder Engagement Projects Recommended for funding by RRT | | | | 0 | |
| Stakeholder Engagement Projects <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-2050 | Southern Oregon Land Conservancy | SOLC Upper Bear Creek Ashland Watershed Engagement | | 55,087 | Jackson |

| Monitoring Projects Recommended for Funding in Priority Order | | | | | |
|--|-----------------------------------|--|---|--------------------|---------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-2047 | Partnership for the Umpqua Rivers | Umpqua Basin Collaborative Monitoring 2019-2021 | Monthly water quality data will continue to be collected in the Umpqua Basin to identify stream-specific limiting factors for planning restoration in areas with the greatest need for preservation. | 220,356 | Douglas |
| 219-2049 | Coos Watershed Association | Coos Watershed Real-time Hydrological and Meteorological Monitoring 2019-2021 | Five long-running stream gaging and weather stations in the Coos River watershed will be upgraded to improve and expand data collection efforts providing real-time hydrological and meteorological information. This will provide a dataset large enough to perform meaningful statistical analysis for monitoring, assessment, research, and project effectiveness needs. | 88,270 | Coos |
| Total Monitoring Projects Recommended for funding by OWEB Staff | | | | 308,626 | |
| Monitoring Projects Recommended but Not Funded in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount | County |
| 219-2043 | Cascade Pacific RC&D | Eel Creek Pacific Lamprey Ramp Effectiveness Monitoring 2019 | Pacific lamprey use of a passage ramp will be monitored to evaluate the functionality and usability of the ramp. Lamprey movement, holding habitats, barrier issues, and habitat use within the Eel Lake Basin near Reedsport will also be monitored to provide stakeholders with valuable information about Oregon Coast Pacific Lamprey. | 69,492 | Coos |
| 219-2045 | Partnership for the Umpqua Rivers | Umpqua Basin Stream Flow and Temperature Monitoring Project 2019 | Continued monitoring of summer stream flow and stream temperature at sites across the Umpqua Basin will inform regulation of instream water rights, model water supply and demand, and provide water quantity and quality data. | 31,958 | Douglas |
| Total Monitoring Projects Recommended for funding by RRT | | | | 410,076 | |
| Monitoring Applications Not Recommended for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount | County |
| 219-2044 | Smith River WC | Smith River ARIS/DIDSON Anadromous Salmonid Monitoring | | 62,511 | Douglas |
| 219-2046 | Klamath Bird Observatory | Bird Monitoring to Evaluate Effectiveness of Riparian Restoration in the Rogue Basin | | 33,607 | Jackson |
| Region 2 Total OWEB Staff Recommended Board Award | | | | 2,191,447 | 21% |
| Regions 1-6 Grand Total OWEB Staff Recommended Board Award | | | | 10,554,731 | |

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3014-16583

Project Type: Restoration

Project Name: Horsetail Creek Floodplain
Restoration Project Phase II

Applicant: Lower Columbia Estuary Partnership

Region: Willamette Basin

County: Multnomah

OWEB Request: \$162,240

Total Cost: \$222,359

Application Description *(from application abstract)*

The Lower Columbia Estuary Partnership (LCEP) requests \$162,236 to improve the diversity, quality, and quantity of instream and floodplain habitats on the Horsetail Creek floodplain in the Lower Columbia River Gorge, Multnomah County. The site is 180-acre Columbia River floodplain natural area containing two fish bearing streams and associated sloughs, ponds, drainages and wetlands, located on US Forest Service (USFS) property. It is situated between 1-84 and the Union Pacific Railroad and was significantly impacted by construction of the railroad and highway and historic land use. The proposed Horsetail Creek Floodplain Restoration Phase II project (Phase II) expands upon the previous project. Phase I, constructed in 2013 on the west portion of the site, improved site thermal conditions, removed fish passage barriers, restored freshwater tidal hydrology, added 600 pieces of large wood to the stream and revegetated 0.9 miles of stream habitat over the lower 35 acres of the site. Phase II, focused to the East Slough, will treat an additional 0.5 stream miles by placing 25 pieces of in-stream large wood, installing beaver dam analog structures (BDAs), and revegetating an additional 30 acres of floodplain habitat by removing an invasive understory of reed canary grass and planting 65,000 native forested wetland species. This project has the unique opportunity to leverage burned wood from the 2017 Eagle Creek Fire by felling and placing large on-site burned trees in-stream and on the floodplain. Large wood placements and the BDAs will increase habitat complexity, enhance off-channel rearing and high flow refugia habitat and encourage additional beaver activity. Restoring floodplain vegetation and closing the riparian overstory will restore process and function to floodplain forests, improve the site's cold-water refuge for anadromous salmonids, and increase macroinvertebrate prey production for juvenile salmonids.

Review Team Evaluation

Strengths

- The project builds on a previous phase 1 restoration investment.
- Since the project site is located on one of the last cold water refugia areas before the Columbia River dams, restoration actions will significantly benefit spawning and rearing ESA-listed fish.
- Technically sound designs will be implemented for large wood placement and floodplain vegetation restoration; and design alternatives and likely impacts of restoration at the site and adjacent areas were considered.

- Watershed benefits are quantified well in the application.
- The site provides a well-suited opportunity to test Beaver Dam Analog (BDA) structures, which will help beavers by providing dam building materials.
- The project will take advantage of burned trees from the 2017 Eagle Creek fire by utilizing these trees as instream and floodplain habitat features.

Concerns

- The budget has some lump sums, which makes it difficult to determine how costs break down by tasks. For example, it is unclear how costs break out for various plant establishment activities, such as mowing and herbicide application.
- Inclusion of BDA design information in the application, including a placement plan, would help provide better understanding of how BDAs will function.
- It is challenging to address causes of watershed impacts with the constraints created by the project location adjacent to I-84.

Concluding Analysis

The project addresses human altered watershed conditions in a priority location for ESA-listed fish. Proposed restoration activities take advantage of opportunities provided by available large wood, partners engaged in a restoration vision and plan for the site, and a location to restore floodplain process and function. The ecological uplift that will result is cost-effective for the watershed benefit.

Review Team Recommendation to Staff

Fund

Review Team Priority

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Review Team Recommended Amount

\$162,240

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3015-16619

Project Type: Restoration

Project Name: Little North Fork Santiam Bank Restoration

Applicant: Cascade Pacific RC&D

Region: Willamette Basin

County: Marion

OWEB Request: \$224,608

Total Cost: \$318,808

Application Description *(from application abstract)*

The Little North Fork Santiam Bank Restoration project is located just passed Salmon Falls County Park approximately 14 miles up Little North Fork Rd on private property owned by the 25 member not-for-profit group known as the Elk Horn Corporation. Over the last 30 years the members have been observing steady soil erosion along approximately 300 feet of riverbank adjacent to the county road. The riparian area in this reach which was once full of native vegetation is now consisting of exposed soils and is inundated with non-native blackberries. The bank erosion and riparian degradation in this reach has the potential overtime to undermine and impact the Little North Fork county road. The NSWC is proposing to contract River Design Group to design and oversee the construction of a large wood bank restoration project. The project area will then be planted with native riparian trees and shrubs to help further stabilize the soils and to restore the riparian habitat. The project will benefit ESA listed Spring Chinook salmon and winter steelhead by reducing further erosion, improving water quality and by providing instream large wood habitat. Grant funds will cover contracted services and supplies and materials. Project partners include: Marion Soil & Water Conservation District, Marion County, ODFW and the Elk Horn Corporation.

Review Team Evaluation

Strengths

- The project is clearly described in the application.
- The project site is located in a priority watershed for ESA-listed fish.
- Proposed actions will provide benefits to a diversity of fish species during high stream flows.
- Landowner support is demonstrated by a letter of support and significant match.

Concerns

- Since the large wood placement is not designed to extend into the stream, habitat benefits to fish will be minimal.
- Project designs focus on treating symptoms of disturbance instead of causes of watershed impacts.

- The project cost is high for a limited watershed benefit.
- The county is not involved in the project even though the adjacent county road significantly influences the river in this area.

Concluding Analysis

Since the Little North Santiam River is deficient in instream large wood, adding large wood structures will address a limiting factor for this watershed. However, the primary purpose of the proposed project design appears to be bank stabilization rather than fish habitat restoration, which results in an uncertain ecological benefit for the investment. Investigating design alternatives that incorporate a longer reach of the river could lead to a restoration approach that addresses watershed processes and functions causing erosion at the project site while incorporating restoration elements that provide cost-effective fish habitat benefits.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

N/A

Review Team Recommended Amount

\$0

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3016-16621

Project Type: Restoration

Project Name: Fribley Oak Woodland Restoration

Applicant: Coast Fork Willamette WC

Region: Willamette Basin

County: Lane

OWEB Request: \$106,794

Total Cost: \$139,794

Application Description *(from application abstract)*

The 20.03 acre property is located south of the City of Eugene within Lane County and the lower Camas Swale sub-watershed. This property contains rare but degraded Willamette Valley oak woodland habitat and a seasonal stream. Oregon white oaks within the project area are threatened by conifer encroachment and overtopping, while the understory has been heavily invaded by exotic woody vegetation. This loss of native habitat reduces biodiversity and negatively impacts important species that rely on these habitats including acorn woodpecker, slender billed nuthatch, and western gray squirrel. The proposed project will implement oak woodland habitat restoration that includes: (1) thinning small and large-diameter firs and oaks around legacy trees to restore 20.03 acres of oak habitat; (2) enhancing the seasonal stream; (3) controlling invasive plant species; (4) enhancing the plant diversity by planting native trees, shrubs, forbs, and grasses. The Coast Fork Willamette Watershed Council (CFWWC) will implement this project in partnership with CFWWC Technical Advisory Team who will provide planning & technical support. OWEB funds will be used for CFWWC staff, contracted services (tree thinning, weed removal/planting crews), travel, permits, and materials (plants).

Review Team Evaluation

Strengths

- The application is well-written.
- The project site is located in historic oak habitat and provides a potential future opportunity to connect with other oak habitat restoration projects in the area.
- Proposed plans for restoring oak habitat are technically sound.
- A letter of support is provided to demonstrate landowner support for the project.

Concerns

- Since there are no old legacy oak trees on the site, this site may not be the highest priority for oak habitat restoration.
- The project area has a small footprint, which limits the cost-benefit for the watershed investment.
- While there are oak restoration sites in the general area, existing projects are located too far away to provide immediate habitat connectivity.

Concluding Analysis

The current scale of this project limits the quantified watershed benefits, which also limits the cost-benefit of the restoration. While the proposed actions will improve oak habitat at this site, strategically recruiting neighbors to build connectivity with other oak habitat restoration projects in the region would significantly increase impacts from this investment.

Review Team Recommendation to Staff

Fund

Review Team Priority

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Review Team Recommended Amount

\$106,794

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3017-16624

Project Type: Restoration

Project Name: Upper North Santiam Side Channel Reconnection

Applicant: Cascade Pacific RC&D

Region: Willamette Basin

County: Linn

OWEB Request: \$159,894

Total Cost: \$311,809

Application Description *(from application abstract)*

The Upper North Santiam side channel reconnection project is located 10 miles upstream of the Detroit Dam near the town of Idanha. This site has an old 750 foot long historical side-channel that used to connect with the Upper North Santiam River at River Mile 59. Past stream cleaning and logging activities have removed riparian conifers and key pieces of large wood in the channel and floodplains. Side-channel development has been limited by the lack of in-stream large wood to re-direct flows off the mainstem and channel hardening and straightening activities from revetment installation. Reconnecting the side channel will primarily benefit ESA listed juvenile Spring Chinook salmon and resident cutthroat trout by increasing the availability and complexity of off-channel rearing habitat. The NSWC/CPRCD received an OWEB TA grant in 2017 to contract River Design Group to develop a list of restoration alternatives that helped the NSWC and its local technical team in identifying alternatives and the feasibility of restoring side channel habitat in this reach. Based off the alternatives analysis the NSWC is now seeking funds to implement the technical teams preferred design alternative of opening up the 750 ft historic side channel and creating an additional 150 ft side channel. Large wood structures will be placed at the inlet, outlets and throughout the reconnected and newly created side channel habitat. Grant funds will cover contracted services and supplies and materials. Project partners include: ODOT, ODFW, USFS and adjacent private landowners.

Review Team Evaluation

Strengths

- The project builds on a previous technical assistance investment.
- The proposed actions will address limiting factors identified for this watershed in a strategic location for habitat restoration to benefit ESA-listed fish.
- Designs consider potential impacts to adjacent properties.
- Surrounding landowners are actively involved in the project planning process.
- The project leverages a separate mitigation investment by expanding restoration benefits through an increased project scope and footprint.

Concerns

- A constructed side-channel reconnection may not sustain over the long term since the upstream inlet connection will likely fill in over time. Furthermore, this project may not be re-establishing a historic side-channel because the site appears to be the result of avulsion instead of a historic side-channel that filled in and disconnected from the mainstem North Santiam. This, combined with the proximity of homes and other nearby infrastructure, has resulted in a highly engineered project with a whole project cost that is high for the anticipated watershed benefit.
- Land ownership for the project area is uncertain.

Concluding Analysis

The proposed restoration will provide habitat to ESA-listed fish in a priority watershed for their recovery. While the highly engineered approach limits the cost-benefits of this project, the resulting habitat elements address priority limiting factors in the Upper North Santiam watershed.

Review Team Recommendation to Staff

Fund

Review Team Priority

7 of 9

Review Team Recommended Amount

\$159,894

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3018-16634

Project Type: Restoration

Project Name: Clackamas River Community Cooperative Revegetation Project

Applicant: Clackamas River Basin Council

Region: Willamette Basin

County: Clackamas

OWEB Request: \$66,249

Total Cost: \$98,124

Application Description *(from application abstract)*

The proposed restoration project is located in Clackamas, Oregon on the property of the Clackamas River Community Cooperative, a nonprofit, resident owned manufactured home community (45°40'40.46N 122°52'19.53W). The property includes the confluence of Sieben Creek and the mainstem Clackamas River and can be accessed from SE Jennifer Street. This project is designed to return this property to its baseline conditions by eradicating invasive species and re-establishing native plant communities, mixed riparian forest. Bohmian knotweed, garlic mustard, Himalayan blackberry, reed canarygrass, English ivy, clematis, and false brome dominate the area and negatively impact riparian functioning. Proposed work would consist of site prep, including hand cutting weeds and then treating resprouts with aquatically labeled herbicide. The project would be maintained following OWEB funding with matching funds from the CRISP partnership (pending).

Review Team Evaluation

Strengths

- The project site is located on a priority stream for ESA-listed fish, and is in close proximity to past and future restoration planned in adjacent areas.
- Restoring the riparian forest will provide significant ecological benefits to this site.
- The restoration approach is technically sound.
- It is likely that successful implementation of the proposed actions will lead to adjacent landowners committing to restoration on their properties, which will further expand the benefits of this project.
- The applicant has a proven track record restoring riparian plant communities, therefore, this project is likely to succeed.
- Project costs are reasonable for the watershed benefit.
- Landowners are actively involved and supportive of the project.

Concerns

- No significant concerns were identified.

Concluding Analysis

The proposed project provides an opportunity for a landowner with limited resources to restore a riparian forest that has ecological benefits on the decline. If an investment is not made soon to restore this riparian forest habitat, the area will further decline and require substantial investment to restore watershed function. This riparian area is at a tipping point at which a timely restoration investment will provide significant watershed benefit for the cost because there are habitat elements in place to leverage and move it towards a healthy native plant community.

Review Team Recommendation to Staff

Fund

Review Team Priority

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Review Team Recommended Amount

\$66,249

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$66,249

Staff Conditions

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3019-16640

Project Type: Restoration

Project Name: Upper Sandy River Basin Habitat
Restoration Project: Salmon River and Clear Fork

Applicant: The Freshwater Trust

Region: Willamette Basin

County: Clackamas

OWEB Request: \$317,507

Total Cost: \$1,138,223

Application Description *(from application abstract)*

Sandy River salmon and steelhead populations have declined over the last century due to degradation of habitat and other factors. The Sandy River Basin Partners (the Partners) have identified the Salmon River and Upper Sandy 6th Field watersheds among the top four areas providing high quality habitat for the basin's native fish. The Partners are aligned on a near term goal of restoring these priority watersheds to advance Sandy basin-scale restoration. On behalf of the Partners, The Freshwater Trust (TFT), US Forest Service (USFS) and Bureau of Land Management (BLM) are taking the lead on the Upper Sandy River Basin Habitat Restoration Project, which will address primary limiting factors by increasing off channel habitat/floodplain connectivity and large wood abundance in the Salmon River and Clear Fork (located within the Upper Sandy 6th Field watershed). Restoration actions 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. Proposed work is on public land managed by the USFS and BLM located near Welches, Oregon in Clackamas County. 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. OWEB funding will support TFT staff time for project design/permitting, project management, construction, travel, administration and reporting.

Review Team Evaluation

Strengths

- The application is clear and addresses previous project evaluation comments.
- The proposed restoration is similar to previous work completed in the watershed that has proven success demonstrated by evidence from fish return data.
- The project addresses key limiting factors in a priority watershed with known use by ESA-listed Chinook, coho, and steelhead. The proposed work also implements actions in multiple planning documents.
- Lessons learned from previous restoration implementation are incorporated into this phase of the project.
- The project design approach demonstrates an understanding of geomorphic processes in the Sandy River Basin.

- The project team has a proven track record as a successful partnership on similar projects.
 - Partner support is demonstrated by multiple letters of support and match.
- v

Concerns

- It is unclear whether the design-build contractor has capacity for the restoration work scheduled to occur during Summer 2019.
- Due to the scale and complexity of this project, there are greater risks of negative impacts if the project were to fail.

Concluding Analysis

This project is part of a phased strategic approach in 6th field subwatersheds of the upper Sandy River Basin. This watershed has numerous ESA-listed fish species, making it a priority area for instream habitat restoration. Furthermore, post-project data from previous work demonstrates this stream system typically has an outstanding response to restoration that improves fish run numbers. The project has a high ecological benefit-cost ratio and high likelihood of success.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 9

Review Team Recommended Amount

\$317,507

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$317,507

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3020-16668

Project Type: Restoration

Project Name: Sandy River Delta Habitat Continuity

Applicant: Sandy River Basin WC

Region: Willamette Basin

County: Multnomah

OWEB Request: \$165,544

Total Cost: \$243,596

Application Description *(from application abstract)*

Located at the confluence of the Columbia and Sandy Rivers, the Sandy River Delta supports the rich biological diversity of the Columbia River Gorge region and critical habitat for fish and wildlife, including five species of salmonids listed under the Endangered Species Act (ESA). This proposal supports landscape scale restoration underway and as planned for the Sandy River Delta Park, as described in the NEPA approved USDA Forest Service Sandy River Delta Plan. Historic land conversion, multiple uncoordinated restoration projects, and noxious weed invasion have degraded riparian forest structure and function at the Delta. Without intervention, noxious weeds are inhibiting the natural forest canopy and native habitat continuity throughout the 100-acre project area. This proposal restores functional floodplain forest by connecting previously restored habitat areas through the elimination of unintentional hedge rows of invasive species such as blackberry and Scotch broom. Contract crews will remove noxious weeds, which will be replaced with native trees, shrubs and broadleaf pollinator species. Project partners include the USDA Forest Service, Friends of Trees, National Forest Foundation, and East Multnomah Soil and Water Conservation District.

Review Team Evaluation

Strengths

- The project is located in an Oregon Conservation Opportunity Area and is a site that provides habitat to a diversity of native species.
- Proposed restoration will build on previous investments that resulted in successfully establishing native plant communities at this location.
- The applicant has a proven track record with similar type projects.
- Restoration actions are identified in a USFS management plan for the property.
- Project costs are reasonable for the proposed work.
- The project offers an opportunity for raising public awareness about watershed restoration.

Concerns

- The application lacks details to determine technical soundness of the project design approach for this

phase of restoring native plant communities.

- The restoration approach does not provide adequate plant protection to address the level of impact that is likely to occur at this site located in a heavily used recreational area. This will limit the likelihood of success for this investment.
- The budget does not include plant stewardship activities. Activities to ensure plants reach a “free-to-grow” state depends on match funding sources that are not yet secured. As a result, it is uncertain that plants will effectively be maintained to ensure a likelihood of success for establishing restored native plant communities.
- It is unclear how funds requested for effectiveness monitoring will provide information beyond the reporting elements required for Post Implementation Status Reports, which has a separate line item in the budget.
- Since there are several partners working on restoring native plant communities on the Sandy River Delta, a description on how these partners are collaborating to leverage their efforts in implementing the USFS plan for the site would be helpful. For example, inclusion of an abridged version of the USFS management plan with progress made by each partner would provide useful context for understanding whether work on this site is coordinated or occurring as independent projects.

Concluding Analysis

While the proposed restoration will improve habitat for fish and wildlife, there are significant risks caused by recreational impacts at the site that could limit the ecological uplift from this investment. Without a site-specific plan for protecting and stewarding plants, the proposed restoration is not likely to succeed in establishing restored native plant communities under the unique conditions resulting from the heavy recreation use. Also, considering additional levee removal as part of a project in the Sandy River delta area to allow increased water inundation would significantly increase ecological benefits at this location.

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

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3021-16675

Project Type: Restoration

Project Name: Heritage Pine oak and prairie restoration and enhancement

Applicant: Metro

Region: Willamette Basin

County: Washington

OWEB Request: \$107,212

Total Cost: \$214,426

Application Description *(from application abstract)*

Heritage Pine Natural Area (Heritage Pine NA) is a 202-acre property located near Sherwood, Oregon, just east of the Tualatin River National Wildlife Refuge (TRNWR) Atfalati unit and bordered by the Tualatin River to the North. Heritage Pine NA is within the TRNWR acquisition boundary and the Tualatin River ODFW Conservation Opportunity Area. The site is co-managed by Metro and the United States Fish and Wildlife Service under an Inter-Governmental Agreement. The proposed 60 acre project will implement oak and prairie habitat restoration based on a restoration plan developed by RTF Consulting in collaboration with Metro and TRNWR staff. Actions will address fundamental limiting factors identified in the state conservation strategy, especially woody plant encroachment, invasive weeds and low forb diversity. Several restoration actions are included. 1) Release of open grown legacy Oregon white oak on 14.2 acres on the edges of the prairie and on an escarpment above the emergent wetland. This will involve thinning competing conifer, Oregon ash and bigleaf maple, removal of non-native trees and seeding of native forbs and grasses. 2) Restoration and enhancement of 33.4 acres of wet and upland prairie, including removal of woody vegetation and invasive species, and seeding of native prairie species. A small drainage ditch will be filled and agricultural drain tiles will be removed to restore wet prairie hydrology. At Heritage Pine, encroaching woody vegetation includes a planted ponderosa pine plantation surrounding the iconic pine. 3) Restoring a small section of riparian forest (2.3 acres) and emergent wetland (8.9 acres) adjacent to the prairie through site preparation, native bare root plantings and seeding of native wetland species. These areas will buffer the focal oak and prairie restoration area from re-invasion by invasive weeds and provide habitat for associated species. The cost per acre over five years is approximately \$3600.

Review Team Evaluation

Strengths

- The application is well-written and provides details on restoration activities, why these actions are needed, timing of project elements, and costs.
- Restoration methods are clearly defined, technically sound, and focus on treating causes impacting habitats rather than symptoms of disturbance.
- Priority oak and wet meadow habitats will be restored to provide benefits to a diversity of native wildlife species, and will build anchor habitats in an area that has rapid urbanization.

- There is connectivity between this project site and other restoration efforts along the Tualatin River.
- The project site provides opportunities to raise public awareness about watershed restoration.
- Multiple partners are involved in the project.

Concerns

- Project management costs seem high compared to similar type projects.
- While partner participation in the project was described well at the review team site visit, the application provides limited information on partner roles.

Concluding Analysis

A diversity of priority habitats will be restored on a large conservation holding that is part of a portfolio of properties in the region owned by the applicant. Previous restoration activities on these properties, along with future restoration envisioned for these sites, will provide a network of connected fish and wildlife habitats and build watershed resilience as urbanization expands in this region. This provides a significant watershed cost-benefit for the investment.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 9

Review Team Recommended Amount

\$107,212

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$107,212

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3022-16680

Project Type: Restoration

Project Name: Lower South Fork River Floodplain Enhancement Project Phase II

Applicant: McKenzie Watershed Alliance

Region: Willamette Basin

County: Lane

OWEB Request: \$464,079

Total Cost: \$962,134

Application Description *(from application abstract)*

The Lower South Fork McKenzie River Floodplain Enhancement Project is a multi-phased effort designed to restore the physical, chemical, and biological processes that maintain a healthy, diverse, and resilient ecosystem within the lower 4.2 miles and 600 acres of the South Fork McKenzie River (South Fork) downstream of U.S. Army Corps of Engineers (USACE)-operated Cougar Dam. Phase I was completed in 2018 over the lower 0.7 miles and 150 acres of the South Fork. The proposed Phase II will continue that work on 0.5 miles and 50 acres of floodplain directly upstream of Phase I on public lands owned and managed by the U.S. Forest Service (USFS) in Lane County near the unincorporated community of Blue River. The installation of USACE operated Cougar Dam, placement of berms and levees, removal of instream wood, and timber harvest from floodplain forests degraded habitat within the lower South Fork valley. These activities alter physical, chemical and biological processes and degraded habitat for native species including ESA-Threatened spring Chinook salmon and bull trout. Limiting factors include lack of spawning gravel, off-channel habitat, high flow refuge, pools, cover, fine sediment deposition on the floodplain, and shallow wetland habitat. Phase II will address limiting factors through the removal of artificial berms and other floodplain surfaces, manual aggradation of incised channels, and placement of large wood throughout the valley bottom. Partners include the USFS Willamette National Forest, McKenzie Watershed Alliance, Oregon Department of Fish and Wildlife and USACE.

Review Team Evaluation

Strengths

- The application is well-written.
- This phase 2 project builds on previous restoration to reconnect the stream with its floodplain in a large-scale, whole valley approach that treats causes impacting watershed health rather than symptoms of disturbance.
- Lessons learned from previous restoration work are incorporated into this phase of the project.
- Effectiveness monitoring is incorporated into the project and provides an opportunity to understand the efficacy of the stage zero restoration approach.
- The overall project cost for the scale of resulting watershed benefits is reasonable.
- The project team has a proven track record as a successful partnership on similar projects.

- Partner support is demonstrated by letters of support and match.

Concerns

- Since impacts from Cougar Dam continue to affect this watershed, there could be a limit to how effective this restoration can be in restoring watershed processes and functions.
- Some ODFW staff have concerns regarding the technical soundness of the stage zero approach, however, the local ODFW staff provided a letter of support for this project that highlights the success of the phase 1 work.
- There is limited data on the effectiveness of the stage zero restoration approach.

Concluding Analysis

In addition to Cougar Dam, the lower South Fork valley in the McKenzie Watershed has been impacted by placement of berms and levees, removal of instream wood, and timber harvest from floodplain forests. While the dam will continue to be a limiting factor in this watershed, the proposed restoration will make significant progress towards restoring watershed processes and functions degraded by the collective impact of these historic actions that led to current conditions. This large-scale, high impact project will build watershed resilience and provide significant benefits to ESA-listed fish in a watershed prioritized for their recovery. Based on phase 1 results, it is expected that phase 2 will result in a significant amount of high quality stream habitat that will likely be utilized by fish instantly.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 9

Review Team Recommended Amount

\$464,079

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$464,079

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3023-16702

Project Type: Restoration

Project Name: Greenhill Oak and Prairie Restoration

Applicant: Long Tom WC

Region: Willamette Basin

County: Lane

OWEB Request: \$299,936

Total Cost: \$556,756

Application Description *(from application abstract)*

The project area encompasses 315 acres on four contiguous private properties in the Coyote Creek subbasin of the Long Tom Watershed located about a mile southwest of Eugene in an area identified as high priority for oak and prairie conservation by the Rivers to Ridges Partnership, the Oregon Conservation Strategy, and The Nature Conservancy. The project proposes to restore 315 acres oak savanna, woodland, and prairie habitat that currently suffers from fire suppression, woody encroachment, dense canopy conditions, and pressure from nonnative and invasive plant species. Native prairie and oak understory plant communities continue to support a number of rare and high-fidelity plant species and in some places moderate and high species diversity. Grassland birds, including Oregon Vesper Sparrow, nest in the project area. The Long Tom Watershed Council proposes to work with the four highly engaged and motivated landowners, NRCS, and USFWS to develop land management plans to guide habitat restoration activities, including transitioning 78 acres of planted Doug fir woodland to oak savanna, implement habitat restoration actions, including prescribed fire, and share experiences with other landowners. The site would leverage OWEB's significant prior investment in restoration on several adjacent and nearby properties. Project activities include thinning, brush treatments, mowing, invasives control, good fire, and seeding. On one site rotational grazing planning and monitoring will continue to inform the use of grazing as a tool in prairie and oak habitat stewardship. Project partners include the U.S. Fish and Wildlife Service, the Rivers to Ridge Partnership and burn implementation group, the Natural Resources Conservation Service, and private landowners.

Review Team Evaluation

Strengths

- The proposed project leverages previous OWEB restoration investments by extending connectivity of restored habitats on properties adjacent to the project area.
- Priority oak savannah, woodland, and prairie habitats identified in the Oregon Conservation Strategy will be restored.
- The project has a large footprint with four large contiguous properties, which creates a significant cost-benefit for the watershed investment.
- Landowners are actively involved in building partnerships to utilize restoration resources, and they have already completed voluntary restoration work on their properties.

- Multiple partners are involved in the project, which is demonstrated by letters of support and match.
- Existing habitat in the project area has a high diversity of native plants, including 74 prairie plant species on just one landowner site alone.

Concerns

- No significant concerns were identified.

Concluding Analysis

Landowners involved in this project share a unified vision for a ridgetop to ridgetop restoration approach across their properties. This project also provides an opportunity to demonstrate how voluntary conservation and working lands can effectively be integrated together. There is a high likelihood for this project to succeed because of the scope and scale of the restoration, diversity of partners involved, and integration of land management actions with habitat restoration.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 9

Review Team Recommended Amount

\$299,936

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$299,936

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3024-16711

Project Type: Restoration

Project Name: South Fork Pedee Creek Enhancement

Applicant: Luckiamute WC

Region: Willamette Basin

County: Polk

OWEB Request: \$121,684

Total Cost: \$466,534

Application Description *(from application abstract)*

The South Fork Pedee Creek Enhancement project area lies within the timberlands of the upper Luckiamute watershed in the Pedee 6th field hydrologic unit. The North and South Forks join to form Pedee Creek, which then drains into the Luckiamute River near the community of Pedee in Polk County. Historical practices such as logging to the water's edge, log removal, and log drives impacted upper Luckiamute sub-basins, including Pedee. A severely undersized culvert at the upper end of the project reach is blocking the transport of bedload. The streambed is scoured to bedrock in many areas, a lack of instream wood and debris jams has led to poor sediment sorting and gravel retention, riparian conifers are absent in large sections, and there is little channel-floodplain interaction. The lower culvert, near the center of the project reach, is undersized and failed during high flows in 2012; a small, ephemeral alder log jam has raised the streambed, otherwise the pipe's size and slope create a juvenile barrier. The riparian corridor along a 0.74-mile section of the project reach is dominated by invasive weeds and is not providing adequate shade. The Luckiamute Watershed Council used NetMap, a fine-scale watershed based modeling tool, in combination with field verification to prioritize restoration reaches for steelhead recovery in the Luckiamute basin. The proposed project area was the highest ranking reach. Resolving current and future instream large wood deficiencies through log placement, conifer enrichment, understory enhancement, and riparian revegetation will result in both immediate and long-term habitat benefits and restore key ecological processes throughout the 2.8-mile reach. Project partners will replace both culverts during the project period. Partners are Starker Forests, Inc., Hancock Forest Management (on behalf of the property owners), Forests Forever, Inc., Western Oregon University, and the Bureau of Land Management.

Review Team Evaluation

Strengths

- The project site is located in a stream reach with high potential for improved biological value, and restoration actions will address limiting factors and benefit steelhead.
- The proposed actions will treat causes impacting watershed health instead of symptoms of disturbances by addressing undersized culverts trapping sediment bedload. When the culverts are replaced, this bedload will move downstream, sort, and be captured by the large wood structures that will be placed instream. This will provide a restored streambed with fish habitat benefits.

- The proposed restoration is based on a rigorous analysis of the watershed that was used to determine the best locations for stream restoration. As a result, the proposed project has a high likelihood for success in achieving expected watershed benefits.
- Alternatives were evaluated as part of the project design.
- The project includes a public awareness component, including Western Oregon University student involvement.
- The ecological benefits from this project significantly outweigh the cost.
- Applicant has a proven track record in implementing similar projects.

Concerns

- A portion of the project planting component will occur within a 100-foot riparian buffer on private timber lands that could potentially be harvested in the future.

Concluding Analysis

This comprehensive project across multiple properties leverages landowners investing in road crossings that are currently interrupting watershed processes and functions. An OWEB grant to fund instream large wood placement is timely in order to leverage the landowner investment and achieve the highest benefit-cost of this voluntary work. Instream large wood placement needs to occur before the culverts are replaced so that when the bedload trapped above the culverts moves downstream, the large wood can sort and trap gravels and rebuild a natural streambed that provides fish habitat. The project has a high likelihood of success and benefit-cost- ratio because it addresses altered watershed functions over a significantly long stream reach that will benefit priority steelhead populations.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 9

Review Team Recommended Amount

\$121,684

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$121,684

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3025-16712**Project Type:** Restoration**Project Name:** Truax Island Floodplain Restoration
- Phase 1 - Planting and Plant Establishment**Applicant:** Calapooia WC**Region:** Willamette Basin**County:** Linn**OWEB Request:** \$212,671**Total Cost:** \$365,225**Application Description** *(from application abstract)*

Truax Island Access is a 128 acre undeveloped Willamette Greenway site within the Upper Willamette River Floodplain conservation Opportunity Area (COA 61, Oregon Conservation Strategy, 2016). The project occurs on the east side of the mainstem Willamette in kilometer slices 160-161 (<http://ise.uoregon.edu/slices/Main.html>). Truax Island is bordered on the south side by Dead River Slough which flows into the Willamette River. The Willamette River is the northern border of Truax Island. The primary watershed issue being addressed during the current Phase 1 is restoration of 40 acres of floodplain forest in the active floodplain which was cleared for agricultural use, and addressing riparian forest degraded by invasive species, as well as enhancing a small area of oak-pine uplands and adding turtle basking structures. Site preparation is underway thanks to a grant from Meyer Memorial Trust (OWEB 216-8201-15835). Funding is sought to install 62,160 native stems to reestablish a native floodplain forest (31.3 acres) and enhance oak-pine uplands through oak release and planting of upland native plants (8.7 acres). The future Phase 2 will build on the vegetation work and will focus on increasing connectivity to Dead River Slough and a relict gravel pit for juvenile salmonids and enhancing Western pond turtle habitat. Project partners include Oregon Parks and Recreation Department, Knife River Corporation, River Design Group, Department of Geologic and Mineral Industries (DOGAMI), The Nature Conservancy, and the Calapooia Watershed Council.

Review Team Evaluation**Strengths**

- The project site is located in a priority watershed area and implements actions identified in multiple plans, including the Upper Willamette Conservation and Recovery Plan for Chinook Salmon and Steelhead, Oregon Conservation Strategy, and the Willamette Anchor Habitat Working Group Action Plan.
- A diversity of watershed habitat benefits will result from the proposed restoration activities, including oak and western pond turtle habitats.
- The project builds connectivity with upstream and downstream restoration efforts.
- Multiple partners are involved in the project, which is demonstrated by letters of support. The applicant has engaged a diversity of partners necessary for this project to be successful, including neighboring agricultural landowners, state agencies, and an on-site gravel industry stakeholder.

- The project site provides opportunities to raise public awareness about watershed restoration.

Concerns

- Since previous turtle habitat projects have been unsuccessful, consulting ODFW to ensure turtle predation concerns are addressed and their life history is considered in scheduling restoration activities, such as timing of mowing and herbicide use, would improve technical soundness of the restoration approach.
- Planting plans for some of the habitat types may not be the most effective approach for the site. For example, planting an understory of herbaceous woody vegetation in the oak habitat area is discouraged. Given the scale of the site and the diversity of vegetation communities, the project would benefit from vetting the revegetation plan with a technical team to ensure planting approaches are likely to succeed and provide significant watershed benefits for the investment.

Concluding Analysis

Since initial site preparation has begun on the site with match funding sources, there is an element of timeliness and need to implement replanting strategies in order to maintain gains from this investment. The proposed restoration has potential to provide significant ecological uplift to priority habitats in a location that leverages connectivity with restoration investments in adjacent areas. However, proposed restoration strategies for western pond turtle and oak habitats have uncertain likelihood of success, which limits the benefit of this watershed investment. If the application is resubmitted, the applicant is encouraged to consult with ODFW on pond turtle habitat, and work with technical advisors on planting techniques, especially in the oak habitat, to ensure planting designs are site-appropriate and technically sound for the habitat type.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

N/A

Review Team Recommended Amount

\$0

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

| | |
|---|----------------------------------|
| Application Number: 219-3026-16717 | Project Type: Restoration |
| Project Name: Oak Creek Fish Passage Phase I | |
| Applicant: Marys River WC | |
| Region: Willamette Basin | County: Benton |
| OWEB Request: \$139,918 | Total Cost: \$320,457 |

Application Description *(from application abstract)*

This project is located in the Oak Creek watershed, a tributary which enters the Marys River in Corvallis a mile from its confluence with the Willamette. This proposal represents the first phase to address fish passage barriers identified in Marys River Watershed Council's TA grant (#219-3007). Working with project partners Benton County Public Works and OSU Research Forests, we propose to replace two culverts which prevent access to the high value cutthroat trout habitat in the upper reaches of the basin. A third previously impassable culvert was replaced by Starker Forests in summer 2018, opening access to the upper reaches of Alder Creek, Oak Creek's major tributary. Removal of these barriers also builds upon the removal of a dam previously installed near OSU's Oak Creek Center for Urban Horticulture. The Oak Creek Action Team convened by four professors in the late 1990's recommended and oversaw the removal in 2006. The Benton County culvert located on Alder/Skunk Creek just upstream of its confluence with Oak Creek will replace a culvert that is undersized and perched with the bottom ribs rotted out, presenting a hazard to migrating aquatic life. For this crossing, we are proposing an open bottom multi-plate arch culvert with concrete footings and simulated stream bed. Replacement of this culvert opens up year-round passage for 4.65 miles in the Alder and Oak Cr drainages, which is presently truncated on mainstem Oak Creek at the OSU McDonald Forest research weir (a complete passage barrier to be addressed with our TA grant). The OSU Research Forests culvert is on forest road #6020 upstream of the research weir, with high quality habitat in two branches of Oak Cr for 1.43 total miles above it. The current culvert in this location is undersized, perched and rotted in the center with about a 2' drop to the stream through the center of the pipe at low flows. We propose to install a counter-sunk squash pipe with passively-seeded stream bed at this location.

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The Benton County culvert located on Alder/Skunk Creek just upstream of its confluence with Oak Creek will replace a culvert that is undersized and perched with the bottom ribs rotted out, presenting a hazard to migrating aquatic life. For this crossing, we are proposing an open bottom multi-plate arch culvert with concrete footings and simulated stream bed. Replacement of this culvert opens up year-round passage for 4.65 miles in the Alder and Oak Cr drainages, which is presently truncated on mainstem Oak Creek at the OSU McDonald Forest research weir (a complete passage barrier to be addressed with our TA grant).

The OSU Research Forests culvert is on forest road #6020 upstream of the research weir, with high quality habitat in two branches of Oak Cr for 1.43 total miles above it. The current culvert in this location is undersized, perched and rotted in the center with about a 2' drop to the stream through the center of the pipe at low flows. We propose to install a counter-sunk squash pipe with passively-seeded stream bed at this location.

Review Team Evaluation

Strengths

- The project builds on OWEB technical assistance and stakeholder engagement investments.
- Undersized culverts that are in danger of failing and negatively impacting stream conditions will be addressed, which will also open access to cold water refugia habitat for native fish.
- An OSU concrete research weir located between the two project culverts will likely be removed in the future, and OSU plans to use this opportunity to study how barrier removal affects stream sediment transport.

Concerns

- There is uncertainty about whether the dam on an OSU property downstream of the project area is likely to be addressed.
- While there are plans to address the OSU research weir located between the two project culverts, it will not occur until after the current research project is completed in 2023.
- The project design approach could provide additional ecological benefit for the investment by incorporating instream habitat components.

