Kate Brown, Governor

OREGON WATERSHED ENHANCEMENT BOARD

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

Agenda Item L 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 L– Fall 2019 Open Solicitation Grant Offering
June 10-11, 2020 Board Meeting

I. Introduction

This staff report describes the Fall 2019 Open Solicitation Grant Offering and funding recommendations. Staff request the board approve the funding recommendations outlined in Attachment D to the staff report, including funding for 45 restoration grants, 19 technical assistance grants, 18 monitoring grants, and 4 stakeholder engagement grants.

II. Fall 2020 Grant Offering Background and Summary

A. Applications Submitted

A total of 150 applications were received requesting $18.2 million. Attachment A shows applications submitted by region, project type, and funding request.

B. Applications Withdrawn

Following the application deadline, one application (220-6032) was withdrawn by the applicant.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 to 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, which are provided in Attachment C. 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 that improve greater sage-grouse habitat. The Fall 2019 Open Solicitation Grant Offering does not include any projects that meet this criteria. Total funding awarded to sage-grouse projects in all categories since April 2015 is $8,783,345.

IV. Funding Recommendations

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

Table 1: 2019-21 Spending Plan and Fall 2019 Grant Offering Staff Funding Recommendations

Grant Type	Spending Plan Total	Previously Awarded	Grant Funds Available	Staff Recommendations	Recommended Grant Funds Remaining
Restoration	$31,200,000	$8,047,622	$23,152,378	$7,897,069	$15,255,309
Technical Assistance	$3,100,000	$991,132	$2,108,868	$975,053	$1,133,815
Monitoring	$3,500,000	$0	$3,500,000	$1,753,452	$1,746,548
Stakeholder Engagement	$1,000,000	$245,429	$754,571	$251,689	$502,882
TOTAL	$38,800,000	$9,284,183	$29,515,817	$10,877,263	$18,638,554

OWEB staff considered the RRT recommendations and the funding availability in the 2019-2021 spending plan in developing the staff funding recommendation to the board. Attachment D 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.

Attachments

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

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Agenda Item L-1 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 L-1 – Fall 2019 Open Solicitation Grant Offering
June 10-11, 2020 Board Meeting

I. Introduction

This staff report recommends an effective date of April 22, 2020 for open solicitation projects awarded at the June 10-11 2020 meeting.

II. Background

OWEB grants operate on a reimbursement basis. Grantees can bill for eligible costs beginning with the effective date of the grant award.

III. Current Board Awards

Item L recommends the board award $10,877,263 in open solicitation funds for 90 applications. Board award for these projects was delayed from April to June to better understand the impacts of the lottery revenue declines caused by the pandemic shutdown. Due to circumstances beyond the control of grant applicants, project costs may have been incurred prior to the June grant award date.

IV. Staff Recommendation

To allow full grantee reimbursement for project costs, staff recommend the board award funds for applications as described in Item L with an effective date of April 22, 2020.

Oregon Watershed Enhancement Board
October 28, 2019 Open Solicitation Offering

Applications Received by Type

	Monitoring	Stakeholder Engagement	Technical Assistance	Restoration	Totals
Region 1	8	1	5	9	23
Region 2	7	2	13	12	34
Region 3	5	3	2	13	23
Region 4	6	2	5	7	20
Region 5	3	0	7	15	25
Region 6	6	0	7	12	25
Totals	35	8	39	68	150

Dollar Amounts by Application Type

	Monitoring	Stakeholder Engagement	Technical Assistance	Restoration	Totals
Region 1	341,189	33,967	270,814	1,799,516	$2,445,486
Region 2	900,647	185,307	686,224	2,852,707	$4,624,885
Region 3	639,396	224,434	76,605	2,768,218	$3,708,653
Region 4	836,864	92,672	270,743	1,611,090	$2,811,369
Region 5	126,646	0	291,762	1,256,565	$1,674,973
Region 6	945,330	0	439,230	1,586,860	$2,971,420
Totals	$3,790,072	$536,380	$2,035,378	$11,874,956	$18,236,786

RRT and Staff Funding Recommendations for the Fall 2019 Open Solicitation Grant Offering

Restoration

Region	RRT	Staff	%
1	7	5	71%
2	9	7	78%
3	11	7	64%
4	7	7	100%
5	12	11	92%
6	9	8	89%
Total	**52**	**45**	**87%**

Technical Assistance

Region	RRT	Staff	%
1	5	3	60%
2	12	8	67%
3	2	2	100%
4	4	3	75%
5	6	3	50%
6	5	4	80%
Total	**34**	**23**	**68%**

Monitoring

Region	RRT	Staff	%
1	5	4	80%
2	4	3	75%
3	2	2	100%
4	3	3	100%
5	3	3	100%
6	3	3	100%
Total	**20**	**18**	**90%**

Stakeholder Engagement

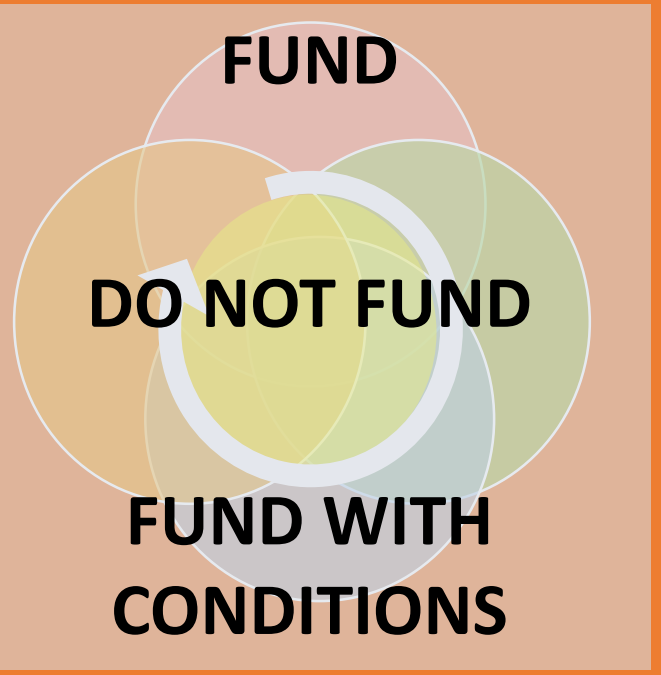
Region	RRT	Staff	%
1	1	1	100%
2	2	1	50%
3	2	2	100%
4	0	0	-
5	0	0	-
6	0	0	-
Total	**5**	**4**	**80%**

Region	Restoration	Technical Assistance	Monitoring	Stakeholder Engagement
1	$1,293,067	$ 185,106	$100,828	$ 33,967
2	$ 1,398,257	$ 76,605	$ 540,761	$ 54,778
3	$ 1,686,316	$149,929	$ 135,949	$ 162,944
4	$ 1,611,090	$ 157,762	$ 285,428	$0
5	$ 745,939	$ 138,835	$ 126,646	$0
6	$ 1,162,400	$ 215,728	$ 569,918	$0
Total	**$7,897,069**	**$975,053**	**$1,753,452**	**$251,689**

Open Solicitation – Restoration Grants

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

Recommend



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

Prioritize

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

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

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

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

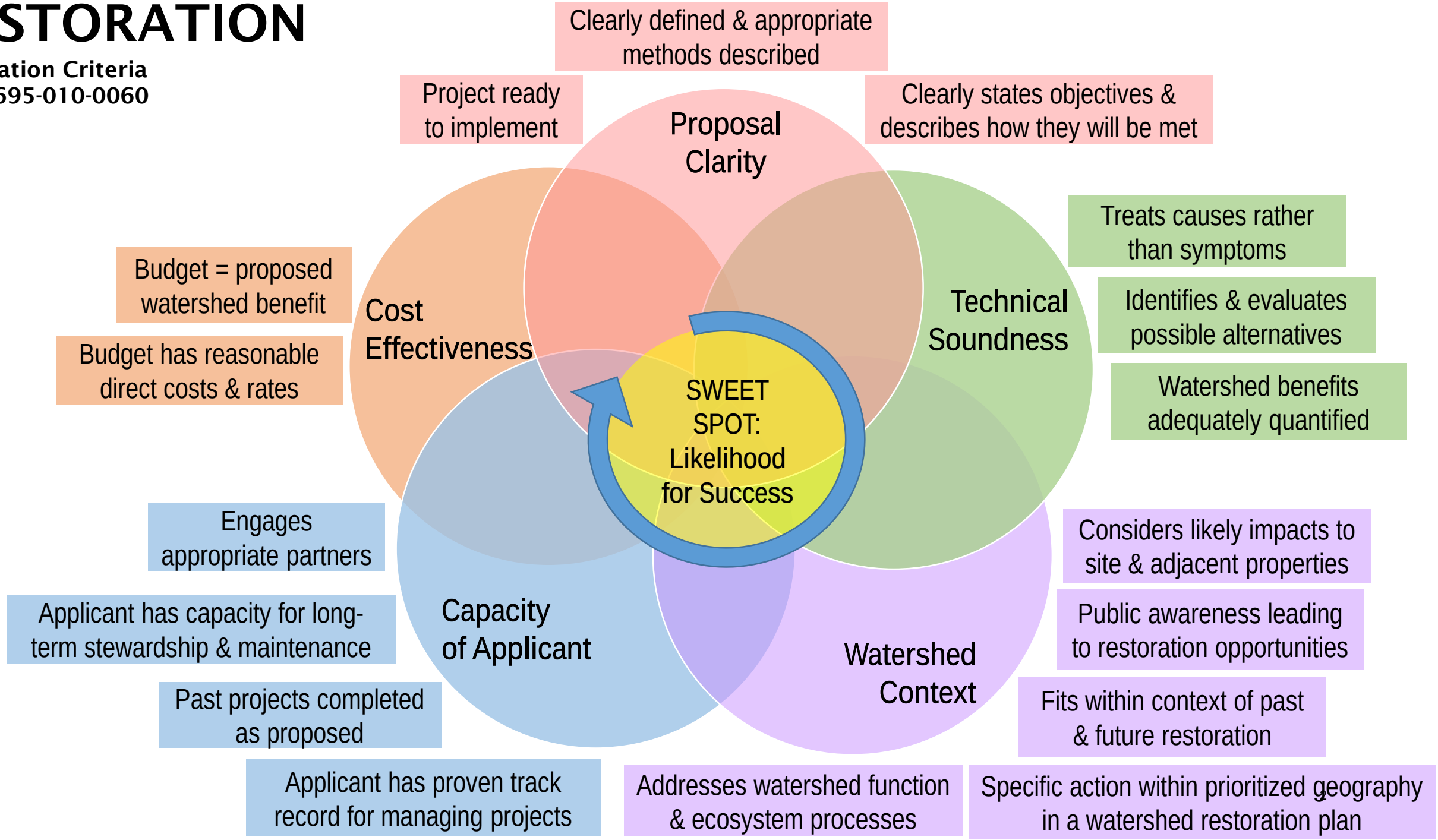
COST BENEFIT
Project costs relative to the anticipated watershed health benefits

Recommendation to Staff

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

RESTORATION

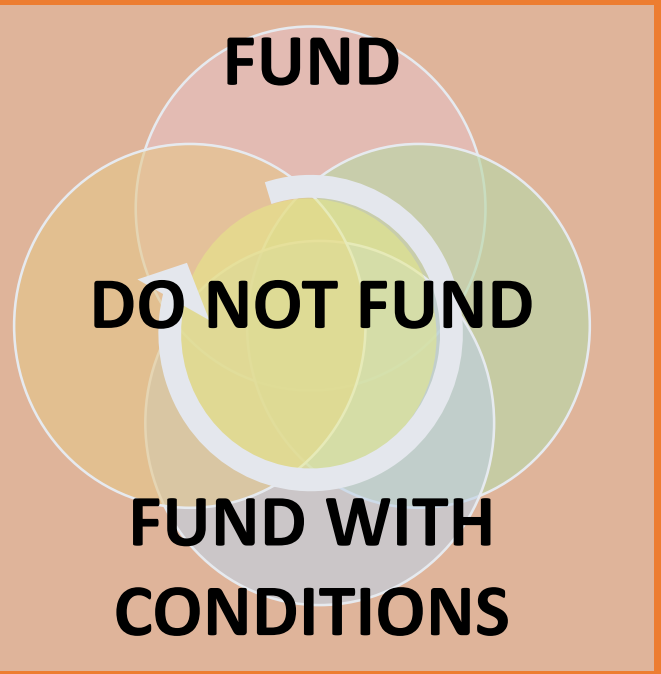
Evaluation Criteria
OAR 695-010-0060



Open Solicitation – Technical Assistance Grants

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

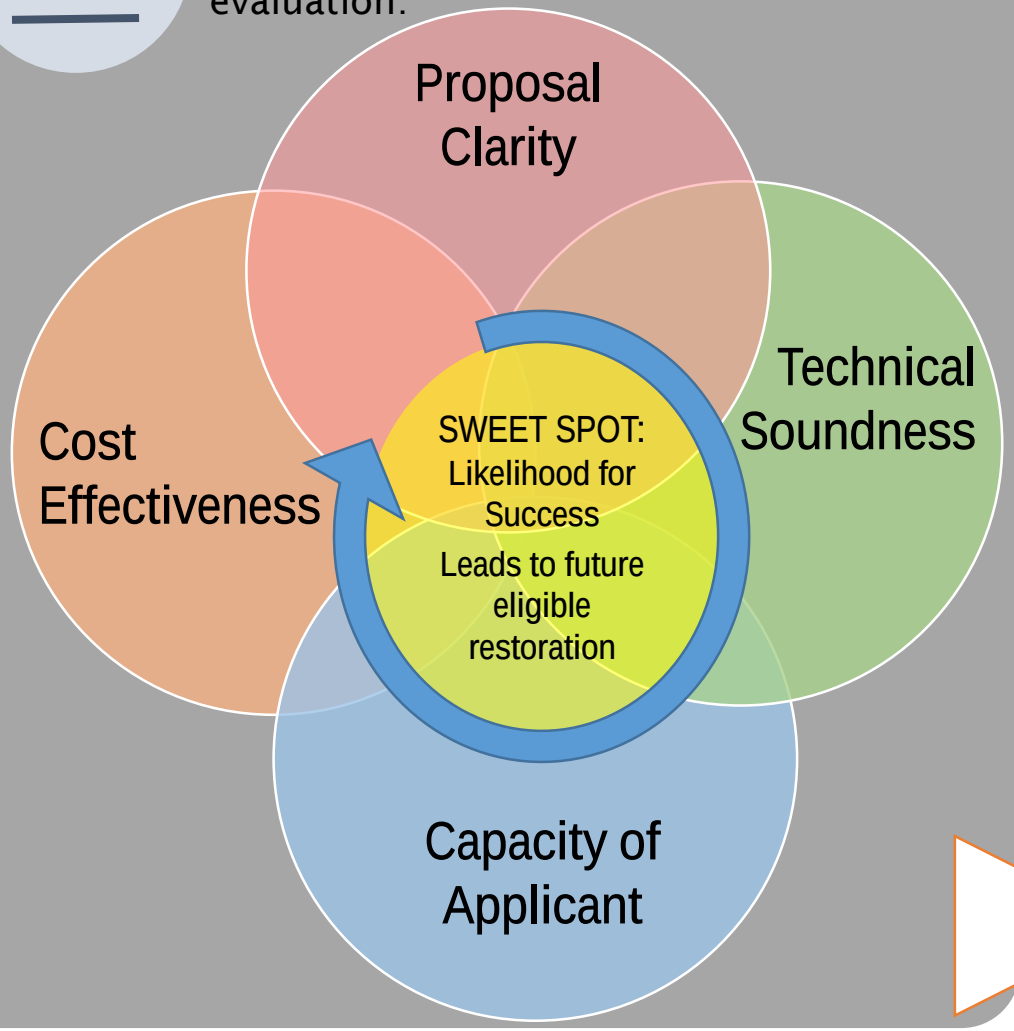
Recommend



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

Prioritize

CRITERIA
How well project meets criteria for project evaluation:



Recommendation to Staff

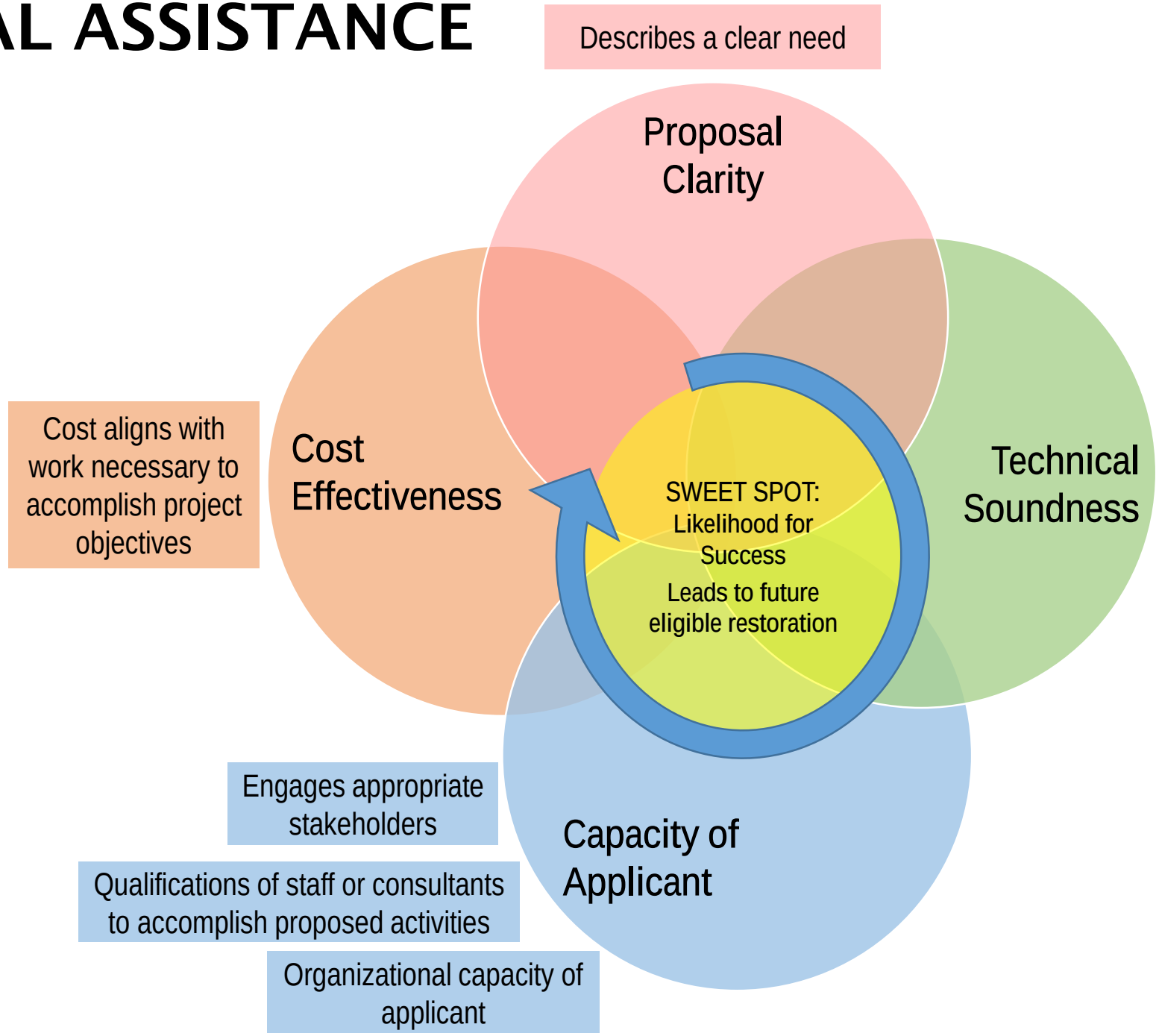
Staff review recommendations from each regional review team & make a statewide funding recommendation to the Board based on available resources for the grant period & type.

TECHNICAL ASSISTANCE

Evaluation Criteria
OAR 695-030-0045

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

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



Technical Design & Engineering

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

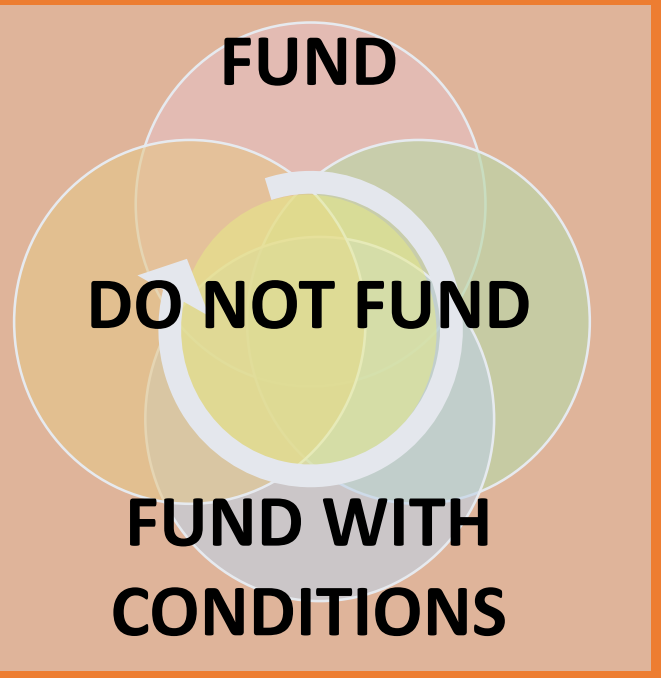
Resource Assessment & Planning

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

Open Solicitation – Monitoring Grants

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

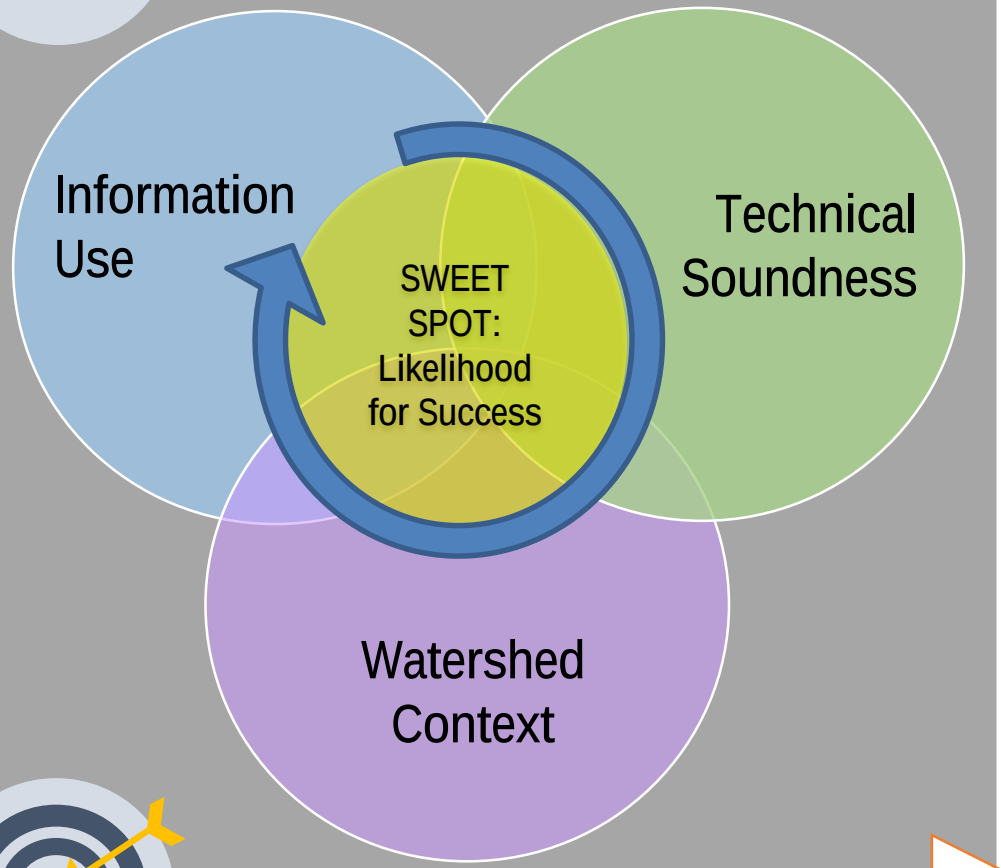
Recommend



Statewide & Regional Teams review & evaluate each project individually based on how well project meets criteria

Prioritize

CRITERIA
How well project meets criteria for project evaluation:



CERTAINTY OF SUCCESS

Recommendation to Staff

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

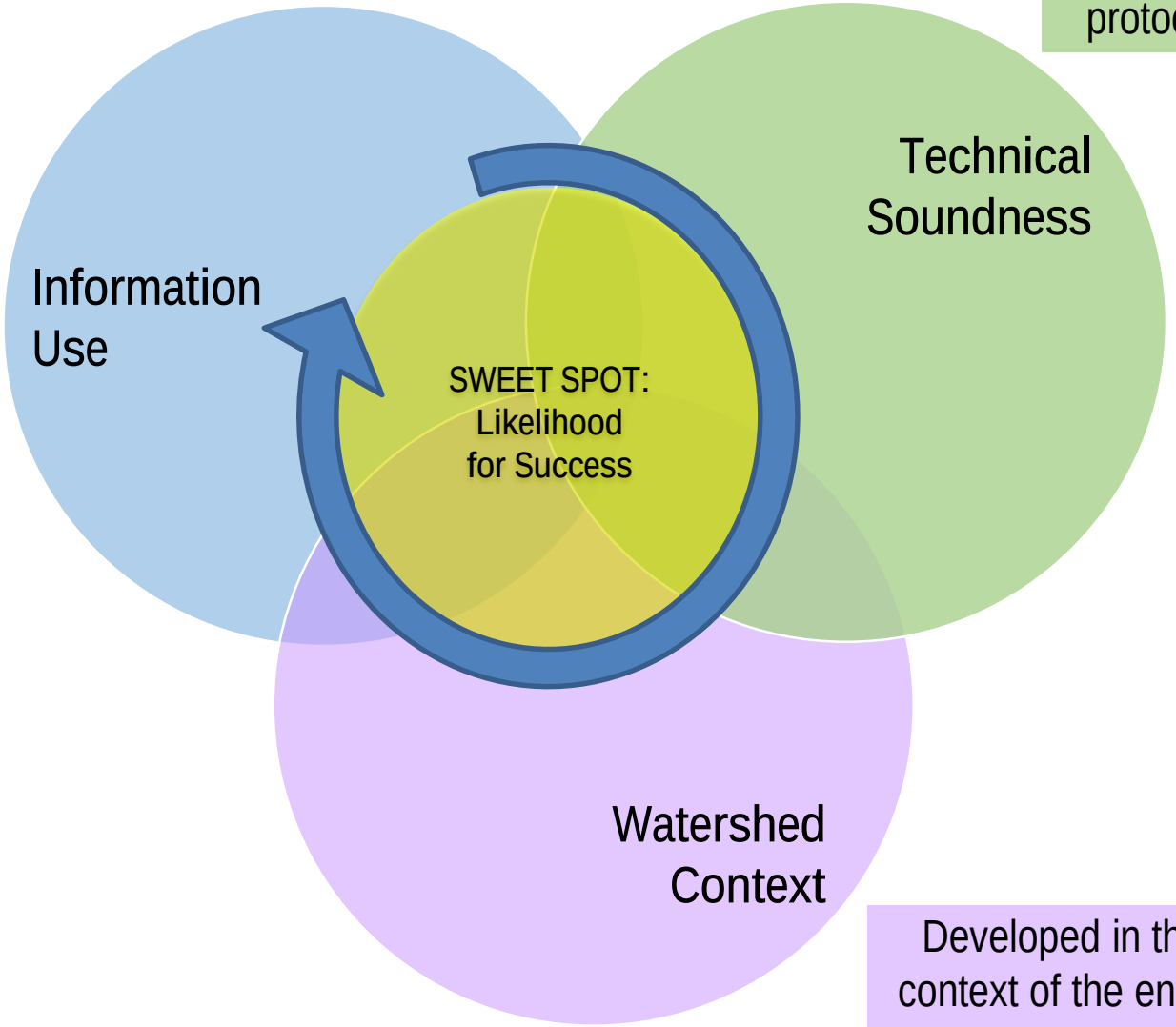
MONITORING

Evaluation Criteria
OAR 695-025-0040

"Watershed Monitoring Project" means a project that identifies conditions in the watershed. It may be for the purpose of gathering baseline data on current conditions, for evaluation of the specific effects of management actions, or for comparing similar watershed components before and after a project.

Use information to implement or direct projects to enhance or sustain health of watersheds

Acknowledge that the results will be available to a state database



Implement appropriate protocols

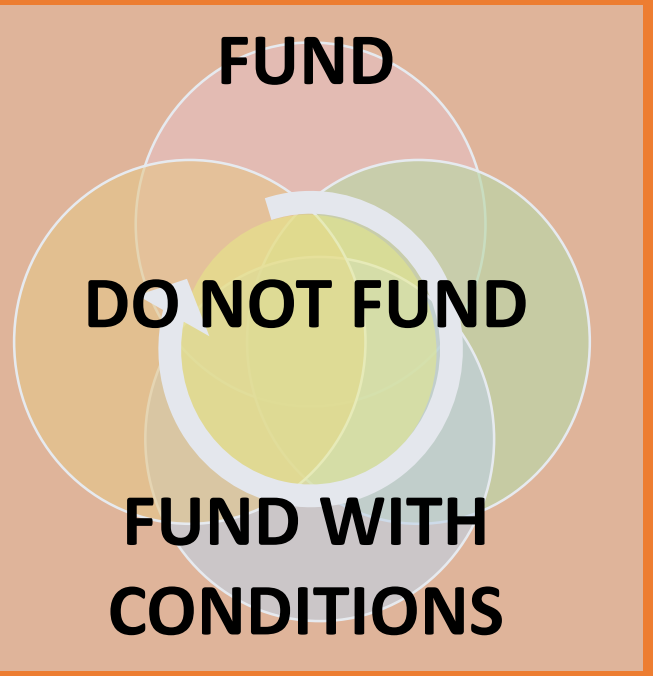
Demonstrate knowledge of state and/or federally accepted monitoring protocols

Developed in the context of the entire watershed

Open Solicitation – Stakeholder Engagement Grants

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

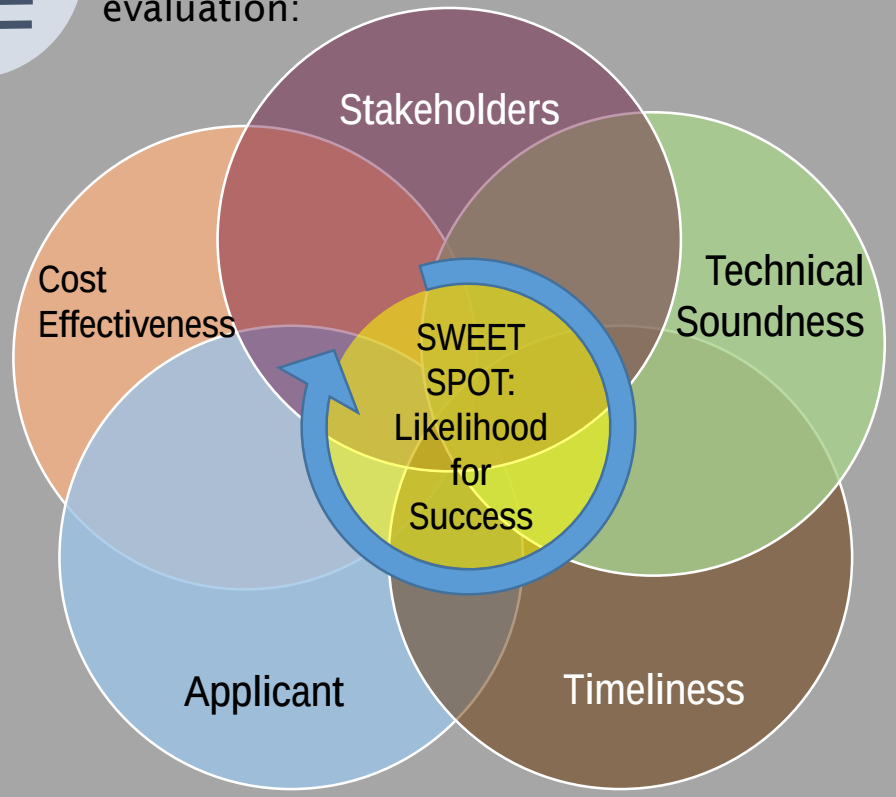
Recommend



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

Prioritize

CRITERIA
How well project meets criteria for project evaluation:



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

Recommendation to Staff

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

STAKEHOLDER ENGAGEMENT

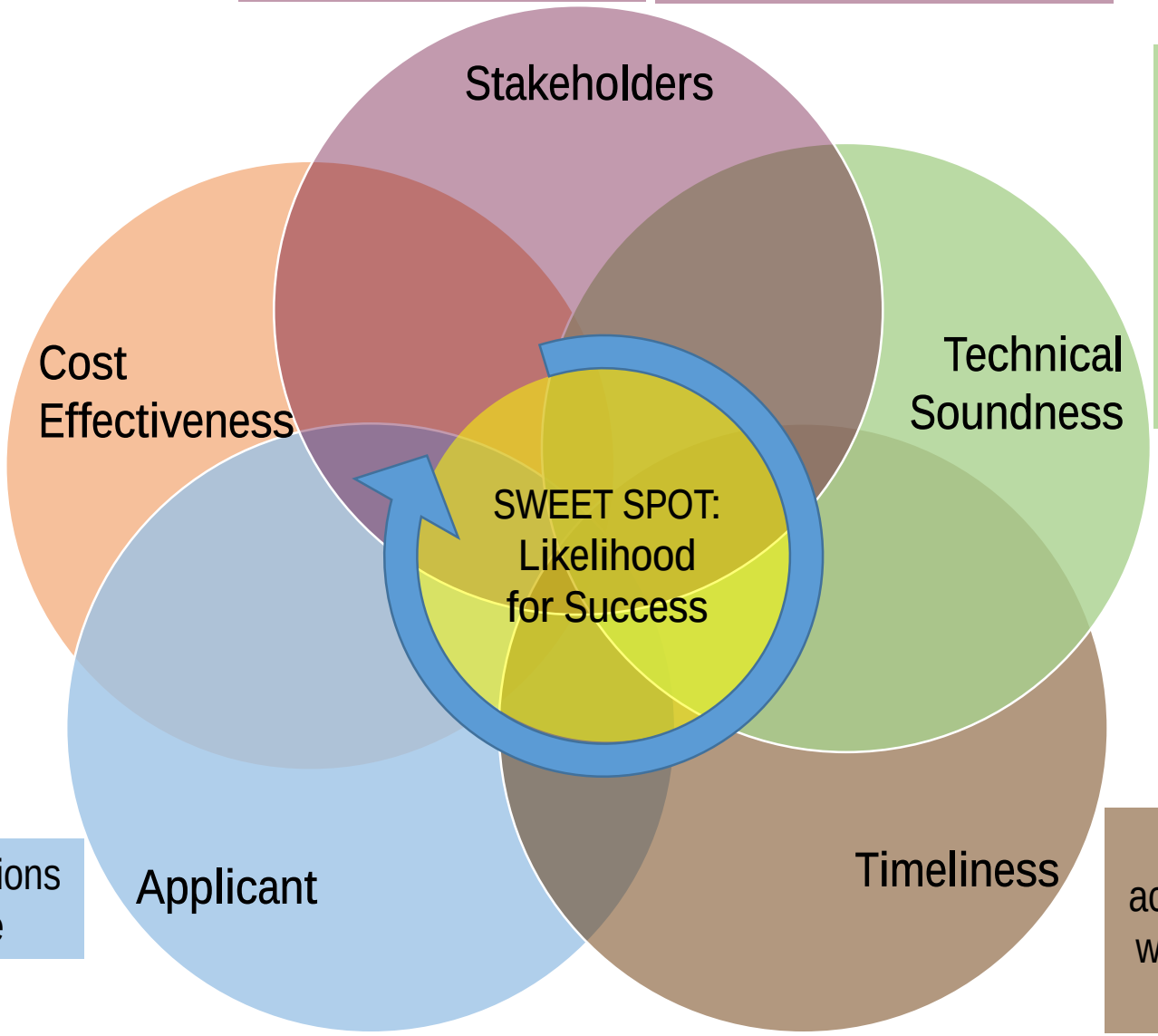
Evaluation Criteria
OAR 695-015-0070

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

Projects whose primary purpose is education are NOT ELIGIBLE

Applicants engage with appropriate stakeholders in the appropriate geography

Likely effectiveness of multidirectional communication among the applicant & stakeholder



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

Evidence base linking engagement to eligible project types

Shows qualifications & experience

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

North Coast

Southwest

Willamette Basin

Central Oregon

Eastern Oregon

Mid-Columbia

North Coast - Region 1 Fall 2019 Applications

Document Path: Z:\oweb\Technical_Services\Information_Services\GIS\Maps\Review Team Meetings\2019FallCycle\Projects\Region1_RTM_apps_11x17_2019Fall.mxd
ESRI ArcMap 10.6, NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20191106

Grant Types

- Restoration
- Technical Assistance
- Stakeholder Engagement
- Monitoring

Previous Grants: 1998 - Spring 2019

- Restoration
- Land Acquisitions
- Streams
- Region Boundary

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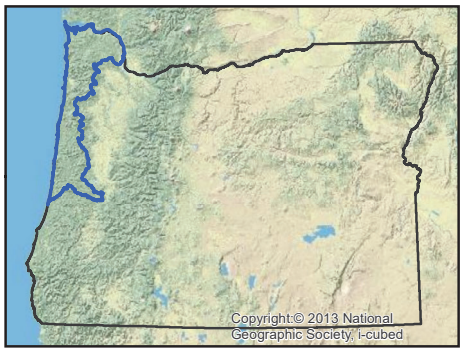