Concluding Analysis

The project area provides a unique opportunity for a watershed restoration strategy to connect multiple land use types including agricultural, residential, urban, and forestry. The proposed culvert replacements will have limited benefits due to the downstream dam and research weir. The current stakeholder engagement project could provide an opportunity to continue conversations with OSU and secure a stronger commitment for addressing the downstream dam. Until there is more definitive indication these other barriers will be addressed in the near-term, the proposed restoration lacks urgency and has uncertain ecological benefit for the investment.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

N/A

Review Team Recommended Amount

\$0

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3027-16614

Project Type: Technical Assistance

Project Name: Feasibility Assessment of Pilot Cold Water Refuge Enhancement Technique

Applicant: Lower Columbia Estuary Partnership

Region: Willamette Basin

County: Multnomah

OWEB Request: \$74,977

Total Cost: \$101,658

Application Description *(from application abstract)*

LCEP requests \$74,976 to assess the feasibility and develop 30% engineering designs for a pilot technique to enhance cold water refuges at the mouths of lower Columbia Gorge tributaries to benefit salmon and steelhead in the face of warming climate conditions. The importance of cold water refuges to salmon and steelhead migrating through the Columbia River is well documented, with steelhead using cold water refuges for days to weeks during the summer. Summertime water temperatures in the mainstem Columbia River have increased steadily over the last several decades, and recent annual peak temperatures have regularly exceeded 21°C and been as high as 24°C. These already stressful summer temperatures are predicted to continue to warm and the duration of that warm period is expected to increase. The warmest period typically occurs in July to early September, coincident with late-migrating summer Chinook and with substantial portions of the fall Chinook salmon and summer steelhead runs. Previous research identified several characteristics that make cold water areas along the mainstem suitable for salmonid use: 1) a temperature differential of >2°C with the mainstem, 2) water depth of >0.5 meters for juveniles and >2 meters for adults, and 3) size of > 1 acre. In the lower Columbia River below Bonneville Dam only the Kalama, Cowlitz, and Lewis rivers meet these criteria, leaving a distance of 57 miles between refuges in the Lewis River and Eagle Creek. To fill this spatial gap, we assessed the feasibility of expanding the cold water plumes of three lower Columbia Gorge tributaries, which meet the temperature criterion but not the size and depth criteria, through manipulating nearby topography. By mimicking topography at other documented thermal refuges, primarily Herman and Eagle creeks' confluences with the mainstem, we hope to deflect mainstem Columbia flow away from the confluences of smaller tributaries to expand plume size and depth to foster salmonid use.

Review Team Evaluation

Strengths

- The application is well-written and clearly describes a need for the proposed technical assistance.
- Enhancing cold water refugia addresses a key limiting factor for ESA-listed fish in the Columbia River. This technical assistance project provides an opportunity to design watershed restoration that will create cold water refugia fish habitat, and the proposed model may have potential to inform other cold water refugia habitat projects.

Concerns

- Portability of this work may be limited in its applicability to future projects due to differences in site conditions.
- There are a limited number of partners involved in the project.

Concluding Analysis

Cold water refuge for ESA-listed fish migrating along the Columbia River corridor is a key limiting factor in a priority location for their recovery. Restoring this habitat type in a large-scale river system is challenging, therefore, progress towards designing effective restoration projects will provide significant watershed benefit for the cost.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 2

Review Team Recommended Amount

\$74,977

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$74,977

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3028-16639

Project Type: Technical Assistance

Project Name: Conserving Mussels in Aquatic Restoration--Technical Assistance

Applicant: The Xerces Society

Region: Willamette Basin

County: Lane

OWEB Request: \$74,952

Total Cost: \$90,140

Application Description *(from application abstract)*

We will partner with restoration practitioners statewide to identify and protect freshwater mussels during restoration projects. Mussels are among the most important, yet overlooked, animals in Oregon's freshwater systems, providing valuable services to salmon and other organisms. Mussels purify water by filtration, increase macroinvertebrate abundance, support lamprey, and cycle nutrients. However, many of Oregon's native species risk extinction. Aquatic habitat restoration poses a significant emerging threat to these cryptic, frequently unnoticed animals. They are often discovered by restoration practitioners after site dewatering, at which point their chance of survival is limited. When mussel beds are lost, recovery can take decades. Our solution is to provide direct technical assistance to 18 existing restoration projects, affecting at least 20 river miles, including conducting mussel surveys, reviewing restoration plans and providing feedback on protecting mussels, and being present during restoration projects to coordinate mussel salvages or otherwise assist. Identified project partners and locations include: 1) McKenzie River Trust; Finn Rock Reach Preserve; McKenzie River near Blue River, Lane Co; 2) Luckiamute WC; South Fork Pedee Creek and Upper Luckiamute River, near Falls City, Polk Co; 3) Middle Fork Willamette WC at Elijah Bristow SP; Middle Fork Willamette River near Dexter, Lane Co; 4) BLM, South Fork Alsea River near Alsea, Benton Co; 5) MidCoast Watersheds Council; Bummer, Ernest, and Crazy Creeks; near Alsea, Benton and Lincoln Co; and North Creek near Lincoln City, Lincoln Co; and 6) CTUIR at restoration sites on the Middle Fork and North Fork John Day Rivers, and the Grand Ronde River and tributaries, Grant, Umatilla, and Union Co. Projects activities range from culvert replacements to large wood placement and floodplain and in-channel restoration. We will identify other partners through our complementary Stakeholder Engagement project.

Review Team Evaluation

Strengths

- The application is well-written, and provides a clear justification for the need to protect freshwater mussels in Oregon's waterways.
- Proposed technical assistance activities are based on a technically sound Best Management Practices Manual, and will provide an effective resource for restoration practitioners.
- The applicant has relevant qualifications and experience for the proposed project.

- Project support is demonstrated by multiple letters of support.

Concerns

- Some project costs in the budget are unusually high, including costs for a wetsuit and travel costs. Additional explanation on these costs would help to determine whether they are necessary and reasonable.
- Given the broad extent of the mapped freshwater mussels, it will be difficult to have a significant impact with the limited available resources. Prioritizing geographies could be useful in helping to focus efforts.
- It is unclear whether all types of restoration projects are a risk to freshwater mussels, or whether there is a threshold at which watershed restoration work impacts mussels. For example, large wood placement projects that lay wood in the channel do not impact the stream to the same extent as large wood placement projects that bury the logs into the channel and may be more disruptive to mussel beds.

Concluding Analysis

This proactive approach for introducing Best Management Practices is likely to succeed in protecting native freshwater mussels during watershed restoration projects. Similar to lamprey, freshwater mussels are widely overlooked even though they play an important role in freshwater habitats. Raising awareness and teaching techniques for incorporating lamprey into restoration project design considerations made significant progress in protecting this species; therefore, it is expected the same result is likely to occur for freshwater mussels.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 2

Review Team Recommended Amount

\$74,952

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$74,952

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

| | |
|--|---------------------------------|
| Application Number: 219-3029-16697 | Project Type: Monitoring |
| Project Name: Luckiamute Temperature Monitoring Phase 2 | |
| Applicant: Luckiamute WC | |
| Region: Willamette Basin | County: Polk |
| OWEB Request: \$48,152 | Total Cost: \$62,552 |

Application Description *(from application abstract)*

The Luckiamute Watershed Council (LWC) proposes to continue its temperature monitoring program. The project will collect continuous temperature data from surface waters in the Luckiamute River Watershed during the summer months of 2019 and 2020. The goal 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 will be selected in order to characterize priority tributaries and stream reaches, detect trends, collect baseline data, and ground-truth results of the thermal loading model from the 2017 NetMap analysis. The LWC proposes 21 monitoring stations in the mid and upper Luckiamute watershed in Polk and Benton Counties. Work will include field deployment, mid-season checks, and retrieval of 21 loggers. The LWC will also implement appropriate quality assurance and quality control measures to ensure high-quality data that meets A-level standards. The LWC will share data through presentations and incorporation of web-based interpretation and visualization applications. Project partners include field and technical volunteers, Hancock Forest Management, and River Network.

The Luckiamute Watershed Council (LWC) proposes to continue its temperature monitoring program. The project will collect continuous temperature data from surface waters in the Luckiamute River Watershed during the summer months of 2019 and 2020. The goal 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 will be selected in order to characterize priority tributaries and stream reaches, detect trends, collect baseline data, and ground-truth results of the thermal loading model from the 2017 NetMap analysis. The LWC proposes 21 monitoring stations in the mid and upper Luckiamute watershed in Polk and Benton Counties. Work will include field deployment, mid-season checks, and retrieval of 21 loggers. The LWC will also implement appropriate quality assurance and quality control measures to ensure high-quality data that meets A-level standards. The LWC will share data through presentations and incorporation of web-based interpretation and visualization applications. Project partners include field and technical volunteers, Hancock Forest Management, and River Network.

Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant has an existing DEQ approved Sampling and Analysis Plan (SAP), and the application has a good explanation of monitoring methods and steps to manage and interpret the data.
- There is a sound rationale for and explanation of the sites they are choosing to monitor.

- The applicant has local support from relevant partners and some local landowners.
- The interactive web interface increase access to the data.
- A two-page handout for each participating landowner will explain what the data mean.
- The data are being collected to ground truth and inform the NetMap model to prioritize restoration actions.
- The application schedule incorporates a planning element for their Temperature Subcommittee and Project Review Committee to review and interpret the data for use in planning and prioritizing future restoration projects.

Monitoring Team Concerns

- Depending on the web interface developed, more time and resources might be needed to develop an effective online visualization tool in order to meet the objectives described in the application.
- Some sections of the application were overly long – particularly the issues section. Consider using bullet points to succinctly describe important content.

Monitoring Team Comments

- The applicant should consider monitoring water temperature year-round to adequately document thermal dynamics.
- The applicant should consider developing additional water temperature metrics beyond what was mentioned in the application.

Review Team Evaluation

Strengths

- The proposed monitoring builds on a previously funded project that has demonstrated success.
- The application is well-written.
- Protocols described in the application are technically sound.
- Resulting monitoring data will be used to groundtruth the applicant's NetMap watershed restoration planning tool that is used to identify and prioritize watershed projects.
- Multiple partners support this monitoring work, which is demonstrated by letters of support.
- The applicant has a demonstrated track record from previous monitoring work, which included effectively reviewing and reporting data.
- Landowners and the local community will be engaged as part of this monitoring project.
- Project costs are reasonable for the proposed work.

Concerns

- The proposed work shifts the direction of the applicant's monitoring approach, which previously included monitoring effectiveness of completed restoration projects. The current proposal focuses monitoring to only identifying areas with water temperatures well suited for fish rearing and migration in the forested reaches of the watershed to identify future restoration opportunities.

Concluding Analysis

The proposed monitoring is a continuation of a number of integrated efforts the applicant is implementing to build a comprehensive watershed restoration strategy. Monitoring data will characterize temperature conditions in forested fish rearing and migration habitat to identify priority tributaries and stream reaches for future restoration. The applicant has a history of adapting their restoration strategy based on lessons learned from monitoring data, which results in cost-effective prioritized restoration projects with a high likelihood for success.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 1

Review Team Recommended Amount

\$48,152

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$48,152

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3030-16713**Project Type:** Monitoring**Project Name:** Calapooia Environmental DNA Monitoring**Applicant:** Calapooia WC**Region:** Willamette Basin**County:** Linn**OWEB Request:** \$48,378**Total Cost:** \$62,978

Application Description *(from application abstract)*

1) The Calapooia Watershed Council's proposed environmental DNA (eDNA) monitoring will occur on the mainstem Calapooia River/Sodom Ditch, from its confluence with the Willamette River in Albany to the end of anadromy on National Forest Lands at RM 72.0. 2) To best manage and restore native populations of aquatic organisms in the Willamette Valley, a baseline understanding of their distribution and habitat utilization is required. However, this critical information is largely lacking in the Calapooia River due to limitations in agency capacity and the elusiveness of certain species. Thus, management decisions regarding the declining native fish species often lack critical information. Spring Chinook in the Willamette River are listed as Threatened under the Endangered Species Act. With the recovery of UWR spring Chinook still attainable, valuable spatial information gathered with eDNA monitoring will begin to guide the restoration of important habitats and provide insights into the recovery of the population. 3) In order to make the most effective use of monitoring funds and enable instream restoration targeted at the reach-scale, the Calapooia Watershed Council seeks to address these information gaps regarding wild spring Chinook in the Calapooia River with eDNA monitoring. Environmental DNA (eDNA) is an innovative monitoring technique that collects and analyzes the DNA shed into the environment by an organism. By filtering stream water and analyzing the contents for the DNA of a particular species, the presence of that species can be determined with a high level of certainty. The results of the eDNA monitoring will inform the selection of instream habitat restoration sites, depict the current spatial distribution of spring Chinook in the Calapooia River, and provide insights for future monitoring. 4) The CWC will be partnering with the National Genomics Center for Wildlife and Fish Conservation, Oregon Department of Fish and Wildlife, and Weyerhaeuser.

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Monitoring Team Evaluation

Monitoring Team Strengths

- This application proposes an appropriate use of eDNA technology to detect Spring Chinook in the Calapooia River, where the species is believed to be at very low densities.
- The applicant has a realistic understanding of what the information this technology can provide.
- The applicant is leveraging an existing eDNA assay for Spring Chinook and they are going the extra step to verify it will detect Willamette river species in advance.
- The applicant is working closely with the National Genomics Center for Wildlife and Fish Conservation to ensure they are following the correct sampling collection method and samples are analyzed correctly.
- The applicant has a good track record of coordination with ODFW to help fill data gaps in the Calapooia River.
- This project provides a nice opportunity to engage a broad range of volunteers and engage underutilized groups to help collect water samples.

Monitoring Team Concerns

- With the low numbers of Spring Chinook in the Calapooia, they may not detect any DNA, but that would be important information.
- The application mentions leveraging the water temperature data they are collecting with another monitoring grant, but this was not described in the schedule and no funding is provided in the budget.
- It was not clear what the additional staff time in the budget was needed for since they describe this monitoring project as needing minimal effort to collect the data.

Monitoring Team Comments

- Collect a water sample from a known stream (outside the Calapooia) where Spring Chinook are present and submit it blindly to the lab to verify their ability to detect DNA.
- The final report should include information from the eDNA results and mapped relative abundance and incorporate existing data gathered from additional monitoring grants to inform future monitoring and restoration efforts.

Review Team Evaluation

Strengths

- The proposed monitoring protocols and use of eDNA data is technically sound.
- Resulting monitoring data will fill data gaps and inform future watershed restoration projects.
- The applicant's project manager has experience with this monitoring technique.
- The project is supported by a partnership with ODFW and National Genomics for Wildlife and Fish Commission.

Concerns

- It is unclear how other data, such as the temperature data referenced in the application, will be integrated with eDNA data. The proposed eDNA data alone may not help identify potential watershed restoration sites. As a result, the certainty of success for this project is unclear without more information on how other watershed data will be incorporated with eDNA information to direct future projects with watershed health benefits.
- The application is unclear on what final products, such as a report, will result from this monitoring project.
- Costs for staff for the amount of work outlined in the application seem high. Without an explanation on the need for the number of hours for the project manager, executive director, and restoration program manager, it is unclear whether costs and hours are reasonable for achieving the scope of work described in the application.
- It is unclear what the outreach project components requiring education staff time will entail, and whether these components are necessary for the proposed monitoring project.

Concluding Analysis

The proposed eDNA monitoring project has potential for providing useful information to determine the presence of spring Chinook that could inform ODFW management of the Calapooia River. Without additional details on how this eDNA data will be integrated with other watershed data to provide information that will be used to implement and direct watershed health projects, it is unclear whether this monitoring project is likely to succeed.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

N/A

Review Team Recommended Amount

\$0

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3031-16637

Project Type: Stakeholder Engagement

Project Name: Engaging Stakeholders in Restoration to Enhance Drinking Water Quality

Applicant: Coast Fork Willamette WC

Region: Willamette Basin

County: Lane

OWEB Request: \$27,715

Total Cost: \$52,840

Application Description *(from application abstract)*

The Coast Fork Willamette watershed is located in the southern most reaches of the Willamette Basin, in Lane County. As one of the two headwater rivers that create the mainstem Willamette River near Eugene, the Coast Fork Willamette Rivers' influence can be felt throughout the Willamette Basin. The Coast Fork Willamette Watershed Council (CFWWC) continues to work collaboratively with partners to recruit stakeholders and encourage new projects that benefit fish, wildlife, natural ecosystems and human health. CFWWC is in the process of finalizing a 10-year Action Plan prioritizing work throughout the watershed. The result of this work has identified key areas that will provide the most ecologically significant impact for on the ground restoration and enhancement. This project seeks to recruit stakeholders in the prioritized regions of the Row River, Mosby Creek, and Upper Coast Fork Willamette watersheds to conduct on the ground restoration. The sensitive areas identified are drinking water sources for both the City of Cottage Grove (approximately 10,000 residents) and the City of Creswell (approximately 4,500 residents). This work is essential for the long term protection of drinking water sources for the communities reliant on the Coast Fork Willamette River surface water for drinking water. Funding for this project will primarily support CFWWC staff time and travel required to conduct outreach efforts, build relationships with key landowners, and design projects for future restoration efforts. Primary project partners include the City of Cottage Grove, the City of Creswell, Oregon Department of Environmental Quality, private landowners, and the Coast Fork Willamette Watershed Council. Secondary partners that will participate if appropriate based on landowner interest, future project design, current land use, and project location include McKenzie River Trust, Natural Resources Conservation Service, Farm Services Agency, and Oregon Department of Fish and Wildlife.

Review Team Evaluation

Strengths

- Previous application evaluation concerns are addressed by the applicant.
- The project outreach plan is based on drinking water source protection, and proposed landowner engagement methods have proven successful.
- The watershed council is well-suited to serve as an ambassador bridging the urban and rural divide, and has a proven track record in effectively communicating with these stakeholders.

- Support from both cities involved in the project is demonstrated by letters of support.
- Resulting restoration project development will be beneficial to the watershed.
- Stakeholder engagement integrates job opportunities for youth crews.
- The project is timely for identifying restoration opportunities that could potentially secure local funding sources.

Concerns

- The project problem statement is unclear.
- It will be difficult to track what actions landowners complete on their own in response to the stakeholder engagement activities.
- The cities' staff roles in this project are unclear.

Concluding Analysis

The proposed stakeholder engagement project will reach a significant number of landowners in a community that has not yet been contacted through watershed related work. Framing the engagement conversation around drinking water concerns provides an effective common ground starting point to raise awareness about watersheds, and builds landowner interest to participate in activities that benefit the watershed. The applicant is encouraged to work with the county on trash pick up activities that may result from this stakeholder engagement work.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 2

Review Team Recommended Amount

\$27,715

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$27,715

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3032-16649

Project Type: Stakeholder Engagement

Project Name: Engaging Diverse Stakeholders in Floodplain Restoration at Elijah Bristow State Park

Applicant: Middle Fork Willamette WC

Region: Willamette Basin

County: Lane

OWEB Request: \$124,594

Total Cost: \$161,131

Application Description *(from application abstract)*

Through an OWEB Technical Assistance grant, the Middle Fork Willamette Watershed Council (MFWWC) has been working with Wolf Water Resources (W2r), and a robust technical team (Oregon Parks and Recreation Dept., Oregon Dept. of Fish and Wildlife, U.S. Geological Survey, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and the U.S. Forest Service) to develop process-based floodplain restoration designs for Elijah Bristow State Park (EBSP) – targeting 800 acres – and the sections of the Middle Fork Willamette River (MFWR) and Lost Creek that flow through the park. Dam building on the MFWR and berm creation have resulted in the loss of dynamism and diverse habitat historically present in this floodplain environment. Restoration designs will be bold – including the consideration of “Stage 0” approaches. This type of restoration approach has been strictly implemented on Federal lands thus far. Applying this approach in a location with more logistical and social constraints is going to require significant social engagement in order to be successful. The logical and necessary next step in the effort to restore the EBSP floodplain is to engage stakeholders. EBSP is an extremely popular site with annual day-use attendance of 187,200 including frequent use by equestrian groups, trail runners, anglers, and boaters. We seek to explain the project and its rationale to neighbors, park visitors, and river users because stakeholder understanding and acceptance will be essential to restoration project success. We will utilize project tours, science pubs, open houses, social media, and other methods to do so. It will also be critical to engage with Tribes, river and land managers, permitting agencies, and other key organizations that have an interest in the site and can support the restoration activities. Engagement activities with these groups will primarily include meetings, information sharing, and project tours.

Review Team Evaluation

Strengths

- The project builds on an OWEB-funded technical assistance project.
- Stakeholder engagement activities are technically sound and described well in the application.
- The proposed stakeholder engagement is timely for development of the Elijah Bristow State Park restoration project, which will provide high ecological benefit for the watershed.

Concerns

- It is unclear whether alternatives to the proposed stage zero restoration approach were considered as part of the technical assistance work. If there are no restoration design alternatives under consideration, it is unclear what restoration project options are available in the event that engagement conversations result in no stakeholder support for stage zero restoration at this site.
- The proposed stakeholder engagement is described in the application as targeted; however, the stakeholders listed seem broader than is necessary to be effective. For example, all 9 federally recognized tribes in Oregon are identified when it would not be appropriate to engage more than the local geographically appropriate tribes. Additional information on why the proposed intensity of engagement is necessary and engages only the appropriate stakeholders for the resulting Elijah Bristow Park restoration project to be successful would provide helpful context.
- The number of staff hours seems high for the described goals, objectives, and tasks. It is also unclear whether some costs are necessary; for example, perhaps boats could be provided by partners instead of purchasing kayaks.

Concluding Analysis

Using the stage zero restoration approach at Elijah Bristow State Park is bold and will provide significant ecological benefits; and it will also require significant stakeholder engagement to be successful. Since using stage zero outside of USFS lands is new and experimental, it will be challenging to manage stakeholder expectations on how it will change this landscape. If stage zero is the only restoration alternative under consideration and it is unclear whether stakeholders will be comfortable with the uncertainty with this approach, there is a level of risk that the proposed stakeholder engagement will not lead to timely development of a watershed restoration project for implementation.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

N/A

Review Team Recommended Amount

\$0

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3033-16691

Project Type: Stakeholder Engagement

Project Name: North Clackamas Urban Watersheds Council Kellogg Dam Fish Passage

Applicant: North Clackamas Urban Watershed Council

Region: Willamette Basin

County: Clackamas

OWEB Request: \$62,312

Total Cost: \$112,698

Application Description *(from application abstract)*

NCUWC will engage stakeholders to create fish passage at Kellogg Dam, which blocks access to 9 miles of vital salmon, steelhead and lamprey habitat in the Kellogg/Mt. Scott Watersheds and off channel refugia for Clackamas and Willamette river populations. We will convene stakeholders into a Fish Passage Steering Committee that will provide the needed planning, coordinated action, and fundraising essential needed to create fish passage at Kellogg Dam and to take advantage of upcoming windows of opportunity. While public support for fish passage and/or dam removal is high, the lack of coherent stakeholder engagement and planning processes has led to missed opportunities for mitigation credits, agency funding processes, and other opportunities to advance fish passage forward. There are several upcoming opportunities to advance the project, but they are time-sensitive and steps must be taken now to prepare to seize them. NCUWC will rejuvenate stalled processes and consolidate uncoordinated, ineffective and sporadic planning, and advance the project toward the feasibility and design phases. Key results will be:-Re-engagement of stakeholders in securing fish passage-Convening these stakeholders in a Fish Passage Steering Committee that will coordinate work-Progress toward the feasibility, design and fundraising phasesWorking with a strong consultant with knowledge of both public and private opportunities for advancing restoration work and experience in multi-agency watershed processes, we will achieve an essential step in rebuilding anadromous fish populations and watershed health in the Lower Willamette region. Committed partners include Cascade Environmental Group (CEG), City of Milwaukie, Clackamas Water Environment Services (WES), GeoEngineers, Lower Columbia Estuary Partnership, NOAA Fisheries, North Clackamas Parks & Recreation District, and other partners listed in the full application.

Review Team Evaluation

Strengths

- The proposed stakeholder engagement is likely to succeed in moving a high profile restoration project forward. This will build on previous efforts that addressed upstream barriers, and improved instream and riparian habitat.

- While there is already strong support demonstrated for dam removal, there is a clear need for an organization to lead a steering committee of key stakeholders to plan, coordinate, and fundraise for the restoration project that is likely to result from this effort.
- Project support is demonstrated by multiple letters of support.
- The consultant identified has relevant experience.
- The resulting planning documents will support fundraising efforts from diverse sources.

Concerns

- It is unclear whether the applicant has the capacity for the proposed project.
- Future restoration options may have a high cost for the resulting watershed benefit.

Concluding Analysis

The long-term goal of this project is to remove Kellogg dam and provide fish passage on an important tributary located in the lower Willamette River. This will significantly benefit fish using the drainage, including Coho and steelhead, by providing cold water refugia. Proposed activities described in this application will engage over 25 stakeholders and provide necessary coordination to move towards achieving the goal to address the negative impacts Kellogg dam has on migrating fish.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 2

Review Team Recommended Amount

\$62,312

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$62,312

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Willamette Basin (Region 3)

Application Number: 219-3034-16715

Project Type: Stakeholder Engagement

Project Name: Beaver Creek Fish Passage Community

Applicant: Sandy River Basin WC

Region: Willamette Basin

County: Multnomah

OWEB Request: \$36,597

Total Cost: \$84,179

Application Description *(from application abstract)*

1) This project will take place in the Beaver Creek watershed, the lowermost tributary to the Sandy River, in and near the Cities of Gresham and Troutdale, in Multnomah County. 2) One remaining culvert either completely or partially blocks fish passage on Beaver Creek, home to endangered salmonids, following removal of two others in the past two years. Temperatures in Beaver Creek exceed salmonid rearing standards much of the summer due in part to lack of riparian canopy. Both fish passage and temperature reduction will support recovery of ESA listed salmon in the watershed. The culvert replacement previously completed on Beaver Creek at Stark St. was met with some resistance from neighbors over the road closure; due in part to poor communication and lack of awareness that endangered salmon depend on Beaver Creek. Community concerns hold the potential to jeopardize the implementation of another culvert replacement project scheduled for 2019. Habitat in many riparian areas is compromised by invasive vegetation along Beaver Creek. This project will address weed removal and native plant establishment in key riparian areas and provide critical direct stakeholder engagement opportunities in the restoration of the watershed. 3) Stakeholder engagement activities include site tours of fish passage sites (4 tours with a total of 50 participants each year), work parties to restore native vegetation in riparian and sensitive areas (4+ events with 25 participants each) and tabling and other outreach events in the community (10 events reaching 1000 stakeholders) with the outcome of securing community support and active involvement in implementing fish passage and riparian vegetation restoration projects. 4) Project Partners include East Multnomah Soil and Water Conservation District, Multnomah County, Metro, Mt. Hood Community College, Cities of Gresham and Troutdale, Job Corps, Gresham Chamber of Commerce, Gresham and Reynolds School Districts, and others.

Review Team Evaluation

Strengths

- The application is well-written.
- The project is located in a watershed with salmon bearing and 303(d) listed streams.
- Stakeholder engagement will target a diverse urban population with a variety of activities including face-to-face interactions, project tours, and social media.

Concerns

- Since the fish passage barrier projects will be implemented regardless of the proposed stakeholder engagement work, it is unclear whether the proposed project is needed.
- Additional description on how projects costs were determined would strengthen the application since it is unclear whether the budgeted cost for proposed community engagement staff time is warranted.
- The pathway from the stakeholder engagement project to an eligible restoration project is unclear; the application would be strengthened by an explanation on what is expected beyond the stakeholder engagement outreach activities and how they connect to a future restoration implementation project.

Concluding Analysis

Fish passage restoration projects scheduled to be implemented in 2019 offers a community engagement opportunity to raise community awareness about watershed restoration, and could potentially recruit involvement in future projects. Since stakeholder engagement is not necessary for the fish passage project implementation and it is unclear whether additional restoration project types will result from this proposed project, there is a low benefit for the cost.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

N/A

Review Team Recommended Amount

\$0

Review Team Conditions

None

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

None

Staff Recommendation

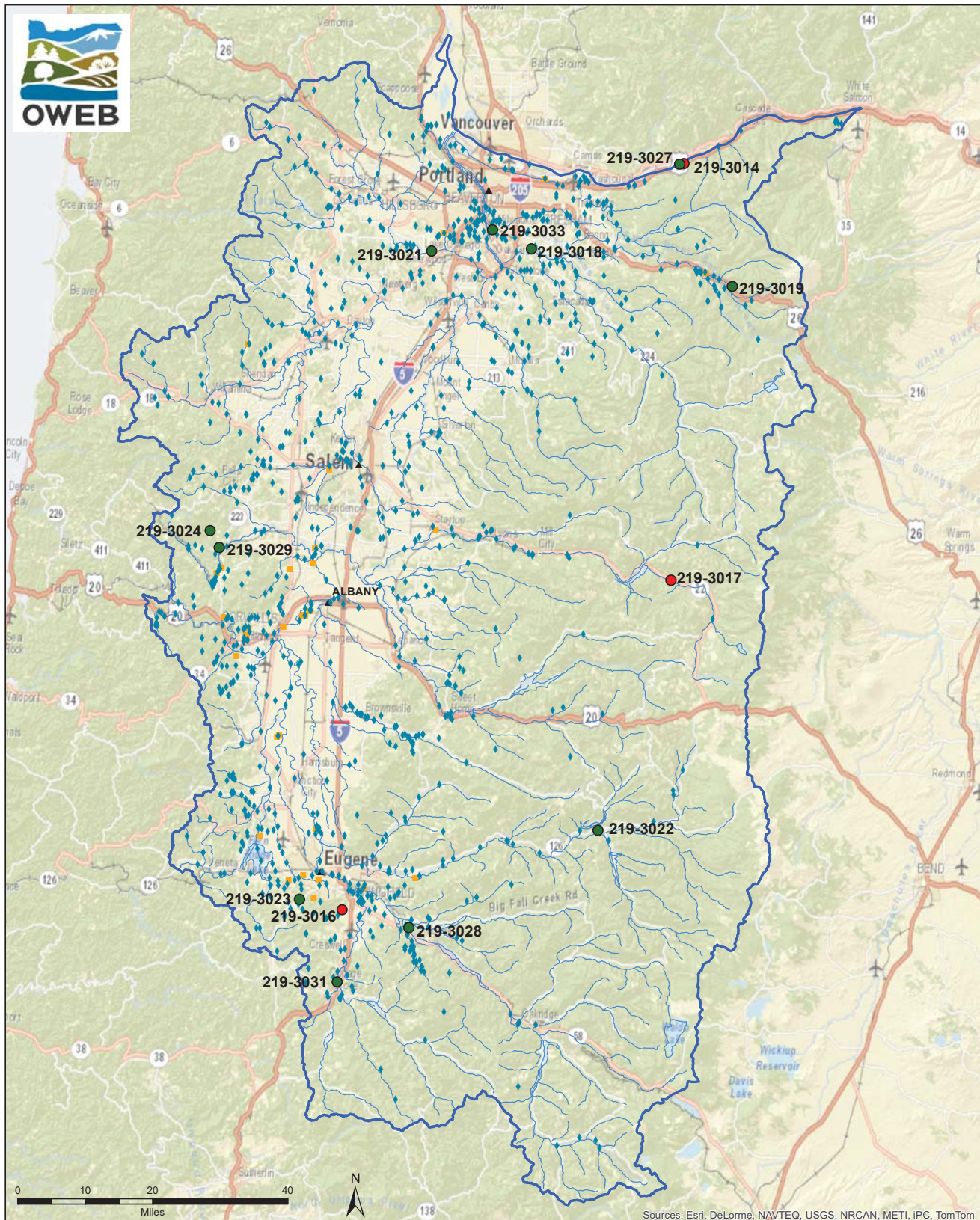
Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

None



Document Path: Z:\oweb\Technical_Services\Information_Services\GIS\Maps\Review Team Meetings\2018Fall\Cycle\Projects\Region3_AppFundingStatus_11x17_2018Fall.mxd
 ESRI ArcMap 10.6 NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20190314

Funding Recommendations

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

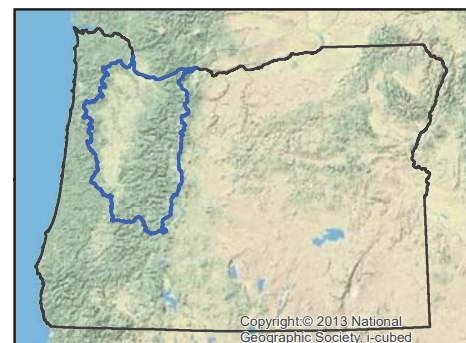
Previous Grants - 1998-Spring 2017

- ◆ Restoration
- Acquisitions
- Stream
- Region Boundary

Oregon Watershed Enhancement Board

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 (503) 986-0178
<http://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 | County |
| 219-3023 | Long Tom WC | Greenhill Oak and Prairie Restoration | Oak savanna, woodland, and prairie habitat currently impacted by fire suppression, woody encroachment, dense canopy conditions, and pressure from nonnative and invasive plant species will be restored on four contiguous private properties covering 315-acres in the Coyote Creek subbasin of the Long Tom Watershed, located a mile southwest of Eugene. | 299,936 | Lane |
| 219-3019 | The Freshwater Trust | Upper Sandy River Basin Habitat Restoration Project: Salmon River and Clear Fork | Native fish habitat will be restored in the Upper Sandy River near Welches, Oregon in Clackamas County. Increasing off-channel stream habitat, floodplain connectivity with the river, and large wood abundance instream will provide diverse, high quality habitat that supports salmon and steelhead populations. | 317,507 | Clackamas |
| 219-3024 | Luckiamute WC | South Fork Pedee Creek Enhancement | Impacts from historic land use practices, including logging to the water's edge, removing logs from the stream, and log drives in a upper Luckiamute tributary will be addressed to restore natural stream functions. This will include replacing road crossings, adding large wood in the stream, and replanting native streamside trees. | 121,684 | Polk |
| 219-3022 | McKenzie Watershed Alliance | Lower South Fork River Floodplain Enhancement Project Phase II | McKenzie River stream habitat will be restored to a healthy, diverse, and resilient ecosystem for native fish species, including spring Chinook salmon and bull trout. This multi-phased project on 600 acres over 4.2 stream miles addresses impacts caused by the installation of a Army Corps dam, placement of berms and levees, removal of instream wood, and timber harvest from floodplain forests. | 464,079 | Lane |
| 219-3018 | Clackamas River Basin Council | Clackamas River Community Cooperative Revegetation Project | A streamside plant community along the Clackamas River will be restored by eradicating invasive species and re-establishing native plants. | 66,249 | Clackamas |
| 219-3021 | Metro | Heritage Pine oak and prairie restoration and enhancement | Oak and prairie habitats will be restored on 60 acres of the Heritage Pine Natural Area, which is a 202-acre property located near Sherwood, Oregon, just east of the Tualatin River National Wildlife Refuge. Controlling invasive plant species, increasing the diversity in native plant communities, and removing plants crowding oaks trees will improve habitat for native plants and wildlife. | 107,212 | Washington |
| Total Restoration Projects Recommended for Funding by RRT and OWEB Staff | | | | 1,376,667 | |

| Restoration Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
|---|------------------------------------|--|---|---------------------------|---------------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-3017 | Cascade Pacific RC&D | Upper North Santiam Side Channel Reconnection | Stream habitat will be restored in the Upper North Santiam River near Idanha, Oregon. Reconnecting a side-channel to the mainstem river and placing large wood structures instream will provide diverse habitat for native fish, including Chinook salmon and cutthroat trout. | 159,894 | Linn |
| 219-3014 | Lower Columbia Estuary Partnership | Horsetail Creek Floodplain Restoration Project Phase II | The diversity, quality, and quantity of instream and floodplain habitats will be improved on Horsetail Creek in the Lower Columbia River Gorge in Multnomah County. This 180-acre floodplain natural area contains two fish bearing streams and associated sloughs, ponds, drainages and wetlands. Habitat restoration will improve cold-water refuge for native salmon migrating along the Columbita River by placing large wood instream, installing beaver dam analogs, and establishing native plant communities. | 162,240 | Multnomah |
| 219-3016 | Coast Fork Willamette WC | Fribley Oak Woodland Restoration | Willamette Valley oak woodland will be restored on a 20 acre property located south of the City of Eugene within Lane County. Controlling invasive plant species, increasing the diversity in native plant communities, and removing fir trees that are crowding oaks trees will improve habitat for native plants and wildlife. | 106,794 | Lane |
| Total Restoration Projects Recommended for Funding by RRT | | | | 1,805,595 | |
| Restoration Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-3015 | Cascade Pacific RC&D | Little North Fork Santiam Bank Restoration | | 224,608 | Marion |
| 219-3020 | Sandy River Basin WC | Sandy River Delta Habitat Continuity | | 165,544 | Multnomah |
| 219-3025 | Calapooia WC | Truax Island Floodplain Restoration - Phase 1 - Planting and Plant Establishment | | 212,671 | Linn |
| 219-3026 | Marys River WC | Oak Creek Fish Passage Phase 1 | | 139,918 | Benton |

| Technical Assistance (TA) Projects Recommended for Funding in Priority Order | | | | | |
|---|------------------------------------|---|--|--------------------|-----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-3028 | The Xerces Society | Conserving Mussels in Aquatic Restoration-- Technical Assistance | Technical assistance will be provided to restoration practitioners statewide to identify and protect freshwater mussels during stream restoration projects. Freshwater mussels are an important, yet overlooked, animal in Oregon's freshwater systems that provide valuable services to salmon and other stream organisms. Stream habitat restoration work poses a significant emerging threat to mussel beds, which can take decades to recover after they are lost in a stream project. | 74,952 | Lane |
| 219-3027 | Lower Columbia Estuary Partnership | Feasibility Assessment of Pilot Cold Water Refuge Enhancement Technique | A feasibility assessment will be completed to develop engineering designs for a pilot technique that will enhance cold water refuges at the mouths of lower Columbia Gorge tributaries to protect salmon and steelhead in the face of warming climate conditions. | 74,977 | Multnomah |
| Total TA Projects Recommended for Funding by RRT and OWEB Staff | | | | 149,929 | |
| Technical Assistance Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total TA Projects Recommended for Funding by RRT | | | | 149,929 | |
| Technical Assistance Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| None | | | | | |

| Stakeholder Engagement Projects Recommended for Funding in Priority Order | | | | | |
|---|---|--|--|--------------------|-----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-3033 | North Clackamas Urban Watershed Council | North Clackamas Urban Watersheds Council Kellogg Dam Fish Passage | Stakeholders in a lower Willamette tributary area will be convened into a Fish Passage Steering Committee that will provide planning, coordinated action, and fundraising essential to create fish passage at Kellogg Dam. The resulting restoration project will open passage to 9 miles of stream habitat for salmon, steelhead and lamprey, and provide off-channel refuge for Clackamas and Willamette river fish populations. | 62,312 | Clackamas |
| 219-3031 | Coast Fork Willamette WC | Engaging Stakeholders in Restoration to Enhance Drinking Water Quality | Stakeholders in Row River, Mosby Creek, and Upper Coast Fork Willamette watersheds in Lane County will be engaged to conduct on-the-ground restoration actions that provide long-term drinking water protection and improve overall watershed health. | 27,715 | Lane |
| Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff | | | | 90,027 | |
| Stakeholder Engagement Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Stakeholder Engagement Projects Recommended for funding by RRT | | | | 90,027 | |
| Stakeholder Engagement Projects <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-3032 | Middle Fork Willamette WC | Engaging Diverse Stakeholders in Floodplain Restoration at Elijah Bristow Park | | 124,594 | Lane |
| 219-3034 | Sandy River Basin WC | Beaver Creek Fish Passage Community | | 36,597 | Multnomah |

| Monitoring Projects Recommended for Funding in Priority Order | | | | | |
|---|---------------|---|---|--------------------|--------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-3029 | Luckiamute WC | Luckiamute Temperature Monitoring Phase 2 | Stream temperature data will be collected in the Luckiamute River Watershed to fill a data gap, and inform restoration project prioritization and planning. | 48,152 | Polk |
| Total Monitoring Projects Recommended for funding by OWEB Staff | | | | 48,152 | |
| Monitoring Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Monitoring Projects Recommended for funding by RRT | | | | 48,152 | |
| Monitoring Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-3030 | Calapooia WC | Calapooia Environmental DNA Monitoring | | 48,378 | Linn |
| Region 3 Total OWEB Staff Recommended Board Award | | | | 1,664,775 | 16% |
| Regions 1-6 Grand Total OWEB Staff Recommended Board Award | | | | 10,554,731 | |

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4013-16589**Project Type:** Restoration**Project Name:** Chiloquin Community Forest and Fire Project - Forest Treatments**Applicant:** Klamath Watershed Partnership**Region:** Central Oregon**County:** Klamath**OWEB Request:** \$537,878**Total Cost:** \$9,591,331

Application Description *(from application abstract)*

Fire suppression and past forest practices in and around Chiloquin, Oregon, have altered forest structure and watershed function. Increased stand density and understory growth have reduced vegetation vigor and diversity, leaving entire landscapes vulnerable to drought, catastrophic wildfire, or other disturbances such as insects or disease. Changes in precipitation infiltration, water storage, and riparian condition have altered the hydrologic regime and water quality, altering habitat conditions and availability for T&E species such as the Oregon spotted frog, shortnose sucker, Lost River sucker, bull trout, and northern spotted owl. Forest restoration to historical conditions will restore and protect conservation values. The Chiloquin Community Forest and Fire Project (CCFFP) will restore forest health and resiliency across 184,370 acres of private and federal U.S. Forest Service land by engaging the community and implementing phased treatment of overstocked dry-type forests. The area is identified as a high-risk for wildland fire in the Chiloquin Community and Klamath County Wildfire Protection Plans. Vegetation and wildfire risk mapping has been completed for all of the private land, and crosswalks have been used to identify treatments for each stand. Outreach and education to 2,841 private landowners began with mailings and workshops in 2017, and will continue throughout the project to build a stakeholder base necessary for landscape implementation and long-term maintenance. Conservation practices that will be used to restore forest health and wildlife habitat include: brush management, fuel breaks, forest slash treatment, forest stand improvement (thinning), and tree/shrub pruning. Key partners include the U.S. Forest Service, Oregon State University Extension, Oregon Department of Forestry, Natural Resources Conservation Service, and governmental and non-governmental members of the Klamath-Lake Forest Health Partnership (KLFHP).