Region 1 - North Coast

Restoration Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Project Modification	Amount Recommended	County
220-1029	MidCoast WC	Big Creek Floodplain Restoration	Instream, floodplain, and wetland function will be improved by removing fill material, grading the streambank, and placing large wood fish habitat structure in Big Creek, a direct ocean tributary in Lane County north of Florence.		267,771	Lane
220-1025	Nestucca-Neskowin Watersheds Council	Clear Creek Fish Passage Restoration	The only remaining barrier to fish passage will be replaced on Clear Creek, a tributary of the Nestucca River in Tillamook County. Clear Creek provides habitat for ESA-listed coho salmon, chum, steelhead, Chinook, coastal cutthroat trout, and Pacific lamprey.		259,163	Tillamook
220-1026	Scappoose Bay WC	Brush Creek Large Wood and Fish Passage	Habitat for lower Columbia River fish species will be restored by placing large wood structures instream, addressing a fish passage barrier preventing fish access to upstream habitat, and restoring native trees and shrubs plant communities along the streamside on Brush Creek, a tributary of Scappoose Creek.		264,280	Columbia
220-1023	Necanicum WC	Coho Creek Fish Passage Project - Seaside	The last remaining barrier will be addressed on Coho Creek in the Necanicum River watershed, located within Seaside city limits in Clatsop County, which will improve fish passage to stream habitat and restore full tidal exchange to a tidally-influenced wetland.		355,979	Clatsop
220-1028	MidCoast WC	North Beaver Creek Riparian Restoration	Riparian, wetland, and floodplain function will be restored by planting native trees and shrubs within large stream buffers on a former agricultural property on North Beaver Creek, a direct ocean tributary in Lincoln County.	$19,047 increase for more plant stewardship	145,874	Lincoln
Total Restoration Projects Recommended for Funding by RRT and OWEB Staff					**1,293,067**	

Region 1 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Restoration Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-1024	North Coast WS Assn	Upper Big Creek Road Decommissioning	A legacy forest road along Big Creek in the Nikolai-Wickiup watershed will be decommissioned to restore floodplain connection with the creek and prevent sediment from entering the stream. Large wood will also be installed instream to improve habitat complexity for coho, steelhead, and cutthroat.		172,580	Clatsop
220-1027	Nestucca-Neskowin Watersheds Council	Neskowin Fish Passage Improvement Project	Fish passage will be improved in the Neskowin watershed by replacing non-functional tidegates and an undersized culvert with bridges on two stream crossings. The bridges will be constucted as part of a road upgrade for a new emergency egress road out of the city of Neskowin in Tillamook County.		237,420	Tillamook
Total Restoration Projects Recommended for Funding by RRT					**1,703,067**	

Restoration Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount Requested**	**County**
220-1030	Columbia SWCD	Calhoun-Rock Creek Restoration	66,659	Columbia
220-1031	Oregon Wildlife Heritage Foundation	Seeley Creek Habitat Project	48,837	Benton

Region 1 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance (TA) Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Project Modification	Amount Recommended	County
220-1032	Westwind Stewardship Group	Coastal Prairie Restoration at Westwind	A restoration strategy will be developed for rare coastal prairie habitat at Westwind, a conservation property in Lincoln County adjacent to the Salmon River estuary.		37,875	Lincoln
220-1034	Scappoose Bay WC	Raymond Creek Floodplain Design	An alternative analysis will be conducted and designs developed for restoration actions on Raymond Creek, a major tributary in Scappoose Bay in Columbia County. Summer rearing habitat will be improved and fish passage barriers addressed to benefit Lower Columbia native fish.		74,961	Columbia
220-1033	Lower Nehalem WC	Alder Creek Habitat Enhancement	Project designs will be developed to restore instream and wetland habitats on a conservation property located within the lower Nehalem watershed in Tillamook County. Restoration alternatives include developing tidal channels, adding instream large wood fish habitat structures, and restoring streamside plant communities.		72,270	Tillamook
Total TA Projects Recommended for Funding by RRT and OWEB Staff					**185,106**	

Technical Assistance Projects *Recommended but Not Funded* in Priority Order

Project #	Grantee	Project Title	Brief Description		Amount Recommended	County
220-1036	Upper Nehalem WC	Clear Creek Fish Passage/Habitat Design	Fish passage designs will be developed for five stream crossings in the Clear Creek basin, a tributary of the Nehalem River in Columbia County. The crossings are currently barriers to fish migration and their replacement will increase access to instream habitat for fish species, including Oregon coast coho salmon.		41,158	Columbia
220-1035	Columbia SWCD	Conyers Confluence Area Enhancement	An alternatives analysis will be conducted and designs developed to restore rearing and foraging habitat for juvenile salmon and steelhead in Conyers Creek, a tributary of the Clatskanie River in Columbia County.		44,550	Columbia
Total TA Projects Recommended for Funding by RRT					**270,814**	

Technical Assistance Applications *Not Recommended* for Funding by RRT

Project #	Grantee	Project Title	Amount Requested	County
None				

Region 1 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Stakeholder Engagement Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-1045	North Coast Land Conservancy	Rainforest Reserve	Stakeholder engagement will gain community and financial support to acquire the Rainforest Reserve, a 3,500-acre property in Clatsop County; which will conserve rare coastal habitats, improve water quality, and support coastal biodiversity.		33,967	Clatsop
Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff					**33,967**	
Stakeholder Engagement Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**		**Amount Recommended**	**County**
None						
Total Stakeholder Engagement Projects Recommended for funding by RRT					**33,967**	
Stakeholder Engagement Projects *Not Recommended* for Funding by RRT						
Project #	**Grantee**	**Project Title**			**Amount Requested**	**County**
None						

Region 1 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-1040	North Coast WS Assn	NCWA Monitoring 2020-2021	Temperature monitoring will continue in four watersheds in Clatsop County, including Youngs Bay, Skipanon, Nickolai-Wikiup, and Ecola Creek.		14,317	Clatsop
220-1037	Lower Columbia Estuary Partnership	Continuing Columbia SWCD Water Quality Monitoring Program	Water quality monitoring will continue in four key subbasins in Columbia County. The basins provide habitat for state and federally listed species of salmon and steelhead, and the data will help in addressing impaired water quality impacting these fish populations.		25,025	Columbia
220-1038	Siuslaw WC	Siuslaw Coho Partnership Coordinated Water Quality Monitoring Phase 1	Continuous water quality monitoring within the Siuslaw Coho Partnership will be coordinated among partners at locations throughout the Siuslaw watershed. The data will be incorporated into State of Oregon databases and made accessible to the public.		18,577	Lane
220-1042	Nestucca-Neskowin Watersheds Council	Nestucca, Neskowin & Sand Lake Expanded Monitoring	Temperature and bacteria water quality data will be collected in priority reaches of the Nestucca, Neskowin, and Sand Lake watersheds to inform prioritization and planning for restoration projects.		36,831	Tillamook
Total Monitoring Projects Recommended for funding by OWEB Staff					**94,750**	

Region 1 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**		**Amount Recommended**	**County**
220-1044	Lincoln SWCD	Mid Coast Monitoring Project Status & Trend 2019	Long-term fish spawning ground surveys on key reaches in the MidCoast watersheds will be continued. Data collection is focused on early component Chinook, chum, fall Chinook, coho, and steelhead populations.		66,277	Lincoln
Total Monitoring Projects Recommended for funding by RRT					**161,027**	
Monitoring Applications *Not Recommended* for Funding by RRT						
Project #	**Grantee**	**Project Title**			**Amount Requested**	**County**
220-1039	Siuslaw WC	Siuslaw Coho Partnership Effectiveness Monitoring Phase 2			74,692	Lane
220-1041	Lincoln SWCD	Mid Coast Monitoring Project AQI 2019			66,407	Lincoln
220-1043	Salmon Drift Cr WC	Agnes, Baldy, Logan Creeks and Ocean Outfalls Baseline Data Acquisition 2020-2021			39,063	Lincoln
Region 1 Total OWEB Staff Recommended Board Award					**1,606,890**	**15%**
Regions 1-6 Grand Total OWEB Staff Recommended Board Award					**10,877,263**	

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1023-17360

Project Type: Restoration

Project Name: Coho Creek Fish Passage Project - Seaside

Applicant: Necanicum WC

Region: North Coast

County: Clatsop

OWEB Request: $355,979

Total Cost: $580,740

Application Description *(from application abstract)*

Coho Creek is a tributary to Neawanna Creek in the Necanicum River watershed within Seaside city limits in Clatsop County. The culverts to be replaced are juvenile and adult fish passage barriers under certain flow conditions and impair natural channel processes impacting ESA listed coho, Chinook, chum, Pacific lamprey, winter steelhead and cutthroat trout. The project involves three existing, undersized culverts. The project proposes to permanently remove two culverts and relocate the City's sewer main which currently is installed over the top of the culverts. In addition, the project proposes to replace the existing undersized culvert crossing under Wahanna Road with a 19' open bottom, multiplate arch with natural stream simulation that meets the design criteria of 1.5x active channel width. The project will improve fish access to 1.4 miles of stream habitat and restore full tidal exchange to the site's tidally influenced stream-wetland complex. Project partners include: City of Seaside and Oregon Department of Fish and Wildlife.

Review Team Evaluation

Strengths

- The proposed restoration builds upon previous OWEB investments in fish passage upstream of the project site, and the road crossings to be removed are the last remaining barriers in the system.
- Replacing these fish passage barriers will result in 1.4 stream miles opened for passage and connectivity with wetlands both upstream and downstream of the crossing.
- The project provides habitat connectivity with an upstream tidally-influenced wetland that has an alder-slough sedge-skunk cabbage plant community, which is considered globally rare.
- The work will benefit juvenile Oregon coast coho salmon and other native fish species by providing access to rearing habitat. Coho Creek has a thriving coho population that could be negatively impacted if the crossing were to fail.
- This project may be a starter project that leads to additional restoration within the City-owned wetlands upstream.
- Since the creek is used by the adjacent schools as an outdoor classroom, restoration of full fish passage at this location will complement and enhance community engagement efforts around watershed function and health.

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- There is a committed partnership around the project, including the City of Seaside who has allocated funding in the current city budget for the project. Delaying implementation further will put this funding at risk.

Concerns

- The site is not a complete fish passage barrier, which reduces the overall ecological benefit from this investment.
- The City's plans for managing the upstream tidal wetland are unknown. The project would be strengthened by a commitment to future restoration and protection of this area.

Concluding Analysis

Restoration of full fish passage to Coho Creek in the City of Seaside will improve access to rearing and spawning habitat for Oregon coast coho salmon and build on past OWEB investments in this watershed. There is community support for the project because of the significance of the stream to the school district. This project has a high likelihood of success with the assembled partnership and is a reasonable investment for the proposed watershed benefit.

Review Team Recommendation to Staff
Fund

Review Team Priority
4 of 7

Review Team Recommended Amount
$355,979

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$355,979

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1024-17362

Project Type: Restoration

Project Name: Upper Big Creek Road Decommissioning

Applicant: North Coast WS Assn

Region: North Coast

County: Clatsop

OWEB Request: $172,580

Total Cost: $257,190

Application Description *(from application abstract)*

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. Camp 7 Spur is a 1.2 mile stretch of legacy logging road adjacent to Big Creek that encroaches on the floodplain. 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 and is an area of high intrinsic potential habitat. This project proposes to 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, 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 and landowner willingness to move forward with implementation. OWEB funds will allow us to install large wood structures along this stretch of spawning habitat that will no longer be accessible on the ground after abandonment. Project partners include the private landowner, Hampton Lumber and the North Coast Watershed Association (NCWA).

Review Team Evaluation

Strengths

- Big Creek is a high priority area to improve habitat for ESA-listed species in the Nikolai-Wikiup watershed, including coho salmon.
- The project will remove and alter sections of road in the riparian area, which will decrease its impact on fish and wildlife and reduce the amount of sediment that enters the stream.
- The habitat upstream of the hatchery is of high quality for cutthroat trout, and lamprey also exist in the system.
- The stream lacks large wood structure needed for instream habitat complexity, which is a limiting factor for this watershed. A planned timber harvest in the basin will provide the necessary material for the large wood placements.

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- Lower summer flows in the area will reduce instream impacts during project implementation.
- The landowner letter of support indicates they are engaged and committed to a successful restoration project. The landowner will oversee project implementation and has relevant qualifications and experience.

Concerns

- The permitting approach is not described and the fish salvage plan is not well detailed in the application.
- Not all of the concerns from previous application reviews are addressed. The designs still lack detail and specifications about the fill material to be removed and where it will be placed. The objectives also remain unchanged; more details would be helpful to clarify project activities.

Concluding Analysis

This project will address limiting factors in the Nicolai-Wikiup watershed and is located within a priority area to improve habitat for lower Columbia fish species. This application is a resubmittal from previous iterations that were not recommended for funding, and this proposal addresses many of the concerns identified in previous reviews. For example, dimensions are now provided for the fill material and it appears that the technical providers and project managers have more clarity around the plans for implementation. While the designs are still basic, there is sufficient detail to determine that the project is likely to succeed.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 7

Review Team Recommended Amount

$172,580

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1025-17363

Project Type: Restoration

Project Name: Clear Creek Fish Passage Restoration

Applicant: Nestucca-Neskowin Watersheds Council

Region: North Coast

County: Tillamook

OWEB Request: $259,163

Total Cost: $497,088

Application Description *(from application abstract)*

The Clear Creek fish passage restoration project is located on Tillamook County owned Jenck Road just south of the community of Cloverdale. This culvert is the only mainstem fish passage barrier on Clear Creek. Clear Creek is a 4th order tributary to the Nestucca River that drains a 3,700 acre watershed. From its headwaters, the stream flows through Siuslaw National Forest managed lands before entering private lands and reaching its confluence with Arstell Creek and emptying into the Nestucca River. Clear Creek provides 4.4 miles of fish habitat with 2.5 miles that support spawning and rearing habitat for ESA listed Coho. Chum, steelhead, fall Chinook, coastal cutthroat trout and Pacific lamprey are also present. The existing culvert is a corrugated metal pipe arch undersized and poorly aligned for the stream. The culvert is approaching failure. The project proposes to replace the aging, failing, undersized culvert with an appropriately sized bridge that meets Aquatic Organism Passage Standards and is sized at greater than 1.5x Active Channel Width (ACW).Project partners include: US Forest Service (USFS),US Fish & WIldlife Service (USFWS), Oregon Department of Fish and Wildlife (ODFW), Trout Unlimited (TU), Tillamook County and Nestucca, Neskowin and Sand Lake Watersheds Council (NNSL). USFS, in cooperation with the County and NNSL, has developed a stream simulation plan. Bridge designs were provided by a private engineering firm in cooperation and consultation with the County and USFS. USFS will take the lead to: prepare the project's federal permit under ARBO II, provide NEPA compliance and secure the state DSL permit. NNSL will prepare the county land-use form, ODFW fish passage permit, secure state ESA coverage for fish salvage and file and complete BOLI compliance forms. Tillamook County Public Works has provided survey work and design review and will provide construction oversight and construction easements with affected landowners.

Review Team Evaluation

Strengths

- Previous application review comments are addressed.
- The project will restore full passage for all life stages of fish to 4.4 miles of low gradient and high quality habitat in the Nestucca watershed. The existing structure is likely a full barrier to Pacific lamprey and its replacement will also improve passage for Chinook, coho, chum, steelhead, and cutthroat trout. This is also only one of two tributaries in the Nestucca utilized by chum.

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- Clear Creek is an important source of cold water refugia in the Nestucca watershed. The river has higher water temperatures that are a water quality limiting factor downstream of the site; this project will provide access to cooler water upstream.
- In addition to fish passage, the project will also improve watershed conditions by restoring sediment transport and large wood movement that are important for building stream habitat complexity.
- There are strong partnerships established in support of the project that include the County and USFS.
- The structure slated for replacement is on the Salmon SuperHwy barrier list.
- Restoration of fish passage at this location will build on previous conservation work in the watershed, which includes riparian planting efforts implemented downstream.
- The project is well designed and the design approach includes climate change considerations.
- The applicant has a proven track record implementing similar types of fish projects in the basin.
- The project is cost-effective for the proposed work.

Concerns

- The structure is only a partial barrier to most aquatic species and is a water velocity barrier to salmon. The overall ecological benefit of the investment may be limited since some passage does exist at the site.

Concluding Analysis

Replacing the Clear Creek culvert will restore access to 4.4 miles of habitat for a variety of aquatic species, including Pacific lamprey. While the culvert is still passable at certain flows currently, it is a velocity barrier for juveniles at high flows and prevents access to critical cool water habitat upstream. The Nestucca River is water quality limited, which increases the importance of Clear Creek as refugia for fish. The designs for the project are technically sound and the project team experience in implementing similar work indicates this project is likely to succeed.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 7

Review Team Recommended Amount

$259,163

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$259,163

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1026-17398

Project Type: Restoration

Project Name: Brush Creek Large Wood and Fish Passage

Applicant: Scappoose Bay WC

Region: North Coast

County: Columbia

OWEB Request: $264,280

Total Cost: $333,675

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 will also address fish passage concerns by replacing an undersized and perched culvert with a channel-spanning bridge. The project originated 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 2020, replace a culvert with a bridge, and plant 5000 native confers, small trees and shrubs during winter 2020-2021. Project timing is important due to nearby scheduled 2020 logging which will allow shared resources to reduce costs. Project is supported by ODFW, Weyerhaeuser, and Scappoose Bay Native Plant Nursery.

Review Team Evaluation

Strengths

- The project will benefit multiple lower Columbia fish species, including coho, steelhead, and Pacific lamprey. The location is within identified anchor habitat for these species.
- Improving habitat complexity and restoring fish passage will address multiple limiting factors within Brush Creek.
- The project is cost-effective for the amount of work proposed.
- The applicant proactively incorporated previous project review recommendations to address a fish passage barrier affecting juvenile fish within the reach.
- Partnerships strengthen the project and the applicant has effectively worked with the landowner on a solution to the fish passage barrier.
- The applicant has a proven track record implementing similar projects.

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- The design-build approach for the fish passage project elements is technically sound for the low-gradient reach. The proposed bridge will allow for the stream to move freely in its floodplain.
- The plan for the riparian planting incorporates a diversity of plant species, including the installation of shrubs for beaver forage.

Concerns

- No significant concerns were noted during review.

Concluding Analysis

This cost-effective project addresses multiple limiting factors in a priority location within the Scappoose Bay watershed. The revised project application now includes replacing the road crossing with a bridge and installing large wood structures throughout the project reach to improve habitat complexity. Comments from the previous application review are addressed with more details provided in the application regarding the planting plan and species diversity. There is a high likelihood for achieving a successful outcome.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 7

Review Team Recommended Amount
$264,280

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$264,280

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1027-17404

Project Type: Restoration

Project Name: Neskowin Fish Passage Improvement Project

Applicant: Nestucca-Neskowin Watersheds Council

Region: North Coast

County: Tillamook

OWEB Request: $237,420

Total Cost: $547,729

Application Description *(from application abstract)*

The project site is located in the town of Neskowin, Oregon at the southern end of Tillamook County. Neskowin Creek, Hawk Creek and Butte Creek flow through the community of Neskowin and merge to form an estuary before emptying into the Pacific Ocean. Hawk Street is a private foot path that runs north from the OPRD owned Neskowin Beach Wayside. Hawk Street crosses over two tide-gated arch culverts draining Butte Creek: one culvert drains Hawk Creek and one culvert drains a small wetland channel. Fish passage and natural stream function are limited in Hawk and Butte Creeks due to these crossings; the culverts and associated tidegates are undersized and failing. The culverts are velocity barriers to juveniles during high flows, and limit the ability of the fish to access critical rearing habitat and refuge areas. The Neskowin wetland complex extends for 250 acres beyond the crossings.During high winter flows and storm surges, the culverts in the project site are often overtopped and easily clogged with debris, posing a flood risk for Neskowin residents and a maintenance challenge for the County. Hawk Street itself acts as a partial dike, blocking flow between the North and South portion of Hawk Creek. This area is inundated during winter storm events. The wetlands dampen flood peaks, reduce water velocities, store run-off, trap sediments and filter pollutants and nutrients. These factors reduce flood risk and improve water quality and habitat on Hawk and Butte Creeks, and the replacement of the crossing structures would add to this functionality.By replacing the culvert and tidegate structures with bridges, this project seeks to improve fish passage and habitat access. The project will additionally improve hydraulic connectivity, reduce local flood risk and increase resiliency.Project partners include: Tillamook County, OR Dept of Fish & Wildlife, OR Parks & Recreation Department, US Forest Service, and private landowners

Review Team Evaluation

Strengths

- Improving fish passage will increase access to habitat farther upstream in the watershed. The project will also improve connectivity to a nearby marsh that has fish rearing habitat.
- The project is cost-effective for the proposed work.
- Working within the Neskowin stream system will potentially benefit coho populations by adding diversity to the gene pool.

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- The applicant has experience implementing similar types of projects in the watershed.

Concerns

- Hawk and Butte Creeks have dependent populations for coho. Dependent populations are small and isolated, and they persist by attracting strays from other basins. As a result, these creeks are sometimes not considered priority locations to restore fish habitat.
- The proposed project is part of an emergency egress road construction project that is likely to significantly impact wetlands, which reduces the overall ecological benefits resulting from restored fish passage. The design approach may be missing an opportunity for taking a more holistic approach to restoration for the area that could benefit multiple native habitats while addressing infrastructure needs. The scale of the current design for constructing bridges is necessary for the proposed carrying capacity of the new road infrastructure, but is beyond what would be needed for a balanced project with habitat protection and enhancement components.
- The project link with the emergency egress road work creates uncertainty for whether an investment of conservation funds can achieve meaningful ecological benefit at a reasonable cost.
- The project will not be able to achieve the 1.5:1 active channel width ratio necessary to meet federal fish passage standards and still be cost-effective.
- The land use immediately upstream is a golf course, which has limited ecological value for fish species.
- Without an alternatives analysis, it is difficult to ascertain the cost benefit of the chosen project design.

Concluding Analysis

This fish passage project involves constructing two bridges as part of an emergency egress road project planned in the City of Neskowin. The project will improve fish passage for a dependent population of coho that has not been viewed as a priority in the past, but dependent populations are included as a NOAA recovery action if resources exist. An OWEB investment will build in fish habitat benefits into a road construction project.

Review Team Recommendation to Staff

Fund

Review Team Priority

7 of 7

Review Team Recommended Amount

$237,420

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1028-17428

Project Type: Restoration

Project Name: North Beaver Creek Riparian Restoration

Applicant: MidCoast WC

Region: North Coast

County: Lincoln

OWEB Request: $126,827

Total Cost: $240,144

Application Description *(from application abstract)*

North Beaver Creek lies within the 32,000 acre, 5th field watershed in Lincoln County near the town of Seal Rock. Its headwaters are located within the protected Siuslaw National Forest and it joins South Beaver Creek one mile from its ocean terminus in Ona Beach State Park. Despite the protections in the headwaters and on private and state protected areas near its mouth, agricultural practices in the intervening low gradient stream reaches have degraded habitat for federally listed coho salmon and other aquatic organisms. Streams have been channelized and straightened, wetlands drained, riparian trees removed, and non-native species have become dominant. Accordingly, water quality is poor in these reaches and cover is limited. This project is part of a six landowner, 36.7- acre effort to improve floodplain and riparian conditions in this basin. Funding from OWEB will be used on the furthest downstream 18.9-acre property, to restore riparian, floodplain and wetland function through a planting plan utilizing >200 ft wide buffers that will provide shade, long-term input of large woody debris to the system, as well as provide a base of food and dam building material to encourage beaver activity. Enrollment of this project property in the Conservation Reserve and Easement Program (CREP) shows that the landowners are committed to conservation management. Project partners include private landowners, Natural Resources Conservation Service, Farm Service Agency, and Oregon Parks and Recreation Department. Additional partners, notably the USFS's Siuslaw Collaborative Watershed Restoration Program (hereafter "Stewardship project") and matching funds are in hand to improve riparian conditions on the additional 17.8 upstream acres on North Beaver Creek, Peterson Creek, and Bowers Creek. Together, this work provides an opportunity to regain significant natural function to help link the protected headwaters and lowlands in this key watershed with an independent coho population.

Review Team Evaluation

Strengths

- The goals and objectives are clear and well-described in the application.
- The project stretch of Beaver Creek will benefit from a healthier riparian buffer by reducing stream temperature in the future and promoting native biodiversity on-site.

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- A diverse list of plant species are proposed for planting, and the exclosures and buffer design are reasonable. The plan for plant protection is well-designed and appropriate for the site, given the heavy elk use present in the Beaver Creek area. The large buffer size increases the ecological benefits for the project costs.
- The project provides opportunity for raising awareness that could lead to future restoration by leveraging the CREP program in an area that has had little interest in this program. Successful implementation of CREP could lead to future participation that will extend the benefits from this investment.
- The applicant has a proven track record and has engaged the appropriate partners in the project.
- The landowners are engaged and committed to restoration on their property.

Concerns

- The plan for scalping reed canary grass is not likely to be effective at the 3-4” depth proposed, and will likely exacerbate the reed canary grass issue on site. Scalping reed canary grass has been shown to be effective for site preparation at depths of 12-18” because this depth gets below the extensive rhizome system of the plant. Mowing without scalping would likely be more effective than the proposed scalping.
- A DSL General Authorization permit will likely be required for the proposed scalping activities, but this is not mentioned in the application.
- The proposed plant establishment may not be sufficient to achieve a free-to-grow state. With the proposed site preparation and the conditions on site, 5 years is recommended.
- The CREP match contribution is for future payments to the landowner, which is not eligible as match because it will not be accrued by the end of the grant. However, the remaining match is sufficient to meet the required 25% for OWEB grants
- The native seed species list is not provided with the application making it challenging to evaluate its appropriateness for the site.

Concluding Analysis

Beaver Creek in Lincoln County has a thriving coho salmon run and has long been a restoration priority for local organizations. This project will plant a nearly 19-acre parcel in native trees and shrubs, with the goal of improving wildlife habitat and addressing stream temperature issues on the creek. The applicant is encouraged to consider alternatives for managing reed canary grass during site preparation and contacting DSL to determine whether a permit is needed. With the condition of increasing the years of plant establishment from 3 to 5, the proposed riparian buffer goals and objectives are achievable and will provide significant ecological uplift for the cost.

Review Team Recommendation to Staff

Fund Increased with Conditions

Review Team Priority

5 of 7

Review Team Recommended Amount

$145,874

Review Team Conditions

Increase recommended amount to increase plant establishment from 3 years to 5 years, the two additional years shall use the same techniques described for years 1 to 3.

Staff Recommendation

Staff Follow-Up to Review Team

Staff verified with applicant the costs associated with additional plant establishment work.

Staff Recommendation

Fund Increased with Conditions

Staff Recommended Amount

$145,874

Staff Conditions

Increase recommended amount to increase plant establishment from 3 years to 5 years, the two additional years shall use the same techniques described for years 1 to 3.

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1029-17442
Project Type: Restoration
Project Name: Big Creek Floodplain Restoration
Applicant: MidCoast WC
Region: North Coast
County: Lane
OWEB Request: $267,771
Total Cost: $475,269

Application Description *(from application abstract)*

The planned restoration work is on Big Creek, an ocean tributary flowing directly into the Pacific Ocean, about 10 miles south of the town of Yachats. The project includes about 0.6 stream miles and 16 floodplain acres upstream from where Big Creek crosses under Highway 101 within Carl G. Washburne Memorial State Park. The site, now owned by Oregon Parks and Recreation Department (OPRD), has been degraded by land clearing and grazing, stream straightening, removal of large wood from the stream, invasion by Japanese knotweed, floodplain fill, and over two feet of stream incision. These actions have greatly impacted instream complexity, floodplain and wetland connectivity, and riparian vegetation; all factors that limit Oregon Coast Coho (OCC) and other salmonid production. This proposed restoration project seeks to improve instream, floodplain, and wetland function through 14 acres of floodplain grading, floodplain fill removal, instream material placement to remedy channel incision, and placement of large woody debris. Large woody debris placement will include both 10 instream log structures and placement of over 200 pieces on the Big Creek floodplain. This increased large wood loading will further increase connectivity and side channel development over time. Riparian planting and seeding will improve the functioning of the riparian zone and enhance a pollinator corridor between two known reproduction sites for the endangered Oregon silverspot butterfly. Project partners include OPRD, Oregon Department of Fish and Wildlife, US Forest Service, Siuslaw SWCD, Oregon Department of Transportation, and the Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians.

Review Team Evaluation

Strengths

- The restoration approach as proposed is holistic and suitable for the site. The designs include enhancement of habitats for both aquatic and terrestrial species, including Oregon coast coho salmon and the Oregon silverspot butterfly.
- The designs are technically sound and appropriate alternatives were evaluated. The expected ecological benefits will support overall watershed function in addition to providing species-specific benefits.
- Big Creek supports populations of steelhead, Chinook salmon, and eulochon, all of which will benefit from habitat improvements resulting from the proposed activities.

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- The project team has assembled the right partners, and bringing ODOT to the table to remove the fill located in the project area is a significant accomplishment that will provide additional ecological benefit.
- Knotweed treatments conducted by the landowner have been highly effective and the timing of implementing a floodplain restoration project will capitalize on the momentum generated by this completed work.
- The project area is protected through a previous OWEB-acquisition grant and this work will build on this prior conservation investment.
- The wood for the project will be donated and is of appropriate size to place in the stream for restoring watershed function.
- The project will serve to increase awareness of watershed restoration projects because the location is highly visible.
- The applicant has a proven track record implementing similar projects and capacity to implement the proposed work.

Concerns

- There may be a lost opportunity for additional ecological uplift because the design approach does not consider a large-scale process-based restoration strategy. However, the project scale is appropriate for achieving the proposed restoration goals in the identified watershed while balancing reasonable costs.

Concluding Analysis

The proposed floodplain restoration on Big Creek will restore and enhance habitat for fish and wildlife by reconnecting the stream's floodplain through strategic grading and large wood placement, and establishing native plant communities targeted toward pollinators. The effort will build on previous investments by many agencies in the Big Creek watershed and incorporate the long-desired removal and relocation of over an acre of ODOT rock fill from the immediate floodplain.
The selected design is expected to be effective at this site based on lessons learned from nearby restoration projects. The proposed approach and partners involved indicate the project has a high likelihood of success for providing significant ecological benefits for the cost. The landowner is encouraged to consider designing and installing appropriate signage to increase community engagement around watershed health, given the highly visible location of this project.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 7

Review Team Recommended Amount
$267,771

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$267,771

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1030-17470
Project Type: Restoration
Project Name: Calhoun-Rock Creek Restoration
Applicant: Columbia SWCD
Region: North Coast
County: Columbia
OWEB Request: $66,659
Total Cost: $301,695

Application Description *(from application abstract)*

The project is located in Columbia County on lower Rock Creek, a Nehalem River tributary. Numerous issues within the Rock Creek watershed, such as decreased floodplain connectivity, degraded riparian habitat, in-stream habitat simplification, and reduced large wood input, have been identified by a limiting factor analysis (Trask et al 2011). Lower Rock Creek is also listed as a 303(D) impaired water body for elevated temperature by the Oregon DEQ. Similar to the wider watershed, current and historic land uses have degraded the project reach in-stream, riparian and floodplain habitats. Modified flows, and conversion of multi-canopied riparian and floodplain habitat to single stratum pasture, have resulted in increased solar radiation, accelerated streambank erosion and channel degradation promoting channel simplification and floodplain abandonment. For this project the Columbia SWCD is partnering with the NOAA-Wild Salmon Center and the National Fish and Wildlife Foundation (NFWF) to address, within the project reach, increased thermal loading and the limiting conditions detailed by Trask et al 2011. Consequently, the project intends to enhance in-stream habitat complexity through placement of edge-oriented large wood structures and key pieces, restore riparian and floodplain connectivity and structural complexity by lowering an unnaturally steepened bank and re-establishing multi-canopied riparian and floodplain vegetation. Placement of edge-oriented large wood structures and key pieces will increase in-stream habitat complexity by encouraging pool formation, and gravel retention within scoured-bedrock exposed channel bed areas, and development of off-channel habitat to provide lateral margins for high flow fish refugia. Recovery of multi-canopied riparian and floodplain habitat will increase bank cohesion, reduce solar radiation and sediment reaching the stream, and provide sources for long term large wood recruitment.

Review Team Evaluation

Strengths

- Rock Creek is a high priority location to improve habitat for salmon, especially fall Chinook.
- Rock Creek has water quality concerns, specifically temperature, that will be addressed by actions such as the planting proposed in this application. The creek is also the drinking water source for the City of Vernonia.
- The landowners are supportive and engaged in restoration on their property.

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Concerns

- The planting plan lacks detail and clarity needed to understand technical soundness of the approach, and includes conifer species that are not native to the area as well as extensive herbicide use upstream of the City's drinking water system.
- The project designs lack clarity because only working copies are provided with the application. On the site visit, it was indicated that the designs changed since application submittal. The most current designs drop several of the originally proposed large wood structures, which reduces the potential ecological benefit that could be gained from the investment.
- The primary focus of the project appears to be bank stabilization rather than restoring watershed function. As a result, the project approach treats a symptom rather than the root cause of watershed impacts and project implementation may push the erosion problem elsewhere.
- The proposal to tip trees from the riparian area into the creek may not be technically sound, given the smaller diameter of these trees compared with the size of the active channel width. Since this large wood proposed for tree tipping is undersized for the size of the stream, it will likely not provide benefit to the site for long because high water flows will move it downstream.
- The proposed buffers are not very wide, which limits the expected ecological benefit of the proposed work for the cost.
- The designs miss the opportunity to reactivate side-channels and reconnect the floodplain, and as such the project is not likely to have significant benefit to fish habitat conditions in Rock Creek.

Concluding Analysis

Rock Creek is a high priority location to improve habitat conditions for fish populations in the upper Nehalem watershed and the project site has potential for restoration. The proposal misses an opportunity to significantly address watershed limiting factors on the site because the design focuses mainly on bank stabilization instead of considering strategies for reconnecting the floodplain with the stream and improving riparian conditions. Given the limited ecological benefit possible with the proposed designs, the project is not cost-effective for the expected outcome.

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1031-17475
Project Type: Restoration
Project Name: Seeley Creek Habitat Project
Applicant: Oregon Wildlife Heritage Foundation
Region: North Coast
County: Benton
OWEB Request: $48,837
Total Cost: $62,037

Application Description *(from application abstract)*

Seeley Creek is a tributary of the North Fork of the Alsea River located roughly 2 miles northeast of the town of Alsea and provides approximately 3 miles of anadromous fish habitat. Fish species present in the watershed include ESA-listed coastal Coho, fall Chinook, winter steelhead, cutthroat trout and pacific/brook lamprey. Seeley Creek has been identified in the ODFW's Coho Conservation Plan (2007) as good Coho habitat potential but lacks complexity, over winter habitat, and large woody debris. The proposed restoration section of Seeley Creek is owned and managed by industrial timberland (Weyerhaeuser), is surrounded by young timber and clearcut, and is dominated by alder and reed canary grass in much of the riparian. A habitat assessment conducted by ODFW's habitat program in 2006 categorized the wood volume as low. The Seeley Creek Habitat Project is proposing to use ground based heavy equipment to place 154 pieces of large wood (57 key pieces with a minimum 24" diameter, 97 filler pieces with a 16" minimum diameter) into a 1.1 mile section of Seeley Creek spread over 26 identified sites. In addition to the large wood treatment, a unique side channel re-connection is planned to be completed during the same working period. This section of Seeley Creek contains a historic log pond adjacent to Seeley Creek that was connected with a man-made side channel in 1998 to promote off-channel habitat and provide additional juvenile fish rearing. The pond and side channel are currently dysfunctional but have great restoration potential by removing two concrete inlet/outlet structures and allowing the stream to function naturally. A riparian planting component is also planned to promote conifer growth and large wood recruitment for the long term. Project partners include: Oregon Department of Fish and Wildlife, Oregon Wildlife Heritage Foundation, and Weyerhaeuser.

Review Team Evaluation

Strengths

- Seeley Creek is a priority location to improve habitat for salmon populations in the Alsea watershed.
- The proposal for large wood placement strives to achieve NOAA benchmarks for large wood in a river system, and the wood that will be used is appropriately sized for Seeley Creek.
- The project site is located just above a county park, which could allow public access to the project area and support ongoing local educational activities focused around fish and watersheds.
- The applicant is experienced and has completed similar projects in the past.
- A knowledgeable ODFW biologist will assist with project design and implementation.

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- The project is cost-effective for the work proposed.

Concerns

- The application lacks design details needed to evaluate the technical soundness of the design approach, including information on the stream gradient, floodplain details, topography, bank-full width, and stages for floodplain connectivity.
- The plans for addressing the pond and its impacts are not well-developed in the application. For example, juvenile coho may be stranded in the pond and the application does not indicate how this will be addressed.
- The proposed planting density at 50 trees per acre is low for the site. Limited success could occur with low proposed density for a planting within the reed canary grass dominated areas. The plant list also lacks species diversity.
- The application identified a number of past failures with implementing previous restoration projects on the site, but does not address why those efforts failed, nor discusses how the new proposed work will use lessons learned to achieve success.
- Recent project management resulting in past projects not being completed as proposed may indicate that the applicant has limited capacity.

Concluding Analysis

This project will address limiting factors in the Alsea watershed by improving instream habitat complexity and enhancing rearing habitat for fish. The plan for the large wood placements is technically sound and has the support of an experienced project manager. However, the designs for the alterations to the old artificial pond are not clear, and the application lacks detail needed to evaluate the likelihood of achieving the stated ecological outcomes. The planting plan is also limited in detail and may not be robust enough to be successful in the reed canary grass dominated portions of the project reach. A future application should include more details regarding the characteristics of the stream reach and the designs for the pond alterations in order to provide the information necessary for determining whether the proposed restoration is likely to achieve the stated goals and objectives.