Review Team Evaluation

Strengths

- Forestry treatments (small tree thinning and brush mowing) will improve watershed function with an increase in precipitation infiltration promoting understory vegetation growth and a decrease in risk and stress to mature trees left on the landscape from pest insects (e.g. bark beetles).
- The project builds off of successes gained through a current OWEB technical assistance grant.
- Proposed forestry treatments will improve wildlife habitat and forage availability.

- Management plans developed for each landowner will incorporate wildlife habitat improvements and wildfire education.
- The Wyden Amendment will be utilized to promote cross boundary forestry treatments between private and public lands.
- The project approach taken by the applicant and partners is strategic and utilizes an eight step model that has proven to be effective in neighboring Lake County for implementing similar cross boundary forestry treatments.
- The role of prescribed fire in contributing to the long-term maintenance and resiliency of the landscape is being discussed with the community.

Concerns

- Individual management plans with landowners have not been developed, which makes it challenging to discern the watershed and wildlife benefits without seeing actual prescriptions for each landowner.
- Mule deer could be negatively impacted by intense brush management, it would have been helpful to understand what type of prescriptions and subsequent monitoring will be employed to ensure that bitterbrush remains productive and abundant as appropriate to support mule deer populations.
- The long term benefits stated in the application are hinged upon the introduction of prescribed fire on the landscape, yet there is no guarantee this action will occur. Implementing prescribed fire requires risk management and private landowner trust, neither of which is discussed in the application.
- It is challenging to understand from the application how contracts with landowners will be managed, maintained, and monitored over time. More detail about contract management with each landowner would have been helpful.
- It is unclear what the landowners' role will be in maintaining the treatments completed with grant funds, specifically what the expectation is from the applicant and its partners.
- The timing associated with implementing match fund sources is unclear, specifically the implementation timeframe and location for treatments on Fremont Winema National Forest and landowner implementation timeframes with NRCS's Conservation Implementation Strategies (CIS) for this area. This information would have allowed for a better understanding of how matching fund sources complement this grant's focus area and timeline.
- The threatened Oregon spotted frog is listed as a beneficiary of these treatments, yet no critical habitat for the species is within the treatment area.

Concluding Analysis

The overall 184,370-acre project footprint provides an opportunity to implement landscape scale forestry treatments across ownerships that promote wildfire resiliency and watershed health. This proposal is the result of a methodical and successful model to work with community members so they are aware, informed, and engaged in the process of restoring their forests. The application clearly articulates the need for forest health treatments in this geography; however, it fell short on details regarding wildlife considerations and expected benefits from small tree thinning and brush management. This project will work with willing landowners who are committed and interested in completing forest health activities on their lands.

Review Team Recommendation to Staff Fund

Review Team Priority

3 of 5

Review Team Recommended Amount

\$537,878

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$537,878

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4014-16605**Project Type:** Restoration**Project Name:** Swalley Piping Project, Elder Lateral**Applicant:** Deschutes River Conservancy**Region:** Central Oregon**County:** Deschutes**OWEB Request:** \$292,008**Total Cost:** \$1,021,090

Application Description *(from application abstract)*

1) The Swalley Elder Lateral Piping Project is located in Bend north of Cooley Road crossing under the Old Bend-Redmond Highway in Deschutes County. 2) This project addresses critical streamflow issues that are a major limiting factor for fish and wildlife habitat and water quality in the Deschutes River. 3) Swalley Irrigation district serves 4,331 acres in the Upper Deschutes Basin. This project will pipe approximately 10,057 feet of district conveyance canals and permanently protect rights 395 acre-feet (1.3 cfs) into the Deschutes River. The project will also eliminate approximately 100 individual irrigation pumps, estimated to save irrigators up to 286,566 kWh a year. Swalley will construct the project in fall-winter 2019-2020. The Deschutes River Conservancy will manage the administrative process through the Oregon Water Resources Department to permanently protect conserved water instream. 4) Project partners include Swalley Irrigation District, the Deschutes River Conservancy and the Oregon Water Resources Department.

Review Team Evaluation Strengths

- Both the watershed context and ecological benefits are described well in the application, making it clear the proposed restoration is the right action in the right place to achieve the desired outcomes.
- The applicant has a proven track record for completing conserved water transactions.
- Since the Swalley Irrigation District has a completed and approved watershed plan, this project is permit-ready.
- Due to the extensive planning effort to date, the applicant and District are operating in a strategic manner to upgrade the District's delivery system.
- Piping the Elder lateral will result in 1.3 cfs of senior water rights permanently conserved to the Middle Deschutes Riv

Concerns

- The power savings discussed in the application will only occur once the main canal is piped; therefore, savings will not be realized with the implementation of this project.

- There is no documentation of landowner support in the application, nor any mention of farm irrigation water management. It would have been helpful to understand how landowner irrigation operations will become more efficient with the delivery of pressurized water.
- The applicant proposes 75% of water savings to be permanently conserved. The ecological value of the project would have been stronger if 100% of the water savings were to be permanently protected.

Concluding Analysis

Piping the Elder lateral in the Swalley Irrigation District is another step towards the District's commitment to irrigation modernization. The District's watershed plan was recently federally approved, which secures their match funding source from the current PL-566 fund and making this OWEB request a timely investment. The overall watershed plan will take roughly 10 years to implement and is heavily contingent on available funding. With this investment of public funds to modernize water delivery systems, a commitment from the landowners to implement on-farm irrigation water efficiencies would have strengthened the proposed project. The applicant and District demonstrate a strong partnership and commitment to achieving the ecological goal of improving stream flow in the Deschutes River.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 5

Review Team Recommended Amount

\$292,008

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$292,008

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4015-16607**Project Type:** Restoration**Project Name:** West Fork Hood River at Jones Creek Instream Habitat Project**Applicant:** Hood River SWCD**Region:** Central Oregon**County:** Hood River**OWEB Request:** \$72,704**Total Cost:** \$395,775

Application Description *(from application abstract)*

The proposed instream habitat enhancement project is along a 0.6-mile reach of the upper West Fork Hood River between the confluences with Jones Creek and Ladd Creek. The project is located on United States Forest Service (USFS) land on the Mt. Hood National Forest. The Upper West Fork provides some of the best spawning and rearing habitat for spring Chinook, coho, and summer steelhead in the Hood River basin because of its cold water temperatures and higher stream flows. However, past timber management practices (i.e., splash damming, stream cleaning, removal of large riparian conifers) have led to insufficient amounts of large wood instream, channel incision, and loss of connectivity between the main channel and historic side channels. These factors have resulted in reduced habitat quantity and complexity, including poor spawning substrate composition, low pool frequency, and little refuge from high velocities. The goals of the project are to improve and expand salmonid spawning and rearing habitat within the treatment reach. This will be accomplished by placing 380 pieces of large wood in 10- 15 structures. Large wood structures will improve spawning habitat by trapping and sorting spawning gravels. They will improve rearing habitat by maintaining or reconnecting side channels, creating new pools, partitioning flow, increasing cover, and improving stream food web dynamics. The project will be managed by USFS staff. USFS has provided the large wood and paid for its delivery to the site, and performed a modeling analysis of the design. Confederated Tribes of the Warm Springs (CTWS) developed the design for this project and will assist with implementation oversight. Hood River Watershed Group staff will assist with contract administration and monitoring. USFS and CTWS have implemented several projects in the Upper West Fork and its tributaries over the past 10 years. The proposed project complements these projects and builds off of the lessons learned.

Review Team Evaluation

Strengths

- The location of this project is a high priority for fish habitat restoration because it is not impacted by siltation from glacial tributaries and is a designated cold water refugia.
- The actions proposed in this project are identified in recovery planning documents for ESA-listed salmonids. The applicant and their partners have a proven track record with related restoration efforts; therefore, the project is likely to succeed.
- The project builds off previous restoration efforts and incorporates key lessons learned.

- The project is cost effective by utilizing whole trees salvaged from nearby hazard tree removal on USFS lands.

Concerns

- The design plans included in the application are light on details and do not include engineered drawings or construction plans. This additional information would have been helpful to determine whether the design intent will effectively accomplish project goals.
- The long-term objectives for the landowner should include management specifically designed to grow larger trees in the riparian area for future large wood recruitment.

Concluding Analysis

The West Fork of the Hood River bolsters some of the best remaining spawning and rearing habitat in the entire Hood River basin. The area of focus for the project partners presents an opportunity to improve these conditions while promoting floodplain inundation with the addition of whole large trees. This project complements on-going efforts in the West Fork of the Hood River, and will specifically address limiting factors for several ESA-listed salmonids. The project is cost effective, has high potential for success, and demonstrates an effective working relationship with local, federal, and tribal partners.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 5

Review Team Recommended Amount

\$72,704

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$72,704

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4016-16609

Project Type: Restoration

Project Name: Cogswell Creek Fish Passage & Stream Restoration

Applicant: Lakeview SWCD

Region: Central Oregon

County: Lake

OWEB Request: \$366,518

Total Cost: \$482,120

Application Description *(from application abstract)*

1) Cogswell Creek is a steep to low gradient stream south of Lakeview flowing from the west out of the Warner Mountains into Goose Lake. 2) There are multiple irrigation diversions and a road culvert that pose multiple problems including, fish passage, altered sediment transport regimes, and in stream push up dams that require constant maintenance. The only consistent stream flow is in the upper reaches of the stream to which fish access is limited. 3) The restoration components are as follows: Replace push-up diversions with stream simulation concrete wall diversion with closeable headgates; replace failing concrete diversion with new diversion which allows for fish passage; replace perched culvert barrier with pre-fabricated steel bridge; install a screen and pipeline on the primary ditch of concern for fish entrapment, and install instream fish habitat features. 4) Partners include: OWRD, ODFW, USFWS, USFS, Lake County Umbrella Watershed Council, Lake County SWCD, and the landowners.

Review Team Evaluation

Strengths

- The proposed system-wide approach will address all diversions and barriers to fish movement on Cogswell Creek, which will allow for a complete barrier-free perennial tributary to Goose Lake.
- The project includes instream habitat and bank stability treatments to improve overall riparian and aquatic conditions for redband trout.
- Landowner support for the project is demonstrated by letters of support and match.
- Replacing and upgrading diversions will allow for easier maintenance of structures, improved water management and delivery consistency, and an opportunity to measure flow at each diversion structure.
- The applicant has a proven track record in the community for building partnerships and recruiting participation from private landowners.
- The design detail provided in this application provides insight on the proposed approach and technique.
- This project builds off a recently completed OWEB technical assistance grant that funded engineering and planning to a 60% design level.

Concerns

- Project designs in the application do not include ODFW fish passage approval; this would have been helpful to determine whether ODFW will consider the project technically sound.
- The application includes little discussion about adjacent land use and riparian health. Riparian enhancements were discussed but not elaborated on. It would have been helpful to understand how this investment will be protected from adjacent land use impacts.
- The design includes large wood placements on the floodplain and bank log jams. Ballast rock and existing vegetation will be primary anchors for this material. It is unclear from the application what the potential is for this material to mobilize downstream and whether this could be tolerated, particularly given a major highway crossing is downstream of the majority of the work being proposed.
- Including detail in the application on how the stream's hydrology was calculated and analyzed would assist with evaluating the design features and their ability to accomplish the project goals and objectives.
- A completed design set would have provided more confidence that this project could attain necessary permits and meet the desired passage and habitat objectives state in the proposal.

Concluding Analysis

The applicant was awarded a technical assistance grant from OWEB to bring each of the water users together to determine how best to collaborate in seeking solutions for fish passage and improved water delivery. As a result of this technical assistance work, this restoration project proposal includes all the water users on Cogswell Creek in voluntary conservation work that will provide a meaningful cost-benefit for the watershed investment.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 5

Review Team Recommended Amount

\$366,518

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$366,518

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4017-16663

Project Type: Restoration

Project Name: Dee Irrigation District Water Conservation Project

Applicant: DEE Irrigation District

Region: Central Oregon

County: Hood River

OWEB Request: \$303,981

Total Cost: \$2,823,515

Application Description *(from application abstract)*

This project will take place within 840 acres of Dee Irrigation District (DID), located between the West and East forks of the Hood River in the upper west side of the Hood River Valley. The purposes of this project are to conserve water instream and eliminate sources of pollution to the West and East forks of the Hood River. DID's unpressurized, partially open distribution system is prone to leaks and breaks, and the system includes seven end spills, which result in DID diverting more water than is necessary from the West Fork Hood River. (An 'end spill' occurs when water not utilized for irrigation returns to the river, several miles downstream of the diversion, at the end of each distribution line.) The end spills also cause chemical (nutrients, sediment, bacteria, and pesticides) and thermal pollution to the West Fork and East Fork Hood River. Low flows in the West Fork Hood River are a limiting factor for threatened Chinook, steelhead, and coho populations. In addition, both the West Fork and East Fork have temperature TMDLs. Upgrading DID's distribution system to a pressurized pipeline will save an estimated 2 cfs (1 cfs of which will be protected through a Conserved Water Allocation). This will increase instream flows on approximately 6 miles of the West Fork Hood River and will eliminate chemical and thermal pollution of the West and East Fork Hood River from DID's distribution system. Project partners include Dee Irrigation District, Oregon Water Resources Department, and the Hood River Watershed Group.

Review Team Evaluation

Strengths

- The proposed canal and ditch piping will complete the modernization of the Dee Irrigation District's distribution system.
- The project will result in 1 cfs permanently protected in the West Fork Hood River.
- A flow meter will be installed on each turnout, which will allow the District to carefully monitor water use.
- The new piping infrastructure will eliminate all of the end spills, which are speculated to increase sediment and pollutant run-off, degrading water quality.
- The applicant addressed previous review team comments regarding the permanent protection of water instream.
- The OWRD match funding source, has been awarded to the District so the project is ready for implementation.

Concerns

- The project is anticipated to save 2 cfs; however, the District is only committing 1 cfs to be permanently protected instream. The full ecological potential of this project will not be realized.
- The water quality benefits may be overstated as these are not based on actual data comparisons; however, piping will fully eliminate all end spills, which will eliminate any potential pollutants that could be degrading water quality.
- The overall project costs seem expensive for the ecological value that will be gained.

Concluding Analysis

This project is the last phase for the Dee Irrigation District to become fully modernized by piping the entire distribution system. The District has a history of conservation practice, and with flow meters installed at each turnout, the District will have the capability to monitor water use that may offer potential to realize water savings on farm.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 5

Review Team Recommended Amount

\$303,981

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$303,981

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4018-16698

Project Type: Restoration

Project Name: Lower Deep Creek Restoration
Project – Phase 2 (2019)

Applicant: Discover Your Northwest DBA: Discover
Your Forest

Region: Central Oregon

County: Crook

OWEB Request: \$211,151

Total Cost: \$323,976

Application Description *(from application abstract)*

The Lower Deep Creek Floodplain Restoration Project (Phase 2 - 2019) will be a continuation of in-stream and riparian restoration activities that were implemented in the summer of 2018 (Phase 1). This application seeks additional funding to continue a more involved project restoration approach and increased community engagement through partnership with Discover Your Forest. Feedback received by the US Forest Service (USFS) and its partners in the months leading up to Phase 1 implementation, resulted in an adaptive management hybrid design that created more immediate habitat features, relative to the initial design of 2015. This has been deemed a more desirable project design for all partners involved. Phase 2 will complete a series of treatments planned and implemented to improve aquatic habitat conditions and riparian function within the Deep Creek watershed. This watershed represents the most interconnected habitat for Redband trout in the Crooked River basin. Proposed activities would occur in the lower half of Deep Creek and dovetail with recently completed work including Crazy and Jackson creeks (see map – Jackson Creek is the upper half of Deep Creek). The purpose and need for these restoration activities is to enhance and recover habitat for Redband trout, Columbia spotted frog and other riparian dependent aquatic, wildlife, and plant species. Currently, untreated floodplain habitat is deficient in the quantity and quality of large woody debris and pools, and exceeds standards for bank stability and width/depth ratios. As with Phase 1, this project phase will match OWEB funds with significant USFS and partner funding and includes placement of large woody debris complexes in 6 distinct stream segments, and plug and fill work to aggrade the channel in the lower reach, Phase 2 include planting of additional native riparian plants across impacted floodplain, and the installation of cattle guards to protect this significant restoration investment.

Review Team Evaluation Strengths

- Deep Creek is a high priority for fish habitat restoration. The system is a stronghold for redband trout and offers larger base flows than the neighboring North Fork Crooked River.
- The applicant and their partners have applied lessons learned from other Stage 0 restoration projects in the region.
- The approach and technique proposed had local peer review.

- Phase I implementation was delayed, which allowed for more lessons learned and local peer review to be incorporated into the implementation of phase I and the design approach for the proposed phase II construction.
- The applicant has a public awareness plan.

Concerns

- Without allowing time to observe how the stream system will respond to the new approach applied during phase I implementation (completed October 2018), the sense of urgency for moving forward with phase II is not justified.
- The project site is part of a grazing allotment. The application lacks sufficient detail to help understand how these investments will be protected. For example, no specifications or locations are identified for the enclosures discussed and cattle guards to be installed are not identified on a map. The impact of these actions on the project site are unclear without further information.
- The maps included in the application suggest there will be restoration in Middle and Upper Deep Creek, yet there is no detail or designs provided that describe what types of actions are proposed in these locations. More detail on these proposed actions and the ecological benefit these actions will provide would have been helpful.
- Dispersed camping is a known problem in this area and has occurred on the project site, yet the application fails to articulate how the Forest Service will manage this to ensure restoration investments made will be protected from dispersed camping

Concluding Analysis

This project proposes a continuation of instream and floodplain restoration actions on lower Deep Creek in the Ochoco National Forest. Phase I was partially funded by OWEB in 2015, yet implementation was delayed till fall 2018 due to fire concerns, solar eclipse activity, and USFS personnel changes. The delay turned out to be advantageous for the USFS as new information about Stage 0 restoration was emerging, which allowed for more dialogue with local restoration practitioners. Given this, USFS revamped the approach and technique during implementation of phase I. However, this new approach forced construction to move slower than initially anticipated, leaving roughly half the initially planned restoration site un-touched, hence the proposed phase II to finish the work. Understanding the landscape and biological responses along with the ecological benefit from phase I implementation will provide information to determine whether the proposed phase II approach is likely to succeed. The applicant is encouraged to reapply when benefits of phase I can be reported on, in addition to including a detailed grazing management plan demonstrating how restoration investments will be protected over time.

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-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4019-16699

Project Type: Restoration

Project Name: Trout Creek Upland Habitat Improvement

Applicant: Jefferson SWCD

Region: Central Oregon

County: Jefferson

OWEB Request: \$417,333

Total Cost: \$623,166

Application Description *(from application abstract)*

This project lies within the Trout Creek Watershed, an east side tributary to the Deschutes River. Located in Jefferson County, the project sites are located south of Ashwood on two tributaries of Trout Creek; Calf Gulch and Thompson Creek. These two tributaries are critical to one of the very few perennial reaches of Trout Creek. Both of these creeks are intermittent on the surface, but provide much needed subterranean flow to Trout Creek, keeping a 4 mile reach with surface water year round. With water flow being listed as one of the major limiting factors in the East side tributaries of the Deschutes River, this particular stretch of creek is very important to the survival of ESA listed Mid-Columbia Summer Steelhead. The Stenersen property includes two tracts of land totaling 2250 acres. 1445 acres are located in Calf Gulch and 805 acres in Thompson Creek, both of which have an overabundance of western juniper. The understory throughout the property is in relatively good shape with diverse perennial bunchgrasses, forbs and shrubs, lending itself to high upland restoration potential. Removing the junipers, enhancing the herbaceous and shrubby vegetation will significantly improve the wildlife habitat and provide an increase in much needed water to both creeks as well as Trout Creek itself, increasing summer flows and potentially extending the perennial reach downstream, increasing usable summer habitat for steelhead juveniles. The landowner plans to cut a portion of the junipers with chainsaws and remove others with an excavator. The Ashwood-Antelope Rangeland Fire Protection Association will then perform prescribed burns to the area, while ODFW and the Jefferson SWCD will re-seed the areas cleared with the excavator. The SWCD will also plant willows along the two creeks to provide habitat and food for potential beaver relocation in the future.

Review Team Evaluation

Strengths

- The project actions are timely given the current vegetation understory is in relatively good condition and the juniper encroachment is in phase I and II.
- A reduction in tree canopy will increase precipitation infiltration, which could increase local water tables and stream flow.
- The wildlife habitat should improve with less juniper density and reinvigorated grasses, forbs, and shrubs.

- The applicant has worked in the Trout Creek watershed for many years and is well aware of the issues and opportunities impacting fish and wildlife habitat resources.

Concerns

- The landowner is listed for completing the entire juniper cutting on 2,008 acres, which is a significant undertaking. The application lacks details on how well equipped, committed, and experienced the landowner is to complete this work.
- The cost per acre for juniper cutting seems low, which may be a result of relying too heavily on the landowner and could cause fatigue before accomplishing the entire scope of acres proposed for treatment.
- The proposal does not include a burn plan for the prescribed fire. Prescribed fire has risks associated with igniting high intensity crown fires. Without a burn plan, it is challenging to evaluate this activity due to the lack of understanding on how outreach, communication, smoke management, contingency planning, and monitoring will be implemented.
- It is unclear whether any outreach to adjacent neighbors has been completed, particularly regarding the prescribed fire component and whether or not neighbors support this type of management. Documenting support from adjacent landowners would have been helpful.
- The commitment in providing long term management of juniper encroachment is not well articulated in the application. The application points to long term prescribed fire, but offers no details on how this will be carried out.
- The Trout Creek watershed is heavily plagued with juniper encroachment, and this property represents a very small percentage of the overall problem. The application failed to explain the importance of juniper removal in this location within the context of the watershed.
- The local Rangeland Fire Protection Association (RFPA) is listed as the lead for the prescribed fire component, yet there is no letter of support pledging their partnership, capabilities, and interest in this project.

Concluding Analysis

This application proposes upland habitat restoration in two small tributary drainages of Trout Creek. Restoration activities include juniper cutting, prescribed fire, invasive species control, and riparian planting. The applicant has significant experience working in Trout Creek, and has spent the last 20 years partnering with ODFW implementing fish habitat and floodplain restoration projects to benefit mid-Columbia steelhead. This project with one landowner will remove juniper from the property and restore conditions more favorable for wildlife. The scope and scale of this project may be difficult to accomplish by only landowner labor alone. Additionally, without a burn plan in place, evaluating this component of the project is challenging to determine whether the project is technically sound and likely 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-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4020-16537

Project Type: Technical Assistance

Project Name: Middle Mainstem Columbia
Restoration Action Plan

Applicant: Lower Columbia Estuary Partnership

Region: Central Oregon

County: Hood River

OWEB Request: \$74,995

Total Cost: \$95,214

Application Description *(from application abstract)*

The Lower Columbia Estuary Partnership (LCEP) requests \$74,991 to develop a restoration inventory and action plan for the mainstem Columbia River from Bonneville Dam to the John Day Dam to fill knowledge gaps and jumpstart restoration activities in this area. The mainstem mid-Columbia River historically provided essential rearing, migration, and refuge habitat for nine ESA-listed species of Pacific salmon and steelhead. Critical historical mainstem habitats included complex riparian shorelines, nearshore and shallow water areas, side channels, tributary confluences, and areas of groundwater upwelling or other thermal refuges. Many of these habitats have been flooded by the dams, cut off from the mainstem, and hardened or greatly simplified by the transportation corridor and urban and industrial development. In 2013, a restoration project inventory for the Washington side of the mainstem, from the White Salmon River up to the Snake River confluence, was developed by the Mid-Columbia Fisheries Enhancement Group, but this process has not been replicated on the Oregon side of the mainstem, leaving a gap of information on restoration opportunities. To fill this gap, we propose to update the literature review and salmonid life stage habitat preference criteria; survey the Oregon shoreline condition of the mainstem Columbia; catalog existing habitat types; identify restoration opportunities and compile them into a geodatabase; prioritize the identified restoration projects; and develop concept designs and an implementation plan for the top ranked projects. This entire process will be overseen by a stakeholder group, including key watershed councils and tribal, local, state, and federal representatives.

Review Team Evaluation

Strengths

-
- This project will focus on an area of the Columbia River that has a known data gap regarding fish and habitat restoration opportunities.
- The project will build off similar work that occurred on the Washington side of the Columbia River along this reach.
- The emphasis on cold water refugia areas and the work currently being done in conjunction with the EPA will complement and support this effort.
- The restoration plan to be developed could strongly benefit fisheries, given that numerous species migrate up and down this corridor of the Columbia River.

- This area tends to get overlooked by federal and regulatory entities; the project will raise attention and identify opportunities to benefit listed salmonids.
- The applicant is well suited and experienced to complete the work proposed.

Concerns

- Given the large focus area and complex issues, the number of stakeholder meetings may not be enough to provide understanding and gain consensus moving forward.
- The applicant has project support documented in Multnomah and Hood River Counties, but no support documented in Wasco, Sherman, and Gilliam Counties.
- There is a lack of details on how project development will occur after the restoration plan is completed. More information on this would have been helpful.

Concluding Analysis

This project is a resubmittal for the third consecutive cycle. The applicant provided answers to previous review team comments. Habitat concerns in this portion of the Columbia River are not well known, notwithstanding the numerous ESA-listed salmonids that migrate up and down this corridor. The project will help bring attention to this area, engage appropriate stakeholders, characterize the resources based on constraints and opportunities, and develop a restoration plan to move forward. This portion of the Columbia River appears overlooked by many; the applicant is attempting to change that. The degraded and modified river corridor presents challenges, but without such a plan as the applicant proposes, opportunities may be getting overlooked as well.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 5

Review Team Recommended Amount

\$74,995

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4021-16606

Project Type: Technical Assistance

Project Name: Thomas Creek Watershed Forest Health Mapping & Inventory

Applicant: Lake County Umbrella Watershed Council

Region: Central Oregon

County: Lake

OWEB Request: \$51,150

Total Cost: \$83,650

Application Description *(from application abstract)*

The Thomas Creek Watershed Forest Health Project (TCWFHP) encompasses 46,266 acres of private, non-industrial forestland in Lake County, west of Lakeview. This landscape scale project is tied directly to Fremont-Winema National Forest's Thomas Creek Integrated Landscape Restoration Project, totaling 116,947 acres and is adjacent to the North Warner Forest Health Project where current treatment is underway. Through a century of fire suppression, the forests of this region have increased in density, lost diversity, and altered the structure and hydrologic function of watersheds. This loss from historic conditions has increased the scale and risk of fire severity, and reduced forest resiliency to drought, insects, and disease. High priority resources and habitat such as waterways and associated sensitive species, homes, ranch land, and private/industrial timberland are currently in jeopardy. The goal of the TCWFHP is to initiate a landscape-level forest management effort aimed at improving forest health conditions that will reverse the current fire trend and increase ecosystem resiliency. Based on similar efforts in Lake County, the TCWFHP uses an 8 step model founded on personal connections with informed and engaged private landowners. A comprehensive outreach, mapping, and inventory effort will inform and facilitate cross-boundary planning and implementation of forest health practices. Technical Assistance will be used to conduct targeted outreach to private landowners, including phone calls, mailings, site visits, forest management planning sessions, and educational workshops. Landowner education efforts will include two OSU Extension workshops for forest ecology/management, fire science and prioritization planning. Project partners include the Fremont Winema National Forest, ODF, NRCS, ODFW, and members of the Klamath- Lake Forest Health Partnership.

Review Team Evaluation Strengths

- This project will build off similar successful efforts employed in the adjacent North Warner focus area.
- The approach is methodical and utilizes an eight-step model that has been successful in achieving desirable goals and objectives.
- The project is well supported with all appropriate entities participating.
- The timing of this project is critical, given the massive impacts the 2018 Watson Creek fire had on the neighboring watershed.

- The need and resource concerns are well described.
- The engagement with private landowners could spawn additional opportunities to benefit fish and wildlife.
- The applicant has a strong track record of working in the Thomas Creek watershed, previously implementing a variety of fish passage and instream habitat projects

Concerns

- There is no discussion or detail provided in the application on project alternatives.
- The application lacks information on the anticipated timeline of the Fremont-Winema National Forest's work proposed for this geography. They are NEPA ready, but a timeline of activities would have been helpful to understand the timeframe associated with proposed cross-boundary forestry treatments.
- Project success is dependent on landowner awareness and interest; however, not all landowners had been contacted at the time of application.

Concluding Analysis

This proposal builds off recent local efforts and synergy around dry forest restoration. The tactic taken by the applicant and partners will work sequentially through a model to engage and inform landowners, and characterize timber and other natural resources on-site to develop site specific management plans to achieve desirable results for forest health. This effort will complement a ridgetop to ridgetop approach for overall watershed health in the Thomas Creek benefiting a variety of fish and wildlife resources.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 5

Review Team Recommended Amount

\$51,150

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$51,150

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4022-16629**Project Type:** Technical Assistance**Project Name:** Fish Passage and Screening in the Upper Ochoco Creek Watershed**Applicant:** Crook SWCD**Region:** Central Oregon**County:** Crook**OWEB Request:** \$74,871**Total Cost:** \$98,875**Application Description** *(from application abstract)*

Our project area is anchored by the confluence of Ochoco and Marks Creeks in the Upper Ochoco Creek watershed. Ochoco Creek is a significant tributary to the Crooked River east of Prineville, OR. These streams exhibit rich ecological potential but past management and barriers to fish migration and survival have fettered their productivity. With proper fish passage and screening this lush valley has the opportunity to offer high value spawning and rearing habitat for redband trout while continuing to provide excellent big game habitat and agricultural production. This application seeks to secure funds to engage a professional engineer who will conduct necessary surveys and develop design packages needed to address 11 fish passage barriers and 9 fish screening locations to restore passage along 20.3 miles of Ochoco and Marks Creeks. The project includes two land ownerships, with both landowners excited to continue their work to improve fish habitat and overall watershed conditions. The designs produced through this project will be used to apply for available restoration funds. The combination of willing landowners, motivated agency staff, and high site potential make this an excellent opportunity to improve fish habitat while increasing the efficiency of agricultural operations. The project team, partnering with ODFW, NRCS, US Forest Service, OWRD and The Crooked River Watershed Council, has identified this application as a necessary step in a larger effort to restore this landscape and waterway to a fully functioning ecosystem.

Review Team Evaluation**Strengths**

- The application presents a methodical approach for addressing fish passage and screening on Ochoco and Marks Creeks, starting at the first known barrier above Ochoco Reservoir and moving upstream.
- The proposal will develop designs for 11 barriers and 9 associated screens to a 50% level, which should provide enough detail to build landowner and partner support for a chosen alternative.
- The watershed above Ochoco reservoir is a stronghold for Redband trout; this project presents an opportunity to restore habitat connectivity.
- The applicant has established working relationships with private landowners involved in the project.
- The proposal is cost effective, achieving 50% designs for the number of proposed barriers and screens.

- The level of detail in the application justifies the approach, methodology, and reasoning for the project.

Concerns

- The match listed from the Forest Service is based on a projection of potential restoration investments that may occur upstream of the project area. The applicability of this match to the proposed project is unclear.
- Since stream corridors in the project area have been negatively impacted by livestock use, restoring passage to areas with poor riparian habitat may limit the ecological benefit of the resulting restoration projects. It would be helpful to learn whether there is interest and future plans to protect and or enhance riparian areas from adjacent land use practices.
- The proposed budget may be inadequate to achieve 50% designs for all 11 diversions and 9 screens.

Concluding Analysis

The project will engage landowners and resource entities to partially design fish passage and screening solutions at 11 diversion structures upstream of Ochoco reservoir. The proposal presents a methodical approach, has garnered local support, and developed a cost effective budget from a qualified engineer. The applicant is strongly encouraged to coordinate closely with OWRD throughout the design process regarding potential impacts to their existing stream gage located at one of the diversions on Ochoco Creek.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 5

Review Team Recommended Amount

\$74,871

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$74,871

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4023-16630

Project Type: Technical Assistance

Project Name: Thomas Creek & Tributaries
Streams - Restoration and Fish Passage
Reconnaissance and Design

Applicant: Lake County Umbrella Watershed
Council

Region: Central Oregon

County: Lake

OWEB Request: \$56,934

Total Cost: \$71,434

Application Description *(from application abstract)*

This stream reconnaissance & design project, located northwest of Lakeview seeks to improve stream channel function and fish passage on 4 priority streams in the Goose Lake Basin. In addition to Thomas Creek, the project will also develop fish passage solutions for 3 tributary streams including Bauers, Cox , and Camp Crks (collectively known as the project area). This project will involve site survey, project alternatives plan, and conceptual design for 5 diversion structures located on four adjoining private properties. The irrigation diversion structures currently affect stream corridor connectivity and fish passage. Additionally, historical channel straightening, livestock grazing, and resulting channel incision have impacted stream corridor and wetland function. One new property owner and three existing generational ranching families have come together to address these issues. The Goose Lake Fishes Conservation Strategy, 1995 and Goose Lake Tributaries Reconnaissance and Fish Passage Plan, 2017 identify these projects as high priorities with the potential to improve stream function and fish passage. Addressing the diversions, stream conditions, and land use will improve migration corridor connectivity between upper valley stream segments that provide spawning and rearing habitat, and highly productive Goose Lake. This project has opened the door to address issues associated with these important streams that affect all 9 Goose Lake fish species Modoc Sucker, Goose Lake Redband Trout, Goose Lake Tui Chub, Pit Sculpin, Pit-Klamath, Brook Lamprey, Speckled Dace, Pit Roach, Pit Sculpin, and Goose Lake Sucker. While sections of these streams are degraded, the majority of Thomas Creek and sections of Camp, Bauers, and Cox crks have all been improved through stream restoration and fish passage improvement efforts in the last 10 years. The current projects will add to past efforts and further benefit the watershed. Partners: USFWS, ODFW, DU, 4 landowners, SWCD

Review Team Evaluation Strengths

- The project includes three adjoining private properties, two of which have worked on previous restoration projects with the applicant. The other parcel of private land has a new owner, which until now, had never been accessible for conservation work.

- The project will greatly benefit fish habitat connectivity; the project area provides habitat for up to nine species of fish, some of which are endemic to this basin.
- The outcome of the project will be 60% project designs that address each fish passage barrier on the creek.
- Access to private lands offers an opportunity for fish surveys to be completed that will provide a better understanding of fish species use and their distribution in the system.
- Adjacent land use will be addressed by developing a grazing plan for the new landowner, and plans to comprehensively address resource concerns along these stream corridors.
- The project is cost effective for the deliverables described.
- The applicant has demonstrated success in this type of work.
- The maps and photos provide clarity about the project area and its context in the watershed.

Concerns

- The application states this project will benefit nine different species of fish. However, no data or information of known presence, use, or distribution of these fish in the Thomas Creek watershed is provided, making it hard to evaluate how valuable this project will be to fish.

Concluding Analysis

The project presents an exciting opportunity to work with a private landowner that is new to voluntary conservation. The project will provide significant benefit for improving fish passage, connectivity, and riparian management along these high priority drainages. This project will complement previous fish passage projects in Thomas Creek completed by the applicant, which increases the benefit-cost ratio of this investment.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 5

Review Team Recommended Amount

\$56,934

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$56,934

Staff Conditions

As part of the project completion report, the applicant will provide fish survey data that was collected as part of this effort.

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

| | |
|---|---|
| Application Number: 219-4024-16703 | Project Type: Technical Assistance |
| Project Name: Eastside Lateral Pipeline Design | |
| Applicant: Hood River SWCD | |
| Region: Central Oregon | County: Hood River |
| OWEB Request: \$35,090 | Total Cost: \$504,400 |

Application Description *(from application abstract)*

This water conservation/pipeline design project will take place within the East Fork Irrigation District (EFID) near Hood River, Oregon. EFID serves approximately 975 patrons on 9,600 acres of agricultural and rural residential land. During peak irrigation (early July through mid-September) in an average summer, EFID diverts approximately 110 cfs from the East Fork Hood River, which amounts to about 75% of the East Fork Hood River's flow. Much of EFID's distribution system is still open canal, which results in an estimated 30 cfs of water loss during summer months. This has a significant impact on spawning and rearing habitat availability for spring Chinook, coho, and winter steelhead. The proposed work will include a cultural resource assessment and pipeline design for the Eastside Lateral Canal, a 6-mile unlined ditch that begins near Swyers Drive (45.6123/-121.5073) and ends near Old Dalles Drive (45.6740, -121.4859). The canal serves about one-third of the district (~40 cfs) and has 14 end spills. Combined with evaporation and potential seepage loss, the canal loses an estimated average of 10 cfs. The design would include final construction drawings and specifications for the pipeline and turn-outs to sub-lateral lines and individual patrons. The completed design will support implementation of this project, which has received funding for the first phase of construction from the Natural Resources Conservation Service (NRCS) and Confederated Tribes of the Warm Springs (CTWS). Project partners include EFID, Hood River Watershed Group (project manager), Hood River Soil & Water Conservation District (applicant/fiscal sponsor), CTWS (funder), NRCS (technical assistance), and Farmers Conservation Alliance (technical assistance).

Review Team Evaluation

Strengths

- The applicant addressed all of the previous review team comments, particularly regarding the design costs and breakdown of match funding.
- The proposed instream benefit from piping this lateral is ~10cfs, which will provide a strong boost in summer base flows on the East Fork Hood River. The increased streamflow is estimated to provide a 12% increase in available habitat, and up to a 25% increase under climate change scenarios.
- The added instream benefit from flow restoration for fish is well described and documented.
- The justification provided for piping this lateral is articulated well.

Concerns

- The benefits to spring Chinook may be overstated in the application.
- There is no discussion regarding any on-farm efficiencies that may be taking place in the service area of the East Fork Irrigation District. It would be helpful to know what landowners are doing to be more efficient.
- The application lacks information regarding how the District will manage operations during times of drought.

Concluding Analysis

The water savings from future piping of this lateral will provide a significant uplift to stream flows in the East Fork Hood River, which is designated habitat for ESA listed salmonids. The East Fork Irrigation District has implemented previous water conservation and fish passage projects with OWEB and tribal partners. The District and its partners are well suited to be successful at achieving the desired goals and objectives of this project.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 5

Review Team Recommended Amount

\$35,090

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$35,090

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4025-16685

Project Type: Technical Assistance

Project Name: Lundy Ditch Feasibility

Applicant: Deschutes SWCD

Region: Central Oregon

County: Deschutes

OWEB Request: \$45,851

Total Cost: \$89,708

Application Description *(from application abstract)*

The proposed study would comprehensively examine the feasibility of converting a private open lateral (Lundy Ditch) to pipe. In addition examine potential of consolidating other private laterals into the Lundy Ditch and upgrading all on-farm irrigation systems. The study would assess the potential water and energy savings, technical feasibility, estimated costs and financial incentives with the goal of future on demand pressurized irrigation water that will reduce water usage and increase on-farm irrigation water efficiency and management. The potential water savings will contribute to the goal of maintaining and sustaining Spotted Frog habitat in the upper Deschutes River system as addressed in the Upper Deschutes Basin Study.

Review Team Evaluation

Strengths

- All of the private landowners served through the Lundy Ditch are engaged and willing to participate in this project.
- The Deschutes SWCD has committed to developing on-farm plans with each landowner.

Concerns

- The application states that 42.1% of water is lost through seepage; however, no data is provided to support this.
- It is unclear what the ecological benefit of this project will be. The intent appears more to support landowners accessing their water than providing watershed value.
- There is no letter of support from the irrigation district indicating their support for this effort and whether they would be interested in conserving water instream.
- The application has inaccuracies regarding ditch capacity and potential water savings through piping; the numbers provided were incorrect.
- Project management is budgeted for 310 hours, which is unusually high given that a consultant is tasked with the majority of the project deliverables.
- The overall project costs for engineering services on 3,996 ft. of ditch seem high and unjustifiable.
- The application fails to articulate how the Lundy ditch ranks and prioritizes for modernization within the Arnold Irrigation District.

- Without a commitment to implement the Allocation of Conserved Water Statute, there is low likelihood that conserved water will be available for in-stream uses.

Concluding Analysis

The Lundy ditch is a private lateral that is fed from Arnold Irrigation District's main canal, which diverts water from the Upper Deschutes River. It is documented that the conveyance of water through this ditch does not always reach every patron who has legal access to withdraw water. The Deschutes SWCD has completed significant outreach and awareness to all the patrons on the ditch, resulting in this application to fix delivery issues. Unfortunately, the application presented a series of inaccuracies that caused confusion regarding water calculations, potential savings, and seepage loss. There is low confidence in the engineering approach and high costs estimated for such a small ditch. The application fell short on justifying the ecological value to be gained and how modernizing this ditch fits in with local priorities.

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-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4026-16677**Project Type:** Monitoring**Project Name:** Recovery of a threatened amphibian after invader removal**Applicant:** Trout Unlimited Inc**Region:** Central Oregon**County:** Klamath**OWEB Request:** \$195,483**Total Cost:** \$294,672**Application Description** *(from application abstract)*

Invasive species are important drivers of declines for many amphibians, including the threatened Oregon Spotted Frog (*Rana pretiosa*; OSF). This project will monitor the recovery of an OSF population during and after removal of invasive American Bullfrog (*Lithobates catesbeianus*; BF). We will collect pre- and post-treatment data on abundance, distribution, and habitat use by OSF and BF in wetlands near Fort Klamath, Klamath County. Bullfrog removal will begin late in year 1 and continue during the second year of the study (2020). This removal (i.e., restoration) will target vulnerable BF life stages and maximize the effect on the local BF population. Removal of BF from our study area should both reverse local decline of OSF and eliminate BF colonists that could reach upstream wetlands that BF do not currently occupy. We will work with neighbors and area agencies to confirm BF have not yet colonized those habitats in the northern Wood River valley and provide tools for BF detection and control locally. Deliverables include meetings with landowners and agencies in the Wood River/Upper Klamath lake area, annual updates to two OSF working groups, presentation of results at a regional conference of biologists and wetland managers, and publication of results in peer reviewed journal. This project addresses limiting factors, recommended conservation actions, and information needs for the study region and across the range of the OSF: it contributes information toward recovery of an ESA-listed species via improved local status and better understanding of effects and management of an important invader. The project capitalizes on an experienced team, matching resources, and a key location for limiting BF invasion in the valley. Partners include owners of the ranch where monitoring and removal are conducted, Oregon Department of Fish and Wildlife, Oregon State University, US Geological Survey, US Fish and Wildlife Service, US Forest Service, and US Bureau of Land Management.

Invasive species are important drivers of declines for many amphibians, including the threatened Oregon Spotted Frog (*Rana pretiosa*; OSF). This project will monitor the recovery of an OSF population during and after removal of invasive American Bullfrog (*Lithobates catesbeianus*; BF). We will collect pre- and post-treatment data on abundance, distribution, and habitat use by OSF and BF in wetlands near Fort Klamath, Klamath County. Bullfrog removal will begin late in year 1 and continue during the second year of the study (2020). This removal (i.e., restoration) will target vulnerable BF life stages and maximize the effect on the local BF population. Removal of BF from our study area should both reverse local decline of OSF and eliminate BF colonists that could reach upstream wetlands that BF do not currently occupy. We will work with neighbors and area agencies to confirm BF have not yet colonized those habitats in the northern Wood River valley and provide tools for BF detection and control locally. Deliverables include meetings with landowners and

agencies in the Wood River/Upper Klamath lake area, annual updates to two OSF working groups, presentation of results at a regional conference of biologists and wetland managers, and publication of results in peer reviewed journal. This project addresses limiting factors, recommended conservation actions, and information needs for the study region and across the range of the OSF: it contributes information toward recovery of an ESA-listed species via improved local status and better understanding of effects and management of an important invader. The project capitalizes on an experienced team, matching resources, and a key location for limiting BF invasion in the valley. Partners include owners of the ranch where monitoring and removal are conducted, Oregon Department of Fish and Wildlife, Oregon State University, US Geological Survey, US Fish and Wildlife Service, US Forest Service, and US Bureau of Land Management.

Monitoring Team Evaluation

Monitoring Team Strengths

- The proposed project will provide an important test of hypotheses relating to the effectiveness of bullfrog removal and Oregon spotted frog recovery in the Wood River Valley.
- This application will address several Oregon spotted frog data gaps and conservation actions described in the Oregon Conservation Strategy and inform future bullfrog and Oregon spotted frog management actions.
- The application has a good description of the frog monitoring study design, sampling methodology and citation of protocols.
- The applicant provides evidence of landowner willingness, strong interagency support and collaboration, secured match and research permits.
- The applicant has a good track record and an experienced project team that proposes to collect, analyze, and report the data over a 5-year period, which helps place the overall expense of the project in context.

Monitoring Team Concerns

- The application lacked a proper explanation of methods to collect water temperature, water level, and fish data; no protocols were cited.
- The application briefly mentioned fish monitoring, but its context was not addressed in the application.
- The application could have provided more information about how and what information will be disseminated to various landowners that will enable them to perform specific management actions on their property.

Monitoring Team Comments

- Incorporate continuous loggers to monitor water levels in the ponds.

Review Team Evaluation

Strengths

- The project team includes representatives from local, state, and federal entities who are well versed with Oregon spotted frog biology and conservation in this geographic area, and are being led by a researcher who is highly regarded by peers as an expert in this field.
- The landowner has participated in other conservation efforts on the property and is willing and engaged in this project.
- The project site represents an array of habitat features and distribution for bullfrogs and Oregon spotted frogs, including areas where bullfrogs do not currently exist. This presents an opportunity to be successful at bullfrog removal as well as yield valuable data on each species, which could be beneficial for future management considerations.
- The budget proposed provides detail and justification on need and expenses necessary to deliver on project goals and objectives.

Concerns

- The application provides detail on known bullfrog distribution in the Wood River valley; however, it fails to describe how bullfrogs are managed on public and private lands outside of this project site. The project site could be recolonized with bullfrogs over time if source populations are not managed or monitored.

Concluding Analysis

The Oregon spotted frog was federally listed in 2014, the Wood River valley is thought to be a stronghold for the species, second only to the Upper Deschutes River basin. One of the threats to the species viability is the invasive bullfrog. This project represents a combination of understanding Oregon spotted population, distribution, and survivability in direct correlation to aggressive bullfrog control on private land. One of the key attributes this project will determine is how well Oregon spotted frog recovers after bullfrog removal. This project will add valuable insight and data for conservation managers.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 2

Review Team Recommended Amount

\$195,483

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$195,483

Staff Conditions

None

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4027-16686**Project Type:** Monitoring**Project Name:** Klamath Anadromous
Reintroduction Monitoring**Applicant:** Trout Unlimited Inc**Region:** Central Oregon**County:** Klamath**OWEB Request:** \$170,248**Total Cost:** \$261,838**Application Description** *(from application abstract)*

Following the removal of the four hydroelectric dams on the Klamath River in 2021, over 400 miles of habitat (Klamath County, OR, Lake County, OR, and Siskiyou County, CA) will be available for fall and spring-run Chinook Salmon, Coho Salmon, steelhead trout, and Pacific Lamprey. Currently, staff from ODFW located in Klamath Falls and The Klamath Tribes are developing the Implementation Plan for the Reintroduction of Anadromous Fishes into the Oregon Portion of the Upper Klamath Basin (Reintroduction Implementation Plan), which will be complete by summer of 2019. The purpose of the Reintroduction Implementation Plan is to guide the monitoring activities associated with volitional recolonization of fall-run Chinook Salmon, Coho Salmon, and steelhead trout and the active reintroduction of spring-run Chinook Salmon. The Reintroduction Implementation Plan identifies the types of monitoring facilities and activities that will be needed to evaluate recolonization. The Reintroduction Implementation Plan also recommends baseline studies to occur prior to the removal of the dams, including genetically characterizing resident Redband Trout (*Oncorhynchus mykiss*) prior to dam removal. The proposed monitoring project will fund ODFW and TU fish biologists to conduct pre-dam removal, baseline-monitoring activities, and identify locations and establish methods for monitoring facilities in preparation for the recolonization of anadromous fishes. These activities will be beneficial to establish monitoring activities that will need to occur immediately following dam removal in the year 2021, inform the active reintroduction of spring-run Chinook, and collect time-sensitive data that will only be useful if obtained before dams are removed. Project Partners include Oregon Department of Fish and Wildlife, Oregon State University, and California Depart. of Fish and Wildlife, US Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and The Klamath Tribes. Following the removal of the four hydroelectric dams on the Klamath River in 2021, over 400 miles of habitat (Klamath County, OR, Lake County, OR, and Siskiyou County, CA) will be available for fall and spring-run Chinook Salmon, Coho Salmon, steelhead trout, and Pacific Lamprey. Currently, staff from ODFW located in Klamath Falls and The Klamath Tribes are developing the Implementation Plan for the Reintroduction of Anadromous Fishes into the Oregon Portion of the Upper Klamath Basin (Reintroduction Implementation Plan), which will be complete by summer of 2019. The purpose of the Reintroduction Implementation Plan is to guide the monitoring activities associated with volitional recolonization of fall-run Chinook Salmon, Coho Salmon, and steelhead trout and the active reintroduction of spring-run Chinook Salmon. The Reintroduction Implementation Plan identifies the types of monitoring facilities and activities that will be needed to evaluate recolonization. The Reintroduction Implementation Plan also recommends

baseline studies to occur prior to the removal of the dams, including genetically characterizing resident Redband Trout (*Oncorhynchus mykiss*) prior to dam removal. The proposed monitoring project will fund ODFW and TU fish biologists to conduct pre-dam removal, baseline-monitoring activities, and identify locations and establish methods for monitoring facilities in preparation for the recolonization of anadromous fishes. These activities will be beneficial to establish monitoring activities that will need to occur immediately following dam removal in the year 2021, inform the active reintroduction of spring-run Chinook, and collect time-sensitive data that will only be useful if obtained before dams are removed. Project Partners include Oregon Department of Fish and Wildlife, Oregon State University, and California Depart. of Fish and Wildlife, US Fish and Wildlife Service, National Oceanic and Atmospheric Administration, and The Klamath Tribes.

Monitoring Team Evaluation

Monitoring Team Strengths

- N/A

Monitoring Team Concerns

- N/A

Monitoring Team Comments

N/A

Review Team Evaluation

Strengths

- N/A

Concerns

- N/A

Concluding Analysis

Application withdrawn by the applicant prior to review.

Review Team Recommendation to Staff

Withdrawn

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

Withdrawn

Staff Recommended Amount

\$0

Staff Conditions

Withdrawn

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4028-16719

Project Type: Monitoring

Project Name: Measuring the effects of beaver dam analogs for restoration on the South Fork of the Crooked River.

Applicant: OSU Office of Sponsored Research & Award Admin

Region: Central Oregon

County: Crook

OWEB Request: \$44,801

Total Cost: \$77,418

Application Description *(from application abstract)*

The South Fork of the Crooked River is a tributary of the Crooked River near Paulina, Oregon (Crook County). It is disconnected from portions of its floodplain and lacks woody riparian vegetation. We propose to monitor five beaver dam analogs (BDAs) that we installed on the South Fork in 2016. We will monitor geomorphology, vegetation, and stream temperatures using RTK-GPS, drone imagery, vegetation measurements, and temperature probes. Although a BDA study on nearby Bridge Creek shows promising results for BDAs as a restoration tool, rapid implementation of BDAs in Western drainages exceeds follow-up monitoring. Our site offers an opportunity to monitor BDAs in a low-gradient system with no extant woody riparian vegetation, which differs from the steeper gradient and intact riparian woody communities on Bridge Creek. The low gradient and lack of woody riparian vegetation on the South Fork raises these questions: (1) At what rate does aggradation occur behind BDAs when a low gradient may have limited capacity to transport sediment? (2) Can BDAs aid restoration practitioners to actively reestablish riparian woody species where none currently occur? (3) What is the effect of BDAs on stream temperatures without riparian shade? An understanding of aggradation is related to restoring vegetation because as streams aggrade they reconnect with their floodplains, thus raising the water table and supporting plants. Vegetation growth and stream temperature monitoring will be conducted by OSU-Cascades students with quality control administered by OSU-Cascades professors. Aggradation measurements will be done by Anabran LLC. Deliverables include growth rates of woody riparian vegetation planted for restoration adjacent to and distant from BDAs, changes in green zone areas measured from drone imagery, temperature data above and below each structure, and measurements of sediment gains and losses in stream channels and banks near structures and in control reaches. The South Fork of the Crooked River is a tributary of the Crooked River near Paulina, Oregon (Crook County). It is disconnected from portions of its floodplain and lacks woody riparian vegetation. We propose to monitor five beaver dam analogs (BDAs) that we installed on the South Fork in 2016. We will monitor geomorphology, vegetation, and stream temperatures using RTK-GPS, drone imagery, vegetation measurements, and temperature probes. Although a BDA study on nearby Bridge Creek shows promising results for BDAs as a restoration tool, rapid implementation of BDAs in Western drainages exceeds follow-up monitoring. Our site offers an opportunity to monitor BDAs in a low-gradient system with no extant woody riparian vegetation, which differs from the steeper gradient and intact riparian woody communities on Bridge Creek. The low gradient and lack of woody riparian vegetation on

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Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant addressed previous review comments and refined the scope of work and budget to focus the monitoring efforts proposed in this application.
- The application has a good justification of the data they propose to collect based on what information is available in the literature.
- The project leverages existing baseline and post-project data to collect additional years of data to understand longer term effects of BDAs.
- The application contained uploads illustrating data that have been collected in the past, and demonstrates the applicant's ability to adequately collect, manage, and report the information.
- The applicant is partnering with an experienced consultant to work on this project

Monitoring Team Concerns

- The application lacked an adequate description and citation of monitoring methods.
- The application lacked a description of how the data will be managed, analyzed and interpreted.
- The application states that they will generate a sediment budget by surveying cross sections. This approach does not take into consideration suspended sediment transport and should not be considered a true sediment budget.
- The application describes the limited information available on effects of BDAs, yet the schedule and application narrative does not indicate the development of a final report to produce findings associated with the monitoring actions proposed in the application

Monitoring Team Comments

Include in the schedule and application the development of a final report to interpret and report the monitoring findings.

Review Team Evaluation

Strengths

- The applicant and landowner have a long history working together and are committed to conservation and understanding the effectiveness of beaver dam analogues (BDAs) installed on the property.
- The contractor implementing the work has significant experience implementing BDAs and conducting ecological response monitoring.
- Impacts of ongoing CREP plantings along the project site will be characterized in relation to BDA placement, allowing both the applicant and CREP planners to learn and adapt to changing conditions.
- The applicant addressed previous review team comments and submitted a refined approach and budget from the last submission.

Concerns

- The South Fork of the Crooked River has unique qualities compared to other nearby drainages, making the applicability of utilizing this project to inform other similar projects challenging.
- It is unclear how the applicant will draw conclusions and transfer this data that will result in future restoration.
- The monitoring protocols lack sufficient detail to determine technical soundness of the approach, specifically in providing information to understand whether BDAs actually raise and hold local water tables.

Concluding Analysis

The use of BDAs in stream restoration is growing, and the applicant seeks to fill key knowledge and information gaps with the proposed monitoring. The monitoring results would be difficult to apply elsewhere due to the unique hydrologic setting of the South Fork Crooked River. The lack of details about monitoring protocols and the relatively small cluster of BDAs included in the application limit the cost-benefit of this investment. The pathway leading to future restoration is unclear.

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-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4029-16584

Project Type: Monitoring

Project Name: Continuation Data Collection and Verification of the Stream Classification Database for Klamath/Lake

Applicant: Klamath Watershed Partnership

Region: Central Oregon

County: Klamath

OWEB Request: \$130,876

Total Cost: \$163,320

Application Description *(from application abstract)*

Klamath Watershed Partnership (KWP) will merge the objectives and priorities of Oregon Department of Forestry (ODF) and Oregon Department of Fish and Wildlife (ODFW) in a collaborative effort to correct, update, and supplement the ODF Stream Classification Database with field-based data regarding stream and fish presence, fish passage barriers, and habitat restoration potential in Klamath and Lake Counties. This proposal is a continuation of status and trend monitoring funded through OWEB 217-4040-14296 in 2017. The Stream Classification Database is the basis on which ODF enforces Water Protection Rules of the Oregon Forest Practices Act as it regulates forestry on private and state-owned lands. The data for the ODF Klamath-Lake District is inaccurate and insufficient due to poor modelling and inadequate capacity to support a concerted ground-truthing effort. Consequently, piecemeal investigations for fish presence delay projects, frustrate partners, consume State resources, and ultimately do not provide sufficient assurance that aquatic resources are being adequately protected. The proposed project will provide a 3rd and 4th field season of data collection and ground-truthing to correct and confirm the highest priority areas based on ODF and ODFW objectives. Potential areas include the upper North Fork Sprague, upper Sycan, and upper Williamson watersheds. Surveys will include field verification of stream classification for 300 miles of streams, and physical habitat assessments for fish presence on 120 miles of streams. Project partners include ODF and ODFW. KWP is also working with ODFW and Trout Unlimited to ensure that data collection efforts regarding fish passage barriers are complementary, and not duplicative.

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Monitoring Team Evaluation

Monitoring Team Strengths

- This application helps fills data gaps related to the current stream network, fish presence, and potential fish barriers that exist.
- The application proposes to collect information that could inform restoration actions associated with future anadromous fish reintroduction plans.
- The application was well written, contains achievable goals and objectives and letters of support demonstrating coordination among the partners, and proposes a reasonable timeline to complete the proposed activities.
- The examples of data collected that were provided as uploads to the application describe the information gathered and how it can inform forest management and future restoration actions.

Monitoring Team Concerns

- It was unclear how intensive the forest management operations are in this region to gauge the importance and need for the data.
- There was not a strong description of the data quality assurance and quality control.
- The OPMT questioned if the information is communicated to USGS to update the National Hydrography Dataset (NHD).

Monitoring Team Comments

Report the updated stream layer to the USGS to help incorporate into the NHD.

Review Team Evaluation

Strengths

- This proposal is a continuation of a currently funded OWEB grant, which thus far has been successful at achieving the desired goals and objectives.
- The project fills key data gaps in a database that is inaccurate for characterizing stream networks and associated fish use.
- Most of the project will take place on large industrial forest lands, which makes securing property access for the majority of the study area feasible.

- The current grant has already spawned a restoration project to be implemented in 2019 on Spencer Creek, which according to local resource biologists may be one of the first streams recolonized by anadromous fish post-dam removal on the Klamath River.

Concerns

- The survey approach taken in summer 2018 in which surveys were stopped when field crews discovered a fish barrier and anything upstream was categorized as “non-fish” may have limited opportunities. While this determination may be applicable for anadromous fish, opportunities may be missed for other native fish by disregarding drainages above known barriers. More information regarding this protocol and justification would have been helpful.
- While one opportunity for potential restoration is discussed, the application generally lacks a clear plan on how information collected will be used to inform future restoration.

Concluding Analysis

This project will support the continuation of updating the stream classification database. Currently, the applicant has an OWEB grant and has completed one field season (2018) with one more to go (2019) with this funding. The database employed by ODF and ODFW are grossly inaccurate as it was developed at a coarse scale for landscapes on the west side of Oregon. The applicant reported a successful first year in 2018, reaching more stream miles than anticipated. However, this was achieved due to the approach of discounting drainages above discovered barriers to fish. The pathway of this monitoring effort leading to restoration has resulted in one opportunistic project thus far.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 2

Review Team Recommended Amount

\$130,876

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

N/A

Open Solicitation-2018 Fall Offering Central Oregon (Region 4)

Application Number: 219-4030-16647

Project Type: Stakeholder Engagement

Project Name: Conserving Mussels in Aquatic
Restoration--Stakeholder Engagement

Applicant: The Xerces Society

Region: Central Oregon

County: Deschutes

OWEB Request: \$55,167

Total Cost: \$66,384

Application Description *(from application abstract)*

Freshwater mussels provide an essential contribution to Oregon's freshwater quality and biodiversity, yet they frequently go unnoticed. They are sensitive to disturbance, and many of Oregon's native mussel species are at risk of extinction. Aquatic habitat restoration poses a significant emerging threat to mussels. These cryptic animals are often discovered by restoration practitioners only when sites are dewatered, at which point, their chance of survival is limited. When mussel beds are lost, it can take decades to restore this resource, and the ecological condition of an otherwise restored site devoid of mussels may be poorer than the site was prior to restoration. We will address this problem by engaging more than 400 restoration practitioners statewide in learning about how to protect mussels during restoration projects. We will reach people through presentations, day-long workshops, and site visits. Through each of these levels of engagement, we will provide information on surveying for mussels and implementing best management practices during restoration planning, and we will recruit stakeholders to be part of our complementary Technical Assistance project. We have identified priority regions to target for engaging stakeholders in mussel conservation, based upon the predicted location of climate refugia for these animals over the next 50 to 100 years. These priority counties include: Baker, Clackamas, Coos, Crook, Deschutes, Douglas, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Lane, Lincoln, Linn, Multnomah, Tillamook, Union, Wallowa, and Wasco.

Review Team Evaluation

Strengths

- The project proposed will deliver revealing and useful information regarding the safeguarding of freshwater mussels, a suite of species that often are overlooked and unintentionally harmed during restoration projects.
- The benefits of this engagement will have impacts statewide.
- The Xerces Society is well suited and equipped to deliver on project goals and objectives.
- The emphasis on targeting engagement to restoration practitioners should raise awareness to provide guidance and technical resources in order to carefully craft salvage plans for future instream work.
- The project is well supported by a variety of appropriate partners.

Concerns

- It is unclear how this engagement will lead to actual eligible restoration projects, which is a requirement of the Stakeholder Engagement offering.
- Engagement with regulatory or permitting personnel is not mentioned in the application. The applicant may be missing an opportunity that could provide more substantial, long-term protection of freshwater mussel species.

Concluding Analysis

Freshwater mussels tend to be a lesser known part of the ecosystem, yet provide essential value in rivers and lakes. They also can be used as a key indicator species of water quality and fish habitat suitability. As instream and wetland restoration continues to thrive in Oregon, freshwater mussels can often be overlooked and inadvertently harmed or destroyed by activities striving to benefit overall aquatic health. The applicant is looking to build off their recently developed Best Management Practices for freshwater mussels by engaging restoration practitioners in informative and thoughtful workshops and providing resources to safeguard these species in future restoration projects. This project presents a great opportunity to fill information gaps and provide pathways forward to protect and promote these species.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 1

Review Team Recommended Amount

\$55,167

Review Team Conditions

None

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

None

Staff Recommendation

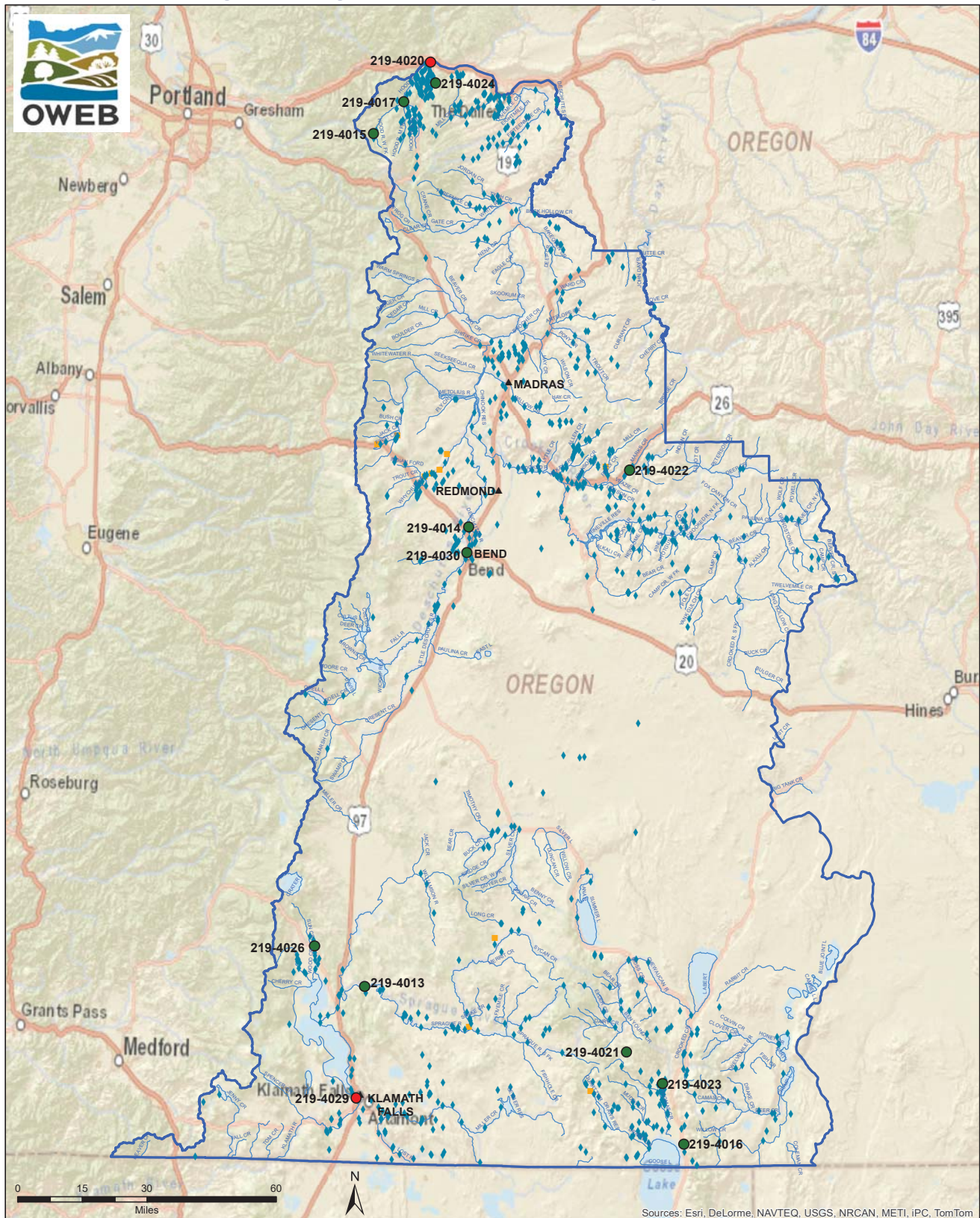
Fund

Staff Recommended Amount

\$55,167

Staff Conditions

None



Document Path: Z:\oweb\Technical_Services\Information_Services\GIS\Maps\Review Team Meetings\2018Fall\Cycle\Projects\Region4_App\FundingStatus_11x17_2018Fall.mxd
 ESRI ArcMap 10.6 NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20190314

Funding Recommendations

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

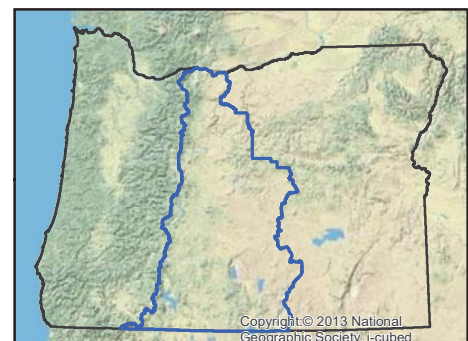
Previous Grants - 1998-Spring 2017

- ◆ Restoration Acquisitions
- Stream
- Region Boundary

Oregon Watershed Enhancement Board

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

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Region 4 - Central Oregon

Restoration Projects Recommended for Funding in Priority Order

| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
|---|-------------------------------|---|---|--------------------|------------|
| 219-4015 | Hood River SWCD | West Fork Hood River at Jones Creek Instream Habitat Project | Instream fish habitat structures will be placed along a one mile segment of the West Fork Hood River to improve habitat for spring Chinook, coho, and summer steelhead. | 72,704 | Hood River |
| 219-4014 | Deschutes River Conservancy | Swalley Piping Project, Elder Lateral | Irrigation piping of the Elder lateral will permanently conserve water instream to the Middle Deschutes River. | 292,008 | Deschutes |
| 219-4013 | Klamath Watershed Partnership | Chiloquin Community Forest and Fire Project - Forest Treatments | Small tree thinning and brush treatment will occur on forested private lands east of Chiloquin to promote wildlife resiliency and wildlife habitat. | 537,878 | Klamath |
| 219-4017 | DEE Irrigation District | Dee Irrigation District Water Conservation Project | The last phase in irrigation modernization for the District will permanently conserve water instream to the West Fork Hood River. | 303,981 | Hood River |
| 219-4016 | DEE Irrigation District | Cogswell Creek Fish Passage & Stream Restoration | Fish passage will be fully restored to the entire Cogswell Creek, a small east side tributary to Goose Lake. | 366,518 | Hood River |
| Total Restoration Projects Recommended for Funding by RRT and OWEB Staff | | | | 1,573,089 | |

Restoration Projects *Recommended but Not Funded* in Priority Order

| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
|--|---------|---------------|-------------------|--------------------|--------|
| None | | | | | |
| Total Restoration Projects Recommended for Funding by RRT | | | | 1,573,089 | |

Restoration Applications *Not Recommended* for Funding by RRT

| Project # | Grantee | Project Title | Amount Requested | County |
|-----------|---|---|------------------|-----------|
| 219-4018 | Discover Your Northwest DBA: Discover Your Forest | Lower Deep Creek Restoration Project Phase 2 (2019) | 211,151 | Crook |
| 219-4019 | Jefferson SWCD | Trout Creek Upland Habitat Improvement | 417,333 | Jefferson |

| Technical Assistance (TA) Projects Recommended for Funding in Priority Order | | | | | |
|---|--|---|--|--------------------|------------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-4023 | Lake County Umbrella Watershed Council | Thomas Creek & Tributaries Streams - Restoration and Fish Passage Reconnaissance and Design | The technical assistance will engage three landowners to develop partial engineered designs to improve fish passage at five barriers on Thomas, Cox, and Camp Creeks located just west of Lakeview. | 56,934 | Lake |
| 219-4024 | Hood River SWCD | Eastside Lateral Pipeline Design | Engineered designs will be completed and construction-ready to support future piping of a six mile canal that will permanently protect water instream to the East Fork Hood River. | 35,090 | Hood River |
| 219-4022 | Crook SWCD | Fish Passage and Screening in the Upper Ochoco Creek Watershed | Project partners will work with several private landowners to develop partial engineered designs to improve fish passage and fish screening on stream diversions along Ochoco Creek above Ochoco Reservoir. | 74,871 | Crook |
| 219-4021 | Lake County Umbrella Watershed Council | Thomas Creek Watershed Forest Health Mapping & Inventory | An eight step model will be used to engage and inform landowners, characterize timber and other natural resources to develop landowner specific management plans to promote forest health and wildlife habitat. | 51,150 | Lake |
| Total TA Projects Recommended for Funding by RRT and OWEB Staff | | | | 218,045 | |
| Technical Assistance Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-4020 | Lower Columbia Estuary Partnership | Middle Mainstem Columbia Restoration Action Plan | The Lower Columbia Estuary Partnership (LCEP) will lead a variety of partners to develop a restoration inventory and action plan for the mainstem Columbia River from Bonneville Dam to the John Day Dam to fill knowledge gaps and jumpstart restoration activities in this area. | 74,995 | Hood River |
| Total TA Projects Recommended for Funding by RRT | | | | 293,040 | |
| Technical Assistance Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-4025 | Deschutes SWCD | Lundy Ditch Feasibility | | 45,851 | Deschutes |

| Stakeholder Engagement Projects Recommended for Funding in Priority Order | | | | | |
|---|--------------------|--|--|--------------------|-----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-4030 | The Xerces Society | Conserving Mussels in Aquatic Restoration-- Stakeholder Engagement | Workshops and technical assistance will be provided to restoration practitioners in an effort to engage and facilitate the protection of freshwater mussels during stream restoration. | 55,167 | Deschutes |
| Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff | | | | 55,167 | |
| | | | | | |
| Stakeholder Engagement Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Stakeholder Engagement Projects Recommended for funding by RRT | | | | 55,167 | |
| | | | | | |
| Stakeholder Engagement Projects <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| None | | | | | |
| | | | | | |

| Monitoring Projects Recommended for Funding in Priority Order | | | | | |
|---|--|--|--|--------------------|---------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-4026 | Trout Unlimited Inc. | Recovery of a threatened amphibian after invader removal | Oregon spotted frogs will be monitored to evaluate their response to bull frog removal. | 195,483 | Klamath |
| Total Monitoring Projects Recommended for funding by OWEB Staff | | | | 195,483 | |
| Monitoring Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-4029 | Klamath Watershed Partnership | Continuation Data Collection and Verification of the Stream Classification Database for Klamath/Lake | Field-based surveys will continue to classify stream types and fish suitability to provide critical updates to ODF's outdated and often unreliable stream classification database. | 130,876 | Klamath |
| Total Monitoring Projects Recommended for funding by RRT | | | | 326,359 | |
| Monitoring Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-4028 | OSU Office of Sponsored Research & Award Admin | Measuring the effects of beaver dam analogs for restoration on the South Fork of the Crooked River | | 48,801 | Crook |
| Region 4 Total OWEB Staff Recommended Board Award | | | | 2,041,784 | 19% |
| Regions 1-6 Grand Total OWEB Staff Recommended Board Award | | | | 10,554,731 | |

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

| | |
|--|----------------------------------|
| Application Number: 219-5024-16570 | Project Type: Restoration |
| Project Name: Wallowa Mountain Loop Road Reconstruction | |
| Applicant: Grande Ronde Model WS Foundation | |
| Region: Eastern Oregon | County: Wallowa |
| OWEB Request: \$118,096 | Total Cost: \$8,010,736 |

Application Description *(from application abstract)*

Location: The proposed project is located in Wallowa County, Oregon, east of Joseph, along Forest Highway 248 (Wallowa County Road 4602, NFSR 39) from MP 0.0 to MP 5.0. Project Need: The roadway within the project area hosts a diversity of traffic ranging from Forest Service and natural resources personnel to recreation and logging vehicles. The overall roadway width is narrow, and existing pavement is in poor condition with much of the surface exhibiting potholes and severe alligator cracking. A few areas of fill slope instability have been identified and will be corrected. Many rock cut slopes adjacent to the roadway are raveling, and the associated rock fall is a maintenance issue. Maintenance funds are dwindling and the county and Forest Service can no longer keep the roadway in a serviceable condition. A structural asphalt concrete pavement overlay is needed to increase the service life and to improve the driving surface. Fisheries are a priority in the project area, with great emphasis being placed on restoration and improving access to habitat. ESA listed bull trout and steelhead occupy Little Sheep Creek and measures to reduce road derived sediment contribution and improve passage conditions will benefit both species. Many culverts along the roadway are damaged or buried and require maintenance or replacement. A double culvert installation in Little Sheep Creek near Highway 350 and at the beginning of the project is a long standing and known passage barrier. Proposed Work: Road surface work will consist of reconstructing or rehabilitating pavement that is in poor condition and exhibits alligator cracking, longitudinal edge cracking, potholes, and minor rutting along 5-miles of Wallowa County Road 4602. The double culvert will be removed and replaced with a bridge. Project Partners: Project partners include Federal Highway Administration, Oregon Department of Transportation, US Forest Service, Wallowa County and Grande Ronde Model Watershed.

Review Team Evaluation Strengths

- The application is well-written and provides excellent detail and maps.
- The double culvert is a well-known passage barrier on Little Sheep Creek.
- Project implementation will benefit salmonids, including Chinook, steelhead, and bull trout.
- There is 11 miles of stream habitat above the barrier that will be accessible to fish once the culvert is replaced.

- The culvert removal is part of a larger infrastructure improvement project that will provide benefits to the local community. In addition to the bridge installation, five miles of road will be improved that accesses a recreational area and is part of a scenic byway.
- There will be a positive cost-benefit to the watershed with project implementation.
- Replacing this culvert is identified in the Wallowa Atlas, the local recovery plan for anadromous fisheries.

Concerns

- No significant concerns were identified.

Concluding Analysis

The project will replace a double culvert with a channel-spanning bridge. The current culvert does not meet fish passage requirements because jump height and water velocity are too high for fish to successfully move through the culvert. Replacing the culvert will improve aquatic passage for all life stages of steelhead, specifically juvenile-rearing. Steelhead will be able to move upstream as stream temperatures increase in the summer, and downstream in the winter as stream temperatures decrease. The project is a part of a multi-million dollar road improvement of the Hells Canyon Scenic Byway between Joseph and Halfway. Project partners include ODOT, Federal Highway Administration, and Wallowa County. The overall budget for the restoration project is reasonable for the resulting high ecological benefits.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 11

Review Team Recommended Amount

\$118,096

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$118,096

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5025-16580

Project Type: Restoration

Project Name: Bootjack Irrigation

Applicant: Burnt River SWCD

Region: Eastern Oregon

County: Baker

OWEB Request: \$109,353

Total Cost: \$185,320

Application Description *(from application abstract)*

The project site is located near Unity, Oregon within the Burnt River Soil and Water Conservation District (SWCD). The Thompson ditch, an open ditch delivery system, spans 1.5 miles from its point of diversion (POD) in the West Fork of the Burnt River, to where it is currently utilized through flood irrigation on 149 acres. A survey of the ditch completed with the local NRCS office found that considerable water loss is occurring throughout the entire reach of the ditch: an estimated 224 gpm was diverted into the ditch at the head gate and 10 gpm was observed at the delivery location at the end of the ditch. To address water loss in the Thompson ditch, this project proposes to convert one mile of open ditch to a pressurized piped irrigation system. In addition to an antiquated and inefficient delivery system, this project will also address increased sediment inputs into the Burnt River Watershed by converting 30 acres of flood irrigated pasture to sprinkler irrigation under pivot. The landowner has realized these watershed issues present at the project location and has contacted the Burnt River SWCD seeking assistance to improve irrigation efficiency by piping one mile of open ditch and installing one three tower pivot converting 30 acres of flood irrigated pasture to sprinkler irrigation. Project partners include the Burnt River SWCD and the landowner.

Review Team Evaluation Strengths

- The project provides an opportunity to return water to the West Fork of the Burnt River.
- Implementation of the project will benefit 1.5 to 2 miles of the Burnt River.
- The applicant has permission and support secured for project implementation from all landowners affected by the ditch easement.

Concerns

- Concerns from the previous application evaluation are not addressed.
- There is no confirmation that the landowner will leave a certain amount of water in the West Fork of the Burnt River.
- A water management plan is needed.

- The ecological uplift needs to be more clearly defined in the application.

Concluding Analysis

The landowner has water rights to divert the entire West Fork of the Burnt River into Thompson Ditch. Replacing the open ditch with the 5,420 feet of HDPE provides opportunity for unused water to remain in the West Fork of the Burnt River. Currently up to 2.6 cfs is diverted. If the conveyance pipe is installed, 1.5 cfs is needed to operate the gated-pipe and 0.5 cfs is needed for the pivot. Potentially 1.1 cfs to 2.1 cfs can remain in the West Fork if a water management plan is developed, and irrigation to the pivot and gated-pipe is non-concurrent. However, it is not clear if the landowner is willing to return a portion of the unused water to the West Fork. The applicant should consider developing a water management plan that addresses needs for the pivot and gated-pipe and has an irrigation schedule that provides for returning water to the creek. The project potentially has merit but needs additional clarification of aquatic benefits and water savings that will remain in the West Fork.

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-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5026-16587**Project Type:** Restoration**Project Name:** Tamkaliks Side Channel and Wetland Complex**Applicant:** Nez Perce Tribe**Region:** Eastern Oregon**County:** Wallowa**OWEB Request:** \$235,097**Total Cost:** \$461,377

Application Description *(from application abstract)*

The proposed project site is located adjacent to the Wallowa River, in the town of Wallowa, and is part of a 320 acre parcel belonging to the Wallowa Band Nez Perce Trail Interpretive Center, Inc. (the Homeland Project). The local non-profit organization, chartered in 1995, is supported regionally by private citizens, local government, and representatives from the Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation and Confederated Tribes of the Colville Reservation. This land provides a place for Nez Perce people ranging from Washington, Oregon and Idaho, to exercise traditional cultural practices – such as the annual Tamkaliks Celebration – in their historical homeland territory. Due to extensive channelization in the project area habitat for juvenile salmonid rearing and spawning is severely limited. This project seeks to address multiple habitat, water quality, and stream function deficiencies associated with this middle reach of the Wallowa River. Proposed work includes constructing a multi-connection side channel, installing large wood, inlet boulders, and alcoves, and enhancing and creating emergent wetland communities. Three recent habitat restoration projects (Wallowa-Baker, McDaniel, and 6-Ranch) have been completed within 15 miles both upstream and downstream of the project reach to increase fish habitat. This project will further enhance the Wallowa River by increasing habitat quantity in the form of back water pools, large wood debris, and re-connection of the river to the existing floodplain, providing year round juvenile rearing and potential spawning habitat for ESA listed fish species. These actions will also intercept various forms of ground water and irrigation returns helping regulate water temperature, sequester excess sediment, and improve/promote riparian vegetation establishment, and hyporheic exchange. Project partners: Nez Perce Tribe, Grande Ronde Model Watershed, USFS, BPA, and the Homeland Project.