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1032-17380

Project Type: Technical Assistance

Project Name: Coastal Prairie Restoration at Westwind

Applicant: Westwind Stewardship Group

Region: North Coast

County: Lincoln

OWEB Request: $37,875

Total Cost: $48,390

Application Description *(from application abstract)*

Westwind is located on the central Oregon Coast, within the Pacific Northwest Coast ecoregion. The physical setting is at the mouth of the Salmon River, on the south side of the river opposite Cascade Head. The property has approximately 1 mile of shoreline along the Pacific Ocean, and 2.7 miles bordering the Salmon River and its estuary. All adjacent land is owned and managed by the US Forest Service, Oregon State Parks (beach), and Lincoln City (as protected Open space). The Property is located within the Cascade Head Scenic-Research Area (CHSRA). Located in the Southwest corner of the Westwind property is a small coastal prairie that is surrounded by rocky cliffs and a mature Sitka/Hemlock forest. The Baseline Documentation and OWEB Conservation Easement identifies this site, known as Iris Meadow, as remnant upland prairie habitat in fair condition and highly threatened due to invasive species and altered successional processes. It has substantial native diversity and abundance, including a rare species (Sidalcea hirtipes) and potential for other less common species. There are very few relatively intact coastal meadows left, and Iris Meadow is a critical site - it serves as a representative site for what species are found in a coastal prairie and a source site for native seed collection.Westwind and its partners at the Institute for Applied Ecology will attempt to restore this isolated parcel of land - all on Westwind's property - into a model of native plant and animal restoration with an eye on management regimes that propagate native organisms and promote the natural functions of the coastal headland prairies. We are also exploring options for coastal prairie restoration at the Fraser Farm site adjacent to the Salmon River estuary and current upland timbered sites that were historically prairie habitat.

Review Team Evaluation

Strengths

- The proposal has clear goals, objectives, and specific actions.
- The work proposed is a component of the management plan for Westwind and will promote restoration of coastal prairie habitat on the property, a priority for the coast. The work will benefit plant species of concern, including bristly-stemmed checker-mallow, Sildacea hirtipes.
- Iris Meadow, the focus of the work, may be one of the last remnants of coastal prairie in the immediate area.

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- The Iris Meadow site is relatively remote and future restoration treatment will likely have a longer standing positive effect due to the location's isolation preventing potential impacts from invasive species and recreation.
- The technical assistance proposed will help the larger prairie restoration community learn how to implement successful restoration projects on the coast.
- The inclusion of the 67-acre Fraser Farm area into the alternatives analysis creates a larger opportunity for coastal prairie restoration on the property.
- The selected technical provider has the most experience implementing this type of work in Oregon. The proposed technical approach is thorough and appropriate for the project's goals.
- The project is cost-effective because the restoration potential will be evaluated on 70-acres of the property.

Concerns

- The Iris Meadow site is only 3-acres in size, and its small size is difficult to ascertain from the application.

Concluding Analysis

Technical assistance is sought to develop restoration plans for high priority coastal prairie locations on the Westwind property, which encompasses the headlands and sand spit in the southern portion of the Salmon River estuary. The Westwind property was acquired in part with an acquisition grant from OWEB, and this work will build on that investment. There is a high likelihood of success for the project to have a positive impact on rare coastal habitats.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 5

Review Team Recommended Amount
$37,875

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation

Fund

Staff Recommended Amount

$37,875

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1033-17389
Project Type: Technical Assistance
Project Name: Alder Creek Habitat Enhancement
Applicant: Lower Nehalem WC
Region: North Coast
County: Tillamook
OWEB Request: $72,270
Total Cost: $91,620

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 needThe 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. It is estimated that the Nehalem River has lost 55% of its area due to modifications to support agricultural and residential uses.This area has been set aside by the landowner (Lower Nehalem Community Trust) for conservation. Additionally, there are several habitat types located on the project site. Restoration in each habitat type would provide easily accessible examples of restoration activities that could then also be implemented on other properties. 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. These designs will address restoration of tidal channels, the addition of in stream wood, riparian vegetation restoration, removal of infrastructure from the flood plain, and lowland prairie restoration. 4. Proposed Partners:Lower Nehalem Community TrustTillamook Estuaries Partnership Lower Nehalem Watershed CouncilNatural Resource Conservation ServiceOregon Department of Fish and Wildlife

Review Team Evaluation

Strengths

- The application is clear and demonstrates willingness to actively implement restoration on the conservation property. This iteration of the application is improved from previous submissions with goals, objectives, and actions that are specific and can lead to a technically sound restoration project plan. The design process and expectations of a technical service provider are better developed and refined.
- The applicant has coordinated with Tillamook Estuary Partnership (TEP) and NRCS, which addresses prior review team concerns about a lack of engaging stakeholder input.
- The site location provides a potential for fish and wildlife habitat development in the lower Nehalem watershed. The project area is adjacent to other conserved properties that may be valuable as restoration sites.

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- A portion of the project will occur on Alder Creek Farm, which was purchased in part with an OWEB Acquisition grant. This project builds on this prior conservation investment. The project location is highly visible and a restoration effort could provide opportunity to raise public awareness.
- The applicant has the organizational capacity for managing the proposed technical assistance with a Board of Directors that are committed to the project and engaged in the community.

Concerns

- The vision for restoring habitats on the property is still unclear. There are a diversity of habitats and options the applicant wants to pursue. However, it is unclear from the application how the applicant plans to strategically sort and elevate priority actions so that the right habitats are targeted first.
- Additional details on design specifications would be helpful to understand the expected restoration project that will result from this technical assistance.
- The project lacks a technical advisory team to guide the project. Given the easement on the property, it is important to involve NRCS and other natural resource agencies in the design process.
- The cited actions from the recovery plan are for freshwater streams only, estuarine actions should also be taken into account for this project location.

Concluding Analysis

This technical assistance work will evaluate restoration options for the Alder Creek Farm property in the lower Nehalem watershed. This site is a visible location to restore fish and wildlife habitat in the region, and the applicant's Board and project partners are engaged and committed. While some project details remain to be developed, the proposed technical assistance will engage a qualified technical provider to complete needed restoration planning that will benefit habitat resources on this conservation property. The applicant is encouraged to (1) use adjacent reference sites, site history, and current sea level rise information to help guide the design process, (2) look at Tillamook County Land Use Planning rules to determine whether there are any constraints for active restoration at the project site, and (3) communicate and coordinate with NRCS from project concept to project completion.

Review Team Recommendation to Staff
Fund with Conditions

Review Team Priority
3 of 5

Review Team Recommended Amount
$72,270

Review Team Conditions

Prior to first payment request, a letter must be submitted from NRCS confirming their participation in the project and commitment to provide input to the technical assistance products.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

$72,270

Staff Conditions

Prior to first payment request, a letter must be submitted from NRCS confirming their participation in the project and commitment to provide input to the technical assistance products.

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1034-17421
Project Type: Technical Assistance
Project Name: Raymond Creek Floodplain Design
Applicant: Scappoose Bay WC
Region: North Coast
County: Columbia
OWEB Request: $74,961
Total Cost: $114,461

Application Description *(from application abstract)*

This technical assistance project is located on Raymond Creek, a tributary to South Scappoose Creek, Scappoose Bay and the Lower Columbia River (LCR). The site is approximately 3.5 miles upstream of the City of Scappoose, in southern Columbia County. Written reports and oral histories indicate that all fish species have declined dramatically in the watershed, including in Raymond Creek. LCR Coho, Steelhead and Cutthroat were all historically abundant in Raymond Creek, and were observed in limited numbers during ODFW surveys (SBWC Watershed Assessment, 2000). Rural residential development has led to poor instream and riparian conditions, including eroding and undercut banks, fish passage concerns, stream channelization, cattle grazing and crossings, lack of large wood and lack of riparian vegetation (ODFW Aquatic Inventory, 2009). Local landowners have expressed concerns due to recent flooding, leading to this proposal. The project will analyze hydrologic and geomorphic conditions, conduct two-dimensional modeling, develop engineered designs for reducing the number of crossings and restoration designs for adding improvements to instream and riparian conditions. The project will work with landowners on alternative analyses, and permitting agencies to find the best alternative for implementing restoration actions. Refined designs will be submitted to permitting entities. Project partners include landowners, Columbia County, ODFW, Lower Columbia Engineering and the SBWC.

Review Team Evaluation

Strengths

- The proposal has clear goals and objectives.
- Landowner participation within the project reach is impressive with five landowners committed to the project, and there is a possibility of engaging more landowners through the technical assistance work.
- The resulting restoration project will benefit native fish. Surveys in Raymond Creek identified 1.1 coho parr/square mile in the summer, which is a significant figure for this particular watershed.
- The road crossings are all partial barriers to fish migration and removing them will improve passage to upstream cold water refugia higher in the watershed.
- The likelihood of future restoration is high because a broad partnership supports the project.
- Proposed riparian buffers are substantial, and removing livestock from the creek will provide water quality benefits.

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Concerns

- Line items in the budget for engineering costs are listed as lump sums, which lacks detail needed to evaluate whether costs are reasonable or are possibly over-inflated.
- One of the major project elements is raising a bridge in the center of the project reach. This action may not provide the intended flood relief and ecological benefits due to the characteristics of the floodplain at this location. Raising the bridge may lead to building a berm in the floodplain that could have unintended impacts.
- The proposed technical assistance will plan future restoration that reactivates the floodplain in a developed area. This can be challenging because it requires designing around pinch points in the floodplain, such as crossings or other infrastructure, which may lead to additional stream channel scour. However, building floodplain water storage where feasible and restoring access to cold-water refugia addresses limiting factors for the Scappoose Watershed.
- It appears a technical provider for the project has been pre-selected and may not have a geomorphologist on staff. The applicant is encouraged to ensure that the selected provider engages additional technical expertise as needed to address hydrological concerns identified during the project.
- Potential partners with technical expertise and resources that could benefit the planning process are lacking, such as NRCS who may be able to bring access to on-farm conservation programs.

Concluding Analysis

Technical assistance will produce construction-ready designs that address a series of fish passage barriers and enhance floodplain habitat on Raymond Creek in the Scappoose Bay watershed. Raymond Creek is a high priority location within this watershed to improve habitat for lower Columbia River fish species. There are some identified site constraints that may complicate design work, but the project has broad community support and is an opportunity to complete restoration in a visible location that benefits both fish and rural residents.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 5

Review Team Recommended Amount

$74,961

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$74,961

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1035-17462

Project Type: Technical Assistance

Project Name: Conyers Confluence Area Enhancement

Applicant: Columbia SWCD

Region: North Coast

County: Columbia

OWEB Request: $44,550

Total Cost: $56,675

Application Description *(from application abstract)*

Project location is at confluence area of Conyers Creek and Clatskanie River (~RM 1). Recent strategic action planning documentation is pointing to the importance of low gradient floodplain habitats for rearing and foraging needs of juvenile salmon and steelhead populations for Lower Columbia River watersheds. Lower section of Conyers creek is an example of high ecological value restoration opportunity in its proximity to its confluence with the lower Clatskanie river. It is positioned at the head of tidal influence which are known to play an important transition area for needs of juvenile and adult salmon and steelhead as they enter the estuarine environment.Technical services are needed to support feasibility investigation of project concepts to improve instream habitat complexity and function of adjacent floodplain wetlands. Scope of these services include field data collection, geomorphic and hydrological assessment, flood risk analysis, alternatives analysis, and design. Effort is meant to compliment previous restoration efforts in the area that have been completed and being planned in the form of fish barrier removal and streambank enhancement. Given its location within the City of Clatskanie urban boundary, project will also benefit from design elements that examine adaptation strategies in light of increased coastal storm events from climate change. Environmental education efforts are also part of this project to continue Watershed Council partnership with high school students stewardship activities in the form native riparian plantings and overall experiential learning programming occurring in the areas watersheds. Project partners include City of Clatskanie, Columbia Soil and Water District, local landowners, and Clatskanie High School environmental education program.

Review Team Evaluation

Strengths

- The project site is a highly visible location in the town of Clatskanie. A restoration project here could serve to raise awareness about watershed health.
- The location at the confluence of Conyers Creek and the Clatskanie River is a high priority location for species recovery of lower Columbia fish species, particularly for juvenile life stages. The Lower Columbia River Recovery Plan identifies the Lower Columbia River coho, Lower Columbia River Chinook, Lower Columbia River steelhead, and Columbia River chum populations as a priority.
- There are many opportunities for a wide variety of restoration elements at the site.
- There are no barriers downstream in the system preventing fish from accessing the project area.

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Concerns

- There is no defined project area or map provided in the application. There are at least eight taxlots present in the immediate area; however, only two landowners are confirmed for participating in the project.
- The project goals and objectives are unclear in the application, and the budget provides costs as lump sums. It is difficult to determine whether project costs align with the proposed work without clear project objectives and budget details.
- There is significant erosion happening at the lower end of the project reach. Design alternatives that address the site constraints around the bridge and downstream impacts could be challenging to develop.
- The applicant has reduced capacity to implement the project with no full-time staff dedicated to the council at this time.

Concluding Analysis

The project is located in a critical site for restoration at the confluence of a major tributary with the Clatskanie River, and restoration here could address limiting factors identified for lower Columbia River fish. Although there is some uncertainty about the nature of landowner support for a project here, the site has potential for future restoration that will result in meaningful ecological uplift in a priority area if landowner participation is broad and demonstrates a clear commitment.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

5 of 5

Review Team Recommended Amount

$44,450

Review Team Conditions

Prior to first payment request, a project area map and landowner agreements must be provided from all landowners located within the project area.

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1036-17490

Project Type: Technical Assistance

Project Name: Clear Creek Fish Passage/Habitat Design

Applicant: Upper Nehalem WC

Region: North Coast

County: Columbia

OWEB Request: $41,158

Total Cost: $52,006

Application Description *(from application abstract)*

UNWC will work in partnership with Weyerhaeuser and ODFW to strategically improve fish passage and natural stream conditions in the Clear Creek basin (Upper Nehalem River tributary). Fish passage and habitat deficiencies have been identified at 5 road/stream crossings (NCAP analysis) and 4 aquatic anchor habitats (NSAP analysis) within the project footprint area respectively. Weyerhaeuser will contract with McGee Engineering and River Design Group to survey, design, and develop engineered redi-set plans to construct unconditional native migratory fish passage at 5 road stream crossings (sizing the new crossings to a minimal 1.5x active channel width). Each crossing will include stream simulation design where necessary. Project partners will collaborate on the design process to improve aquatic anchor habitat (anadromous winter and summer rearing refuge and spawning habitat, floodplain connectivity, sediment storage and natural valley storage capacity) thru strategic placement of 60 complex large woody debris (LWD) structures (15 per treatment reach). Plan sets developed by this technical assistance work will be used to secure funding, solidify partnerships, and bring these proposed improvements to fruition.

Review Team Evaluation

Strengths

- Clear Creek is a priority location for addressing limiting factors for salmon in the upper Nehalem watershed. A resulting restoration project will have benefits to juvenile life stages and restore habitat complexity.
- The applicant is taking a thoughtful approach to improving stream crossings and attaining watershed benefits by pursuing technical assistance prior to restoration. There is a substantial amount of sediment upstream that requires careful design considerations to insure its movement does not habitat aquatic habitat.
- Focusing work in upper tributaries of the watershed has downstream benefits by contributing to the restoration of sediment transport processes.
- Restoring fish passage to the tributaries will provide high flow refuge to Oregon coast coho and other fish.
- Adjacent stands will be harvested soon and there is a possibility the wood can be utilized for habitat structures in a future restoration project.
- The cost for the engineering work appears reasonable and the budget is appropriately detailed.

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Concerns

- The application would benefit from more information on future land management in the context of the entire watershed to better understand how a watershed restoration project fits into long-term goals for managing the forest property.
- Some of the smaller streams in the project area may not be fish-bearing and the ecological benefit of restoring passage is marginal.

Concluding Analysis

Technical assistance will produce project designs that address the goal of restoring fish passage and habitat complexity in the Clear Creek basin on the upper Nehalem. With the catchment entirely managed by one landowner, it presents an opportunity to systematically address limiting factors for fish across the entirety of the Clear Creek watershed. Restoration here could support watershed processes and also provide important refuge habitat for juvenile coho seeking an escape from high velocities or high water temperatures. The ecological benefit may be limited given that some of the crossings may not provide access to fish-bearing streams. However, there is potential for a meaningful restoration project and with the experience of the project team, the project's likelihood of success is high.

Review Team Recommendation to Staff
Fund

Review Team Priority
4 of 5

Review Team Recommended Amount
$41,158

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1037-17378

Project Type: Monitoring

Project Name: Continuing Columbia SWCD Water Quality Monitoring Program

Applicant: Lower Columbia Estuary Partnership

Region: North Coast

County: Columbia

OWEB Request: $25,025

Total Cost: $47,452

Application Description *(from application abstract)*

The Lower Columbia Estuary Partnership, the Columbia SWCD and partners request $25,025 to continue water quality monitoring in four key subbasins in Columbia County. We have been collecting these data since 2017, and this grant will support year four of five planned data collection years. Monitored watersheds 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 be used to fill data gaps, build a dataset that provides an understanding of ambient conditions and potential problems. This understanding will allow us to address limiting factors to improve watershed conditions.This project will build on existing data from 2008-2010 (Scappoose/Milton) and 2017-2019 (all subbasins) and collect samples in discrete upper and lower watershed locations to measure bacteria, temperature, turbidity, conductivity, dissolved oxygen, and pH. 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. We will produce a water quality report, that will inform the Columbia SWCD's Annual Report, which is distributed to the community to educate and engage them in conservation, restoration, and best management practices. Project partners include: Columbia SWCD, Lower Columbia River Watershed Council, Scappoose Bay Watershed Council, and Oregon Department of Environmental Quality.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application made a clear need for the data to continue to be collected for a variety of purposes, including informing future restoration and development of TMDLs.
- The applicant has an existing Sampling and Analysis Plan and proposes to work with DEQ to revise it to reflect proposed monitoring efforts.
- The additional parameters proposed to collect are appropriate.
- The applicant plans to continue coordination with the SWCD to collect and share data with DEQ and local stakeholders.

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- The letters of support provided by the SWCD and Scappoose Bay Watershed Council demonstrate the need for and intent to apply this information.
- The OPMT appreciated incorporation of the land-cover analysis to help interpret the data.
- The application proposes to collect data for a reasonable cost and provides significant match to offset the total request for funding from OWEB.
- This project is in Year 4 and has considerable momentum, given the established sampling sites.
- The applicant has the expertise to complete this work and a good track record of collecting and reporting data, as evident by the uploaded 2017 monitoring report.

Monitoring Team Concerns

- The application had conflicting information regarding if this monitoring would provide four years of data for all the sub-watersheds identified.
- The OPMT expressed concern that having 5 years of data may not be enough to establish a discernible trend.
- The application was not clear as to why the applicant is proposing to collect additional turbidity samples during the summer months.

Monitoring Team Comments

• Coordinate with DEQ to check in at Year 5 to refine monitoring priorities and next steps to ensure sufficient data exists to establish trends.