Review Team Evaluation

Strengths

- Designs provided in the application demonstrate the proposed project is technically sound. These designs were produced from a previous OWEB technical assistance grant and with oversight by local partners.
- The Tamkaliks site has high cultural significance for the Nez Perce Tribe, who purchased this property in the late 1990's.

- Implementation will provide habitat benefits for ESA-listed steelhead, Chinook salmon, bull trout, and lamprey, a culturally significant tribal food source.
- The project location is conducive to public outreach as it is highly visible and frequented by many visitors.
- There is potential for future fish monitoring by the Nez Perce Tribe at the project site.
- The project is ready for implementation with BPA funding already secured.
- The project will have measurable impacts to habitat according to researchers.
- Implementation will build on recommendations identified in the Wallowa Atlas, the local strategic action plan for anadromous fisheries.

Concerns

- No significant concerns were identified.

Concluding Analysis

The application describes a clear need for restoration in the mid-reach of the Wallowa River, which has been channelized by the main highway, railroad, and intensive agriculture. The site is located downstream of four previously implemented side-channel stream meander projects, and approximately two miles upstream of another side-channel project. Salmonid habitat will be significantly improved since the mid-reach of the Wallowa River lacks spawning and rearing habitat for steelhead, Chinook salmon, bull trout, lamprey, and recently re-introduced Coho. Aquatic habitat will be enhanced by the installation of large woody debris, wetland nodes, alcoves, willow clumps, and plantings. Implementation of the project will also enhance wetland and floodplain connectivity. The Nez Perce Tribe and local partners are actively engaged in this effort, demonstrating an effective project partnership and the capacity to implement a high quality project.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 11

Review Team Recommended Amount

\$235,097

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$235,097

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5027-16593

Project Type: Restoration

Project Name: Water Quality Improvement at River
Mile 56 or Making Life Better on the Canal

Applicant: Malheur WC

Region: Eastern Oregon

County: Malheur

OWEB Request: \$62,330

Total Cost: \$149,180

Application Description *(from application abstract)*

1. The project is located in Harper, Oregon along the Malheur River. The tail water directly enters the Malheur River near river mile 56. The slopes are steep, and cattle are present during the late fall and early winter. It is also in an area we would like to make a "focus area" in the future. This makes this project one of the highest priorities for the Council.

2. Water quality improvement in the Malheur Basin is one of our 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 18 years across the Malheur Basin.

3. This proposal will convert 59 acres from flood to sprinkler irrigation through the installation of a pivot system, big gun sprinklers for the corner, and related irrigation infrastructure.

4. Project partners include Vale Irrigation District, landowner and Malheur Watershed Council.

Review Team Evaluation

Strengths

- The project is technically sound.
- Project implementation will eliminate all irrigation-induced return flow to the Malheur River from the project site, which will improve water quality.
- Due to the steep project slopes accelerating erosion and runoff and the site's proximity to the Malheur River, this project is an implementation priority for the watershed council.

Concerns

- No significant concerns were identified.

Concluding Analysis

Converting flood irrigation to sprinkler eliminates nutrient and farm chemical runoff into the Malheur

River. The watershed council has a project ranking system that gives priority to projects located in steeper slopes, in direct proximity to a water body, and within an EQIP-priority area. Flood irrigation on steeper slopes creates excessive sheet-and-rill erosion, which will be eliminated once the pivot is installed. Project implementation will improve water quality and directly benefit the Malheur River. The project is complementary to several other projects implemented in the Harper area.

Review Team Recommendation to Staff

Fund

Review Team Priority

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Review Team Recommended Amount

\$62,330

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$62,330

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5028-16594**Project Type:** Restoration**Project Name:** Makin' Things Better on the Powder:

Phase II

Movin' the Power Lines

Applicant: Malheur WC**Region:** Eastern Oregon**County:** Baker**OWEB Request:** \$59,539**Total Cost:** \$69,139

Application Description *(from application abstract)*

1) The project is on the Powder River, about 2.5 road miles from the town of North Powder. 2) The Powder River is water quality limited for bacteria, DO, temperature, and nutrients. Keeping more water in the river will help with many of the problems. Redband use this reach of the Powder for many stages of their life history. Having more water in the river will help them as well. 3) With the help of a previous OWEB grant we are moving the point of diversion 4.3 miles downstream, which will automatically leave 5 cfs in the river for that length. With the previous grant we will install a fish friendly diversion, and 7040 feet of pipe of various sizes to convert 116 acres of flood irrigation to pivots. The landowner will consider using the conserved water statutes to put a portion of the saved water as an instream right. However, because of the unusually high cost of removing old transmission lines and building new lines to supply power to the proposed pivots, this part of the project (irrigation efficiency) is in jeopardy. The landowner is committed to moving the diversion, installing the fence, protecting water quality, and conserving water through improved irrigation practices. But he cannot afford the cost of supplying power. We, the landowner and project managers, underestimated the costs. The landowner was not concerned based on previous recent experiences implementing a similar project. It didn't seem to be a concern because the power lines run right along the road next to the pump site. Without more assistance, he will be forced to use gated pipe to irrigate the fields. Thus not all of our goals from the original proposal will be achieved. Without the improved irrigation efficiency the landowner will use more water, and contaminated return flows from flood irrigation will still enter the Powder. 4) Partners are Curt Martin, and the Malheur Watershed Council.

Review Team Evaluation

Strengths

- The proposed project supports a previously funded restoration project that will install a fish friendly diversion and leave 5.0 cfs in the Powder River for 4.3 miles.

Concerns

- The number of hours listed in the application as match from project management for moving the

power lines seems unreasonably high given that the OTEC (Oregon Trail Electric Co.) will be providing most of the project oversight.

- The cost to move the power lines is high for minimal watershed benefit.
- It is unclear whether the landowner will move water savings to a conserved water right.

Concluding Analysis

The previously funded project will move a point of diversion five miles downstream on the Powder River, leaving 5 cfs in the river for an additional 4.3 miles. A fish-friendly diversion and a pivot will be installed to improve water quality on 116 acres. The original application did not include the cost for moving the power lines. Based on prior experience moving power lines on another project, the applicant and landowner assumed the costs would be much lower. However, OTEC's cost estimate is higher than was anticipated. With the uncertainty in whether water savings will be moved to a conserved water right, the watershed benefit for the whole project is limited with the additional cost of this current proposal.

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-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5029-16595

Project Type: Restoration

Project Name: Springing into Action on Mahogany Mountain

Applicant: Owyhee WC

Region: Eastern Oregon

County: Malheur

OWEB Request: \$53,634

Total Cost: \$77,989

Application Description *(from application abstract)*

1. Project LocationThe "Springing into Action of Mahogany Mountain" project is located approximately 36 miles south west of Adrian in the Leslie Gulch/Mahogany Mountain area in the Owyhee Uplands.2. Briefly state the project needThis project encompasses approximately 1,863 rangeland acres in core Sage Grouse Habitat. The lack of live water sources throughout the project area limits a preferred grazing rest/rotation plan, and contributes to over/under vegetation utilization in certain areas.3. Describe the proposed workThe first element in project implementation is to develop 7 different spring sites in partnership with NRCS to provide livestock watering sources across the 1,863 acre rangeland parcel. The second implementation strategy is to install approximately 1.6 miles of cross fencing. Cross fencing will allow the landowner to split the project area into 4 different pastures instead of 3 and adopt a grazing rest/rotation management plan. 4. Identify project partnersProject partners include: Private landowner, NRCS, and Owyhee Watershed Council

Review Team Evaluation **Strengths**

- The application is well-written, and the detailed maps, grazing plan, and photos provide helpful context of the project site. The project objectives and design are clearly articulated in the application.
- Located in core sage-grouse habitat, implementation will help further improve and enhance existing vegetation for sage-grouse. Spring sites and troughs are well-sited, located more than 1 mile away from leks.
- The landowner is participating in the Three Fingers Fuel Reduction Project with Oregon State University, which includes targeted grazing at certain times of the year to reduce invasive annual grasses.
- There are very few invasive annual grasses on the property, project implementation will help further limit the expansion of medusahead and cheatgrass.
- The applicant has successfully implemented many upland projects in the Jordan Valley area and has the capacity to oversee this project.
- The project is supported by a partnership with NRCS.

Concerns

- Cost for the tire troughs seems high compared to other projects. However, the project site is in a remote location and transportation to the site increases costs for delivery and installation.
- There is a possibility that the landowner can do a phased approach starting with the water development to ascertain whether the cross fence is needed.

Concluding Analysis

Implementation of this project will help maintain high quality rangeland in critical core sage-grouse habitat. The property has no live water and lacks sufficient livestock distribution. Expanding water sources will improve wildlife habitat and balance vegetation utilization by dispersing livestock. Annual grass invasion, combined with catastrophic wildfires across the Owyhee landscape, has created a loss in native vegetation communities and contributes to declining sage-grouse habitat. The potential for wildfire to spread increases as invasive grasses, such as medusahead and cheatgrass, increases across the landscape. The project has a high likelihood of success in achieving ecological benefits for sage-grouse.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

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Review Team Recommended Amount

\$20,797

Review Team Conditions

Remove the cross fencing project component from the project scope and budget.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$20,797

Staff Conditions

Remove the cross fencing project component from the project scope and budget, including indirect costs.

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5030-16633

Project Type: Restoration

Project Name: Bishop Drain: Checkmate

Applicant: Malheur SWCD

Region: Eastern Oregon

County: Malheur

OWEB Request: \$40,223

Total Cost: \$151,855

Application Description *(from application abstract)*

1. This project is located on the corner of Jefferson and Ivanhoe, approximately 3.7 miles north of Owyhee Junction, 8 miles from Nyssa and 18 miles to Ontario in the Sand Hollow-Owyhee River watershed. 2. Furrow irrigation from the three fields on 80 acres drain into the Bishop Drain. Current furrow irrigation practices result in increased sediment and nutrient loading to the Owyhee and Snake Rivers. The conversion to sprinkle irrigation will eliminate sediment and nutrient loading from these fields and will increase water conservation efficiency. 3. Convert 80 acres from flood to pivot by installing 2 pivots, 1 rotating cleaning screen, 3 acres solid sets, 1 orifice box that will replace the junction box on the corner of Ivanhoe and Jefferson for field 1 and 2, and the neighboring farms on Ivanhoe that use the same junction box. Electrical panel, 20 hp pump, electrical wire, continue to sample Bishop Drain for analysis. 4. OWEB, Oregon DEQ, landowner, and Malheur SWCD,

Review Team Evaluation

Strengths

- The application is well-written and provides essential detail for understanding the project.
- The project complements several other projects previously implemented in the Bishop Drain drainshed, and will provide long-term water quality monitoring to determine the collective impacts of these efforts.
- The project is a technically sound irrigation conversion of 80 acres from flood to sprinkler irrigation.
- The landowner and Owyhee Irrigation District are highly engaged.
- The total project cost is reasonable.

Concerns

- No significant concerns were identified.

Concluding Analysis

The project addresses significant water quality concerns caused by flood irrigation in the Owyhee basin.

Three fields will be combined with the installation of two pivots, and approximately 2,180 feet of open concrete ditches will be eliminated by burying a mainline pipe to the pivots. This will reduce runoff of sediment, nutrients, and bacteria into Bishop Drain and onto the Owyhee River, which is located approximately two miles away. Producers and irrigation districts in Malheur County are making significant strides in converting cropped acreage from flood irrigation to sprinklers. Owyhee Irrigation District will install a new orifice box and headgate. Agricultural drain monitoring will continue on Bishop Drain and inform the applicant of water quality improvement for this and other projects implemented in this drainshed. The project continues on-going efforts in Malheur and Owyhee basins to improve water quality, therefore providing a significant watershed benefit for the cost.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 11

Review Team Recommended Amount

\$40,223

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$40,223

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5031-16641**Project Type:** Restoration**Project Name:** Upper Grande Ronde Invasive
Weed Control Phase IV**Applicant:** Tri-County CWMA**Region:** Eastern Oregon**County:** Union**OWEB Request:** \$25,024**Total Cost:** \$43,024

Application Description *(from application abstract)*

Since 2016, OWEB has continuously supported Tri-County's efforts to control leafy spurge and spotted knapweed in the Upper Grande Ronde. The project located approximately 10 miles west of La Grande towards the town of Starkey. Phase IV of the project aims to intensify treatment of leafy spurge in new sites identified in 2018, and continue treatments of historic sites. The presence of leafy spurge and spotted knapweed both along the Grande Ronde River and adjacent uplands has negatively impacted the native plant diversity, increased sedimentation, and reduced viable riparian and upland fish/wildlife habitat. Landowners have expressed concern that the abundance of these species has negatively impacted their ranching operations and continuous treatment of these species has been successful. Beginning with Phase I of the project, only 63.5 net acres were treated, in Phase II 97.6 net acres were treated, and in Phase III 164.5 net acres were treated (mostly new sites). Photo point monitoring has shown that multiple treatments on the same site is critical to success and continuously surveying for new sites is critical to landscape-wide success. Phase III of this project worked to treat known sites prior to the implementation of the Bird Track Spring Restoration Project, along with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and USFS. Phase IV of the project will help to prevent leafy spurge and spotted knapweed from spreading into the restoration area and work with the CTUIR to treat known sites during the restoration process.

Review Team Evaluation

Strengths

- The project is a long-standing programmatic weed control effort and the proposed work builds upon previous phases.
- The application has clear goals.
- Prior project completion reports and post-implementation reports document successful implementation, especially when multiple weed control treatments are implemented.
- The project cost is reasonable for a significant watershed benefit.
- Many partners in the county participate in this effort including USFS, CTUIR, Tri-County CWMA (Coordinated Weed Management Area), USFS, and landowners in the upper Grande Ronde.

- Noxious weed infestations are targeted along riparian areas where wildlife and aquatic habitat can be negatively impacted by weeds in the upper Grande Ronde, which is a priority area for ESA-listed anadromous fisheries.

Concerns

- The success of prior treatments is not described well in the application. Additional information would have strengthened the application.
- Additional quantifiable information about proposed treatments and outcomes would have been beneficial to include in the application.
- A landscape-level map depicting completed efforts and strategy for future weed control would have provided helpful context.

Concluding Analysis

The ecological benefit from this weed control work is in maintaining native plant communities by preventing their being overtaken by invasive annual plants. While weeds are never eradicated, it is important to keep infestations in check. The CWMA also treats properties adjacent to recent restoration projects, which helps reduce future weed establishment on disturbed sites and protect restored areas. This is an effective partnership with the Tri-County CWMA, USFS, CTUIR, and landowners in the Starkey area.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 11

Review Team Recommended Amount

\$25,024

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$25,024

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5032-16581**Project Type:** Restoration**Project Name:** Whitnah Irrigation**Applicant:** Eagle Valley SWCD**Region:** Eastern Oregon**County:** Baker**OWEB Request:** \$27,156**Total Cost:** \$38,526

Application Description *(from application abstract)*

The project site is located within the Eagle Valley Soil and Water Conservation District near Richland, Oregon and is a tributary to the Powder River Watershed. Currently the project site flood irrigates 30 acres of hay and pasture ground. Water is diverted from Eagle Creek (a fish bearing stream historically containing bull trout) to the Dry Gulch ditch where it is then applied to the project site through an earthen ditch at two locations; one 20 acre field and one 10 acre field. This project addresses water quality and water quantity by converting from flood to sprinkler irrigation through the installation of two wheel lines. All tail water from the current flood irrigation system returns to the Powder River through the Waterbury ditch, a tributary to the Powder River three miles above Brownlee Reservoir; thus decreasing water quality by submitting additional sediment and debris into the watershed. The landowner is also supporting an inefficient form of irrigation. Through the installation of two wheel lines, the landowner will convert 30 acres from flood to sprinkler irrigation conserving water by only using what can be held by the soil and what is required to support the crop being irrigated, leaving additional water in Eagle Creek to support aquatic species in critical bull trout habitat. The landowner has realized the watershed issues present and contacted the Eagle Valley SWCD seeking assistance to improve irrigation practices by converting to sprinkler irrigation. Project partners include the Eagle Valley SWCD and the landowner.

Review Team Evaluation

Strengths

- Project implementation will provide water quality and quantity benefits to the Power River basin.
- The project cost is reasonable for the watershed benefit..
- Project implementation provides an outreach opportunity to demonstrate benefits of irrigation conversion work to other nearby landowners.
- The application is clear.
- There is an existing flow meter located near the project area that can measure reduction in future water use.

Concerns

- No significant concerns were identified.

Concluding Analysis

The project complements other work recently implemented in this area of the Powder basin. Slopes are steep at the project site, which accelerates erosion rates and makes this location a priority for irrigation conversion. Tailwater currently returns to the Waterbury ditch and onto the Powder River. Installing the wheel lines will reduce the amount of runoff entering the waterways. Project implementation will improve water quality by reducing the amount of sediment and farm chemicals conveyed to the Powder River.

Review Team Recommendation to Staff

Fund

Review Team Priority

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Review Team Recommended Amount

\$27,156

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$27,156

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5033-16659

Project Type: Restoration

Project Name: Mr. Rogers Neighborhood

Applicant: Malheur SWCD

Region: Eastern Oregon

County: Malheur

OWEB Request: \$36,062

Total Cost: \$81,613

Application Description *(from application abstract)*

1. This project is located approximately 5.5 miles north of Ontario, on the edge of Bellows subdivision next to the freeway in the Buttermilk Gulch-Snake River Watershed (Please see location Map). 2. This grant application has a twofold that is combined in one grant. Malheur SWCD is requesting \$37,677 to fund 1380 feet of open lateral, and conversion from flood on 27 acres to three different types of sprinkle irrigation system. 3. The conversion from flood to sprinkle will consolidate 4.4 acres of dry ground that has water rights transferred, but is unusable due to the current delivery system with field 1 with an open lateral that divides the 20 acre field. Field 1 will have 2 wheel lines running north and south, with 13 risers for hook up. Field 2 and 3, will have a conversion from flood to solid sets (22 solid sets and 4 big guns) for a conversion of 7 acres total due to shape and size of the two fields. The second part; Owyhee Irrigation District who will dig and bury 1380 feet of 12 inch mainline to convert from an open lateral to a buried mainline that divides field 1. The irrigation district will also install an orifice box that has the capability to measure water delivered to their patrons for this project, next door neighbor and further down the lateral. Project Partners are the landowner, Owyhee Irrigation District and the Malheur SWCD.

Review Team Evaluation

Strengths

- Project implementation will provide water quality benefits to the Snake River. Runoff from the site currently flows into a natural drain that crosses underneath I-84 and is conveyed directly to the river.
- The budget provides an appropriate level of descriptive detail.
- Owyhee Irrigation District (OID) and the landowner's support is demonstrated by match contributions.
- The project cost is reasonable for the watershed benefit.
- Installation of the 12-inch pipe by OID will connect to an existing pipe and eliminate evaporation and seepage along 1,380 feet of an existing ditch.

Concerns

- The 27-acre project footprint is fairly small.
- Parts of the application were unclear.

Concluding Analysis

The Snake River is listed on the DEQ 303(d) list for sediment, nutrients, toxics, dissolved oxygen, temperature, and bacteria. The fields in the project area are used as winter-feeding areas. Tailwater flows into the Snake River approximately two miles from the project site. After the first flood irrigation in the spring, tailwater deposits excess amounts of bacteria directly into the natural drain that flows directly to the Snake River. By converting from flood to sprinkler irrigation, tailwater will be eliminated. This project will improve irrigation delivery to three separate fields and is complementary to other projects nearby in this area of the Snake River. While the project will result in significant watershed benefits for the cost, the overall impact is somewhat limited by the small project footprint.

Review Team Recommendation to Staff

Fund

Review Team Priority

11 of 11

Review Team Recommended Amount

\$36,062

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$36,062

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5034-16667

Project Type: Restoration

Project Name: Foraged in Fire

Applicant: Malheur SWCD

Region: Eastern Oregon

County: Malheur

OWEB Request: \$149,912

Total Cost: \$240,877

Application Description *(from application abstract)*

The Foraged in Fire Project is located within Malheur county and is approximately 36 miles from Rome, Oregon. Fire return intervals within the area are relatively short and have resulted in vegetation loss surrounding the property and threatening known active sage grouse leks within the vicinity. Permanent fire breaks have been established to protect the lek and ranch facilities located in the northern portions of the property but additional protection is required to stop fast moving fires from jumping the breaks. Additionally due to flooding during spring runoff, riparian degradation is beginning to occur resulting in erosion and water table loss. Other issues within the property include small Medusa patches along fire breaks as well as a depleted historic crested wheat field that was heavily grazed due to grazing restrictions on fire damaged allotments. Project components include:- Decrease the fire return intervals on private land with fire breaks and controlled grazing- Protect sage grouse Lek (from fire/invasive)- Herbicide treatment-Reseeding depleted uplands-Provide alternate watering locations for cattle and protect spring heads- Convert old crested wheat seeding used as sacrifice area during adverse conditions to desired upland species.- Establish check dams along riparian area to slow spring flows and raise water table- Mark existing fence near Lek to reduce the risk of strike mortality

Review Team Evaluation

Strengths

- The project is located in a remote area with few opportunities for restoration.
- Seeded areas will be rested from active grazing for two years, which will allow the native bunchgrass community to become more viable.
- Preliminary baseline monitoring for treatment effectiveness is completed.
- The spring site will be protected.
- Planned restoration work will improve core sage-grouse habitat.
- The landowner project support is demonstrated by a letter of intent (LOI) to enroll in the CCAA (Candidate Conservation Agreement with Assurances) and significant project match.

Concerns

- The application lacks a landscape map that places project components into a watershed context.

However, because of confidentiality restrictions that must be followed for landowners participating in a CCAA, exact project locations are not provided on submitted maps.

- Site preparation planned for the seeded area is unclear.
- Idaho fescue is not an appropriate choice in the seed mix since this is a low elevation site with minimal precipitation. Germination rates may be low.
- Applying seed at 18 pounds per-acre is excessive and should be no more than 12 pounds per-acre.
- The viability of the proposed check dams and how the sites for these dams were selected is uncertain. This approach could transfer the problem elsewhere rather than addressing the core issue.

Concluding Analysis

The application has multiple project components to address sage-grouse habitat improvement on a large ranch in remote Malheur County. The various project elements proposed will be incorporated into a site-specific map (SSP) that is anticipated to be approved by USFWS in late winter. The project area experiences frequent landscape fire-return intervals that adversely impact sagebrush and perennial bunchgrass necessary for sage-grouse brooding and rearing habitat. Landscape-level fire threatens the active sage-grouse leks. Permanent fire breaks are proposed to keep fast-moving fires from jumping existing breaks. In addition, the spring developments and troughs will provide upland water to aid grazing management and improve upland vegetation for sage-grouse. The budget is reasonable given the remote location and the proposed project components will benefit core sage-grouse habitat.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

9 of 11

Review Team Recommended Amount

\$149,912

Review Team Conditions

Reduce seed application rate to 12 pounds per acre; and modify the seed mix to include a native species alternative to Idaho fescue. Applicant must seek engineering advice from NRCS to evaluate the effectiveness of the two check dams.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund with Conditions**Staff Recommended Amount**

\$149,912

Staff Conditions

Reduce seed application rate to 12 pounds per acre; and modify the seed mix to include a native species alternative to Idaho fescue. Applicant must seek engineering advice from NRCS to evaluate the effectiveness of the two check dams, and provide a letter from NRCS approving the final design for check dams prior to payment on this project component.

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5035-16673**Project Type:** Restoration**Project Name:** Upper Wallowa River Restoration Project**Applicant:** Wallowa Resources**Region:** Eastern Oregon**County:** Wallowa**OWEB Request:** \$250,726**Total Cost:** \$1,109,741

Application Description *(from application abstract)*

The Upper Wallowa River Restoration (UWRR) Project encompasses 1 1/2 miles of the Wallowa River and the West Fork Wallowa River, beginning near the confluence of BC Creek and flowing into Wallowa Lake. This section of the river is primarily managed for recreation with a mix of small property ownership, small businesses, and Wallowa Lake State Park. This area is a large attraction for tourists and important to the Wallowa County economy. This grant covers the first two reaches of the four-reach project area, from Wallowa Lake upstream to the Bailey Lane Bridge. Natural floodplain function along the reach has been degraded by encroachment and development, thereby reducing the habitat quality and quantity. The planned habitat improvements will: 1) enhance and restore spawning and rearing area habitat for kokanee salmon and bull trout; 2) improve habitat while protecting private and public property from the effects of flooding by maintaining or improving bank stability; 3) capitalize on its location to create significant opportunities for outreach to the general public; Wallowa Lake State Park hosts over half a million people per year; and 4) serve as a model for floodplain restoration in semi-developed areas that is FEMA and NOAA compliant. The combined habitat and social benefits provide a profound opportunity to showcase a constructive win/win example for the coexistence of people and nature. Project partners include ODFW, OPRD, the Nez Perce Tribe, Wallowa Resources, and several private parties. This creates an opportunity for significant outreach to a diverse group of Oregonians.

Review Team Evaluation

Strengths

- The application is clear and has a reasonable budget with clearly defined costs.
- Previous application evaluation concerns were addressed by providing detail on implementation sequencing and consistent units across the budget and narrative sections.
- The project builds on two previously funded OWEB technical assistance grants that provided designs for the proposed work.
- The project provides an opportunity to reactivate the floodplain within the project area.
- The project location at Wallowa Lake State Park will be highly visible and provide an opportunity to demonstrate environmental restoration practices to a diverse audience. The park has over 500,000 visitors annually.

- Private landowners above the project reach have the opportunity to expand restoration. The project design funded by two previous technical assistance grants extends approximately 900 feet south of the proposed project. The DSL permits encompasses the entire reach of the technical assistance design.
- Proposed restoration will benefit kokanee and bull trout.
- A planting plan is provided and addresses future plant maintenance.

Concerns

- No significant concerns were identified.

Concluding Analysis

The project will restore natural watershed functions impacted by stream alterations made to channelize the river and protect private properties and infrastructure. Also, a significant high flow event approximately 15 years created significant challenges to this section of the Wallowa River . The proposed actions could become an example for restoration in a semi-developed floodplain due to the project site's high visibility and accessibility to the public. The resulting habitat restoration will benefit kokanee spawning and all life stages of bull trout in a cost-effective project with a likelihood of success.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 11

Review Team Recommended Amount

\$250,726

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$250,726

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5036-16700

Project Type: Restoration

Project Name: Wallowa Front Forest Health Improvement Partnership-Divide Extended

Applicant: Wallowa SWCD

Region: Eastern Oregon

County: Wallowa

OWEB Request: \$134,987

Total Cost: \$191,987

Application Description *(from application abstract)*

The Wallowa Front Priority Area project is a multi-agency, multi-landowner effort to reduce fuel loads and improve the overall forest health of the Wallowa Front. Alder Slope, Divide, Lostine, and Bear Creek focus areas located on the north face of the Wallowa Mountains encompass the Wallowa Front. The Divide Extended Project Area is located northeast of the Divide area, between the towns of Joseph and Imnaha, and is in the headwaters of Little Sheep Creek and Big Sheep Creek in Wallowa County. In its current state, the Divide Extended is at high risk for catastrophic fires, insect and disease infestations, and continued deteriorating health due to overstocked stands and high treatment costs. The Divide Extended is an addition to the Wallowa Front which includes landowners and six partnering entities: SWCD, NRCS, US Forest Service, Oregon Department of Forestry, OWEB, and Wallowa Resources; who are concentrating funding and implementing on-the-ground projects over the next five years to improve the health of these stands. As more projects in the Wallowa Front are completed it continues to be evident that due to the steep slopes and heavy fuels, higher rates per acre are needed to complete additional contracts. While funding has been obtained for the Wallowa Front a small portion of landowners positioned across the road were not initially included in project area when lines were drawn. The Divide Extended project will expand the work being completed in the greater Wallowa Front Priority Area. Landowner incentives are needed to help pay the high costs to complete thinning and slash treatments. OWEB funds in this application will be used to provide cost share to complete forest thinning and slash treatments on 200 acres in the Divide Extended project area, with heavy ratings being the highest priority.

Review Team Evaluation

Strengths

- The project extends fuel reduction efforts into an area not previously targeted in the adjacent multiple agency RCPP. OWEB funding will enable landowners not included in this RCPP to treat their overstocked stands.
- ODF and the applicant have the capacity to oversee this effort and have a proven track record with similar projects.
- The project provides an opportunity for landowners to access funding for upland thinning, which is typically challenging to secure.

- Overstocked stands will be treated, which leads to a decreased threat of wildfire.

Concerns

- Treatment cost per-acre is somewhat high compared to similar projects. However, the stands proposed for treatment have a high number of trees per-acre (TPA) and are located on steep slopes. TPA is over 1,000 stems within some stands.
- The stands may need to be retreated in the future.

Concluding Analysis

Combined with previous efforts, a significant amount of the upland portion of Divide Area in the Sheep Creek drainage will have treated stands after this project is completed. Reducing high TPA reduces the threat of catastrophic wildfire spreading to or from nearby USFS lands. While the unit costs appear high, topographic constraints due to steep slopes, excessive stand density, piling, and mastication costs are the reason for higher per-acre treatment costs. Reducing stand density to a more historic level will improve forest health and vigor, and help alleviate the threat of insect and disease outbreak. Improved spacing reduces the threat of a ground fire crowning. In addition, hydrologic conditions are improved by increasing snow accumulation to improve groundwater recharge. More snow is able to reach the ground, reducing sublimation and evaporation. If wildfire were to occur on the steep, overstocked stands, high amounts of sediment could reach Sheep Creek and the Imnaha River. The resulting impaired water quality from such an event could adversely affect habitat for ESA-listed steelhead and spring Chinook salmon. All of these factors combined ensure that the project has the potential for high ecological uplifts and a high likelihood of success.

Review Team Recommendation to Staff

Fund

Review Team Priority

8 of 11

Review Team Recommended Amount

\$134,987

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$134,987

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5037-16535

Project Type: Technical Assistance

Project Name: Lostine River - River Mile 5.7
Floodplain and Side Channel Enhancement Project

Applicant: Grande Ronde Model WS Foundation

Region: Eastern Oregon

County: Wallowa

OWEB Request: \$73,040

Total Cost: \$121,508

Application Description *(from application abstract)*

This project is located on the Lostine River at the town of Lostine, Oregon. The project reach is from river mile 5.7 to river mile 6.3. The Lostine River joins the Wallowa River near the town of Wallowa and the project area is in Wallowa County Oregon. The lower 10-miles of the Lostine River has been channelized, straightened and is kept in place by dikes built as a response to flood events in the 1960's and 1970's. These actions have greatly simplified aquatic habitat conditions in the river by reducing the number of pools, increasing riffles, increasing stream velocity, reducing habitat complexity, eliminating side channels, and disconnecting the river from its floodplain. Increased water velocity, specifically at high spring flow, has degraded water quality by increasing bank erosion contributing to fine sediment deposition in the river. The strategic action plan for aquatic restoration in Wallowa County, Wallowa Atlas, identifies limiting habitat factors for the lower Lostine River to be addressed by this project: 1. Floodplain condition, 2. Instream structural complexity, 3. Instream sediment quantity, 4. Stream temperature, and 5. Riparian vegetation. This proposed technical assistance application seeks funding to complete project design, environmental compliance requirements, and construction bidding documents. Deliverables include complete 100% design, ESA Consultation, removal/fill permits, cultural resources survey and report, and construction request for proposal package. Project partners include Grande Ronde Model Watershed, Nez Perce Tribe, and 10 landowners in the project reach.

Review Team Evaluation

Strengths

- The project site along the Lostine River has braided channels that can readily re-activate the floodplain, and has significant existing vegetation. This technical assistance will result in a cost-effective restoration project since habitat will not be artificially created and instead will build on these existing stream conditions.
- Landowners are engaged in every aspect of the project. The application includes cooperative agreements signed by all landowners, which speaks to the level of their commitment.
- Proposed actions for a future restoration project will provide high ecological uplift.
- The application is detailed, clear, and well-written with clear objectives.
- The project location is highly visible, and future implementation provides high potential for outreach.
- Secured match was recently approved by the Grande Ronde Model Watershed board.

- Restoration project designs will be developed with regulatory agency involvement and stakeholder engagement. This will result in secured permits and implementation-ready final designs by the end of this technical assistance project.

Concerns

- No concerns were identified.

Concluding Analysis

This section of the Lostine River was channelized, straightened, and diked in the 1960's and 1970's. With the old braided channels still present, reactivating them will alleviate the need for large quantities of riprap that would further degrade habitat. A future restoration project will increase floodplain connectivity, provide side-channel habitat, and improve spawning and rearing habitat for steelhead, Chinook salmon, and recently introduced Coho.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 4

Review Team Recommended Amount

\$73,040

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$73,040

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5038-16562

Project Type: Technical Assistance

Project Name: A Difficult Survey and Design
Round 2

Applicant: Owyhee WC

Region: Eastern Oregon

County: Malheur

OWEB Request: \$28,930

Total Cost: \$42,380

Application Description *(from application abstract)*

This project will take place approximately 38 air miles South of Jordan Valley on Browns and Difficulty Ridges between the Owyhee and Middle Owyhee Rivers. Four years ago, the private landowner approached OWC and DSL with a rough draft plan to enhance sage grouse habitat through expansion of a wet-meadow and improving grazing management across a 15,748-acre sage steppe area in the Owyhee Uplands. Due to the remote nature and geographic complexities of implementing such a large-scale restoration project, all parties agreed a project wide topographic survey, alternatives analysis, and project design was necessary before selecting a restoration implementation plan. The proposed work will include a full topographic survey of the proposed livestock watering and wet-meadow irrigation pipelines. A topographic survey will allow the stakeholder group to analyze all alternatives and design options before selecting the most cost-effective and purposeful approach to restoring mesic wet-meadow habitat and grazing management across the 15,748-acre project area. Project partners include: Owyhee Watershed Council, Private Landowner, Oregon Department of State Lands, Trout Unlimited, NRCS, USFWS

Review Team Evaluation

Strengths

- The application is well-written and provides detailed answers to the concerns raised from the previous review including clarity regarding the wet-meadow habitat expansion project component. Detailed maps, photos, and water-right information are also provided in the application.
- The future restoration project will benefit sage-grouse habitat at a location with active nearby leks. Restoration implementation will also benefit redband trout, mule deer, elk, and the Columbia spotted frog.
- The project is located in the Three Forks Conservation Opportunity area considered to contain one of the largest blocks of remaining high quality sagebrush habitat in Oregon.
- A grazing plan and an irrigation water management plan will be developed through this technical assistance project.
- Topographic surveys and development of an implementation plan will be coordinated with input from numerous partners.
- Appropriate partners and agencies are participating in this effort including, DSL, Trout Unlimited, OWRD, USFWS, NRCS, Owyhee Watershed Council, and the landowner.

- DSL will provide in-house cultural resource surveys on the trough pipeline route and trough locations.

Concerns

- The restoration phase of this project may be a high cost for the expected ecological benefit.

Concluding Analysis

There is currently significant water loss from evaporation and seepage in the ditch, resulting in limited amounts of water conveyed to the meadow site. The proposed pipeline will expand the wet meadow site to provide mesic sage-grouse brood-rearing habitat. This wet-meadow expansion combined with improved grazing management will enhance high quality sagebrush habitats and ensure this area remain viable for many wildlife species.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 5

Review Team Recommended Amount

\$28,930

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$28,930

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5039-16591**Project Type:** Technical Assistance**Project Name:** Let's Make the Bull Run Run Again:
Da Do RunRun**Applicant:** Malheur WC**Region:** Eastern Oregon**County:** Baker**OWEB Request:** \$39,850**Total Cost:** \$48,100

Application Description *(from application abstract)*

1) Location: The project is a 1 mile stretch of Bull Run Creek a tributary to the SF of the Burnt River. It is 4 air miles to downtown Unity and 12 air miles to Hereford. 2) In the 1930's, Bull Run was dredged and the tailings were left in place. The creek is not functioning because most of the water runs below ground. There is little to no aquatic or wildlife habitat, no connection to the flood plain, riparian vegetation is inconsistently present, and water quality is degraded. The creek needs lots of help to become a creek again. Bull Run Creek is a tributary to the South Fork Burnt River. The upper SFBR has the best flow, temperature and riparian habitat in the Burnt River subbasin (personal communication Dadoly, DEQ). Based on visual inspection, the creek immediately downstream and upstream from the project site are in excellent condition. Thus restoring the connection to the South Fork would expand suitable aquatic habitat beyond the 1 mile project reach. We estimate about 5 miles total or an increase of 2.9 miles of connected habitat after successful rehabilitation of the site. The Bull Run is potential redband habitat and is within core sage grouse habitat. The owner plans to enroll the stream in CREP once the project is complete and has an approved CCAA plan for his property. 3) We are applying for funds to hire an engineer to complete a survey, hydro-logic analysis, develop alternatives, and to develop a 60% design from the selected alternative. The selected alternative must be cost effective and approach the problem in a way that maximizes the benefits to aquatic habitat. 4) Partners are the landowner, Malheur WSC, AP engineering, and design reviewers.

Review Team Evaluation

Strengths

- Three design alternatives to reconnect floodplain habitat will be developed for the landowners and technical team to consider.
- Storing floodwaters and runoff will raise the water table, which will improve mesic conditions and late-season, brood-rearing sage-grouse habitat. Reconnecting the floodplain will also improve habitat for other aquatic species.
- Once the earthwork and stream restoration work is completed, the area will be enrolled into CREP.
- The landowner has an approved CCAA plan.
- Restoring the proposed mile of Bull Run will connect three miles intact habitat on the Bull Run, and benefits sage-grouse habitat in low-density core area.

Concerns

- The restoration project will require substantial earthwork, which will need to be permitted and the application does not address this need. The earthwork will also result in a high cost restoration project for the expected watershed benefit.
- A phased approach may be needed for the restoration project due to the potential cost and with the landowner providing the sole match.
- Redband trout presence in the Bull Run is not substantiated.

Concluding Analysis

The technical team comprised of NRCS, DEQ, TU, ODFW, USFWS, Malheur Watershed Council, and landowner will determine which alternative is feasible and most cost-effective. The resulting restoration project addresses 30 acres of habitat that will benefit brood-rearing sage-grouse and aquatic species in the Bull Run will benefit from improved floodplain connectivity.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 5

Review Team Recommended Amount

\$39,850

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$39,850

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5040-16592

Project Type: Technical Assistance

Project Name: Cusick Creek: The Restoration Continues Phase II

Applicant: Malheur WC

Region: Eastern Oregon

County: Union

OWEB Request: \$29,488

Total Cost: \$36,688

Application Description *(from application abstract)*

1) Cusick Creek is located approx 30 miles North of Baker City and approx 10 miles from North Powder. The Cusick Creek watershed drains approximately 14 square miles or 9,100 acres of land and flows into Thief Valley Reservoir on the Powder River. 2) The upper reaches (~6,000 feet stream length) of Cusick Creek are confined to a moderately narrow canyon and due to past land management practices has become more incised with moderated to severe bank erosion. Fish habitat and the properly functioning condition of the stream have been greatly compromised in these reaches. The lower reach has been restored to a functioning stream. This proposal is the start of Phase II. The previous surveys did not extend this far upstream. 3) We are applying for funds to hire an engineer to complete a survey, hydrologic analysis, develop alternatives, and to develop a 60% design from the selected alternatives. 4) Partners are the landowner, Malheur WSC, RSI engineering, and design reviewers.

Review Team Evaluation

Strengths

- The project reach is located in core sage-grouse habitat with nearby active leks. Future restoration will enhance the wet-meadow complex to improve riparian conditions and increase late-season, brood-rearing habitat for sage-grouse.
- The proposed project builds upon successful implementation of a previously funded restoration project. This first phase withstood a high-flow event of over 1,000 cfs with minimal damage, and is now enrolled in CREP.
- Future restoration will improve wildlife and other aquatic habitat.
- The budget is clear and rates are reasonable.
- Budgets will be provided for three restoration design alternatives.

Concerns

- The technical assistance will provide a 60% design. However, achieving the full 100% design requires additional match, which can be challenging to obtain in remote rural areas.