Review Team Evaluation

Strengths

- The data being collected fills an important data gap identified by natural resource agencies.
- The applicant is working effectively with DEQ on the project, and all data will be submitted to the AQWMS database.
- Data collection for most parameters is proposed at appropriate time intervals.
- The applicant responded to previous review team comments by removing the macroinvertebrate surveys from the project while adding bacteria sampling.
- The proposal provides a summary of preliminary findings from the previously funded monitoring grant, which is helpful in determining utility of continuing the work.
- The project is viable long-term due to an effective partnership that has a proven track record and organizational capacity to utilize the data. The partners have a history of ensuring data analysis is completed, and results are shared with conservation and restoration organizations working in this region.
- The applicant is currently using the data from this ongoing monitoring effort to inform restoration work on the ground.

- There are monitoring sites located downstream of a proposed restoration project. Comparing this data with other projects in the watershed will provide information useful in evaluating the success of planned restoration.

Concerns

- The proposed grab samples may have limited utility.
- It would be preferable to increase the rate of bacteria sampling to five times each 90 days.
- DEQ prefers to have eight years of data collection prior to establishing a trend. However, the long-term goals of this project is to collect only five years of baseline data, which may be inadequate for establishing a trend.
- Additional samples are needed to establish whether the state standards for bacteria are met.

Concluding Analysis

Continuing this monitoring work in the Lower Columbia region is important for collecting adequate baseline information and filling identified gaps in water quality data. Since there is a history of the partners meeting monitoring goals and objectives, there is a high likelihood of success they will continue to collect baseline water quality data. This effort is cost-effective and will achieve year four of a total of five planned years of data collection.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 5

Review Team Recommended Amount
$25,025

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$25,025

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1038-17400

Project Type: Monitoring

Project Name: Siuslaw Coho Partnership Coordinated Water Quality Monitoring Phase 1

Applicant: Siuslaw WC

Region: North Coast

County: Lane

OWEB Request: $18,577

Total Cost: $39,609

Application Description *(from application abstract)*

This project expands on a concept successfully demonstrated by two members of the Siuslaw Coho Partnership (SCP, Partnership) since 2016. Since then, the Siuslaw Watershed Council (SWC) and Siuslaw Soil and Water Conservation District (SWCD) have partnered on continuous water quality monitoring in SWCD priority streams at 15 locations and submitted the data to the Oregon Department of Environmental Quality (DEQ). Data is then uploaded to the Ambient Water Quality Monitoring System (AWQMS) where it can be viewed, graphed and downloaded. AWQMS automatically migrates the temperature data to the Environmental Protection Agency (EPA) Water Quality Exchange (WQX) in the form of daily statistics such as minimum and maximum. We are proposing to expand the pilot project to three additional SCP organizations: Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (CTCLUSI); the United States Forest Service Siuslaw National Forest (USFS); and the Bureau of Land Management Siuslaw Resource Area (BLM). Primarily continuous stream temperature data will be collected at 67 total sites with SCP partners performing the field work and SWC managing the data. This project addresses the need for agencies to cooperate in the planning and collection of water quality data to increase efficiency, coverage, and create economies of scale. The monitoring project proposed here will standardize the SCP data into one convention already being used by the State of Oregon and make it accessible to the public in interactive maps and databases online.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application references several assessments and planning documents that identify water temperature as a limiting factor and the need for data sharing and improved accessibility.
- The effort to expand collaboration and standardize water temperature monitoring protocols across several organizations in the Siuslaw River watershed is extremely valuable.
- This project will result in data being shared with DEQ and wider audiences, due to the data being uploaded to a central database.
- The applicant has an existing Sampling and Analysis Plan (SAP) approved by DEQ; this can serve as a good starting point to develop a new SAP that includes the additional agencies interested in participating.
- The application contains support letters from the participating organizations, reflecting their commitment to the project to increase coordination of monitoring and sharing of the data.
- The budget is reasonable, includes a break-down of costs for various tasks, and demonstrates match commitments of partners.

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- The applicant has good experience in successfully implementing an initial version of this project in cooperation with the Siuslaw SWCD.
- The applicant has a good track record with collecting continuous water quality data and reporting it to OWEB in final completion reports.

Monitoring Team Concerns

- The application timeline and objectives do not account for the time and effort needed to 1) develop a monitoring plan and SAP with DEQ, and 2) determine how to incorporate the Confederated Tribes of Coos, Siletz and Lower Umpqua Indians continuous and discrete water quality monitoring data.
- It was not clear why the water quality data collection was being limited to June and October.
- The application did not provide a description of how the data will be analyzed and reported by sub basin or parameter, given that a broad area is covered by the monitoring and a variety of data types will be collected and compiled.
- The application lacks a detailed description of what future decisions the data will help inform, thus it was not clear if this work will inform future monitoring, management, and/or restoration actions.

Monitoring Team Comments

• Coordinate with DEQ early in the project to develop the SAP.

Review Team Evaluation

Strengths

- The project will continue long-term water temperature monitoring, and supports TMDL goals in high priority watersheds.
- Monitoring efforts are coordinated with the Coho Business Plan.
- Increased coordination among all partners involved in water quality monitoring in the Siuslaw and Coastal Lakes watersheds will improve efficiency and consistency among efforts across disparate land ownerships.
- A significant amount of water quality information will be collected in a basin with diverse management. This effort should produce baseline data over the long term and help to inform restoration.
- The applicant has a proven track record in collecting and analyzing water quality data.
- Data collection is proposed at an appropriate frequency and with relevant methodology.
- The data from the basin will be entered into the state AWQMS database.

Concerns

- Sampling 67 monitoring sites will require a significant amount of staff time to manage, and will produce a large amount of data to handle and analyze.

- Shifting the sampling time range to May through October would increase the likelihood for the data to capture early water temperature issues that may arise in portions of the watershed.
- Many of the sampling sites are directly associated with restoration areas and may not provide information about overall watershed conditions. Integrating different locations outside of restoration project reaches may be needed to identify watershed trends.
- The applicant is relying on AWQMS for data analysis, which may not be effective for using the data to inform future restoration. Additional analysis outside of AWQMS may be needed.

Concluding Analysis

There are many active partners within the Siuslaw and Coastal Lakes watersheds collecting water quality data. This project will effectively coordinate all of these monitoring efforts across land ownerships and provide the Siuslaw Coho Partnership with the capacity to collectively input the data into the AWQMS database. The benefits of increased coordination will improve the cost effectiveness of monitoring projects in the basin, as well as consistency with how data is handled and analyzed. The applicant is encouraged to expand the sampling timeline to May through October.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 5

Review Team Recommended Amount
$18,577

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$18,577

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1039-17411

Project Type: Monitoring

Project Name: Siuslaw Coho Partnership Effectiveness Monitoring Phase 2

Applicant: Siuslaw WC

Region: North Coast

County: Lane

OWEB Request: $74,692

Total Cost: $120,025

Application Description *(from application abstract)*

The Siuslaw Coho Partnership (SCP, Partnership) completed two Strategic Action Plans (SAP) for the recovery of threatened Oregon Coast (OC) Coho Salmon populations in the Siuslaw River and Coastal Lakes watersheds. This partnership planning effort was funded largely from OWEB to create the partnership framework and create recovery plans for the threatened species informed by NOAA's recovery plan for OC Coho released in 2016. The SAPs represent over 3 years of modeling, planning and coordination among the 10 partnership members to identify and prioritize over 100 restoration projects which we believe represent the most strategic and best opportunities we have to recover OC Coho in our watersheds. In 2019-2021, planned SCP projects will add large woody debris to approximately 23.5 stream miles and reconnect over 400 acres of floodplain. Though these types of projects have become common in the Pacific Northwest, their implementation varies by agency and individual expertise, and evaluation of the habitat and biological responses to the restoration is limited. As the lead organization of the SCP, the Siuslaw Watershed Council (SWC) is proposing to continue effectiveness monitoring of SCP projects by conducting phase 2 of Aquatic Habitat Inventory (AQI) and riparian vegetation transects in SCP priority stream reaches. This effectiveness monitoring is the result of the development of a monitoring framework proposed in the last chapter of the SAPs developed by the SCP as a way to inform adaptive management. In 2019, over 11 miles of pre-implementation habitat surveys were completed in the Upper Indian Creek sub-basin as part of phase 1 of this project. Linking responses in physical and riparian conditions to our restoration actions will enable adaptive management to ensure we are protecting and restoring the natural processes for the conservation and recovery of OC Coho. Data and knowledge gained will better inform restoration priorities in the Siuslaw.

Monitoring Team Evaluation

Monitoring Team Strengths

- This monitoring project will help address information needs related to Oregon coast coho.
- Effectiveness monitoring data will provide information to understand outcomes of current and planned restoration actions and could inform future restoration planning efforts.
- The habitat monitoring methods follow established ODFW protocol, and will utilize staff that are already familiar with these methods.
- The applicant will attend annual ODFW trainings to stay current with the monitoring methods.

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- There is a clear monitoring study design to collect 1 year of pre- and post-project data and revisit the monitoring 5 years post-project to understand changes to instream habitat and riparian vegetation.
- The applicant proposes to build on previous data that have been collected before restoration projects were implemented.
- The application includes an objective and a deliberate task in the timeline to revisit the monitoring plan to determine if there is a need to modify it with input from agency partners.
- The application includes an objective to annually review priority areas and discuss what the monitoring data is showing, thus informing decisions in an adaptive management framework.

Monitoring Team Concerns

- The OPMT questioned the value of the first year of post-project data, given that past monitoring reports indicate it takes several years for habitat to respond to the restoration actions.
- At different locations in the application, there was a lack of detail about the riparian monitoring transects.
- The riparian methods were difficult to locate using the reference provided in the application.
- The application lacked a letter of support from USFS to understand how they would utilize the data to be collected.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The AQI survey methods proposed are technically appropriate.
- The proposed monitoring work is based upon the Strategic Action Plan recently completed by the Siuslaw Coho Partnership.
- The applicant is coordinating effectively with state agencies and other regional partners to develop a monitoring strategy.

Concerns

- The proposal lacks clarity and supporting rationale for the proposed work.
- A well-described vision of how the proposed monitoring work will inform the actions of the Partnership is needed to understand the purpose of the project. It is unclear whether the need for restoration effectiveness monitoring or the Strategic Action Plan is driving the monitoring approach, and how this is informing the logic pathway for identifying the parameters and protocols for this project. Additional information is needed to understand the rationale for what is being monitored and why.

- Extensive data will be collected one year after restoration project implementation on a broad scale. This timeline does not match the watershed system response to restoration. As a result, data collected at this interval is unlikely to inform whether restoration actions are effective if there is not a significant flood event within the first year. Repeat monitoring should ideally be triggered by flow events, such as a bankfull or five-year flood event, rather than a time interval after restoration.
- There are no reference reaches proposed for survey, which would be useful in interpreting the data collected within the restoration reaches.
- Riparian monitoring is proposed but only limited detail is provided. It is unclear what protocols will be utilized and how monitoring only one year after implementation will contribute meaningfully to the data set. The proposed AQI survey work will not provide information on planting success. Riparian monitoring should focus on survival and invasive plant cover in the first three years after restoration to monitor plant establishment, and data at five and ten years can provide information on trends.

Concluding Analysis

The proposed monitoring plan collects habitat data at three intervals- pre-project, one-year post-project, and five-years post-project implementation. The majority of the work proposed under this funding request is pre- and one-year post project. While the pre-project data proposed is likely appropriate and relevant, the usefulness of the one-year post-project interval may be limited. Changes in channel morphology associated with the restoration work may not be apparent after such a short time interval, and the cost of performing this year of survey may outweigh the potential benefits gained from the data. If a future application is submitted, the applicant is encouraged to include more details about the vision for the monitoring plan, more details about the riparian monitoring, and rationale of the proposed timing of post-project data collection.

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1040-17414
Project Type: Monitoring
Project Name: NCWA Monitoring 2020-2021
Applicant: North Coast WS Assn
Region: North Coast
County: Clatsop
OWEB Request: $14,317
Total Cost: $19,417

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 which was begun in 2016 and 2017 respectively over an additional two year period ending in the fall of 2021. DEQ prefers an eight year period of monitoring for stream temperature. Oregon DEQ has major data gaps in these watersheds and our continuous temperature monitoring assists DEQ in establishing TMDL data. NCWA is currently using the data to help inform restoration decisions in our Chum SAP and Landowner Outreach programs.Temperature results are analyze and reported back to NCWA by DEQ. We are just getting the numbers from our data loggers reported to DEQ for 2019 and they have promised results for 2018 by the first of November. In comparing the information in our reports from 2016 and 2017 we saw major changes in water temperature at 2 of our 22 sites; Young's River doubled the days of exceedance in 2017 and the Skipinon site had half the number of days of exceedance.This Project will:1. Collect time-series temperature data from 4 identified watersheds during the summertime months2. Deploy loggers at 22+ established sites 3. Follow DEQ approved Sample & Analysis Plan4. 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 157. Upload data and maintain organized file system on NCWA computer, backed up to iCloud8. Submit data to DEQ for processing and uploading to AWQMS9. Make data publicly available on NCWA website once processed/vetted by DEQ and promote its availability to partners and community members (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 application makes clear the need for data collection to continue to support a variety of purposes, including informing future restoration and development of TMDLs.
- The application had a good plan for information sharing information with DEQ, making it available on their website, and providing local presentations to watershed councils and via a lecture series.
- This project has potential to help recruit landowner participation in coordination with their Chum Strategic Action Plan and landowner outreach programs.
- The applicant has a completed Sampling and Analysis Plan that has been approved by DEQ.

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- This project is a continuation of ongoing monitoring efforts, and the applicant has a good track record of data collection and presentation of results to a wide audience (e.g., example poster product).

Monitoring Team Concerns

- The application had conflicting information about the exact number of sites to be monitored.
- There was a lack of concrete description about how this monitoring will help recruit landowners.
- The application timeline and objectives do not include data analysis and completion of a final report to OWEB, which is required to finalize the grant.
- There was a lack of detail about what efforts relate to the Chum SAP and how this project will contribute to those efforts.
- The application lacked letters of support to understand how data can contribute to local partners' interests.
- With the exception of the match source, the application did not describe that grantee will be working with high school students or explain how they will be trained to ensure data quality is maintained.
- It was unclear if the applicant is ready for landowner outreach since the application lacked detail about the specific actions they plan to undertake.
- The maps did not well describe where monitoring was occurring, since the stream layers were missing.

Monitoring Team Comments

• Check the insurance requirement to cover liability requirements for working with children.

• There is value in targeting outreach efforts in all areas, including areas where water temperature is below thresholds.

Review Team Evaluation

Strengths

- The project is an ongoing effort with a track record of success. Previous data collected has been of high quality and was analyzed and presented well.
- The applicant has coordinated with DEQ's volunteer monitoring coordinator and other relevant state agencies. DEQ processes the data and the council presents the data to the community.
- The data has relevancy by informing restoration actions, and has also been utilized in presentations to ODA and stakeholders through the Agricultural Water Quality Plan public process.
- Data collected will be used in the applicant's strategic action plan for community outreach and landowner coordination.
- The applicant organization has an outreach coordinator who has worked effectively with landowners in the watershed, and this data will contribute to that work.
- The information collected will contribute to the Chum Strategic Action Plan currently in development for the watershed.

Concerns

- No significant concerns were noted during review.

Concluding Analysis

This ongoing temperature monitoring has consistently produced high quality data and proved to be useful in community outreach. The work is also relevant to several ongoing planning and restoration efforts in the watershed, including the chum reintroduction in the lower Columbia River watershed. Consistency in field staff collecting the data contributes to a high likelihood of success for this continued monitoring over an additional two years.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 5

Review Team Recommended Amount
$14,317

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$14,317

Staff Conditions

None

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1041-17455

Project Type: Monitoring

Project Name: Mid Coast Monitoring Project AQI 2019

Applicant: Lincoln SWCD

Region: North Coast

County: Lincoln

OWEB Request: $66,407

Total Cost: $89,203

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 populations and life-cycle patterns. Consequently, many ongoing and proposed watershed enhancement and restoration projects within the Mid Coast focus on improving the health and fitness of coho and other salmonid populations. 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 the effectiveness of restoration goals after projects are completed. Lincoln Soil and Water Conservation District's Mid Coast Monitoring Project (MCMP) has been a long-term data collection program in the Salmon, Siletz, Yaquina, Alsea, and Yachats River Basins, along with many ocean outfall creeks. Partners include ODFW, the Confederated Tribe of Siletz Indians, Mid Coast Watersheds Council (MCWC), USDA-NRCS, Salmon-Drift Watershed Council, Siletz Watershed Council, and private landowners. This project proposes monitoring habitat conditions as pre- and post-project Aquatic Habitat Inventory (AQI). These data can be used to monitor the effectiveness of stream restoration work and enhancement projects. The collection of data before a project is implemented is vital in establishing baseline conditions for stream habitat which can then be used in assessing the effects of restoration and enhancement, such as LWD placement, culvert replacement, and riparian plantings. Habitat data collected by the MCMP crew is also used as a monitoring tool to determine the utility of sites and to 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 application proposes to continue monitoring multiple restoration projects implemented by various organizations across several sub-watersheds.
- The application includes a thorough description about how data will be managed, analyzed, and reported to determine whether restoration is improving aquatic habitat.
- The application described how the local partners use data to plan future restoration projects and to understand the outcomes resulting from completed restoration projects.
- The application materials and attached letters of support demonstrate partners' interest in the data.
- The applicant has a good track record of collecting habitat data in coordination with several partners.

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- The costs are reasonable and a reasonable amount of matching funds are contributed.
- The uploaded report was helpful to understand how the historic data have been analyzed to understand restoration effectiveness.

Monitoring Team Concerns

- The description of monitoring methods lacked detail and cited an outdated version of the protocol.
- It was not clear how the monitoring program has evolved over time to ask more targeted questions, in an effort to better understand the mechanisms of success or why habitat improvements may not have been realized.
- It was unclear how previous review comments were addressed in the application.

Monitoring Team Comments

• Prioritize and rank sites to repeat monitoring of restoration that was implemented over a longer period of time, and standardize when repeat surveys will occur to ensure habitat changes are described through time.

Review Team Evaluation

Strengths

- The monitoring team is trained annually by ODFW personnel in Corvallis. Previous data collected is consistently of high quality.
- AQI data has informed prioritization of work locations and stream restoration methods over time.
- The data has helped ODFW and other conservation partners engage with various landowners in the watershed.
- State agencies with reduced budgets over the last decade have greatly benefited from the ability of the Mid Coast Monitoring Project to complete survey work that otherwise would have been discontinued.
- A report is included in the application that summarizes results and accomplishments of the program over the past couple decades, this is something that was requested in previous application reviews.

Concerns

- OPMT noted that protocols referenced in the application are outdated.
- Capacity of the applicant is uncertain because long term staff that previously implemented this monitoring work are no longer with the organization. The capacity of current staff to implement the monitoring protocols is unknown.
- Additional detail explaining how the monitoring effort connects with developing the Coho Strategic Action Plan in the Siletz basin would be helpful for understanding how the data could be used.
- After many years of data collection and the long-awaited 20-year summary report, it is unclear how the collected data has translated into actions within the watershed.

- Very few products, such as reports or other engagement tools have been made available from this data collection efforts over the years despite the abundance of information collected.
- The data may have limited utility in refining the locations of proposed projects due to the broad geographic focus of this monitoring project.

Concluding Analysis

This long term monitoring project has been ongoing for over 20 years and has provided data that is continually utilized by ODFW and other partners. Previous work by the surveyors involved has created many in-roads with landowners that otherwise may have been challenging to engage. However, there is uncertainty about how the data is utilized and informs on-the-ground restoration actions within the project area watersheds. The included report provides some of that information, but it is unclear how local partners are effectively using the data to plan work. There has also been a lack of outreach products and community engagement around the data. The application would have benefited from details about the plan to complete monitoring work given recent staffing transitions as well as a clearly articulated vision for the continuation of this work.

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1042-17471

Project Type: Monitoring

Project Name: Nestucca, Neskowin & Sand Lake Expanded Monitoring

Applicant: Nestucca-Neskowin Watersheds Council

Region: North Coast

County: Tillamook

OWEB Request: $36,831

Total Cost: $72,378

Application Description *(from application abstract)*

The project proposes to collect temperature and bacteria monitoring data in priority reaches of the Nestucca, Neskowin and Sand Lake watersheds during 2020-21, with future phases planned for an additional minimum of two years and potentially six additional years to capture data over a statistically significant timeframe needed for robust trend analysis. The monitoring program's goal is to fill a data gap on bacteria loads and stream temperatures in key locations to inform prioritization and planning for restoration projects. Existing water quality data collected by state and federal natural resources agencies and NGOs over the years (1998 to present) indicate that surface waters in these basins are water quality limited the following ways:1. Many mainstem stream reaches exceed the state temperature standard and are too warm to protect salmon and trout. However, limited information is available for the tributaries.2. Fecal bacteria concentrations in Nestucca Bay are occasionally too high to allow human contact with the water as well as too high to protect human consumption of shellfish harvested from the Bay. 3. Fecal bacteria concentrations in Sand Lake and at Neskowin beach are frequently too high to allow human contact with the water, resulting in beach closures for Neskowin. The current and historic data demonstrate that water quality problems exist, but the data are not high resolution enough to make decisions on prioritizing restoration in specific tributaries. This project is coordinating with TEP/DEQ's existing Volunteer Water Quality Monitoring Program (VWQMP) to select sites that complement the existing program and expand monitoring to priority tributary streams. Project partners include field and technical volunteers, Oregon Department of Environmental Quality (DEQ) and Tillamook Estuary Partnership (TEP).

Monitoring Team Evaluation

Monitoring Team Strengths

- This project will collect information that is important to identifying sources of bacteria that can inform watershed management.
- The applicant is working with DEQ/Tillamook Estuaries Partnership to ensure sites are selected appropriately and that data will be shared to inform TMDL implementation effectiveness.
- The data will be made more widely available to non-technical audiences using the online platform “SWIM GUIDE.”
- The applicant will develop a Sampling and Analysis Plan in coordination with DEQ.

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- There were several letters of support from a wide range of local, state and federal agencies expressing interest in this data.
- The timeline and costs seem reasonable to initiate this project and disseminate the results.

Monitoring Team Concerns

- It was not clear if the water temperature monitoring data would be analyzed along with another data set to identify where restoration activities are most needed to address degraded riparian areas.
- It was not clear if the applicant plans to link water temperature data analysis with the bacteria data to help meet their overall goals of understanding conditions and informing restoration.
- The application did not describe the lab methods for bacteria sample analysis. The development of a monitoring program to collect and analyze water samples is a significant effort, and it was not clear how the applicant will incorporate quality assurance and quality control measures with the volunteers and staff in a way that ensure data will be accurate.
- The application may have under-estimated the volunteer coordinators hours to successfully implement this project over the time frame proposed.
- The applicant is new to OWEB monitoring grants, so does not yet have a proven track record.

Monitoring Team Comments

• Coordinate with DEQ to ensure the bacteria sample analysis methods are described in the SAP and training about properly processing and analyzing the water samples is completed.

Review Team Evaluation

Strengths

- The project is well-coordinated among state agencies and other partners. DEQ's Volunteer Monitoring Coordinator has been engaged and provided input into the monitoring approach.
- The proposed monitoring work will fill important data collection gaps over the landscape and inform bacteria-related water quality in the area.
- The geography for data collection is located in the southern portion of Tillamook County, adjacent to the long-established water quality monitoring efforts to the north. This work will coordinate with monitoring efforts in the area and extend them to the south.
- The applicant has collected relevant water quality data in the past that informed management in the area, particularly within the Sand Lake watershed.
- The data collected will contribute to and inform progress of the ODA North Coast Water Quality Management Plan.
- The data will be submitted to the Swim Guide database, a popular interface for recreationists to learn about local water quality conditions.
- Data will be provided to the Tillamook Estuary Partnership (TEP) and DEQ to complete a trend analysis that will be used to inform conservation and restoration efforts in the work area. This use of the data by partners further leverages the benefits of this monitoring investment.

Concerns

- The proposed data collection has significant overlap with existing efforts, particularly with those of the BLM. Some of the proposed survey locations are duplicate to ones already monitored by the BLM. The applicant is encouraged to coordinate with BLM, USFS, and others implementing monitoring work in the area to avoid duplicate efforts.
- The proposed schedule for auditing the data is not adequate. Auditing should be once per month instead of once over the monitoring season as proposed.

Concluding Analysis

This new monitoring effort in the Nestucca and Neskowin watersheds will contribute to an identified data gap in water quality within the region and expand on more established monitoring efforts to the north. The information collected in the tributaries will be especially helpful since most of the existing information is centered on mainstem river locations. The expansion of bacteria monitoring to the south will also help bring new water quality monitoring volunteers on board with the establishment of a new lab that will reduce travel time for the southernmost data collection sites in Tillamook County.

Review Team Recommendation to Staff
Fund with Conditions

Review Team Priority
4 of 5

Review Team Recommended Amount
$36,831

Review Team Conditions

Identify overlap with other monitoring work in the watershed and revise the monitoring plan accordingly, and submit BLM/USFS data to the DEQ database when relevant instead of collecting duplicative data.

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund with Conditions

Staff Recommended Amount
$36,831

Staff Conditions

Identify overlap with other monitoring work in the watershed and revise the monitoring plan accordingly, and submit BLM/USFS data to the DEQ database when relevant instead of collecting duplicative data.

Open Solicitation-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1043-17479

Project Type: Monitoring

Project Name: Agnes, Baldy, Logan Creeks and Ocean Outfalls Baseline Data Acquisition 2020-2021

Applicant: Salmon Drift Cr WC

Region: North Coast

County: Lincoln

OWEB Request: $39,063

Total Cost: $98,319

Application Description *(from application abstract)*

Salmon Drift Creek Watershed Council (SDCWC) proposes collecting additional 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 they relate to federal and state water quality standards, including those directly related to salmonid life cycles. Watersheds include Baldy Creek, Agnes Creek, and Logan Creek plus outfalls at numerous sites along the seven miles of beaches of Lincoln City. Notably, our work has a statewide and international interest. Streams and outfalls monitored discharge directly into the Cascade Head Marine Reserve and/or Protected Areas. These state designations are similarly also within the recently reauthorized UNESCO Cascade Head Biosphere Reserve. 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. In addition, the program addresses the need of additional outreach as we partner with a wider demographic of society, specifically local youth, to achieve our water quality monitoring objectives. Project partners include Oregon DEQ, Siletz Tribal Charitable Contribution Fund, Neighbors for Kids, Career Tech, Surfrider Foundation, Robertson Environmental, and the City of Lincoln City.

Monitoring Team Evaluation

Monitoring Team Strengths

- The monitoring need for these smaller coastal drainages is identified through watershed assessments, given the lack of monitoring data about these areas.
- This project is a continuation of a previously OWEB funded monitoring project and the applicant plans to work with DEQ to amend its current Sampling and Analysis Plan.
- The monitoring project will help inform the beach closures that have happened periodically due to high levels of bacteria.
- The costs seem reasonable and the budget details the expenses and match contributions.

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- The applicant has a good track record conducting other similar water quality monitoring projects.

Monitoring Team Concerns

- The plans referenced in the application are over a decade old, so it was unclear if the gap for monitoring data still exists.
- The application does not describe how the ocean outfalls are connected to the watershed as a whole, which made it difficult to understand if these outfalls are simply urbanized runoff streams or if they are natural drainages that can be managed to minimize water quality impacts to the beach/near shore water.
- It was not clear what has been achieved in the current open monitoring grant that demonstrates a need to fund another year, given that the SAP has not yet not been developed or approved at time of application review.
- There is not a detailed description of monitoring methods and the citations and links provided are either broken weblinks or do not provide a link to sampling methods. There is no mention of methods to process and analyze water samples for bacteria.
- The sampling frequency will not allow both of the current bacteria standards to be calculated. One of the water quality standards requires a minimum of five samples in a 90-day period for calculating the criteria, therefore the applicant will only be able to calculate the single sample maximum.
- It is unclear if the data will be applied in a meaningful manner. The application lacks detail about how data will be provided to and considered by landowners and municipalities to help inform restoration. The application instead describes working with students/children, and making the information available by posting it on the applicant’s website, sharing with OWEB, and sending data to DEQ.
- There is a mention of a technical advisory committee in the budget to serve as match, but there was no mention of this group’s role in the application.
- The letters of support did not demonstrate coordination with local governments, which is what would be expected since these are urban streams.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The methodology and frequency for the bacteria data collection is appropriate.
- Ocean outfalls are not well-understood and are of interest because of the high bacteria concentrations that can be present.
- The applicant has a track record of collecting high quality data that is always submitted to DEQ.
- The monitoring has relevant value from a water quality and community awareness perspective.
- The application describes the connection of bacterial contamination from the ocean outfalls to adjacent river systems.

Concerns

- The other proposed data parameters beyond bacteria will not be collected at intervals frequent enough to provide meaningful understanding of water quality trends over time.
- An inventory of outfalls and creeks in the watershed is lacking. Without an inventory, it is unclear why the chosen outfalls are prioritized for data collection. More information about how these outfalls are important from a watershed context perspective is needed to understand the priority of this work. Considering all the other monitoring efforts in the region, this work may be a lower priority due to its minimal potential for informing future restoration that provides ecological benefit.
- The partnership with Lincoln City is not well-described in the application.
- It is unclear how the proposed monitoring relates to watershed health beyond human health and public safety.
- Data collected and presented from prior efforts would provide helpful context for understanding how the information is used.

Concluding Analysis

This project will continue previously OWEB funded efforts to collect baseline water quality information from several ocean outfalls in Lincoln City. The work clearly has a strong connection to human health, but benefits to ecological health in the context of the larger watershed are unknown. A description of the work completed to date along with a summary of preliminary data collected and any early findings indicated by this data is needed to evaluate the benefit of continuing this work. If the application is resubmitted, the applicant is encouraged to provide additional information on the logic pathway between collecting data with a primary focus on public health that could raise public awareness and informing actions that provide watershed health 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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1044-17489 **Project Type:** Monitoring

Project Name: Mid Coast Monitoring Project Status & Trend 2019

Applicant: Lincoln SWCD

Region: North Coast **County:** Lincoln

OWEB Request: $66,277 **Total Cost:** $104,343

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 Creek Watersheds Council, Siletz Watershed Council, Lincoln SWCD, and private landowners. This grant would continue long-term spawning ground surveys on key reaches in the area, including early component Chinook, chum, fall Chinook, coho, and steelhead. Information on early component Chinook in the Siletz and Alsea Rivers is a top priority as these populations may be genetically distinct and are being considered for listing under the Endangered Species Act. All of these surveys complement ODFW and other efforts to track salmonid population dynamics by providing monitoring on populations and streams that would not have otherwise been collected. 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. MCMP will continue to work closely with partners in filling information gaps and explore collaborative efforts in the region, such conduct water quality (temperature/dissolved oxygen) in partnership with DEQ.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application clearly identifies the monitoring need to inform conservation and recovery planning and TMDL development.
- The water quality data will help fill data gaps during the spawning period in reaches that support spawning habitat.
- This data can inform management of the micro-hatchery that the Confederated Tribes of Siletz Indians operates on Dry Creek.
- This application will support the collection of spawning data to maintain a long term data set.

- The applicant has a good track record of collecting and sharing similar data with ODFW and making it available to interested parties.
- The applicant provided numerous letters of support from local partners that described their interest in the data.
- The OPMT specifically saw value in the early run spring Chinook and chum surveys.
- The application describes their outreach and public engagement activities to inform a variety of audiences.

Monitoring Team Concerns

- The application lacks a detailed description of the water quality monitoring methods and how the data will be shared with DEQ.
- The application does not clearly describe how all of the data are managed and the plan for comprehensive analysis and reporting.
- The timeline and budget do not include details to understand if data analysis will occur and a final summary report will be written, which is required for OWEB project completion reporting.
- While the data likely will be valuable and useful to the partner agencies and cooperators, there is no indication that the applicant and core partner have a plan in place to complete analysis of the data to inform restoration and management activities.
- There was no clear indication about how the applicant is working with ODFW to prioritize the monitoring efforts to focus on critical uncertainties based on past monitoring efforts or emerging needs.

Monitoring Team Comments

• Coordinate with DEQ to update the SAP, including identifying appropriate monitoring sites and data-collection frequency and ensuring data are reported to DEQ to meet OWEB reporting requirements.

• Incorporate past review team comments on data management, analysis and reporting.

Review Team Evaluation

Strengths

- The monitoring project has a long track record of success, and has continued to contribute to long-term datasets in areas that would not normally be surveyed due to state agency budget cuts.
- The applicant is implementing appropriate survey protocols.
- The monitoring work has generated a long-term dataset that has facilitated data-driven restoration efforts with ODFW.
- In addition to providing information about surveyed streams, the data may help understand fish returns and ocean survival.
- The data generated provides additional value by informing ODFW fisheries management decisions.

Concerns

- The proposed water quality monitoring in the Yachats basin, a new component of this project, is not well-described. It is unclear whether the appropriate water quality monitoring protocols will be implemented.
- After many years of data collection, it is unclear how this data is utilized to prioritize restoration projects.
- Capacity of the applicant is uncertain because long-term staff that previously implemented this monitoring work is no longer with the organization. The technical capability of current staff to implement the monitoring protocols is unknown.

Concluding Analysis

For the past two decades, this monitoring effort has provided long-running spawning surveys that otherwise would have been dropped due to agency budget cuts. ODFW relies heavily on the data collected to make management decisions. There is also applicability to larger fish populations outside of the Mid-Coast as the data provides some insight as to how well fish are thriving in the ocean.

Review Team Recommendation to Staff
Fund

Review Team Priority
5 of 5

Review Team Recommended Amount
$66,277

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-2019 Fall Offering
North Coast (Region 1)

Application Number: 220-1045-17487
Project Type: Stakeholder Engagement
Project Name: Rainforest Reserve
Applicant: North Coast Land Conservancy
Region: North Coast
County: Clatsop
OWEB Request: $33,967
Total Cost: $59,960

Application Description *(from application abstract)*

Unprecedented in Oregon, the proposed Rainforest Reserve will conserve 3,500 acres of coastal rainforest and rocky bald habitat, magnifying the conservation value of adjacent Oswald West State Park, the proposed Arch Cape Community Forest and Cape Falcon Marine Reserve, to create a 32-square-mile sea-to-summit conservation area. The Rainforest Reserve contains the headwaters of three drinking water sources—Asbury, Shark and Ecola creeks—serving the communities of Arch Cape and Cannon Beach, plus a large portion of Arch Cape Creek, an important coastal salmon stream.Opportunities for permanent protection of Oregon coastal rainforest are rare, particularly in Clatsop County, where the vast majority of forestland is managed for repeated timber harvest. Conservation of the Rainforest Reserve will provide an opportunity to steward the forest to late seral conditions, protect drinking water sources, conserve endemic species, and protect adjacent conserved lands by limiting edge effects.The Rainforest Reserve builds upon decades of work by state and local agencies and organizations. Project partners—Cape Falcon Marine Reserve, Arch Cape Water and Sanitary District, Oregon Parks and Recreation Department—continue to support the momentum of this effort.NCLC is seeking OWEB funds to engage with a wide array of stakeholders in order to develop the financial support needed to acquire the Rainforest Reserve by the end of 2021. Engagement will include Rainforest Reserve tours, funder meetings, and community presentations. Tours and presentations will emphasize the importance of biodiversity and drinking water conservation and will explain how this project supports these community values. OWEB’s stakeholder engagement funding will allow NCLC to broaden support for the project by cultivating project ambassadors and motivating funders, ultimately enabling NCLC to acquire the proposed Rainforest Reserve and manage the land to benefit both humans and wildlife.

Review Team Evaluation

Strengths

- The applicant has pulled in all of the relevant stakeholders necessary to build a coalition in support of the future acquisition project.
- The local community is engaged and appears to be supportive of the land acquisition project.
- The plan to engage stakeholders is presented with clear and specific goals and objectives, and the need for this type of work is well-articulated in the application. The project is well thought out with details on stakeholder identification, project timing, costs, and measures of success.

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- The Rainforest Reserve has some very rare habitat types that harbor rare plant communities, including rocky balds and alpine forests. Acquisition of this property will benefit coastal biodiversity and offers a unique opportunity for landscape conservation because large tracts of forest are rarely available in this area for protection.
- Acquisition of this property will ensure that the entire watershed of Ecola creek, a high quality fish habitat stream, is protected.
- The project property contains the drinking water source for the local community of Arch Cape. Protecting this area will have water quality and quantity benefits.
- The applicant is qualified and has a track record of doing implementing similar stakeholder engagement work.
- The plan for engaging stakeholders is clear and the budget is detailed and cost-effective.

Concerns

- No significant concerns were noted during review.