Concluding Analysis

This technical assistance project will provide designs for the second phase of a three-phase effort. These designs will help further restoration efforts along Cusick Creek, and address stream channel instability resulting from impacts to streambanks by historic grazing, an active headcut, and a volatile hydrograph ranging from 2 cfs to 1,258 cfs. Improvements to Cusick Creek will be beneficial to sage-grouse and will enhance wet-meadow habitat by reconnecting the floodplain.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 5

Review Team Recommended Amount

\$29,488

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$29,488

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5041-16671

Project Type: Technical Assistance

Project Name: Powder Basin Groundwater
Records Review

Applicant: Powder Basin WC

Region: Eastern Oregon

County: Baker

OWEB Request: \$29,610

Total Cost: \$37,787

Application Description *(from application abstract)*

There is growing concern that areas within the Powder Basin may be at risk for declining groundwater levels. This has been found in neighboring basins and since groundwater is managed similarly in the Powder Basin, it is presumed that problems will arise eventually, if not already. Based on conversations with the public and Oregon Water Resources Department (OWRD) staff, it was determined that the most logical first step in assessing the current status of groundwater in the Powder Basin was to review existing data that is stored by OWRD. The goal of this project is to summarize existing data, identify trends in groundwater levels over time, extract geologic data that is relevant to groundwater storage where possible and determine where further data collection is needed. This effort will include summarizing all existing groundwater records within the entire Powder Basin and compiling all geologic information from well logs in the Baker Valley. This project is a collaboration between the Powder Basin Watershed Council, the Oregon Water Resources Department and the Oregon Department of Geology and Mineral Industries (DOGAMI).

Review Team Evaluation

Strengths

- The proposed effort could be successful if the applicant works closely with OWRD and DOGAMI, and there appears to be positive initial coordination with these agencies.
- The applicant is proactively anticipating and mitigating potential groundwater issues by using and analyzing existing data.

Concerns

- The technical soundness is unclear without information in the application explaining who will provide oversight and interpretation of the data, and how the data will be used.
- Special rules regarding groundwater use will need to be adopted for the basin before a project could lead to management changes.
- The project provides no clear path to accomplishing restoration in the basin.

Concluding Analysis

Existing data will be used to determine whether groundwater decline is a threat to the Powder Basin. Data collected from well logs and geologic data will be used to determine trends and groundwater-holding capacity. By compiling and summarizing existing groundwater data, a framework for better groundwater management will be provided. Since it is difficult to ascertain how this project leads to future restoration efforts, the cost-benefit for this technical assistance investment is unclear.

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-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5042-16684

Project Type: Technical Assistance

Project Name: Malheur Watershed Habitat
Connectivity Assessment and Enhancement Plan

Applicant: Burns Paiute Tribe

Region: Eastern Oregon

County: Malheur

OWEB Request: \$73,875

Total Cost: \$93,414

Application Description *(from application abstract)*

The proposed project is located in the Malheur watershed along U.S. Highway 20 (US 20) between Juntura and Ontario, Oregon. In this region, US 20 lacks dedicated elements to facilitate wildlife and habitat connectivity and fragments important habitats in the watershed by imposing a large physical barrier to wildlife and habitat connectivity. This fragmentation impairs wildlife and habitat connectivity and limits wildlife access to important resources along the Malheur River riparian corridor which compromises watershed function and resiliency. Additionally, attempts by wildlife to cross the highway to move between habitats often results in a myriad of wildlife-vehicle collisions that pose risk to wildlife and humans alike. For these reasons, connectivity enhancement measures (i.e., counter-measures) to address the many issues related to the fragmentation of habitat by US 20, are warranted. In order to identify connectivity enhancement measures, we will implement a Habitat Connectivity Assessment and Enhancement Plan in the Malheur watershed which will include the following: 1) development of a landscape-level assessment of wildlife and habitat connectivity including identification of limiting factors, 2) evaluation of potential connectivity enhancement measures to address connectivity and vehicle collisions, 3) selection and prioritization of feasible connectivity enhancement measures, and 4) preparation of preliminary design, estimated cost, and implementation plan for selected connectivity enhancement measures. We will develop this Habitat Connectivity Assessment and Enhancement Plan through a collaborative partnership with the Oregon Department of Transportation, Oregon Department of Fish and Wildlife, Oregon Wildlife Foundation, Oregon Hunters Association, Audubon Society, and Oregon Natural Desert Association.

Review Team Evaluation

Strengths

- Concerns from the previous application evaluation are addressed, including expanding the area on the Highway 20 corridor to assess conditions from Juntura to Ontario. ODFW is also added as a project partner.
- The application is detailed and provides significant data, including additional information regarding retrofit solutions, sites for guide fencing, and potential pathways.
- Multiple partners and agencies are involved in the project. Project support from these organizations is demonstrated by the number of letters of support included in the application.

- The Burns-Paiute Tribe project support is demonstrated by significant match.

Concerns

- A recommended outcome may not be supported by ODOT.
- It is possible that this project could lead to another design phase rather than restoration.

Concluding Analysis

Highway 20 is the main travel corridor between Bend and Boise and has high amounts of truck traffic. The section of Highway 20 between Juntura and Ontario experiences unusually high wildlife-vehicle collisions. Highway 20 fragments habitat and is a physical barrier to wildlife accessing riparian habitat along Malheur River. The project will develop a landscape-level assessment of wildlife and habitat connectivity, including identification of limiting factors. This analysis will evaluate measures to address connectivity, prepare a design, and provide an implementation plan.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 5

Review Team Recommended Amount

\$73,875

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5043-16511

Project Type: Monitoring

Project Name: Grande Ronde Basin Stream Flow
Gauging Stations Operation – Water Years 2019 &
2020

Applicant: Grande Ronde Model WS Foundation

Region: Eastern Oregon

County: Wallowa

OWEB Request: \$101,002

Total Cost: \$313,982

Application Description *(from application abstract)*

The Grande Ronde Basin (GRB) covers over 5,000 square miles and includes several thousand miles of perennial flowing streams. This project is in place to operate 12 existing stream gauges in combination with USGS (3 gauges), Idaho Power (1 gauge) and OWRD (one gauge) who, independent of this project, operate five additional gauges (Grande Ronde at Troy, Imnaha R. at Imnaha, Minam R. at Minam, Lookingglass Creek, and Upper Catherine Cr.) to characterize flow in both the Grande Ronde and Imnaha subbasins. These gauges are intended to inform and provide data for irrigation water management, fisheries management, long term flow and trend analysis, TMDL and SB1010 water quality management plan effectiveness, subbasin plan implementation, restoration project development and provide essential information regarding cumulative effects response to conservation in the Grande Ronde Basin (GRB). Stream flow characteristics including headwater contribution, land management influence, and basin outlet data are all selectively collected in this network of 17 flow gauges. Production partners include Grande Ronde Model Watershed (GRMW) and Oregon Water Resources Department (OWRD) with funding partners being BPA, OWEB and OWRD. The Grande Ronde Basin (GRB) covers over 5,000 square miles and includes several thousand miles of perennial flowing streams. This project is in place to operate 12 existing stream gauges in combination with USGS (3 gauges), Idaho Power (1 gauge) and OWRD (one gauge) who, independent of this project, operate five additional gauges (Grande Ronde at Troy, Imnaha R. at Imnaha, Minam R. at Minam, Lookingglass Creek, and Upper Catherine Cr.) to characterize flow in both the Grande Ronde and Imnaha subbasins. These gauges are intended to inform and provide data for irrigation water management, fisheries management, long term flow and trend analysis, TMDL and SB1010 water quality management plan effectiveness, subbasin plan implementation, restoration project development and provide essential information regarding cumulative effects response to conservation in the Grande Ronde Basin (GRB). Stream flow characteristics including headwater contribution, land management influence, and basin outlet data are all selectively collected in this network of 17 flow gauges. Production partners include Grande Ronde Model Watershed (GRMW) and Oregon Water Resources Department (OWRD) with funding partners being BPA, OWEB and OWRD.

Monitoring Team Evaluation

Monitoring Team Strengths

- Many local, tribal, state, and federal organizations use the data collected with OWEB funds in the past.
- OWRD has a proven track record maintaining gages and sharing real-time and published data.
- The application broadly describes how the data are used to identify, plan, and prioritize restoration projects.

Monitoring Team Concerns

- The activities described in the schedule will not achieve the broader objectives stated in the application. The project funded under this application will provide the data to organizations that will actually use it for these purposes.
- The application is not clear on how proposed monitoring aligns with the place-based planning effort that is underway.
- The application does not adequately describe the need for funding and it is unclear what would happen if this project was not funded in the future.

Monitoring Team Comments

- The objectives described in the application would be better described in the Wrap-up Section questions designed to understand how the data will be reported and applied to inform future actions.
- This project would benefit from working with the DEQ Basin Coordinator to look at long-term data to understand trends in flows and relationships to water quality.
- Letters of support from Nez Perce Tribe and Oregon Department of Fish and Wildlife should be provided to describe how they currently use the data and describe specific projects that would benefit from it in the future.

Review Team Evaluation

Strengths

- The project will continue long-term monitoring that has occurred on some gauges since 1997; and continues maintenance, review, and operations of the 12 streamflow gauging stations.
- Data collected from the stream gauges are used broadly and regularly. The data is informative for many entities and users.
- The operation of the gauges ensures that irrigation water management and agreements are supported and can be enforced.
- Collected data is connected to various on-line systems.

Concerns

- It is unclear from the application how the applicant will complete a cumulative-effects response

analysis.

- USGS protocols are followed and the applicant has a proven track record collecting high quality data. The quality of data collected at these sites continues to increase with new technology and continuing years of record establishes excellent history for each site.

Concluding Analysis

There is a long-term need for the collected data that is critical to designing future restoration projects. Gauges are located strategically throughout the Grande Ronde basin to document the effects of irrigation withdrawal. This is critical for irrigation water management and to enforce water right leases, especially during low-flow periods. The information provides an important data set used by OWRD, local river guides, and others as a management tool. There is substantial ecological benefit in maintaining gauges for consistent data.

This long-term project provides valuable data to multiple stakeholders working in the basin to manage fisheries, irrigation, and watershed restoration.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 3

Review Team Recommended Amount

\$101,002

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$101,002

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5044-16590**Project Type:** Monitoring**Project Name:** Kumbaya 2020: Monitoring in Malheur and Owyhee Basins**Applicant:** Malheur WC**Region:** Eastern Oregon**County:** Malheur**OWEB Request:** \$91,880**Total Cost:** \$124,096**Application Description** *(from application abstract)*

This application is being submitted jointly by the Malheur Watershed Council and the Malheur County Soil and Water Conservation District. These two entities will pool their resources to carry out the project proposed in this application. The proposed monitoring will occur in both the Malheur and Owyhee River Basins of eastern Oregon. In the past 20 plus years landowners, agencies, and irrigation districts have invested millions of dollars improve water quality in the Malheur and Owyhee Watersheds. In conjunction with these efforts, a comprehensive water quality monitoring program was begun to determine the extent and cause of water quality degradation and measure progress in correcting those problems. As the monitoring program progressed, it was refined to provide better detail on both problem areas and areas where best management practices have been applied. At this point, a substantial amount of data has been collected and analyzed to show that some areas are reducing sediment and phosphorus loads and water quality is improving. Continued monitoring is necessary, however, to verify water quality improvements and to characterize further changes in water quality related to changes in land and irrigation management over time. Most importantly, 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. The proposed monitoring program will continue to monitor 48 existing sites including 29 agricultural drains and 19 stream locations. (Please see attached Table 1.0). The collected data will be combined with historical data collected over the last 20 years and be statistically analyzed to determine trends. This application is being submitted jointly by the Malheur Watershed Council and the Malheur County Soil and Water Conservation District. These two entities will pool their resources to carry out the project proposed in this application. The proposed monitoring will occur in both the Malheur and Owyhee River Basins of eastern Oregon. In the past 20 plus years landowners, agencies, and irrigation districts have invested millions of dollars improve water quality in the Malheur and Owyhee Watersheds. In conjunction with these efforts, a comprehensive water quality monitoring program was begun to determine the extent and cause of water quality degradation and measure progress in correcting those problems. As the monitoring program progressed, it was refined to provide better detail on both problem areas and areas where best management practices have been applied. At this point, a substantial amount of data has been collected and analyzed to show that some areas are reducing sediment and phosphorus loads and water quality is improving. Continued monitoring is necessary, however, to verify water quality improvements and to characterize further changes in water quality related to changes in

land and irrigation management over time. Most importantly, 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. The proposed monitoring program will continue to monitor 48 existing sites including 29 agricultural drains and 19 stream locations. (Please see attached Table 1.0). The collected data will be combined with historical data collected over the last 20 years and be statistically analyzed to determine trends.

Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant has established competency, and it is beneficial for the SWCD and watershed council to pool their sampling efforts. This coordination should lead to improved coordination and analysis of the data.
- The co-applicants are working under DEQ approved SAPs, and using a reputable lab to analyze water samples.
- The data is beneficial for TMDL implementation tracking.
- Sampling incorporates the continuous flow gages to develop loads.
- The project will compare current and future data to historic data from the 1980s, and could provide some insight on longer term trends associated with BMP implementation and changes in land use.

Monitoring Team Concerns

- Letters of support are not included in the application.
- The application would have benefited from describing if and how the past sampling network has been analyzed and sites were prioritized. It is unclear if all of the sampling sites are still needed given the large data set that has been produced.
- It is unclear why additional data are needed to demonstrate agricultural water quality issues based on current land management practices; this has been shown with previously collected data.
- It is unclear whether there is a need to continue collecting Upper Malheur phosphorus data and how DEQ will use this data for TMDL purposes.
- The sampling frequency (1 time per month) in the drains is inadequate to answer the applicant's questions.
- DEQ operates ambient water quality monitoring sites in this area and the application does not describe how the applicant is coordinating with DEQ's water quality lab or basin coordinator to share data and analyze trends.
- The application describes that the drain sampling will be accompanied by an analysis to track changes in land use, but no details are provided on how this land-use/management tracking will be done or the changes tracked.
- Many challenges are laid out around the drain flow monitoring sites, yet the application does not describe how these challenges will be addressed.
- The budget is inadequate to complete all the analyses described in the application.

Monitoring Team Comments

- Drop the Upper Malheur phosphorus monitoring and perform drain monitoring 2 times per month.
- Require a communication plan to increase communication with local representatives of partner state agencies, along with reporting of incremental progress via annual progress reports.

Review Team Evaluation**Strengths**

- The proposed monitoring is a joint effort with the Malheur Watershed Council and the Malheur SWCD.
- There is strong partnership with Bureau of Reclamation (BOR) and their mapping is readily accessible on-line.
- The project builds on prior work, and the partners have a proven track record of completing similar projects.
- The monitoring program guides future restoration efforts. The results can also substantiate past efforts to ascertain effectiveness of implemented restoration and conservation projects.

Concerns

- Coordination with additional partners, including ODEQ and ODA, is needed.
- The application needs clarification with a more refined scope of work.

Concluding Analysis

The Snake River Agricultural Drain (SRAD) project has been ongoing with over 12 years of data. Data collected is used by the Owyhee Watershed Council, Malheur Watershed Council (MWC), and Malheur SWCD to prioritize and implement restoration projects that focus on specific drainsheds with impaired water quality. The recently added flow data further enhances the monitoring and will help calculate pollutant loads. This effort also helps to successfully track the progress of restoration projects. The Malheur and lower Owyhee basins have high phosphorus levels, and collected data is essential to help inform the overall TMDL monitoring. One of the monitoring goals is to identify total phosphorus and sediment throughout the basin. Synthesis of existing data is an essential part of this project and will help make those determinations

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

2 of 3

Review Team Recommended Amount

\$91,880

Review Team Conditions

Prepare a communication plan to increase coordination with local representatives of partner state agencies and require the technical team to meet.

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

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$91,880

Staff Conditions

Provide a communication plan prior to first payment that includes plans for increasing coordination with project partners, specifically local representatives of partner state agencies, and plans for maintaining engagement with a technical team. Progress reports will be scheduled for the project and should include an update on actions taken to implement this communication plan.

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5045-16628

Project Type: Monitoring

Project Name: Harney Groundwater Monitoring
Phase 3

Applicant: Harney County Watershed Council

Region: Eastern Oregon

County: Harney

OWEB Request: \$20,235

Total Cost: \$30,955

Application Description *(from application abstract)*

The project area is located in the Malheur Lakes Basin, south east Oregon within Harney County known as the Harney Basin. In 2015, Oregon Water Resources Department placed a moratorium on processing groundwater irrigation permits due to possible over-allocation. With reports of declining water levels over several areas of the basin, OWRD and USGS launched a groundwater study in the project area known as the Greater Harney Valley Area of Concern. In two previous phases of this project we received funding first to have a local technician monitor 30 wells (10 within each of three areas reporting groundwater declines). The second project increased the number of wells to a total of 60 wells to be monitored. Increased response by local landowners wanting their wells monitored has enlarged the project to a total of 102 wells to be monitored quarterly. Project partners include Oregon Water Resources Department, Harney County, the Groundwater Study Advisory Committee and the Community Based Water Planning Collaborative. The project area is located in the Malheur Lakes Basin, south east Oregon within Harney County known as the Harney Basin. In 2015, Oregon Water Resources Department placed a moratorium on processing groundwater irrigation permits due to possible over-allocation. With reports of declining water levels over several areas of the basin, OWRD and USGS launched a groundwater study in the project area known as the Greater Harney Valley Area of Concern. In two previous phases of this project we received funding first to have a local technician monitor 30 wells (10 within each of three areas reporting groundwater declines). The second project increased the number of wells to a total of 60 wells to be monitored. Increased response by local landowners wanting their wells monitored has enlarged the project to a total of 102 wells to be monitored quarterly. Project partners include Oregon Water Resources Department, Harney County, the Groundwater Study Advisory Committee and the Community Based Water Planning Collaborative.

Monitoring Team Evaluation

Monitoring Team Strengths

- The proposed monitoring will build on past groundwater monitoring efforts and continue to contribute to the ongoing groundwater study.
- The application has a broader purpose to engage landowners as part of the place-based planning effort.
- The project will produce consistent data because it will be collected by the same technician that has sampled the existing well network.

- Applicant addressed previous reviewer comments and described the monitoring methods well in the application.

Monitoring Team Concerns

- The OPMT debated the need to expand the monitoring network with one year remaining and how much these data would or could be incorporated into the groundwater study to improve current understanding of the heterogeneity of the aquifer.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The proposed monitoring project builds upon past efforts and includes an increase in the sample size of wells to be monitored.
- Engaging additional landowners is part of the OWRD's placed-based planning effort.
- Utilizing local staff ensures consistency in data collection, and builds trust with landowners that enable the council to monitor wells that out-of-area agency staff may not be granted access.

Concerns

- During previous phases of this monitoring project, data was not reported back to OWRD in a timely manner, and OWRD protocols may not have been followed to provide quality data.
- Some of the previously collected data may not be available to use in the groundwater study due to data quality concerns.
- The applicant has not provided data analysis from Phase 1 of the project.

Concluding Analysis

Due to results from previous phases of this monitoring project, the technical soundness of this next phase of the project is uncertain and is not likely to succeed until the concerns are addressed.

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-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5046-16676**Project Type:** Monitoring**Project Name:** Towards Sustainable Groundwater Management - Monitoring Evapotranspiration in the Harney Basin**Applicant:** Harney County Watershed Council**Region:** Eastern Oregon**County:** Harney**OWEB Request:** \$146,670**Total Cost:** \$268,475**Application Description** *(from application abstract)*

Location: Harney Basin, including the Silver, Silvies, and Donner und Blitzen, Rivers and Harney-Malheur Lakes in Harney County; nearest cities are Burns and Hines. See Figure 1 for a map of the basin. Issue: Groundwater levels are declining in the Harney Basin largely due to a rapid increase in groundwater pumping for irrigation over the last 30 years. A Groundwater Study and local water planning effort are both working to develop an accurate groundwater budget. A major gap exists in the ability to quantify basin-wide groundwater use by crops and groundwater reliant plants (known as phreatophytes). The most cost effective and accurate method for monitoring historical and current basin-wide consumption of water by plants is to use remotely sensed evapotranspiration (ET) measurements (Mapping ET at high Resolution with Internalized Calibration [METRIC]). Proper calibration of the METRIC model relies on measurements of actual ET, which do not currently exist in the basin. Project: This project will collect baseline ET data and use that data to validate the METRIC model to estimate past ET and support ongoing ET monitoring efforts (Figure 2). All data and products will be maintained online and will be publicly available through a web visualization tool. A technical report will be developed that provides ET measurements developed using METRIC from 1984-2020. Outreach activities will connect local partners to the information and help them understand how they can use it in planning and management activities. Partners: This project leverages expertise and resources from several partners to inform studies, planning efforts, management decisions, and projects. Partners include the Desert Research Institute at the University of Nevada-Reno, University of Idaho, Oregon Water Resources Department, US Fish and Wildlife Service, US Geological Survey, the Groundwater Study Advisory Committee, the Community Based Water Planning Effort, County Court, and local landowners. Location: Harney Basin, including the Silver, Silvies, and Donner und Blitzen, Rivers and Harney-Malheur Lakes in Harney County; nearest cities are Burns and Hines. See Figure 1 for a map of the basin. Issue: Groundwater levels are declining in the Harney Basin largely due to a rapid increase in groundwater pumping for irrigation over the last 30 years. A Groundwater Study and local water planning effort are both working to develop an accurate groundwater budget. A major gap exists in the ability to quantify basin-wide groundwater use by crops and groundwater reliant plants (known as phreatophytes). The most cost effective and accurate method for monitoring historical and current basin-wide consumption of water by plants is to use remotely sensed evapotranspiration (ET) measurements (Mapping ET at high Resolution with Internalized Calibration [METRIC]). Proper calibration of the METRIC model relies on

measurements of actual ET, which do not currently exist in the basin. **Project:** This project will collect baseline ET data and use that data to validate the METRIC model to estimate past ET and support ongoing ET monitoring efforts (Figure 2). All data and products will be maintained online and will be publicly available through a web visualization tool. A technical report will be developed that provides ET measurements developed using METRIC from 1984-2020. Outreach activities will connect local partners to the information and help them understand how they can use it in planning and management activities. **Partners:** This project leverages expertise and resources from several partners to inform studies, planning efforts, management decisions, and projects. Partners include the Desert Research Institute at the University of Nevada-Reno, University of Idaho, Oregon Water Resources Department, US Fish and Wildlife Service, US Geological Survey, the Groundwater Study Advisory Committee, the Community Based Water Planning Effort, County Court, and local landowners

Monitoring Team Evaluation

Monitoring Team Strengths

- The proposal is well-written and describes a clear need for why the data is needed and why existing data are not sufficient.
- The meteorological data will be real time and publicly accessible.
- The project will help with the existing and proposed ground water monitoring grants, and the ongoing groundwater study.
- The project includes outreach component to work with stakeholders and references possible uses of data to aid landowners in crop irrigation.
- The budget is detailed and organized by objective, which addresses previous project review concerns.

Monitoring Team Concerns

- The application is unclear on the number of years data are needed to adequately calibrate the model.
- The OPMT questioned what the long term plan is for monitoring needs for these data in support of the model.
- Working with this equipment and data requires a high level of expertise. The application does not include a description on who has the expertise to calculate actual ET.

Monitoring Team Comments

- The application describes the other eddy covariance ET station in the basin and it would be good to incorporate and compare these results as part of the modeling effort, if the data can be acquired.

Review Team Evaluation Strengths

- The application is well-written.
- This project will complement on-going OWRD monitoring in the region.
- This application addresses previous project evaluation concerns, including describing the need for the data and providing budget details.
- Previously identified data quality issues may be mitigated with the additional partners now participating in the project.
- The project includes an outreach component and work with stakeholders.
- The information can be used to help inform crop irrigation scheduling.
- Data will be available through a Web visualization too

Concerns

- The number of years of data needed to adequately calibrate the model is unclear.
- Project costs are high compared to similar work, and it is unclear how the costs for travel, maintenance, calibration, and troubleshooting were determined.
- It is unclear how this project will inform management decisions and future restoration efforts.

Concluding Analysis

OWRD and USGS are participating in an ongoing groundwater study in the Harney basin that will produce a water budget to estimate recharge, discharge, and change in storage. The information collected from the eddy co-variance will help quantify basin-wide groundwater use by crops and groundwater-dependent plants (phreatophytes). The proposed project may offer a cost-effective and accurate method for monitoring historical and current basin-wide water consumption by plants using remotely sense evapotranspiration (ET) measurements. This technology will provide ways to calibrate actual ET. While the monitoring data will be useful to OWRD, the cost-benefit of this investment is uncertain without more information on how the data can be used to inform future restoration projects.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 3

Review Team Recommended Amount

\$146,670

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$146,670

Staff Conditions

None

Open Solicitation-2018 Fall Offering Eastern Oregon (Region 5)

Application Number: 219-5047-16586

Project Type: Stakeholder Engagement

Project Name: Stakeholder Engagement in Groundwater Conservation in the Harney Basin

Applicant: Harney County Watershed Council

Region: Eastern Oregon

County: Harney

OWEB Request: \$42,609

Total Cost: \$53,909

Application Description *(from application abstract)*

The Harney Basin is located in Harney County, and encompasses a significant aquifer as well as surface drainages from the Silvies, Donner und Blitzen Rivers, Silver Creek, and the direct drainages to Harney and Malheur Lakes. Burns and Hines are the area's two major towns. The basin is experiencing significant groundwater declines resulting in regulatory curtailment of new groundwater permits and stimulated the interest in a planning initiative, the Harney Community-Based Water Planning (CBWP) Collaborative. The CBWP has engaged local community members and other interested stakeholders in a collaborative group that is open to the public. Declining groundwater levels can inhibit access to water for drinking, domestic, and agricultural use, and can affect groundwater-dependent ecosystems and species. Additionally, arsenic levels above the 10 ppb drinking water standard have been measured in groundwater wells. Some of the domestic well users are experiencing difficulties in obtaining potable water. Since domestic wells are "exempt" uses under state law, there is little information about their condition or use. The proposed work in this application entails: 1) conducting a statistically-valid, mailed survey -- to be designed and conducted by OSU -- of what rural domestic well users are experiencing with their water; and 2) effectively engaging stakeholders in water-resource information compiled by and solutions developed by the CBWP. These efforts will better enable the Collaborative in developing realistic conservation strategies that are well-matched for the basin, such as voluntary approaches for significant reduction in groundwater use and ecological restoration projects. Our project partners include all the organizations associated with the place-based water resource planning project, and particularly: OSU, Harney County Court, HCWC, OWRD, USGS, Oregon DEQ, Water Watch, The Nature Conservancy and Crane High School.

Review Team Evaluation

Strengths

- The project will broaden the group of stakeholders engaged in groundwater conversations and involve more than the agricultural community.
- Engaging high school students from Crane creates a high likelihood that parents will become involved with this effort.
- Public engagement in the Harney basin may ultimately provide a larger benefit than the data collected from the mailed survey.

- Stakeholder engagement will aid in the development of a water budget, which will be developed as part of the community-based planning effort that is co-convened by Harney County Court and Harney County Watershed Council.

Concerns

- It is unclear whether the project will lead to further study and analysis.

Concluding Analysis

The project has high potential to engage different segments of stakeholders in the Harney basin. There are several on-going efforts in Harney County, including the placed-based planning effort with OWRD and groundwater studies with USGS and OWRD. The outcomes generated by this stakeholder engagement will help stakeholders more broadly understand the magnitude of the issues. It will help various groups target solutions that will resolve conflicts and help to decrease water use. Materials will be provided for stakeholders to develop short-term conservation strategies, understand the basin's water-resource issues, and determine strategies to reduce groundwater use. Conservation strategies recommended can be incorporated into future restoration projects.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 1

Review Team Recommended Amount

\$42,609

Review Team Conditions

None

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

None

Staff Recommendation

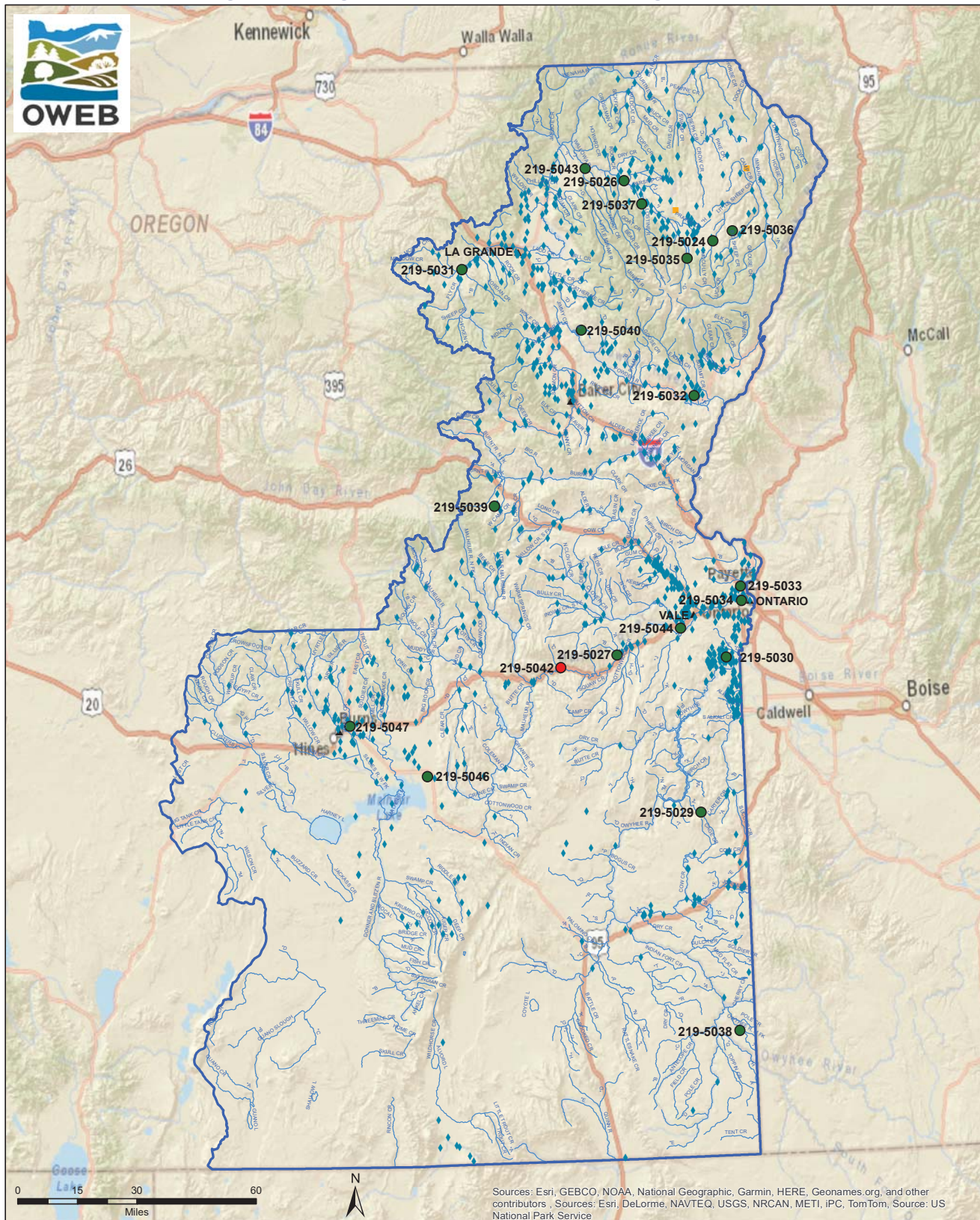
Fund

Staff Recommended Amount

\$42,609

Staff Conditions

None



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 ESRI ArcMap 10.6 NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20190314

Funding Recommendations

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

Previous Grants - 1998-Spring 2017

- ◆ Restoration
- Acquisitions
- Stream
- Region Boundary

Oregon Watershed Enhancement Board

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Region 5 - Eastern Oregon

Restoration Projects Recommended for Funding in Priority Order

| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
|-----------|----------------------------------|---|--|--------------------|---------|
| 219-5026 | Nez Perce Tribe | Tamkaliks Side Channel and Wetland Complex | A culturally significant section of the Wallowa River will be enhanced by installing off-channel wetland nodes, alcoves and large woody debris to improve ESA-spawning and rearing habitat; and wetland and floodplain connectivity. | 235,097 | Wallowa |
| 219-5024 | Grande Ronde Model WS Foundation | Wallowa Mountain Loop Road Reconstruction | A culvert in Little Sheep Creek in the Imnaha basin is a velocity barrier to ESA-listed steelhead and bull trout and will be replaced with a bridge. | 118,096 | Wallowa |
| 219-5030 | Malheur SWCD | Bishop Drain: Checkmate | Flood irrigation on 80 acres will be converted to sprinklers by installing 2 pivots. Field runoff into Bishop Drain will be eliminated to improve water quality in the nearby Owyhee River. | 40,223 | Malheur |
| 219-5031 | Tri-County CWMA | Upper Grande Ronde Invasive Weed Control Phase IV | Spotted knapweed and leafy spurge will be treated along 192 acres of the upper Grande Ronde riparian area that provides habitat for ESA-listed spring Chinook and steelhead. Project will treat known sites and survey new infestations. | 25,024 | Union |
| 219-5029 | Owyhee WC | Springing into Action on Mahogany Mountain | Core sage-grouse habitat in the Owyhee basin will be enhanced by constructing seven spring developments and troughs to pull livestock away from riparian areas. | 20,797 | Malheur |
| 219-5035 | Wallowa Resources | Upper Wallowa River Restoration Project | Bull trout and kokanee spawning and rearing habitat will be improved along 1/3 miles of the Wallowa River above Wallowa Lake. Channel complexity and bank stability will also be improved. | 250,726 | Wallowa |
| 219-5027 | Malheur WC | Water Quality Improvement at River Mile 56 or Making Life Better on the Canal | A 59-acre field near Harper will be converted from flood to sprinkler irrigation to improve water quality and prevent runoff flowing directly into the Malheur River. The project will install 1,200 feet of mainline, big guns, pump and a pivot. | 62,330 | Malheur |
| 219-5036 | Wallowa SWCD | Wallowa Front Forest Health Improvement Partnership-Divide Extended | Overstocked mixed conifer stands with altered fire regime in the Divide Area will be mechanically or hand thinned. Prescriptions prepared by ODF will open stands for larch, ponderosa pine and Douglas-fir regeneration. | 134,987 | Wallowa |

| Restoration Projects Recommended for Funding in Priority Order (Continued) | | | | | |
|---|-------------------|---|---|---------------------------|---------------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-5034 | Malheur SWCD | Foraged in Fire | Multiple project components including permanent firebreaks, green stripping, medusahead treatment, reseeding and spring developments will be implemented to improve core and general sage-grouse habitat in a remote area of Malheur County. | 149,912 | Malheur |
| 219-5032 | Eagle Valley SWCD | Whitnah Irrigation | Flood irrigation on 30 acres will be converted to sprinklers by installing two wheel lines. Field runoff into Powder River will be eliminated to improve water quality in Powder River nearby. | 27,156 | Baker |
| 219-5033 | Malheur SWCD | Mr. Rogers Neighborhood | Flood irrigation on 27 acres will be converted to sprinklers eliminating tailwater from entering the Snake River. Owyhee Irrigation District will install 1,380 feet of 12-inch conveyance pipe and orifice box which will eliminate evaporation and seepage and improve irrigation water conveyance. | 36,062 | Malheur |
| Total Restoration Projects Recommended for Funding by RRT and OWEB Staff | | | | 1,100,410 | |
| Restoration Projects Recommended but Not Funded in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Restoration Projects Recommended for Funding by RRT | | | | 1,100,410 | |
| Restoration Applications Not Recommended for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-5025 | Burnt River SWCD | Bootjack Irrigation | | 109,353 | Baker |
| 219-5028 | Malheur WC | Makin' Things Better on the Powder: Phase II Movin' the Power Lines | | 59,539 | Baker |

| Technical Assistance (TA) Projects Recommended for Funding in Priority Order | | | | | |
|---|---|--|--|--------------------|---------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-5037 | Grande Ronde Model Watershed Foundation | Lostine River - River Mile 5.7 Floodplain and Side Channel Enhancement Project | A future restoration project will benefit Chinook salmon and steelhead-rearing habitat and bull trout migration. Potential design elements will create side-channels incorporating pools, alcoves, and LWD to increase habitat complexity. | 73,040 | Wallowa |
| 219-5039 | Malheur WC | Let's Make the Bull Run Run Again: Da Do RunRun | Bull Run, a tributary to South Fork of the Burnt River near Unity dredged in 30's or 40's, has subsurface flow and impaired aquatic and wildlife habitat. A design will reconnect Bull Run to the South Fork; improve aquatic habitat; and enhance wet meadow for brood-rearing sage-grouse addressing 30 acres of habitat and 1.0 mile of stream. | 39,850 | Baker |
| 219-5040 | Malheur WC | Cusick Creek: The Restoration Continues Phase II | Located in core sage-grouse habitat, a future restoration project will improve a wet-meadow complex to enhance late-season, brood-rearing habitat by improving riparian conditions. Components include a topographic survey; geomorphic analysis; hydrologic and hydraulic analysis to produce a 60% design and three alternatives. | 29,488 | Union |
| 219-5038 | Owyhee WC | A Difficult Survey and Design Round 2 | A project within the Three Forks Conservation Opportunity area, one of the largest remaining blocks of high-quality sagebrush, will improve sage-grouse habitat. Design addresses grazing on 15,748 ares and enhancing 82 acres of wet-meadow habitat. | 28,930 | Malheur |
| Total TA Projects Recommended for Funding by RRT and OWEB Staff | | | | 171,308 | |
| Technical Assistance Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-5042 | Burns Paiute Tribe | Malheur Watershed Habitat Connectivity Assessment and Enhancement Plan | Highway 20 between Juntura and Ontario experiences high wildlife mortality caused by vehicle collision. Burns-Paiute Tribe proposes to develop a landscape-scale assessment of wildlife and habitat connectivity; evaluate measures to address connectivity; and prepare a design and implementation plan. | 73,875 | Malheur |
| Total TA Projects Recommended for Funding by RRT | | | | 245,183 | |
| Technical Assistance Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-5041 | Powder Basin WC | Powder Basin Groundwater Records Review | | 29,610 | Baker |

| Stakeholder Engagement Projects Recommended for Funding in Priority Order | | | | | |
|---|------------------|--|--|--------------------|--------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-5047 | Harney County WC | Stakeholder Engagement in Groundwater Conservation in the Harney Basin | Harney basin experiences significant groundwater decline. This effort engages stakeholders in compiling water-resource information to develop realistic conservation measures. Outcomes will provide a better understanding of what domestic well-users experience with groundwater. | 42,609 | Harney |
| Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff | | | | 42,609 | |
| Stakeholder Engagement Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Stakeholder Engagement Projects Recommended for funding by RRT | | | | 42,609 | |
| Stakeholder Engagement Projects <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| None | | | | | |

| Monitoring Projects Recommended for Funding in Priority Order | | | | | |
|--|---|--|--|--------------------|---------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-5043 | Grande Ronde Model Watershed Foundation | Grande Ronde Basin Stream Flow Gauging Stations Operation Water Years 2019 & 2020 | Streamflow gauges at 12 existing stream gauges in Union and Wallowa County will continue to operate to inform irrigation water management, fisheries management, long-term flow and trend analysis, water quality mgt plans and determine cumulative effects of conservation measures. | 101,002 | Wallowa |
| 219-5044 | Malheur WC | Kumbaya 2020: Monitoring in Malheur and Owyhee Basins | Water quality monitoring will continue at 12 sites inform trend analyses; determine if water quality is improving as a result of project implementation and compile a comprehensive report. Agricultural drain monitoring will continue at 11 sites to evaluate water quality. | 91,880 | Malheur |
| 219-5046 | Harney County WC | Towards Sustainable Groundwater Management Monitoring Evapotranspiration in the Harney Basin | This project will determine actual ET (evapo-transpiration) rates of irrigated crops and native phreatophytes (groundwater-dependent plants). Actual measured ET data will help ground-truth satellite ET Models and improve estimates for irrigation efficiency. | 146,670 | Harney |
| Total Monitoring Projects Recommended for funding by OWEB Staff | | | | 339,552 | |
| Monitoring Projects Recommended but Not Funded in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Monitoring Projects Recommended for funding by RRT | | | | 339,552 | |
| Monitoring Applications Not Recommended for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-5045 | Harney County WC | Harney Groundwater Monitoring Phase 3 | | 20,235 | Harney |
| Region 5 Total OWEB Staff Recommended Board Award | | | | 1,653,879 | 16% |
| Regions 1-6 Grand Total OWEB Staff Recommended Board Award | | | | 10,554,731 | |

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6015-16582

Project Type: Restoration

Project Name: Big Flat Pasture Enhancements

Applicant: South Fork John Day WC

Region: Mid Columbia

County: Grant

OWEB Request: \$54,315

Total Cost: \$135,538

Application Description *(from application abstract)*

The area know as Big Flat is located in the Southwestern corner of Grant County, in the Upper South Fork John Day River Watershed, on the Keerins Ranch. Big Flat is at the headwaters of many redband bearing streams, but closest to Flat Creek and Brisbois Creek. In the both watersheds, streamflows are very low or even non-existent during summer months. Flat Creek is on the 303 (d) list for temperature. This area is also considered winter range habitat for elk, and mule deer. In order to continue efforts to enhance Flat Creek, and to enhance the habitat of Big Flat, mitigate the effects of Juniper, and provide critical water for wildlife and livestock, the Keerins's had a well installed, and are seeking assistance to develop a watering system from this well, and also to remove 183 acres of Western Juniper. Prior to this well, the only water available for the pasture was located at a spring development, previously developed by the Keerins and Izee Ranch, which is dry most of the year. To accompany the well and spring development, and assist in providing improved habitat in the Big Flat pasture, we are requesting OWEB support to remove 183 acres of Western Juniper. This will continue work occurring at the headwaters of Flat Creek on the Kee Property, OWEB grant: 218-6005. This project will also compliment work on Spoon Creek, a tributary of Flat Creek, and Flat Creek itself, just downstream of Big Flat, OWEB grant: 217-6005. Other planned restoration for Flat Creek, and surrounding Big Flat includes Forest Health treatments in the Caribou pasture. All of these project surround Big Flat, and aim to improve the Flat Creek Watershed.

Review Team Evaluation

Strengths

- This is a well-written application that includes clear objectives, photos, and maps.
- Improving the ecological condition of this property will benefit elk and mule deer, as well as other wildlife that live in the basin.
- The project compliments previous restoration work completed in the area.
- Improving water sources in the pasture will help reduce use of pastures that now solely rely on Flat Creek.

Concerns

- Including a grazing management strategy would be helpful to the review.
- It is not clear whether the project will continue if match dollars are not secured.

Concluding Analysis

Numerous restoration projects have been completed in this high elevation private lands to improve wet meadows and forest health, protect aspen, remove encroaching juniper, and improve water quality of Flat Creek and other redband trout tributaries to the South Fork John Day River. This project builds on those efforts by utilizing a new well for livestock water development in a dry pasture. This area is critical deer and elk wintering area with abundant bitter brush and mountain mahogany communities.

Review Team Recommendation to Staff

Fund

Review Team Priority

12 of 12

Review Team Recommended Amount

\$54,315

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$54,315

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6016-16600**Project Type:** Restoration**Project Name:** Rudio Headwaters Meadow Restoration**Applicant:** Monument SWCD**Region:** Mid Columbia**County:** Grant**OWEB Request:** \$99,764**Total Cost:** \$145,592

Application Description *(from application abstract)*

The Rudio Headwaters Meadow Restoration project is located in the upper portions of the Rudio Creek drainage (HUC 12 -170702021005), a tributary of the North Fork John Day River, near the town of Kimberly in Grant County, Oregon. Rudio Creek is listed as critical spawning and rearing habitat for both Chinook salmon and ESA listed (Threatened) Mid-Columbia River steelhead. Past management activities under previous ownership has resulted in severely overstocked forest stands that have encroached upon, and degraded the condition and function of, historic wet meadows in the headwater reaches of Rudio Creek. This project will address the following watershed management objectives: 1) Forest Stand Improvements: 137-acres of mixed conifer forest will be pre-commercially thinned, primarily eliminating lodgepole pine. This restoration action will reduce the risk of catastrophic wildfire and restore hydrologic functions within the headwater wet meadow habitat of Rudio Creek. 2) Exclude Cattle from Wet Meadow and Riparian Habitats: Approximately 6,000 feet of wildlife friendly fence will be installed to create a 27-acre enclosure around 13 acres of wet meadow and riparian habitat. This restoration action will prevent trespass cattle from adjacent properties from accessing the site. Cattle exclusion will result in reduced trampling of hydric soils, decreased soil compaction, increased soil porosity, and accelerated recovery of sensitive plant communities. 3) Accelerate Wet Meadow Recovery: 16 beaver dam analogue (BDA) structures will be installed within Rudio Creek using onsite materials. BDAs will improve large woody debris retention, attenuate flows, improve floodplain connectivity, aggregate sediment, and increase riparian hardwood productivity. Project partners include the Confederated Tribes of Warm Springs, North Fork John Day Watershed Council, Monument SWCD, Jeff Maben (property manager/forester), Wildwood Investments (landowner), and OWEB.

Review Team Evaluation Strengths

- The project site has potential for improved stream function and floodplain reconnection.
- Protecting the riparian area from errant trespass cattle will help establish riparian vegetation.
- The project compliments the landowner's effort to improve forest health on adjacent overstocked timber stands.
- The applicant and landowner have a successful track record of restoration accomplishments.

- Catastrophic wildfire is a serious resource concern in this basin, and the proposed forest stand improvements will reduce this wildfire risk.
- Thinning will help reduce insect infestation and disease.
- Beaver dam analog (BDA) are designed to be strategically placed and incorporated into existing large wood structures located in the stream channel.
- Planting willows will improve the diversity of the existing riparian vegetation.

Concerns

- The design would be strengthened by adding additional trees to be dropped into the channel.

Concluding Analysis

The project is located in the headwater meadows of Rudio Creek, an important steelhead tributary of the North Fork John Day River. This project will improve water quality and potentially increase flows for the entire stream. The landowner has a reputation of successful restoration on their other properties and has already begun forest health treatments adjacent to the project site, maximizing the overall ecological benefits of this project.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

4 of 12

Review Team Recommended Amount

\$99,764

Review Team Conditions

Add project component of dropping large trees in-channel along barren reaches of the stream project site.

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

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

\$99,764

Staff Conditions

Add to the application scope of work a project component for dropping large trees in-channel along barren reaches of the stream project site.

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6017-16604

Project Type: Restoration

Project Name: Clear Creek Restoration

Applicant: North Fork John Day WC

Region: Mid Columbia

County: Grant

OWEB Request: \$59,893

Total Cost: \$110,019

Application Description *(from application abstract)*

Clear Creek is a perennial stream which flows into the Middle Fork John Day River (MFJDR) roughly 1.5 miles north of Austin Junction, OR. Beaver removal, past timber harvest, and associated railroad grade and road construction within the floodplain of Clear Creek led to channel incision which reduced the floodplain inundation frequency and connectivity of the creek to an extensive side-channel network. In the late 1970's, log weirs were installed in Clear Creek with the goal of improving degraded fish habitat by increasing pools, sorting spawning gravels, and preventing further channel incision. Many of these structures met their original intent, but also resulted in unintended consequences, creating barriers that prevent movement of fish to cooler upstream waters, overwidening channels, and forcing step pool complexes in plane-bed channels. Clear Creek is an important cool water tributary to the MFJDR and is key rearing habitat for Mid-Columbia River spring-run Chinook salmon, as well as being designated critical habitat for Columbia River bull trout and Mid-Columbia River steelhead. Recovery plans specifically identified removal of passage barrier weirs as key actions on Clear Creek to recover bull trout and steelhead. The North Fork John Day Watershed Council (NFJDWC), partnering with the US Forest Service (USFS) and the Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), will remove log weirs, remove valley constraining berms and riprap, plant riparian hardwoods, and place appropriate in-channel and floodplain structures (large woody debris and boulders) in order to allow the stream to naturally reduce its width/depth ratio, improve water quality, increase sinuosity and pool numbers, promote spawning gravel accumulation in pool tail-outs, and restore juvenile fish passage. These actions will enhance geomorphic and ecohydraulic processes and functions to support limited over-summer rearing habitat for native fishes.

Review Team Evaluation

Strengths

- The project site provides high quality spawning and rearing for spring Chinook, ESA-listed steelhead, bull trout, and other aquatic species.
- The historic log weirs to be removed are confirmed barriers to juvenile fish. Removing these weir will open access to over three stream miles of Chinook habitat, nine miles of designated critical steelhead habitat, and twelve miles of designated critical habitat for bull trout.

- Years of temperature monitoring data for Upper Clear Creek indicates this stream is one of the coldest on the Middle Fork John Day River. Continued monitoring is an important addition to the project.
- The project is identified in multiple plans, including the Bridge Creek-Middle Fork John Day River Draft Watershed Restoration Action Plan and the Aquatic Restoration Environmental Assessment (Malheur Nat'l Forest 2014.).....
- Ample match and partners with technical expertise, indicates support for the project.
- The project is shovel-ready once cultural work is completed.
- The applicant and partners have successful track records for restoration.
- The proposed work builds on other projects in the upper Middle Fork John Day River basin.
- Utilization of a nearby large wood supply reduces the cost of the project.
- Beavers will expand and increase floodplain connectivity resulting from the proposed work.

Concerns

- Additional information on the berm, such as their role as a limiting factor, the history and actual location, would have been helpful to the review.

Concluding Analysis

This project corrects historic anthropogenic structures that have outlived their original intent and now impact juvenile fish as they attempt to move upstream to high quality habitat. There is no grazing along this stream reach and the vegetation is thick. Dropping some of the large conifers instream will add complexity and cover, as well as allow riparian hardwoods to flourish. The project has a high ecological benefit-cost ratio and high likelihood of success.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 12

Review Team Recommended Amount

\$59,893

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$59,893

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6018-16612

Project Type: Restoration

Project Name: Pine Hollow Middle and Upper Restoration

Applicant: Wheeler SWCD

Region: Mid Columbia

County: Wheeler

OWEB Request: \$167,873

Total Cost: \$244,077

Application Description *(from application abstract)*

1) The project is located along Pine Hollow Creek, a steelhead bearing tributary of Rock Creek, which flows to the John Day River. Located within Wheeler County, the nearest town being Mitchell, Oregon. 2) This project is a holistic continuation of work within the Pine Hollow Creek Watershed to address the limiting factors to watershed health and fish passage. The project will provide much needed habitat complexity on the lower reach of Pine Hollow Creek, correct a significant fish passage barrier, and address juniper encroachment within the headwaters. 3) The project will install Vertical Post Structures (VPSs) and large wood on approximately $\frac{3}{4}$ miles of Pine Hollow Creek which has recently been enrolled in the ODFW Riparian Fencing Program. It will also correct a major fish passage barrier of a perch culvert. Correction of this culvert will include an additional 0.25 miles of fencing through the ODFW program. Lastly, the project will begin restoration of the headwaters of Pine Hollow Creek by the treatment of prioritized juniper in a top down manner. 4) Project partners include USFW Partners Program, the Antone Ranch (Daysprings Partners LLC), the ODFW John Day, and the Wheeler County SWCD.

Review Team Evaluation Strengths

- This project was identified from an OWEB funded assessment and follows an OWEB funded technical assistance grant for the design.
- This Pine Hollow Creek project opens access to three miles of ESA-listed steelhead habitat, and compliments other restoration work done on this stream.
- Alternative designs are discussed in the application.
- The cost rates for removing juniper appeared to be reasonable.

Concerns

- This property is in the process of a pending sale, which creates uncertainty for the project to be successfully implemented.
- It is not clear if there are remaining fish passage barriers above the project reach.

- The application does not clearly explain how the pond will not become a heat-sink that negatively impacts stream temperatures.
- Strategies explaining how the project will be sustained or improved with grazing around the site are missing from the application, further diminishing the long-term likelihood of success.
- More detail on the secondary culvert and the current condition and phases of the juniper stand would have helped the review.
- Information on the actions that will be taken to prevent juniper from re-establishing in the near and distant future is not included in the application.
- The fencing component was confusing because the maps do not show where the fencing will be located in relation to the pond, the adjacent road, and the livestock winter feed area.
- The application does not include information on how management will address livestock winter feed area runoff issues along ¼ mile of Pine Creek alongside and directly below the restoration site. The close proximity of this heavy use area negated or at best lowered the stated ecological benefits.

Concluding Analysis

Pine Hollow Creek, a tributary to Rock Creek, has potential to be valuable steelhead habitat. A lot of restoration work had been completed on this ranch and this project will build on that work. However, this project is premature with the ranch sale pending, and the application lacks critical detail necessary to determine the likelihood of success for the proposed restoration.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

Review Team Recommended Amount

\$0

Review Team Conditions

Staff Recommendation

Staff Follow-Up to Review Team

Staff Recommendation

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

| | |
|---|----------------------------------|
| Application Number: 219-6019-16644 | Project Type: Restoration |
| Project Name: Wildhorse Creek Dam Removal & Bridge Replacement | |
| Applicant: Umatilla Basin WS Foundation | |
| Region: Mid Columbia | County: Umatilla |
| OWEB Request: \$103,290 | Total Cost: \$780,098 |

Application Description *(from application abstract)*

The Umatilla Basin Watershed Council (UBWC) and partners are collaborating with the City of Athena and Umatilla County Public Works to address fish passage and habitat in Wildhorse Creek near Athena, Oregon. Wildhorse Creek (HUC 17070103), a tributary of the Umatilla River originates in temperate forest at an elevation of 3,760 feet and flows 34 miles to the Umatilla River at an elevation of 1,100 feet near Pendleton, Oregon. ODFW & CTUIR biologist have identified a passage obstruction for steelhead along with resident rainbow trout, Pacific Lamprey, Coho Salmon, and several other non-salmonid fish species at the South 3rd Street Bridge in Athena, Oregon. Replacing the bridge was chosen because it was the only alternative from the feasibility study that would allow fish due to a velocity barrier and no associated jump pool. The existing bridge structure is a concrete box with winged buttress walls and a concrete floor. A channel spanning, concrete grade control wall located 10 feet upstream of the bridge creates a 4-foot drop in water surface elevation. These structures limit flow conveyance and passage during peak flows due to increased water velocity, and also contributes to habitat degradation. This project intends to remove the passage obstruction, replace the bridge with a larger structure that meets NMFS and ODFW fish passage criteria, and stabilize channel bed gradient by creating a 160-foot roughened channel. Restoring fish passage at the South 3rd Street Bridge will provide access to an additional 15.4 miles of mountain habitat for salmonid rearing and spawning. Project partners include the Umatilla Basin Watershed Council, ODOT Fish Passage Compensation Program, R&E Program, Umatilla Economic Development Committee, the City of Athena, Umatilla County Confederated Tribes of the Umatilla Indian Reservation, Athena Chamber of Commerce & Main Street Committee, Oregon Water Resources Department, and the Oregon Department of Fish & Wildlife.

Review Team Evaluation Strengths

- The applicant responded to all of the previous evaluation concerns.
- Project designs are 100% complete and ready for construction.
- The bridge components have been purchased by partners and are awaiting installation.
- There has been and continues to be public outreach and support for the project.

- The application includes information that validates the quality of the upstream habitat which is valuable to steelhead.

Concerns

- There are no concerns.

Concluding Analysis

The project site has a significant fish passage barrier and steelhead are known to become trapped in the pool downstream of this site because they are unable to navigate the four-foot high concrete wall. The project has a high likelihood of success with strong partner support, and will provide a significant ecological benefit for the project cost.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 12

Review Team Recommended Amount

\$103,290

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$103,290

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6020-16650

Project Type: Restoration

Project Name: Badger Creek Forest and LWD Restoration

Applicant: Wheeler SWCD

Region: Mid Columbia

County: Wheeler

OWEB Request: \$56,423

Total Cost: \$96,023

Application Description *(from application abstract)*

1)The project is S-SE of Mitchell on Badger Creek which is a tributary of Mountain Creek. The project is located in close proximity to several successful OWEB and NRCS project. 2)A recently completed NRCS pre-commercial thinning project was successfully completed, but enough funds were not available to address all of the area prioritized. Badger Creek through this reach has very little large wood, shading, and floodplain connectivity which are key limiting factors for steelhead recovery. 3) The project conducted additional pre-commercial thinning work on a small acreage to complement a recently completed NRCS pre-commercial thinning project and complete the originally planned total extent to reduce the danger of catastrophic wildfire. Vertical Post Structures (VPSs) and large wood will be installed to improve woody debris prevalence, shading, and floodplain connectivity. 4)Partners include the NRCS, USFWS, ODFW, the landowner, and the Wheeler SWCD.

Review Team Evaluation

Strengths

- The application is relatively straight-forward and includes detailed maps and photos.
- The project builds on and expands significant restoration investment in this basin.
- Badger Creek is an important ESA-listed steelhead stream for both spawning and rearing.
- Incorporating willow whips in the beaver dam analogs is a successful and proven technique.

Concerns

- Information on the thinning project component and timber management, including stocking level and vegetation composition, is lacking in the application.
- The lack of riparian fencing decreases the expected ecological benefits of the project.
- Including documentation that demonstrates past success of using large wood to protect riparian vegetation would have been helpful to the review.
- No grazing management strategy is included in the application to show how restoration investment will be protected from or enhanced by grazing.
- No designs are included in the application.

Concluding Analysis

Quite a bit of restoration has been implemented on Badger Creek, a steelhead tributary of Mountain Creek. This project site adjoins two other completed restoration sites that are showing habitats improvements. However, it is difficult to evaluate the project without more information and detailed designs to determine the likelihood of success in achieving expected watershed benefits. If resubmitted, it is important to address the concerns noted by this evaluation.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority**Review Team Recommended Amount**

\$0

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

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

| | |
|--|----------------------------------|
| Application Number: 219-6021-16689 | Project Type: Restoration |
| Project Name: Greenwood Upland Improvements | |
| Applicant: Grant SWCD | |
| Region: Mid Columbia | County: Grant |
| OWEB Request: \$246,093 | Total Cost: \$344,940 |

Application Description *(from application abstract)*

The project is located on private property with activities in both the Isham and Reynolds Creek watersheds. The property faces numerous conservation challenges such as heavily overstocked timber, invasive annual grasses, juniper infestation, impaired riparian conditions, lack of livestock management infrastructure as well as an overall lack of late season water sources for livestock and wildlife. Late season water for 1,100 acres of pasture is currently provided by a small section of Isham Creek: a summer steelhead stream that flows year round. This project requests OWEB support to improve 4 existing stockponds, install 4 new ones, construct a solar stockwater system and 12,000 feet of cross fencing. Matching efforts will include the landowner, NRCS (forest thinning activities) and ODFW (Annual grass control and reseeding).

Review Team Evaluation

Strengths

- The project proposes a whole-watershed approach to improvements on the property.
- Forest thinning and invasive medusahead treatments done by the landowners demonstrate their commitment to ecologic improvements on their land.
- The upper John Day River mainstem flows along the west side of the property and any improvements to water quality will benefit ESA listed steelhead, Chinook, and bull trout.
- Developing upland water sources are beneficial to both livestock and wildlife.

Concerns

- There is no justification on why lining the ponds is necessary.
- Modeling the hydrology for potential overland flows to ponds and evaporation rates would have been helpful to the review.
- More detail on the grazing management would have strengthened the application.
- Watershed benefit is marginal for the amount of funds requested.

Concluding Analysis

The landowners have a history of implementing restoration projects to improve the landscape scale habitat function. However, the ecological benefits that will be realized from this proposal are low for the requested amount. If this proposal is resubmitted, the applicant should consider a phased approach, documenting the previous restoration results before moving forward on the remaining phases; including clear ecological benefits resulting from the project; and providing a grazing management strategy that informs how the investment in restoration will be protected and sustained into the future.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority**Review Team Recommended Amount**

\$0

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

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

Open Solicitation-2018 Fall Offering

Mid Columbia (Region 6)

Application Number: 219-6022-16693

Project Type: Restoration

Project Name: Upper Fox Creek Fish Passage and Instream Habitat Enhancement Project

Applicant: Confed Tribes Warm Springs

Region: Mid Columbia

County: Grant

OWEB Request: \$167,801

Total Cost: \$886,325

Application Description *(from application abstract)*

The Upper Fox Creek Fish Passage and Instream Habitat Enhancement Project (Project) is located on private agricultural land approximately 2 miles south of the town of Fox, Oregon. The land in the project area is actively grazed by cattle and used for producing hay-feed. Historical land use impacts have degraded the riparian corridor and accelerated stream incision, which now isolates the stream from interaction with the floodplain. Additional impacts include an increase in stream sediment from four unimproved cattle/vehicle fords within the project area and potential fish stranding issues presented by three unscreened irrigation diversions. The project includes: reconnection of historical side channels through excavation; creation of 4 habitat alcoves; 11 bank laybacks to stabilize streambank erosion; installation of LWD and beaver dam analogues; construction of 2 improved livestock crossings to restore fish passage; planting and fencing of native grasses, shrubs, and trees in the riparian area; decommissioning and consolidation of 3 irrigation Point-Of-Diversions and the addition of a fish screen on the consolidated diversion point. The landowner is placing existing surface water withdrawal rights into an instream lease, which will increase instream flows. Project Partners include the following: Bonneville Power Administration - design and implementation funding; North Fork John Day Watershed Council - aspen stand protection; Monument Soil & Water Conservation District - monitoring; US Forest Service (Malheur) - monitoring; US Fish & Wildlife Service - permitting and implementation funding; Freshwater Trust - instream lease; Grant County Soil & Water Conservation District - pump station and water delivery system designs, overseeing the cultural surveys; Landowner - trees, fence maintenance, grazing plan; Oregon Department of Fish & Wildlife - fish screen.

Review Team Evaluation

Strengths

- The ecological benefits are well-explained in the application.
- The project compliments other instream work completed downstream on Fox Creek.
- Correcting the fish passage issues at the culverts will benefit steelhead, redband trout, and juvenile Chinook by opening access to 6.8 miles of cold water habitat.
- ODFW has already approved the designs for the beaver dam analog structure.
- An instream lease is in process, which will protect stream flows into the future.

- The application is well-written, includes detailed maps and provides historic perspectives to aid in the review.
- Designs are comprehensive, construction-ready, and will result in improved water quality and fish habitat in Fox Creek.
- The proposed video will serve to help tell the story of restoration.
- Monitoring fish absence/presence and macro invertebrates will be continued, which will add to the existing baseline data.
- Using the removed juniper as instream large wood habitat structures increases the efficiencies and economy of the project.
- Project support is demonstrated by ample secured match funding.

Concerns

- The large wood placement and burying entire tree boles could result in excessive streambank disturbance. As an alternative, entire logs could be placed in the stream channel for added habitat complexity and cover with less disturbance.
- More detail relating to the livestock crossings, grazing strategies and long-term juniper management would provide helpful context to the review.

Concluding Analysis

The project will provide significant ecological benefits to this upper section of Fox Creek. It builds on extensive past and current restoration underway both up- and downstream. Fox Creek is an identified stream for steelhead and other aquatic species, including large colonies of freshwater mussels.

Review Team Recommendation to Staff

Fund

Review Team Priority

7 of 12

Review Team Recommended Amount

\$167,801

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$167,801

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6023-16694

Project Type: Restoration

Project Name: Camp - Lick Restoration

Applicant: North Fork John Day WC

Region: Mid Columbia

County: Grant

OWEB Request: \$167,452

Total Cost: \$424,016

Application Description *(from application abstract)*

The Camp Creek fifth field watershed has been a priority, focus area for the USFS since 2008. Camp Creek and Lick Creek, just upstream of the town of Galena, provide higher levels of steelhead spawning and juvenile rearing than most other tributaries of the Middle Fork John Day River. An intensively monitored watershed (IMW) study identified large woody debris increased channel complexity in good water years, however, water temperatures drove the magnitude of survivability in most drought years that have occurred since 2012. Watershed issues likely started with eradicating beaver by about 1823 in Camp Creek. Then, in the 1940s, railroad grades were built immediately adjacent to Camp Creek. The railroad grade levee is having the most pervasive impacts to stream processes in low gradient, unconfined valleys along Camp Creek where the valley is bisected and trapped by these levees. Historic side channels and wetlands will be connected to Camp Creek that have been blocked by old railroad grades to restore vegetative establishment and development for cottonwood, willow and dogwood plant communities that would provide for stream shading, increasing terrestrial insect production and providing for beaver over the long term. Railroad grades will be partially and/or fully removed to provide for multi-threaded channel planforms and the soil will be redistributed back across the floodplain. Wetland plants will be salvaged and replanted with more cottonwood poles, willow and dogwood whips. A split of buck and pole and metal fences will be placed around suckering mature cottonwood and disturbed areas that will provide high quality shade. Trees will be tipped and placed, improving forest structure at the stand scale and reduce wild fire threats. The North Fork John Day Watershed Council is partnering with the USFS – Blue Mountain Ranger District and the Confederation of Warm Springs Tribes to accomplish this great project.

Review Team Evaluation

Strengths

- The ecological benefits are well-described in the application with detailed maps that show specific project components.
- The plans to remove the railroad grade and reconnect the floodplain will significantly improve stream function on Camp and Lick Creeks.
- Adding large wood and beaver dam analogs will add stream complexity and improve habitat for both ESA-listed steelhead and Chinook.

- The project builds on and compliments past restoration efforts in the watershed.
- The partners involved have successfully implemented numerous other restoration projects, increasing the likelihood of this project's success.
- Project support is demonstrated by significant secured match.

Concerns

- The application does not explain where the material removed from the railroad bed will end up in relation to existing wetlands on site.
- Using electric fence to protect the riparian areas will require a lot of maintenance to secure the durability around the riparian area and associated plantings.

Concluding Analysis

Camp and Lick Creek provide important habitat for both steelhead and Chinook. Malheur National Forest is partnering with the North Fork John Day Watershed Council to implement and monitor this very visible project along a well-used USFS road, offering a unique outreach opportunity on public timber land.

Review Team Recommendation to Staff

Fund

Review Team Priority

9 of 12

Review Team Recommended Amount

\$167,452

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$167,452

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6024-16695

Project Type: Restoration

Project Name: Hewes Diversion Removal

Applicant: Gilliam SWCD

Region: Mid Columbia

County: Gilliam

OWEB Request: \$76,921

Total Cost: \$200,986

Application Description *(from application abstract)*

The project is located in Gilliam County 16 miles north of Condon in the Lower Rock Creek Watershed. The project is on Rock Creek approximately 20 miles upstream from the confluence with the John Day River. During high flows, steelhead enter the abandoned Hewes diversion dam and become trapped as flows recede resulting in threatened species fatalities. Additionally, high flows strike the concrete structure and careen into the eastern streambank introducing large amounts of sediment into the system. Rock Creek is an important lower basin steelhead spawning and rearing stream in the Lower John Day. This project proposes to completely remove the concrete diversion structure; enhance side channel habitat by placing large wood structures, boulder clusters and regrade the disturbed channel to natural stream form. Banks will be sloped back, seeded and planted. Project partners include Gilliam County SWCD, Oregon Department of Fish and Wildlife, the Confederated Tribes of the Warm Springs, and two local Gilliam County landowners.

Review Team Evaluation

Strengths

- The applicant addressed all prior evaluation concerns.
- The design is simplified and continues to meet the goals and objectives of the project.
- Secured match is provided by partners on the project, which indicates the project is ready to implement. Since impending match dollars have spending deadlines, project implementation is urgent.
- The approach for the concrete diversion disposal is innovative and economical.
- Steelhead entrapment during high flows is a known problem at this project site. Removing the abandoned concrete structure removes that hazard and improves habitat along this reach.
- The project builds on previous restoration completed on Rock Creek in the lower John Day Basin.
- Planting the riparian areas will add benefit in the long term and the contractor identified to plant trees has a successful track record on similar project sites.

Concerns

- There are no concerns.

Concluding Analysis

The grantee maintained landowner interest and engagement in the project through multiple application submissions, developed unusual partners, and simplified the design while continuing to meet the goals and objectives of reducing entrapment of steelhead, increasing habitat, and improving water quality. The resulting project after these refinements provides a significant watershed benefit at an effective cost.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 12

Review Team Recommended Amount

\$76,921

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$76,921

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6025-16701

Project Type: Restoration

Project Name: Cavender Wetland Habitat Improvements

Applicant: Monument SWCD

Region: Mid Columbia

County: Grant

OWEB Request: \$17,029

Total Cost: \$37,328

Application Description *(from application abstract)*

The Cavender Wetland Habitat Improvements project is located on private property in the southwest corner of Monument, Oregon in Grant County. A 9.7-acre wetland occupies a site immediately adjacent to the North Fork John Day River. A previous OWEB restoration grant saw to multiple enhancements across this locally unique and valuable habitat. However, soil compaction from 2016 construction activities and scour from 2017 ice flows resulted in poor native plant establishment and survival in several areas. Some sites have persistent noxious weed populations that threaten the long-term trajectory of desirable plant communities. Herbivory from native ungulates and obligate wetland species (i.e., muskrat and beaver) also hinder the success of native plantings across the wetland. Therefore, additional vegetation management is required to create a stable native plant community within this rare eastern Oregon wetland. The project will address the following management objectives: 1) Herbaceous Invasive Species Control: Noxious weed control with approved herbicides will be conducted across the wetland and associated upland communities to improve the competitive advantage and establishment of desirable native species. 2) Establishment of Desirable Plant Communities: Areas within the wetland with poor vegetation establishment due to soil compaction will receive tillage for seed bed preparation prior to aggressive application of native grass seed. Following successful weed control, 500 native shrubs and trees will be planted within the wetland. 3) Protect Wetland Plantings: Seven 25-foot x 25-foot exclosures will be constructed to protect the 500 native shrub and trees plantings from native herbivory. Project partners include the Confederated Tribes of Warm Springs, North Fork John Day Watershed Council, Monument SWCD, Jack Eldon Cavender Trust (landowner), and OWEB.

Review Team Evaluation

Strengths

- The application is well-written and includes detailed maps and photos.
- The project adds to previous wetland restoration work completed at the site.
- The project location, adjacent to the BLM Park, offers multiple opportunities for restoration outreach.
- Lessons learned from prior restoration work are incorporated into the project, including planting older stock and ripping old road beds prior to seeding.
- Documentation of browse and mortality data is included in the application.

- Using Oregon Youth Conservation Corp for planting provides an outreach opportunity and adds to the socioeconomic benefit from the project.
- The project cost is reasonable for the proposed work and resulting ecological benefit.

Concerns

- When placing new plant cages, there should be consideration for the impacts of future ice flows when determining cage locations.
- Waiting a year before completing additional seeding could result in reducing the treatment area because of any late emergence of the prior seeding.

Concluding Analysis

The proposed project follows an OWEB funded technical assistance and restoration grant that enhanced nine acres of rare wetland habitat along the North Fork John Day River. This proposal addresses two issues contributing to poor plant survival from this previous restoration: 1) actual impacts from previous restoration construction that compacted the seed bed, and 2) a natural ice flow event that caused scour and damaged previous plantings. The project cost is reasonable for the expected watershed benefit from this project since the investment will help to preserve the ecological outcomes of the original restoration project.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 12

Review Team Recommended Amount

\$17,029

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$17,029

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6026-16705

Project Type: Restoration

Project Name: McGirr Fox Creek Passage and Habitat Project

Applicant: Grant SWCD

Region: Mid Columbia

County: Grant

OWEB Request: \$351,376

Total Cost: \$551,952

Application Description *(from application abstract)*

This project is located in Fox Valley approximately 2 miles west of Fox, Oregon. A concrete and flashboard irrigation dam was installed in the early 1980's by the SCS. The bottom-most flashboards have been left in place for many years and have checked the stream bed behind the structure; fish passage for juvenile summer steelhead moving upstream is blocked year round. The proposed project will install a combination of rootwad structures, floodplain benching, hardened rock riffle and beaver dam analogues to achieve necessary diversion head levels as well as provide year round fish passage. The existing dam will be removed. Partners include the Landowner, BOR (design), CTWSRO (design, construction and materials) and ODFW (fish screen).

Review Team Evaluation

Strengths

- Fox Creek is an important ESA-listed steelhead and Chinook stream.
- The beaver dam analogs will add habitat value and the sites selected for these structures are appropriate for increasing stream function.
- Improving Fox Creek habitat builds on numerous restoration projects, past and current, upstream and downstream in this watershed.
- This is an opportune time for the project because the landowner that has not previously been interested in restoration now wants to see improvements along his section of Fox Creek.
- The project addresses one of ODFW's highest priority passage and screening sites on Fox Creek.
- The applicant has a successful track record of restoration implementation and landowner relations.
- The project is technically sound and will provide significant ecological benefits.
- Protecting and enhancing wetlands in the upper section of the project reach adds additional watershed benefit.

Concerns

- Given the history of reluctance by the landowner for considering restoration, there is some risk for this project to not be successful if the landowner decides to not implement the work.

Concluding Analysis

This project addresses a major fish barrier on Fox Creek, adding to numerous large-scale projects that enhance this critical ESA-listed steelhead habitat. Design improvements by BPA's technical review provide a cost effective project that continues to align with the original goals and objectives of the application while providing significant watershed benefits. Successful implementation with this landowner is an opportunity to demonstrate the benefits of voluntary restoration.

Review Team Recommendation to Staff

Fund Reduced with Conditions

Review Team Priority

8 of 12

Review Team Recommended Amount

\$176,522

Review Team Conditions

Accept BPA's technical adjustments to design and reduce the budget accordingly.

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

None

Staff Recommendation

Fund Reduced with Conditions

Staff Recommended Amount

\$176,522

Staff Conditions

Adjust the application scope of work and budget to reflect BPA's technical adjustments to design.

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6027-16708

Project Type: Restoration

Project Name: Eight Mile Headwaters Upland Improvement Project

Applicant: North Fork John Day WC

Region: Mid Columbia

County: Grant

OWEB Request: \$86,763

Total Cost: \$132,589

Application Description *(from application abstract)*

1) This project is located on two private properties (Eight Iron Ranch and Eight Mile Basin, LLC) in Ritter, Oregon. Eight Iron Ranch and Eight Mile Basin, LLC together cover approximately 5,200 acres in the headwaters of Eight Mile Creek. The two properties together take in just over 5 miles of Eight Mile Creek. Eight Mile Creek is a tributary to the Middle Fork John Day River (HUC #1707020305). It drains 60,605 acres, and consists of 157 stream miles. It provides critical rearing habitat for ESA listed Mid-Columbia Steelhead and threatened Chinook salmon. 2) Historic and current land use practices on the Eight Iron Ranch and Eight Mile Basin, LLC have left springs and their surrounding ecosystems degraded. Eight Iron Ranch has been actively working to fence off Eight Mile Creek and provide alternative upland water sources for livestock. Eight Mile Basin, LLC has been incrementally removing juniper property wide and also working to provide alternative upland water sources for livestock. These restoration efforts are to both manage grazing more effectively and preserve water quality and quantity. The limiting factors this project addresses are: altered hydrology, sediment routing, degraded vegetation, and degraded water quality. 3) This project will (1) develop 6 springs within the sub-basin and install 6 watering sources for livestock, (2) cut and burn 140 acres of juniper in priority areas surrounding the developed springs, and (3) thin 20 acres of over stocked forest surrounding one of the developed springs (targeting the optimal canopy cover of 50-60%). 4) Partners for this proposed project are the private landowners (Doug Leach and Shannon Rust), North Fork John Day Watershed Council (NFJWC), and OWEB.

Review Team Evaluation

Strengths

- The application is well-written, and includes photos and maps that show both previous and proposed work.
- The application clearly describes benefits to the watershed.
- Comprehensive grazing management plans are provided in the application for both ranches.
- The project will improve water quality in Eight Mile Creek, an identified steelhead stream.

Concerns

- The application does not include any long-term commitment to weed control.
- More information on the culvert replacement would have been beneficial to the review.

Concluding Analysis

This straight forward project is on two adjoining private ranches located in headwater drainages of Eight Mile Creek. The work from this proposal compliments other restoration completed on both ranches, including riparian fencing and forest thinning. On the site visit, the landowners were enthused and showed results from their prior restoration projects. To increase the ecological benefit, the applicant should consider placing juniper carcasses in gullies and ephemeral channels to help catch sediment.

Review Team Recommendation to Staff

Fund

Review Team Priority

10 of 12

Review Team Recommended Amount

\$86,763

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$86,763

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Mid Columbia (Region 6)

Application Number: 219-6028-16714

Project Type: Restoration

Project Name: Fox Creek Upland Restoration Project

Applicant: North Fork John Day WC

Region: Mid Columbia

County: Grant

OWEB Request: \$120,570

Total Cost: \$168,608

Application Description *(from application abstract)*

1) This project is located on private property (MGN, LLC) in Grant County, approximately 1 mile south of Fox, Oregon. This 2,600 acre property takes in just under 2 miles of Fox Creek (HUC #170702029). Fox Creek becomes Cottonwood Creek and is a tributary to the North Fork John Day River (HUC #17070202). Fox/Cottonwood Creek originates on US Forest Service approximately 6 miles above the MGN, LLC property, drains 149,063 acres, and consists of 273 stream miles. It provides critical spawning, rearing, and migration habitat for ESA listed Mid-Columbia Steelhead and threatened Chinook salmon. 2) Steelhead and salmon are distributed throughout Fox/Cottonwood; productive streams provide refugia from warming water temperatures in the summer. The properties juniper infestation and overstocked, unprotected aspen stands reduce the availability and capacity for upland water. A reduction in upland water storage decreases the amount and quality of late season cold water deliveries to Fox Creek. The limiting factors this project addresses are altered hydrology, sediment routing, channel stability, floodplain and riparian area degradation and water quality. 3) This project will (1) install a total of 5,600 ft of buck and pole fencing to protect 8 acres of aspen, a rare and declining habitat, (2) assess and cage aspen saplings in another 4 acres of aspen, and (3) remove 150 acres of juniper in priority areas that have been identified as "areas beneficial to cut juniper for water" within the Fox Creek/Cottonwood watershed. This project is intended to compliment instream restoration work proposed on Fox Creek by the Confederated Tribes of the Warm Springs (CTWS) in 2019. 4) Partners for this proposed project are the private landowner (Mark Crissman of MGN, LLC), CTWS, North Fork John Day Watershed Council (NFJDWC), and OWEB.

Review Team Evaluation

Strengths

- Aspen and juniper treatment site prioritization is well-explained in the application.
- The treatment locations selected are adjacent to Fox Creek tributaries and will improve water quality.
- The property offers an opportunity to treat the watershed at a landscape scale.
- The project compliments and builds on other restoration taking place on this property.
- Including the Oregon Youth Conservation Crew in restoration activities will provide both restoration and socioeconomic benefits.

- The application is well-written and provides detailed maps for a comprehensive review.

Concerns

- There are no concerns, but dropping junipers into ephemeral gullies to catch sediment from overland flows is suggested.

Concluding Analysis

The property owner is new to the restoration community and is one of the few private holdings on the upper reaches of this watershed. The methodology in selecting the treatment sites is well-explained in the application and shows how these efforts will build on other restoration occurring on this same property, as well as on downstream reaches. Improving upland conditions near the headwaters will have positive impacts to improving the limiting factors of reduced flow and degraded water quality in Fox Creek, an important steelhead stream.

Review Team Recommendation to Staff

Fund

Review Team Priority

11 of 12

Review Team Recommended Amount

\$120,570

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$120,570

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Mid Columbia (Region 6)

Application Number: 219-6029-16709

Project Type: Restoration

Project Name: Couse Creek Confluence Fish Passage Construction

Applicant: Walla Walla Basin Watershed Foundation

Region: Mid Columbia

County: Umatilla

OWEB Request: \$117,992

Total Cost: \$337,066

Application Description *(from application abstract)*

Couse Creek is a tributary of the Walla Walla River located 1.5 miles upstream from the town of Milton-Freewater, in Umatilla County. This stream is used by ESA listed summer steelhead and redband trout, and occasionally ESA listed bull trout and reintroduced chinook salmon. There is a fish passage barrier near the confluence of Couse Creek and the Walla Walla River when steelhead are returning to 8 miles of spawning/rearing areas. Couse Creek transitions from a natural bedrock-controlled channel, past an old concrete and riprap pipe protection structure, and then onto the gravel bed of the Walla Walla River. A 3-4 foot, slanted drop exists at this transition point. Steelhead cannot navigate this drop in late winter and early spring when discharges from the Creek are high, and also at low flows in late spring and early summer. An engineering assessment, survey, and 60% designs have been completed. BPA funds have funded design work with technical support provided by fisheries co-managers. Following a site assessment and an alternatives analysis, a preferred approach was selected. Final designs will be completed this winter. BPA funds have been secured to cover much of the construction project costs; however, OWEB funds are needed to cover the total cost of the project construction. Construction is scheduled for summer of 2019. The work consists of removal of old concrete structures and riprap from Couse Creek, construction of a new 400-foot- long lower gradient Couse Creek channel that includes roughened riffles and step pools; placement of habitat boulders, and revegetation of one acre with native trees, shrubs, and grasses. Couse Creek was described in the Walla Walla Subbasin Plan, 2004, as a Priority Protection Area, and fish passage barriers are a priority limiting factor. Recent restoration investments in Couse Creek have included fish passage and habitat work. A Couse Creek watershed habitat assessment is underway. Partners include BPA, ODFW and CTUIR.

Review Team Evaluation

Strengths

- The project will open access to eight stream miles of ESA-listed steelhead habitat, critical to spawning and rearing.
- Ample cost share along with involvement by appropriate partners indicate this project has a strong likelihood of success.
- The project site is an ODFW priority for passage in the Walla Walla River system.

- Reconnecting an acre of floodplain to the river on a leveed system will provide additional habitat and benefit to the Walla Walla River and Couse Creek.
- The project is located in a rural residential area and has landowner commitment.
- The design is comprehensive.
- The applicant has a proven track record for successfully completing restoration.

Concerns

- Inclusion of an overview sketch of all project components on one map would have provided helpful context.
- More detail on the berm and levee system would have benefited the review.

Concluding Analysis

ODFW noted steelhead regularly spawn in the pool below the barrier and then die when that pool dries up later in the season. Removing this barrier and re-meandering Couse Creek to increase its length and complexity as it joins the Walla Walla River downstream allows steelhead to move upstream to cooler spawning and rearing habitat. Also, connecting an acre of tree-covered floodplain to the leveed Walla Walla River is a rare opportunity and will result in added benefit to steelhead, Chinook, bull trout, and other aquatic species.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 12

Review Team Recommended Amount

\$117,992

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

\$117,992

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Mid Columbia (Region 6)

Application Number: 219-6030-16578

Project Type: Technical Assistance

Project Name: Desolation Reach 3 Design

Applicant: Confederated Tribes Umatilla Indian Reservation

Region: Mid Columbia

County: Grant

OWEB Request: \$45,110

Total Cost: \$121,075

Application Description *(from application abstract)*

This application supports the Desolation Creek Reach 3 design located between RM 2.6 and 4.4 on Desolation Creek approximately 20 miles south of Ukiah, Oregon (Figures 1&2). The property is owned and managed by Desolation Creek LLC who has worked collaboratively to improve land management strategies, infrastructure, and physical/biologic process, in part, for the benefit native wildlife. The CTUIR and collaborators developed the Desolation Creek Geomorphic Assessment and Action Plan (GAAP) in 2017 to guide future restoration efforts. The GAAPs implementation addresses ecological concerns using a tiered ATLAS derived ranking system. To date, a portion of its highest priority reach was implemented with the rest pending a final road relocation design. Collaborators include the landowner, Umatilla National Forest, Grant SWCD, and Confederated Tribes of the Umatilla Indian Reservation (CTUIR). In the meantime, the CTUIR shifted to the GAAP's second highest ranked priority, Reach 3, to implement a design supporting the landowner's needs and desires and the CTUIR's First Foods Policy under the Umatilla River Vision. To date, a qualified contractor has been selected for Reach 3's design development and data collection and analysis has begun and a 30% conceptual design will be produced by 31 January 2019. Work supported by this application will produce 80% and 100% designs to be developed under BPA's HIP III programmatic biological opinion. Collaborators currently involved in the Reach 3 design include the Landowner, Confederated Tribes of the Warm Springs Reservation, and CTUIR. The design will address the influence of historic timber harvest and grazing which reduced the effectiveness of peripheral and transitional habitats, channel structure and form, water quality, and riparian condition. Reach 3's ability to support spring Chinook salmon, Threatened Mid-Columbia steelhead trout, bull trout, Pacific lamprey, and resident species was subsequently compromised.

Review Team Evaluation

Strengths

- The application is well-written and provides useful maps and photos.
- Project cost estimates are reasonable for a complex design.
- The resulting restoration will provide fish habitat benefits for spring Chinook, ESA-listed steelhead, and bull trout.

- Site selection resulted from a comprehensive Geomorphic Assessment and Action Plan (GAAP) for Desolation Creek – this stream section was deemed the second highest priority reach for restoration.
- This work will compliment numerous other restoration projects completed on this large private property that contains over ten miles of Desolation Creek.

Concerns

- No concerns were identified.

Concluding Analysis

Numerous upland, riparian, and instream restoration projects have been successfully implemented, including: restoring and protecting high elevation wet meadows; riparian fencing the entire ten miles of Desolation Creek; protecting aspen communities, and developing strategic upland water for both livestock and wildlife. Following a comprehensive assessment of the entire Desolation Creek, Reach 3 was identified as the second highest priority for restoration benefit. This leveraging of previous restoration investments on a priority stream results in a high cost-benefit ratio for this project.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 2

Review Team Recommended Amount

\$45,110

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$45,110

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

| | |
|--|---|
| Application Number: 219-6031-16646 Project Name: Reith Dam Removal Design Applicant: Umatilla Basin WS Foundation Region: Mid Columbia OWEB Request: \$38,500 | Project Type: Technical Assistance County: Umatilla Total Cost: \$71,100 |
|--|---|

Application Description *(from application abstract)*

The Umatilla Basin Watershed Council and partners at The Confederated Tribes of the Umatilla Indian Reservation seek technical funding for the completion of 100% construction ready dam removal and restoration designs. The designs will serve to remove the major fish passage barrier located at RM 42.3 on the Umatilla River at the town of Reith, Oregon. The barrier known as the Reith Dam/Brownes Dairy Dam is a full river spanning irrigation diversion dam that blocks passage for federally protected aquatic species. The barrier ranks high on local assessments as well as the Oregon statewide priority list for fish passage barriers. Reith dam is located on the mainstem of the Umatilla River; removal of this barrier will provide major uplift for the entire system. The project site has an existing landowner agreement in place to remove the Reith barrier as well as complete a conservation easement on the adjoining 372.2 acres for future restoration projects. Additional Technical team partners include the Umatilla Soil and Water Conservation District, the Umatilla County Department of Public Works, Bonneville Power Administration, and the Oregon Department of Fish & Wildlife.

Review Team Evaluation

Strengths

- One of the landowners has agreed to lease water instream and signed a conservation agreement that includes removing the dam.
- Removing this barrier will benefit multiple fish species, including steelhead and Chinook, and will have the greatest impact on juveniles during low flow periods.
- The dam is on ODFW's statewide priority list of barriers.
- Project costs are reasonable for the work and location.
- Project support is demonstrated by match.

Concerns

- The application does not include letters of support from the Confederated Tribes of the Umatilla Indian Reservation nor the Bureau of Reclamation.
- The schedule appears to be overly ambitious with implementation planned for the 2019 instream work window. This leaves very little time for survey work, design, and permitting to be completed.

- The technical assistance request includes costs for construction oversight, which is not a necessary expense for achieving the proposed design objectives.
- Since separate landowners own the properties adjacent to the dam on each side of the river, the application would be strengthened by including letters of support from both landowners for the dam removal.
- The exact scope of the design work is vague, and it is unclear whether the resulting project will simply remove the concrete dam or if additional habitat or substrate work will be included in the final restoration project design.
- Clear photos of the dam during high and low flows would be helpful context for the application review.
- Inclusion of the referenced scoping report would provide helpful context.

Concluding Analysis

While this dam removal project has potential for providing significant ecological benefit at a reasonable cost, the lack of detail in the application results in an uncertain scope of work for the proposed technical assistance. Without additional information on project timing, costs, and the tasks to be completed, it is difficult to determine the likelihood of success for this technical assistance design project.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

2 of 2

Review Team Recommended Amount

\$27,500

Review Team Conditions

Remove \$10,000 for construction oversight and associated indirect cost; and require agreements from the landowners from each side of the river along the project site.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund; falls below staff-recommended funding line

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Mid Columbia (Region 6)

Application Number: 219-6032-16648

Project Type: Technical Assistance

Project Name: Umatilla River Floodplain
Assessment & Action Plan

Applicant: Umatilla Basin WS Foundation

Region: Mid Columbia

County: Umatilla

OWEB Request: \$55,000

Total Cost: \$217,000

Application Description *(from application abstract)*

The Umatilla Basin and partners seek funding for an assessment and stream prioritization along the mainstem of the Umatilla River from the North and South Forks to the town of Nolin, Oregon. This assessment will provide partners with a guide towards prioritizing future restoration efforts on the mainstem of the Umatilla River. Currently, no such document exist for the Umatilla River and partners in the basin feel that it is critical for strategic project implementation in order to provide effective uplift to the system. The project partners are the Umatilla Basin Watershed Council, Confederated Tribes of the Umatilla Indian Reservation, Umatilla Soil & Water Conservation District, Bureau of Reclamation, and the Umatilla County Public Works.

Review Team Evaluation

Strengths

- The assessment will incorporate climate change in the proposed modeling and analysis.
- There is a clear need for a comprehensive action plan that prioritizes restoration activities on the Umatilla River.
- Project partners have experience completing a similar assessment on Birch Creek, a tributary of the Umatilla River.
- The cost is appropriate for a two to three year study.

Concerns

- The project is poorly planned and the application has limited information on the project activities.
- There is no justification on why some tributaries were not included in this assessment.
- It is unclear whether uplands will be included and if so, what will be assessed.
- The budget has lump sums with no detail on what expenses and activities are included in these sums.
- Descriptions of the assessment components and tasks to be completed by various contractors would have strengthened the application.
- The application does not provide a clear sequence of activities and lacks a comprehensive timeline.

- There are no letters of support from the Bureau of Reclamation or USFS.

Concluding Analysis

An updated assessment of the Umatilla River would be useful to partners collaborating on restoration on the Umatilla River. However, it is difficult to determine the likelihood of success for the proposed project without more information in the application. If resubmitted, the application should include information that addresses the concerns noted above as well as provide more detail on why the identified section of the Umatilla was selected, whether the lower section will be a future phase, and work already completed in the headwater sections on public land.

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-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6033-16615**Project Type:** Monitoring**Project Name:** Hydrological Monitoring in the Walla Walla Basin**Applicant:** Walla Walla Basin Watershed Foundation**Region:** Mid Columbia**County:** Umatilla**OWEB Request:** \$108,944**Total Cost:** \$152,844**Application Description** *(from application abstract)*

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 focus on the Walla Walla River, its tributaries and distributaries, and the surface water connection with the underlying shallow alluvial aquifer. Stream flow monitoring is needed to ensure migratory passage has been maintained for ESA-listed steelhead and bull trout, and reintroduced spring Chinook. Monitoring will evaluate, at different spatial scales, the effectiveness of restoration projects intended to improve hydrological conditions which directly or indirectly influence fish habitat. Streamflow and water temperature monitoring will assess the effectiveness of basin-wide streamflow and rearing habitat enhancement projects that have been implemented over the last 17 years by the Walla Walla Basin Watershed Council (WWBWC). Data will be obtained for two years at varying frequencies for key parameters such as water temperature, stage, discharge, and groundwater elevations. The effectiveness of restoration projects on a landscape scale will be based on evaluating changes over time (relying on dataset of past conditions along with data gathered through this project) in groundwater elevations, Walla Walla River flow and water temperature, and hydraulic gradients between water elevations in surface waters and nearby groundwater. BPA will be the source of match for this project (see attached match document) and project partners (non match) include ODA (Pesticide Stewardship Partnership Project), ODEQ (Couse Creek Assessment Project along with the Heat Source Modeling Project), (tentatively) CTUIR Walla Walla RM&E program (Walla Walla River Stream Gauge Monitoring and Data Distribution Project), and the Bi-State Flow Enhancement Study (WDOE and USBR). Additional project partners consisting of state, local, and federal agencies can be found in the attached letters of support. 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 focus on the Walla Walla River, its tributaries and distributaries, and the surface water connection with the underlying shallow alluvial aquifer. Stream flow monitoring is needed to ensure migratory passage has been maintained for ESA-listed steelhead and bull trout, and reintroduced spring Chinook. Monitoring will evaluate, at different spatial scales, the effectiveness of restoration projects intended to improve hydrological conditions which directly or indirectly influence fish habitat. Streamflow and water temperature monitoring will assess the effectiveness of basin-wide streamflow and rearing habitat enhancement projects that have been implemented over the last 17 years by the Walla Walla Basin Watershed Council (WWBWC). Data will be obtained for two years at varying frequencies for key parameters such as water temperature, stage,

discharge, and groundwater elevations. The effectiveness of restoration projects on a landscape scale will be based on evaluating changes over time (relying on dataset of past conditions along with data gathered through this project) in groundwater elevations, Walla Walla River flow and water temperature, and hydraulic gradients between water elevations in surface waters and nearby groundwater. BPA will be the source of match for this project (see attached match document) and project partners (non match) include ODA (Pesticide Stewardship Partnership Project), ODEQ (Couse Creek Assessment Project along with the Heat Source Modeling Project), (tentatively) CTUIR Walla Walla RM&E program (Walla Walla River Stream Gauge Monitoring and Data Distribution Project), and the Bi-State Flow Enhancement Study (WDOE and USBR). Additional project partners consisting of state, local, and federal agencies can be found in the attached letters of support.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application addresses concerns raised in the previous project evaluation and is well-written.
- The applicant highlights how flow is a major issue in this basin and that ongoing monitoring is needed to make decisions.
- The various letters of support demonstrate there are numerous agencies and organizations that value these data.
- This application adequately documents the monitoring methods, data management, analysis, and reporting procedures.
- The applicant has a proven track record of collecting and reporting the data on past monitoring grants.

Monitoring Team Concerns

- The applicant is using unvented pressure transducers to measure groundwater levels, and these could have accuracy issues. They could look into using vented loggers to determine if there is a difference.
- There is a lack of clarity on how the specific targets were established to answer the monitoring questions, an explanation of how they arrived at the values would have been helpful.
- The applicant has a high number of monitoring sites and it is not clear how each site's data set is evaluated to ensure ongoing data collection is needed.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The application includes multiple letters of support from a diverse array of partners indicating their support for the project.
- The application is well-written and provides maps that reference existing and proposed monitoring sites.
- The monitoring will cover approximately 20 miles of the Walla Walla River and the locations selected are strategic.
- The project builds on an existing 20 year dataset that will inform management decisions related to ESA-listed steelhead and bull trout, and re-introduced spring Chinook.
- The proposed methodology is an adaptive approach to determine effectiveness of past restoration in a unique hydrologic system, as well as prioritizing locations for future watershed projects.
- Monitoring is clearly needed, both spatially and temporally, to fill existing data gaps.
- The proposed activities and timeline are technically sound, and descriptions or references to monitoring quality assurance and quality control protocols are included in the application.
- The applicant has a proven track record with previous monitoring work.
- Access to monitoring data is available to the public through a user-friendly website.
- Over 100 landowners continue to allow monitoring to occur on their land.

Concerns

- The application is unclear on who will complete the data analysis.
- A listing of specific data gaps would have been beneficial to the review.
- The application lacks a clear explanation of how long-term data will provide information on project effectiveness and how future monitoring will inform specific types of restoration.

Concluding Analysis

The watershed council has provided multiple stakeholders quality data for more than 17 years to inform management decisions related to flows, fish, levees, and agriculture. This long-term data set is an unusual and valuable resource to various partners in the basin. A significant number of restoration projects have been completed and continues to occur in this basin. Analyzing the effectiveness and impact of these projects will be useful for prioritizing future projects. The data will also be used in ongoing discussions with Washington's Department of Ecology to help protect resulting savings in water flows.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 2

Review Team Recommended Amount

\$108,944

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$108,944

Staff Conditions

None

Open Solicitation-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6034-16658

Project Type: Monitoring

Project Name: Utilizing multispectral UAV-imagery to monitor stream and riparian restoration effectiveness

Applicant: PSU - Portland State University

Region: Mid Columbia

County: Grant

OWEB Request: \$81,680

Total Cost: \$95,431

Application Description *(from application abstract)*

The project will focus on the Vincent to Caribou reach on the upper Middle Fork of the John Day River. The site is located in Grant county and is approximately 13 miles northeast of Prairie City. The location is scheduled for a large-scale restoration project focused on benefiting anadromous salmonids, mainly Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead (*Oncorhynchus mykiss*). Restoration at the site is planned between 07/15/2019 and 09/20/2019. The restoration site encompasses .7 river miles. The site is located on Confederated Tribes of the Warm Springs (CTWSR) property and they have agreed to allow the monitoring efforts at the location as well as provide data they have from the project location. The project location has been heavily altered via human activity. The river has been channelized with large boulders and rip rap, which has locked the channel in place, disconnected from the floodplain. Grazing has impacted riparian vegetation growth throughout the project location. The proposed restoration will remove most of the placed boulders while adding wood placements. The projects primary goal is "to restore instream habitat conditions and structure for salmonid production, and set the stage for processes needed to sustain habitat features." The project description also states that there will be "an extensive vegetation plan, which promotes stream shading and appropriate channel widths on the constructed channel segments" (CTWSR 2017). The restoration project pairs perfectly with our proposed monitoring effort, which will collect pre- and post-restoration data at the restored reach as well as a similar unrestored control reach nearby. We will be utilizing an unmanned aerial vehicle (UAV) equipped with a high-resolution multispectral sensor to gather monitoring data on stream and riparian characteristics between 06/01/2019 and 07/14/2020. We will produce a technical report describing the complete procedure for future, continuous monitoring of the project.

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Monitoring Team Evaluation

Monitoring Team Strengths

- There is an increased use of UAV technology to monitor changes associated with restoration actions.
- The applicant proposes to establish a “workflow” for processing the drone imagery data that could prove useful for other organizations interested in collecting similar data.
- The applicant proposes to create a semi-automatic tool for processing drone imagery data for others to use.
- The applicant lists a variety of staff that have expertise in working with drone imagery and collecting field habitat data.

Monitoring Team Concerns

- The monitoring study design includes one treatment site and is only measuring 0.7 stream miles. In addition, it is not clear if the short monitoring time period will allow for vegetation changes associated with the restoration actions. If there are no changes, it may be difficult to compare the images to test the tool they hope to develop.
- The application does not describe the physical habitat metrics to be collected in the field and subsequent drone metrics they plan to measure and generate.
- Additional explanation on the monitoring methods and site selection for the control site would have been helpful for understanding this project. To be valuable, multiple sites could be incorporated that represent a gradient of different vegetation composition and structures to test the UAV methodology.
- The application lacks letters of support and it is unclear if the Confederated Tribes of the Warm Springs Reservation of Oregon is going to use the data to track the changes at their restoration project.
- While the proposed monitoring project will take place in the Intensively Monitored Watershed (IMW) study area, it is unclear from the application how the applicant will work with the IMW working group to incorporate these findings.
- The application timeline is tight; the last flight is scheduled the same month in which they plan to submit the final report.

Monitoring Team Comments

None

Review Team Evaluation**Strengths**

- Developing a drone work-flow process could result in a concept used by others in the restoration community.

Concerns

- The timing of the restoration project does not align with the proposed pre- and post-restoration flight schedule.
- One year of data is not enough time to gauge vegetation change.
- The application does not clearly describe the work flow process.
- The likelihood of success for this monitoring project dissipates if the associated restoration project is delayed.

Concluding Analysis

Many in the restoration community are utilizing drones or UAV in monitoring their projects. It is not clear if the techniques noted in this proposal are new or if this technique is already being used by others in the restoration community. Including alternative restoration sites for the monitoring project would have provided a higher likelihood of success.

Review Team Recommendation to Staff

Do Not Fund

Review Team Priority

None

Review Team Recommended Amount

\$0

Review Team Conditions

None

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

None

Staff Recommendation

Do Not Fund

Staff Recommended Amount

\$0

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Mid Columbia (Region 6)

Application Number: 219-6035-16666**Project Type:** Monitoring**Project Name:** Adult Steelhead Migratory Routes Investigation**Applicant:** Gilliam SWCD**Region:** Mid Columbia**County:** Gilliam**OWEB Request:** \$223,232**Total Cost:** \$626,866**Application Description** *(from application abstract)*

Approximately 60% of adult steelhead returning to the John Day River "overshoot" the John Day River mouth and are detected 119 km upstream in the Columbia River at McNary Dam. After crossing McNary Dam, John Day adult steelhead must "fallback" in order to return and spawn in the John Day River. Adult overshoot past a hydroelectric dam can directly (via physical injury during fallback) and indirectly (via increased energy expenditure) reduce the survival and reproductive capacity of returning adults. The current proportion of adult steelhead overshooting the John Day River contributes to a 7-year mean Bonneville Dam to South Fork John Day conversion probability of 50%. This means that only half of the adult steelhead arriving at Bonneville Dam survive and return to their natal stream to spawn. Life-cycle models indicate substantial risk of quasi-extinction for a John Day steelhead population if this status quo conversion probability continues. The quasi-extinction risk diminishes to near zero if conversion rate increases to 70%. A first step toward increasing conversion rate is to map the migratory routes of John Day adult steelhead from the mouth of the river upstream to Tumwater Falls. To do this, we will leverage the existing infrastructure and returning Passive Integrated Transponder tagged adults (originally tagged as parr or smolts in John Day tributaries) by capturing known origin adults in the Bonneville Dam Adult Fish Facility. Recaptured adults will be tagged with acoustic transmitters. An array of acoustic receivers positioned in the Columbia and John Day rivers will detect tagged adults and allow us to map migratory routes to elucidate where and when adult steelhead are migrating. We will compare fate of each tagged individual by migratory route to identify relationships between migration route and population performance. Gilliam SWCD and ODFW will be the lead partners, and will coordinate with other agencies as appropriate.

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Monitoring Team Evaluation

Monitoring Team Strengths

- The application has specific objectives to manage and report the data, and an explanation of the audience with which the data will be shared.
- The applicant is working with the ODFW research station and they have a proven track record of performing fish monitoring efforts in the Mid-Columbia.
- This application addresses a key limiting factor for the viability of Mid-Columbia steelhead populations – tributary overshoot and low conversion during fallback.
- Management solutions to this problem could substantially increase long-term viability projections for John Day steelhead with possible application to other populations experiencing similar issues.
- The applicant proposes a technically sound use of the dual acoustic-radio capabilities and provides some versatility for detecting adult fish moving through the system.
- The proposed project will use existing PIT tag arrays in the hydropower system and John Day River populations.

Monitoring Team Concerns

- The application lacks a description of the methods to collect water temperature data.
- There is no letter of support submitted by tribes, and it would have been helpful to understand how they value this data.
- Connecting the resulting data and how it could affect future management actions in the John Day River to address the overshoot issue would strengthen the application.
- The application could be strengthened by more comprehensively outlining the monitoring questions, explicitly stating the hypotheses, and explaining how the monitoring could inform specific management options.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The application provides clear goals and objectives.
- While the acoustical pit tag technologies have not been utilized as described in the application, they have proven to be successful in other venues for comprehensive tracking of fish.
- The proposal is well-written with maps to help explain the proposed work.
- Utilizing existing infrastructure at the Bonneville dam to tag fish realizes efficiencies and lowers the overall project cost.
- The Mid-Columbia Recovery plan identifies the overshoot threat as significantly impacting the John Day major population group (MPG) - the only wholly wild MPG in the Mid-Columbia steelhead distinct population segment (DPS), and therefore is limiting John Day population, John Day MPG, and Mid-Columbia Steelhead DPS.

Concerns

- There is a risk that the data may not result in clear answers.
- It is unclear how management or restoration options will result from the proposed data collection.

Concluding Analysis

Tributary overshoot by migrating fish is an emerging threat identified after the Mid-Columbia Recovery plan was finalized. Fish research in Oregon, Washington, and Columbia River mainstem indicates this is a primary threat to steelhead recovery. The John Day consistently exhibits the highest overshoot and mainstem loss rates annually due to mortality. This project is the first step to better understand fish migration patterns at the mouth of the John Day and why they are occurring. The data will inform future John Day Basin FIP efforts to address this migration concern so that native John Day fish can spawn in their natal streams.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 2

Review Team Recommended Amount

\$223,232

Review Team Conditions

None

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

None

Staff Recommendation

Fund

Staff Recommended Amount

\$223,232

Staff Conditions

None

Open Solicitation-2018 Fall Offering

Mid Columbia (Region 6)

Application Number: 219-6036-16665

Project Type: Stakeholder Engagement

Project Name: John Day Basin Partnership Outreach

Applicant: North Fork John Day WC

Region: Mid Columbia

County: Grant

OWEB Request: \$36,974

Total Cost: \$65,140

Application Description *(from application abstract)*

1.) The John Day Basin Partnership (JDBP) is a collaborative of 28 organizations working to enhance the pace, scale, and impact of restoration that benefits aquatic and terrestrial ecosystems, agriculture, and economic opportunities for communities in the John Day River Basin. Over the course of three years, the JDBP has become a high-functioning joint venture. It has forged new and strengthened existing relationships with constituents across the basin, developed internal communication protocols, and established operating norms. The JDBP is finalizing a Strategic Action Plan (http://nfjdw.org/nfjdwmedia/John-Day-Basin-Partnership-SAP_FIP_proposal_062918.pdf) that identifies and prioritizes restoration activities “from ridge-to-ridge” throughout the basin. 2.) The JDBP recognizes that landowner and public involvement are vital to sustaining the forward movement of restoration in the basin. In order to better connect the communities, people, and projects impacted by restoration, the time has come for more deliberate efforts dedicated to increased public relations. Initiating a basin-wide outreach campaign will help the JDBP accomplish two primary basin-wide goals: - Generate increased partner cooperation, project prioritization, and joint fundraising among diverse interests in the John Day River basin.- Conduct public outreach on watershed restoration that is taking place and its value to the community. 3.) Project activities will focus on diversifying communication pathways to the public by developing outreach materials such as regular newsletters and informational handouts, hosting informative presentations about projects and partners, and organizing a series of restoration service events for assisting landowners. Through these avenues, the JDBP will receive and respond to community input as well as deliver targeted messaging to constituents about restoration and how to get involved. 4.) Please see attached list of 28 partners.

Review Team Evaluation

Strengths

- Outreach is a valuable tool to engage landowners new to restoration.
- As a partner, Blue Mountain Land Trust's (BLMT) successful outreach experience will be beneficial to the proposed project.
- This proposal complements the newly awarded John Day Basin Partnership FIP by targeting areas within the basin that are outside of the FIP focus areas.

Concerns

- Since this is an ambitious, large scale project, the application would have been stronger with more detailed strategies for achieving the stated goals.
- Including examples of BMLT products or other communication tools would have been helpful in the review.
- Methodologies on how actions will be developed are vague or missing from the application.
- The application would be stronger with more detail on how sensitivities dealing with private lands will be handled.
- It is unclear how the wolf conflict workshop will result in restoration.

Concluding Analysis

The John Day Basin Partnership was recently selected as a recipient of the next round of OWEB's Focus Investment Partnership. They will be working in three geographic areas in the John Day Basin. The proposed project will expand the landowner outreach work to cover the rest of the basin. If the applicant decides to resubmit, effort should be made to address the concerns noted 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-2018 Fall Offering Mid Columbia (Region 6)

Application Number: 219-6037-16678

Project Type: Stakeholder Engagement

Project Name: Walla Walla Basin Stakeholder Engagement

Applicant: Walla Walla Basin Watershed Foundation

Region: Mid Columbia

County: Umatilla

OWEB Request: \$27,522

Total Cost: \$42,367

Application Description *(from application abstract)*

The Walla Walla Basin Watershed Council (WWBWC) seeks to engage stakeholders in and around Milton-Freewater, Oregon in the Walla Walla River (WWR) Basin, with a focus on the upper WWR, Couse Creek, Little WWR system and connected alluvial aquifer. Engagement activities will support projects aimed at addressing some of the basin's hydrological and ecological issues, including, degraded stream flows, floodplain connection, surface water to groundwater interaction, water quality, fish passage, riparian conditions, and in-stream habitat complexity. To address fish passage and habitat issues, the WWBWC and Confederated Tribes of the Umatilla Indian Reservation (CTUIR) will engage directly with landowners to identify potential project partners on the upper WWR and Couse Creek. WWBWC will engage with individuals throughout the basin who possess senior water rights in order to develop partners for irrigation efficiency projects directed at permanently protecting water in-stream via Oregon's Allocation of Conserved Water program. Stakeholders will be sought to develop potential projects aimed at advancing the WWBWC's aquifer recharge program. Additionally, various stakeholder engagement activities will be carried out to familiarize potential stakeholders with the WWBWC's work, the basin's hydrological and ecological issues and the potential for projects, with the aim of developing future partners and projects necessary to address the basin's degraded hydrological and ecological systems. In various capacities, the WWBWC will seek to partner with landowners, holders of water rights, CTUIR, Oregon Department of Fish and Wildlife (ODFW), Little WWR Working Group, local irrigation districts and other stakeholders.

Review Team Evaluation

Strengths

- The intent of the project is clearly stated in the application and directly relates to specific restoration types and locations.
- The applicant has a proven track record of successfully implementing restoration, monitoring, and community outreach for near to 20 years, indicating a high likelihood of success for this project.
- Maintaining landowner relations is vital to continuing restoration. ODFW depends on the council's outreach to landowners for the work they do on private lands.

- The proposed stakeholder engagement compliments assessment work being completed on Couse Creek, as well as in other areas.

Concerns

- The project description focuses more on resulting watershed restoration expected from this project instead of details on the proposed stakeholder engagement activities.
- More information on how senior water rights factor into the prioritization and selection of restoration sites would have been beneficial to the review.

Concluding Analysis

The Walla Walla Basin Watershed Council has a long history of successful community outreach. Over the years, their myriad of outreach activities has paid off in many successful restoration projects and improved landowner relations. Although parts of the application were somewhat difficult to navigate, the overall intent of the proposal was clear and objectives are reasonable.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 1

Review Team Recommended Amount

\$27,522

Review Team Conditions

None

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

None

Staff Recommendation

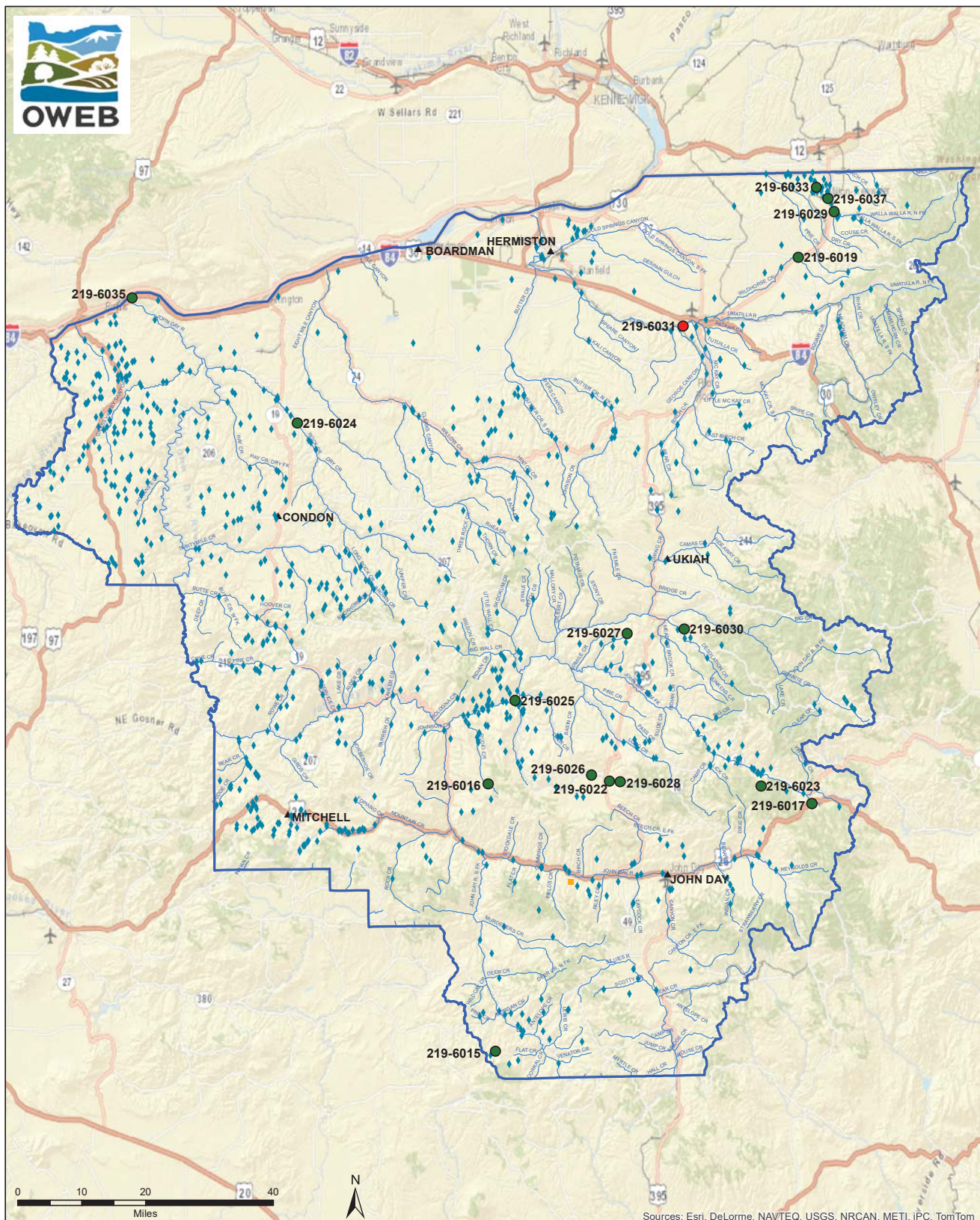
Fund

Staff Recommended Amount

\$27,522

Staff Conditions

None



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 ESRI ArcMap 10.6 NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20190314

Funding Recommendations

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

Previous Grants - 1998-Spring 2017

- ◆ Restoration Acquisitions
- Streams
- Region Boundary

Oregon Watershed Enhancement Board

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 Salem, OR 97301-1290
 (503) 986-0178
<http://oregon.gov/OWEB/>

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Region 6 - Mid-Columbia

Restoration Projects Recommended for Funding in Priority Order

| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
|-----------|--|---|---|--------------------|----------|
| 219-6017 | North Fork John Day WC | Clear Creek Restoration | Multiple old log weirs and historic road berms that keep fish from swimming upstream on Clear Creek will be removed. | 59,893 | Grant |
| 219-6029 | Walla Walla Basin Watershed Foundation | Couse Creek Confluence Fish Passage Construction | This project will remove old concrete rip rap that blocks fish from swimming up Couse Creek to cooler water and good habitat. Wood and other natural structures will be added along 3/4 mile of Couse Creek to improve fish habitat. | 117,992 | Umatilla |
| 219-6019 | Umatilla Basin Watershed Foundation | Wildhorse Creek Dam Removal & Bridge Replacement | A major barrier that blocks fish from accessing 15 miles of Wildhorse Creek will be corrected by removing a four-foot high concrete diversion under a too-narrow bridge and replace it with a structure that allows fish to swim upstream to cooler and better habitat. | 103,290 | Umatilla |
| 219-6016 | Monument SWCD | Rudio Headwaters Meadow Restoration | Dense forest will be thinned around Rudio Creek headwaters then set into the stream to catch and build up an eroded channel. Additionally, a wildlife friendly fence will be built around the site to keep cattle from the restored site. | 99,764 | Grant |
| 219-6024 | Gilliam SWCD | Hewes Diversion Removal | This project will remove a huge abandoned concrete diversion, add habitat instream for fish, and plant riparian shrubs for future shade. | 76,921 | Gilliam |
| 219-6025 | Monument SWCD | Cavender Wetland Habitat Improvements | This project will control weeds and plant important wetland shrubs and grasses to provide good habitat for birds and wildlife that call Cavender Pond home. | 17,029 | Grant |
| 219-6022 | Confederated Tribes Warm Springs | Upper Fox Creek Fish Passage and Instream Habitat Enhancement Project | Two culverts will be replaced with a bridge so steelhead and other fish can swim upstream to cooler water; habitat will be improved on two miles of Fox Creek; encroaching juniper will be removed; and riparian shrubs will be planted and protected along Fox Creek. | 167,801 | Grant |
| 219-6026 | Grant SWCD | McGirr Fox Creek Passage and Habitat Project | This project will remove a concrete diversion that currently blocks most fish from swimming upstream to critical habitat in Fox Creek. | 176,522 | Grant |
| 219-6023 | North Fork John Day WC | Camp - Lick Restoration | This project will remove non functioning log weirs, berms and rip rap that impair both Camp and Lick Creek; large wood and other natural structures will be added to the streams to improve fish habitat; and riparian shrubs and trees will be planted and protected with fencing. | 167,452 | Grant |

| Restoration Projects Recommended for Funding in Priority Order <i>(Continued)</i> | | | | | |
|---|------------------------|--|---|--------------------|---------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-6027 | North Fork John Day WC | Eight Mile Headwaters Upland Improvement Project | Six springs will be developed for wildlife and livestock water; and thirsty juniper and crowded timber will be removed upslope of the spring sites. | 86,763 | Grant |
| 219-6028 | North Fork John Day WC | Fox Creek Upland Restoration Project | Encroaching juniper will be thinned and seven declining aspen stands will be protected with buck and pole fencing. | 120,570 | Grant |
| 219-6015 | North Fork John Day WC | Big Flat Pasture Enhancements | Removing juniper upslope from Flat Creek compliments water developments for both livestock and wildlife. | 54,315 | Grant |
| Total Restoration Projects Recommended for Funding by RRT and OWEB Staff | | | | 1,248,312 | |
| Restoration Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Restoration Projects Recommended for Funding by RRT | | | | 1,248,312 | |
| Restoration Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-6018 | Wheeler SWCD | Pine Hollow Middle and Upper Restoration | | 167,873 | Wheeler |
| 219-6020 | Wheeler SWCD | Badger Creek Forest and LWD Restoration | | 56,423 | Wheeler |
| 219-6021 | Grant SWCD | Greenwood Upland Improvements | | 246,093 | Grant |

| Technical Assistance (TA) Projects Recommended for Funding in Priority Order | | | | | |
|---|---|--|---|--------------------|----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-6030 | Confederated Tribes Umatilla Indian Reservation | Desolation Reach 3 Design | This proposal would result in designs to restore and improve two miles of fish habitat in Desolation Creek. | 45,110 | Grant |
| Total TA Projects Recommended for Funding by RRT and OWEB Staff | | | | 45,110 | |
| Technical Assistance Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-6031 | Umatilla Basin Watershed Foundation | Reith Dam Removal Design | Construction ready designs will enable removing an abandon full channel-spanning concrete irrigation dam on the Umatilla River. | 27,500 | Umatilla |
| Total TA Projects Recommended for Funding by RRT | | | | 72,610 | |
| Technical Assistance Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-6032 | Umatilla Basin Watershed Foundation | Umatilla River Floodplain Assessment & Action Plan | | 55,000 | Umatilla |

| Stakeholder Engagement Projects Recommended for Funding in Priority Order | | | | | |
|---|--|--|--|--------------------|----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-6037 | Walla Walla Basin Watershed Foundation | Walla Walla Basin Stakeholder Engagement | Healthier streams and better habitat for fish and wildlife in the Walla Walla Basin will result from landowners and partners collaborating on restoration. | 27,522 | Umatilla |
| Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff | | | | 27,522 | |
| Stakeholder Engagement Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Stakeholder Engagement Projects Recommended for funding by RRT | | | | 27,522 | |
| Stakeholder Engagement Projects <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-6036 | North Fork John Day WC | John Day Basin Partnership Outreach | | 36,974 | Grant |

| Monitoring Projects Recommended for Funding in Priority Order | | | | | |
|---|--|--|--|--------------------|----------|
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| 219-6035 | Gilliam SWCD | Adult Steelhead Migratory Routes Investigation | Over 50% of fish native to the John Day River swim past the mouth of the river, reducing the numbers of steelhead that make it back to their home streams to reproduce. This proposal monitors water temperature and tracks steelhead as they return from the ocean to the John Day River. | 223,232 | Gilliam |
| 219-6033 | Walla Walla Basin Watershed Foundation | Hydrological Monitoring in the Walla Walla Basin | This monitoring proposal will collect stream temperature, flow and ground water levels at numerous long-term monitoring locations. This information will inform both the effectiveness of existing restoration and help prioritize locations for future restoration. | 108,944 | Umatilla |
| Total Monitoring Projects Recommended for funding by OWEB Staff | | | | 332,176 | |
| | | | | | |
| Monitoring Projects <i>Recommended but Not Funded</i> in Priority Order | | | | | |
| Project # | Grantee | Project Title | Brief Description | Amount Recommended | County |
| None | | | | | |
| Total Monitoring Projects Recommended for funding by RRT | | | | 332,176 | |
| | | | | | |
| Monitoring Applications <i>Not Recommended</i> for Funding by RRT | | | | | |
| Project # | Grantee | Project Title | | Amount Requested | County |
| 219-6034 | PSU- Portland State University | Utilizing multispectral UAV-imagery to monitor stream and riparian restoration effectiveness | | 81,680 | Grant |
| | | | | | |
| Region 6 Total OWEB Staff Recommended Board Award | | | | 1,653,120 | 16% |
| | | | | | |
| Regions 1-6 Grand Total OWEB Staff Recommended Board Award | | | | 10,554,731 | |