Concluding Analysis

The Rainforest Reserve acquisition project is an effort to conserve and protect a large parcel of land in Clatsop County that will support the connectivity of critical habitats by linking the basaltic ridge with the coastal shore. This acquisition project has been in development for decades and is coming together at this time because most of the required funds have been obtained and the groundwork has been laid with community partnerships. This stakeholder engagement work will provide the necessary momentum for the project team to continue to build the community support necessary to bring this complex and highly-regarded conservation land acquisition project to fruition.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 1

Review Team Recommended Amount

$33,967

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$33,967

Staff Conditions

None

Southwest - Region 2 Fall 2019 Applications

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ESRI ArcMap 10.6, NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20191106

Grant Types

- Restoration
- Technical Assistance
- Stakeholder Engagement
- Monitoring

Previous Grants: 1998 - Spring 2019

- Restoration
- Land Acquisitions
- Streams
- Region Boundary

OREGON WATERSHED ENHANCEMENT BOARD

775 Summer St, NE Suite 360
Salem, OR 97301-1290
(503) 986-0178
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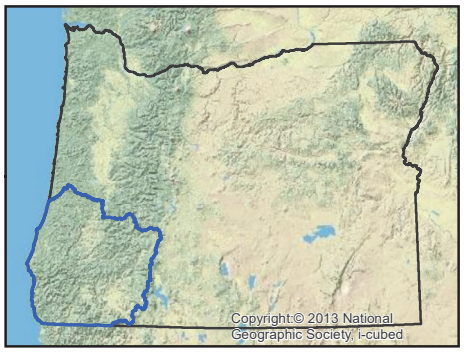

Region 2 - Southwest Oregon

Restoration Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Project Modification	Amount Recommended	County
220-2033	Curry SWCD	Rogue River Estuary 2020	Instream fish habitat complexity and floodplain connectivity will be improved through the placement of large wood in floodplains and sloughs and restoring native plant communities on The God Wants You Slough, located near Gold Beach.		313,261	Curry
220-2036	Coquille Watershed Association	Twelvemile Creek Restoration	Instream habitat will be improved for coho through the placement of large wood fish habitat structures and boulders along six miles of stream in Twelvemile Creek, a tributary to the Middle Fork Coquille River near Camas Valley.		155,081	Douglas
220-2038	Coquille Watershed Association	Lower North Fork Riparian Restoration	Streamside areas on four properties will be restored to improve water quality by installing wildlife-friendly fencing that excludes livestock access from the river and planting native tree species along the North Fork, a main tributary of the Coquille River near the town of Myrtle Point.		281,382	Coos
220-2034	Partnership for the Umpqua Rivers	Windy Creek Instream Restoration	Instream fish habitat will be improved on Windy Creek, a tributary to Cow Creek near Glendale, by placing large logs and trees on a stream mile to benefit native coho salmon and steelhead.		72,809	Douglas
220-2035	Coquille Watershed Association	Woodward Creek Restoration	Woodward Creek, a tributary to the North Fork Coquille River, will be restored by placing large wood fish habitat structures instream, installing barriers to restrict illegal recreational activity, replacing failing culverts, and partially decommissioning a valley bottom road to improve water quality and conditions for coho.		273,063	Coos
220-2031	Illinois Valley WC	Page Creek Aquatic Complexity and Passage	Fish passage and instream habitat will be improved by removing a diversion dam and placing large habitat wood structures in Page Creek, a tributary to the lower East Fork Illinois River near Cave Junction. The dam will be replaced by a roughened channel designed to allow for both fish passage and irrigation water withdrawal by the landowner.		93,197	Josephine
220-2040	Coos Watershed Association	Marlow Creek Habitat Restoration	Large wood structures will be placed in four miles of Marlow Creek, a tributary to the East Fork Millicoma River near Coos Bay, to improve instream habitat for coho salmon. Additionally, two miles of stream will be made accessible to salmon by improving passage through a boulder falls and water quality will be improved by improving a road to reduce sediment runoff into the stream.		209,464	Coos
Total Restoration Projects Recommended for Funding by RRT and OWEB Staff					**1,398,257**	

Region 2 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Restoration Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-2041	Coos Watershed Association	Williams River Habitat Connectivity Project	Fish passage through a historic rock quarry site will be improved by widening the existing channel to provide access to 21 miles of habitat for coho salmon on the Williams River, the largest tributary to the South Fork Coos River.		151,155	Douglas
220-2042	Elk Creek WC	Ellenburg Creek Instream Restoration	Large wood fish habitat structures will be placed in over a mile of stream of Ellenburg Creek, a tributary to Sand Creek near of Drain, to improve instream habitats important for coho salmon.		190,904	Douglas
Total Restoration Projects Recommended for Funding by RRT					**1,740,316**	

Restoration Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount Requested**	**County**
220-2032	The Freshwater Trust	Little Butte Creek River Mile 13 Instream and Riparian Habitat Restoration Project	400,357	Jackson
220-2037	Curry SWCD	Greggs Creek Fish Passage and Stream Restoration	50,378	Curry
220-2039	Partnership for the Umpqua Rivers	South Smith River Wetlands Phase 1 and 2	661,656	Douglas

Region 2 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance (TA) Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-2045	Applegate Partnership, Inc.	McKee Dam Irrigation and Fish Passage Study Phase2	Preliminary designs will be developed to improve fish passage at the McKee Dam, an active water diversion structure and fish passage barrier on the Applegate River in Jackson County.		54,783	Jackson
220-2049	Curry SWCD	Pistol River Hydraulic Model	A hydraulic model will be developed for the lower Pistol River to identify causes driving severe bank erosion and sedimentation into the stream and inform potential remediation and restoration actions to address these problems.		43,068	Curry
220-2047	Curry SWCD	Spatial datasets to inform planning on the South Coast	Spatial data layers that depict project partners' organizational objectives related to restoration, conservation, and assessment of natural resources across nine coastal watersheds largely within Curry County will be developed to create an implementation strategy for prioritized projects across the region.		28,518	Curry
220-2052	Coos Watershed Association	Project Design For Habitat Improvement in Large Streams	Large wood placement design alternatives will be developed for Lower Williams River, the largest tributary to the South Fork Coos River that provides important spawning and rearing habitat to fall chinook, coho, and steelhead. A hydraulic analysis along with collaboration with other groups that have experience with developing instream structures in large streams will inform project designs.		74,648	Douglas
Total TA Projects Recommended for Funding by RRT and OWEB Staff					**201,017**	

Region 2 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**		**Amount Recommended**	**County**
220-2053	Coos SWCD	Winter Lake Phase 3: Hydrologic Enhancement Design	Engineered designs will be developed to replace undersized culverts and install swale channels and grassed waterways that enhance the capacity of the agricultural lands located behind the China Camp Creek tidegate restoration project. This will support coho juveniles during winter months and pasture grass production in summer months.		74,946	Coos
220-2050	The Freshwater Trust	Lower Ashland Creek Habitat Enhancement	Restoration alternatives and project designs for streamside and instream habitat will be developed to improve salmon habitat and water quality along lower Ashland Creek, a tributary to Bear Creek in Ashland.		49,658	Jackson
220-2054	Coos Watershed Association	South Fork Coos River Road Assessment and Project Development	A road inventory will evaluate approximately 240 miles of roads using a protocol designed by the US Forest Service to identify road conditions impacting areas that drain directly to the South Fork Coos River and its tributary systems, and develop an action plan to address the issues.		65,118	Coos
220-2046	Applegate Partnership, Inc.	Slate Creek Fish Passage Project	Engineered designs will be created to improve fish passage at the Slate Creek Dam, a channel-spanning fish passage barrier on Slate Creek in Josephine County.		35,470	Josephine
220-2048	Partnership for the Umpqua Rivers	South Smith River Wetlands Phase 3 Technical Assistance	A new tide gate structure will be designed to improve fish passage along with tidal channel and dike work needed to improve the ecological conditions of wetlands on two properties in the lower Smith River.		74,300	Douglas
220-2044	South Umpqua Rural Community Partnership	Elkton Reserve Restoration Project	Field surveys needed to revise a management plan will be completed to guide stewardship for the multiple ecological values present on The Elkton Reserve property, located on the mainstem of the Umpqua River near Elkton.		37,486	Douglas
220-2043	Coquille Watershed Association	Big Creek Watershed Assessment and Project Development	Project partners will assess watershed condition to develop, prioritize, and design habitat and water quality restoration projects on Big Creek, a tributary of the Middle Fork Coquille River.		55,146	Coos
220-2055	Curry SWCD	Donaldson Creek Fish Passage Design	Project partners will collect topographic, hydrologic, and archaeological data to develop alternative conceptual stream channel designs that restore fish passage between Willow Creek and Donaldson Creek near Langlois.		44,525	Curry
Total TA Projects Recommended for Funding by RRT					**637,666**	

Technical Assistance Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount Requested**	**County**
220-2051	Elk Creek WC	Big Tom Folley Creek Watershed Restoration Action Plan	48,558	Douglas

Region 2 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Stakeholder Engagement Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-2064	Coquille Watershed Association	South Fork Coquille Watershed Stakeholder Engagement	Project partners will engage with landowners in the South Fork Coquille River basin to build interest and support for developing restoration actions that address watershed problems.		54,778	Coos
Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff					**54,778**	

Stakeholder Engagement Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**		**Amount Recommended**	**County**
220-2063	Illinois Valley SWCD	Illinois Valley Collective Mobilization for Fire and Fish	Landowners in the Illinois River Watershed will be engaged by project partners to develop interest in potential actions that improve fire resiliency and stream habitats on their properties.		130,529	Josephine
Total Stakeholder Engagement Projects Recommended for funding by RRT					**185,307**	

Stakeholder Engagement Projects *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount Requested**	**County**
None				

Region 2 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-2057	Coquille Watershed Association	Lower Coquille Restoration Effectiveness Monitoring	The effectiveness of two tide gate replacement and habitat restoration projects in the Coquille River will be evaluted to improve the understanding of how juvenile coho respond to these projects and inform future efforts.		166,890	Coos
220-2056	Cascade Pacific RC&D	Eel Creek Pacific Lamprey Ramp Effectiveness Monitoring 2020- 2021	Pacific lamprey movement and habitat use within the Eel Lake Basin will be examined to evaluate the functionality and usability of a new lamprey ramp.		69,362	Coos
220-2061	Coos Watershed Association	Coho Life History and Migrations in Tide Gated Lowland Coastal Streams 2020-2022	Coho salmon abundance, survival, life histories, habitat use, and migration monitoring will continue in Palouse and Willanch Creek, two tide gated lowland streams in the Coos Bay estuary, to qualify and quantify the ecological benefits of tidal habitat restoration.		304,509	Coos
Total Monitoring Projects Recommended for funding by OWEB Staff					**540,761**	

Monitoring Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**		**Amount Recommended**	**County**
220-2059	Partnership for the Umpqua Rivers	Umpqua Basin Stream Flow and Temperature Monitoring Project 2020-21	Summer stream flows and water temperatures at sites across the Umpqua basin will be sampled regularly as part of a long running data collection program that provides information needed to maintain required minimum flows for aquatic resource protection and data interested stakeholders.		75,399	Douglas
Total Monitoring Projects Recommended for funding by RRT					**616,160**	

Monitoring Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount Requested**	**County**
220-2058	Curry SWCD	Sullivan Gulch Bottomlands Monitoring for Current Functions and Restoration Effectiveness	23,837	Curry
220-2060	Smith River WC	Smith River ARIS Anadromous Salmonid Monitoring	87,932	Douglas
220-2062	Rogue Basin Partnership	Rogue Basin Partnership Fish Passage Monitoring Program	172,718	Josephine

Region 2 Total OWEB Staff Recommended Board Award	**2,194,813**	**20%**
Regions 1-6 Grand Total OWEB Staff Recommended Board Award	**10,877,263**	

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2031-17359 **Project Type:** Restoration

Project Name: Page Creek Aquatic Complexity and Passage

Applicant: Illinois Valley WC

Region: Southwest Oregon **County:** Josephine

OWEB Request: $93,197 **Total Cost:** $185,360

Application Description *(from application abstract)*

Located within the Lower East Fork Illinois River subwatershed, Page Creek joins the EF Illinois River 11 miles south of Cave Junction within the community of Takilma in Josephine County. The project reach is publicly owned, managed by the USFS.OWEB TA Program funding was secured to develop a restoration alternatives design that delivered recommended restoration actions addressing and resolving aquatic organism passage and channel complexity/altered habitat limiting factors for ESA-listed SONCC coho salmon, Pacific lamprey and KMP Steelhead that inhabit Page Creek. This proposal seeks to implement the recommended alternative design developed as a result of that OWEB TA grant.The project reach is high intrinsic potential for SONCC coho salmon. Heavily modified, the channel is straightened, incising, and simplified, lacking instream structure. Additionally, Page Creek experiences serious fish passage issues during the irrigation season from a flashboard dam at the lowest portion of the project reach. The dam presents a 5-foot-high complete barrier to all life stages of coho and steelhead. Page Creek is a primary salmonid contributor, supporting SONCC coho salmon, KMP Steelhead, and Pacific lamprey in addition to resident cutthroat and rainbow trout. The Illinois River SONCC coho salmon population is designated as core, functionally independent at high risk of extinction (NOAA, 2014). The recommended activities of this proposal address two recovery action implementation schedule targets and strategic actions of the Final Recovery Plan (NOAA, 2014) and priority restoration actions of the FS's WRAAP for the East Fork Illinois River watershed (USFS, 2014).Restoration actions proposed include replacing the flashboard dam with an engineered roughened channel and constructing 11 instream large wood structures along a one-half mile reach. Partners include the USFS, city of Cave Junction, OR-WA DWPP, and an affected private landowner.

Review Team Evaluation

Strengths

- The project is the result of an OWEB Technical Assistance grant (#218-2029).
- The design engineer overseeing project implementation has relevant experience using roughened channels to provide fish passage.
- The large wood designs are appropriately sized for the stream and will improve the existing simplified instream conditions by increasing stream habitat complexity.

- Addressing fish passage in the Rogue River watershed is a high priority and this project will provide juvenile fish access to cool water refugia.
- The project builds on past and future restoration. One of the two culverts upstream of this site was removed in 2019, the other is slated for replacement in the near future.
- Previous review comments are addressed. The resubmitted application improved in organization and clarity, and project design information needed to understand technical soundness is also included.
- The landowner is engaged and highly supportive of the project.

Concerns

- It is difficult to discern the expected quantified watershed benefits due to inconsistencies across the application. For example, there are different quantities identified for stream habitats with moderate to high intrinsic potential and potential stream miles that will be made accessible to fish.
- The project design approach does not address the hydrological condition that is a limiting factor for coho, and instead focuses on treating a symptom rather than the cause of a watershed health problem. The stream was moved into a new channel in the early to mid-1900s. LiDAR could indicate a more effective placement for the stream to flow based on the location of its historic channel. However, current land management precludes attempting to place the stream back in its original course.

Concluding Analysis

The Illinois River system is a stronghold for ESA-listed coho and this cold water stream provides critical habitat. The site has an intact riparian plant community with diverse species and age classes. The project will improve fish access to one mile of stream and improve instream habitat conditions in the project reach for salmonids and other native fish species.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 9

Review Team Recommended Amount

$93,197

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$93,197

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2032-17370

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: $400,357

Total Cost: $489,824

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 threatened 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 riparian shade. The proposed work will include placement of 6 large wood structures to increase fish and wildlife habitat and reduce erosion by stabilizing a portion of exposed bank. Riparian revegetation will occur on 3.9 acres, with seven years of plant establishment and noxious weed suppression. Native plants will provide shade, reduce bank erosion, filter nutrients, and support large wood recruitment in the future. Primary project partners are TFT, the Rogue River Watershed Council, the City of Medford, and private landowners. The project is part of a larger effort being undertaken in partnership with the landowners, US Forest Service and City of Medford, and will complement a project previously funded with an OWEB Restoration Grant on an adjacent site.

Review Team Evaluation

Strengths

- This project builds on similar riparian and streambank restoration work in the area.
- Streambank erosion and steep vertical banks in the project area has led to simplified riparian conditions. The riparian restoration proposed will improve site conditions and benefit stream health.
- The watershed provides critical habitat for ESA-listed coho and is an area for which a Coho Strategic Action Plan is being developed.
- A thoughtful approach to riparian restoration is proposed by including regeneration of native plants, addressing invasive plant species, and proactively addressing the degraded site conditions present in portions of the project area. The application also includes design information for the large wood structures.

Concerns

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- The site orientation is likely to limit any shade benefits resulting from the riparian planting because the streambank aspect may prevent direct stream shading.
- The large wood structures will primarily provide bank stabilization. While the proposed work will provide some instream habitat benefits for juvenile winter high flow refugia, summer stream temperatures are high in the project reach and likely to be lethal for rearing salmonids that are encouraged to hold in this area over the winter.
- The large wood specifications may be sized too small for the stream size and inadequate for providing long term habitat benefits because it can more readily break down. A significant amount of the log length will be buried into the streambank, which could increase their integrity but also reduce any benefits to stream habitat.
- Landowner support for the project is not readily evident.
- The application lacks details on how livestock exclusion will be implemented and managed.
- The application does not include information on whether potential impacts to adjacent properties were considered, such as whether water will be pushed into neighboring properties.

Concluding Analysis

The resubmitted application presents a thoughtful and honest assessment of the project site and approach. Actions to improve water quality, such as restoring the riparian area, are important in this water quality limited system that provides critical habitat for ESA-listed coho. However, the project cost is high for a limited watershed health benefit. With a design approach focused on stabilizing banks instead of restoring stream processes, the proposed restoration focuses on symptoms instead of addressing causes of watershed health impacts in an area with limited potential for providing summer fish habitat due to lethal stream temperatures.

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2033-17409
Project Type: Restoration
Project Name: Rogue River Estuary 2020
Applicant: Curry SWCD
Region: Southwest Oregon
County: Curry
OWEB Request: $313,261
Total Cost: $403,220

Application Description *(from application abstract)*

The Lower Rogue basin is 226,668 acres and empties into the Pacific Ocean at Gold Beach, Oregon. On the south shore at river mile 1.5, God Wants You Slough is the most densely vegetated tidal slough in the estuary; connected at the downstream end to the Rogue River Estuary. The slough provides over-wintering habitat for coho salmon, and critical summer rearing habitat for steelhead, cutthroat, Pacific lamprey, and Chinook salmon. This area is also used by terrestrial wildlife and waterfowl. Due to the high intrinsic potential of the area for anadromous fish production and the need to improve stream complexity, the slough has been identified as high priority for instream restoration and conservation.Lack of instream complexity and floodplain connectivity is highlighted as a key stressor for all coho populations in the Rogue. This limiting factor also impacts suitable habitat for steelhead, Chinook, amphibians, reptiles, and beaver in the Basin. The actions proposed to reduce the limiting factor of structural complexity and connectivity is to add large wood to floodplains and sloughs to provide habitat complexity, and to revegetate riparian areas with native species in order to provide a long term source of wood, floodplain roughness, and diversity as well as overhanging cover to slow the rate of water warming and support insect production for fish. Goals include increasing number of smolts found in GWY slough, improved condition factor of smolts found in GWY slough, and to improve salmonid habitat. These goals should be achieved through the following objectives: - Increased habitat complexity and structure through the placement of large wood- Increased floodplain connection through the creation of alcove(s)- Increased roughness, long-term source of wood, overhanging, cover, and diversity through the removal of invasive weeds and the revegetation of the riparian areasPartners include ODFW, USFWS, Oregon Stewardship, and Freeman Rock.

Review Team Evaluation

Strengths

- The application has clear project objectives and designs.
- The resubmitted application addresses previous review concerns by seeking a Technical Assistance grant (#218-2017) to develop designs.
- A multi-agency and stakeholder technical review committee will help develop and review design options.

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- Project designs are provided by a firm with relevant technical expertise. The designs incorporate stout logs and use an innovative pinning technique for anchoring wood structures. This technique has not been truly tested, however, it appears promising for addressing challenges associated with working in an estuary environment.
- The designing process utilized LiDAR imagery, which provides accuracy in developing surface elevation models.
- The project will incorporate post-implementation monitoring of the wood structures, smolt usage, and water temperatures that will be compared to baseline, pre-project monitoring data.
- The work will promote floodplain connectivity and provide habitat complexity currently lacking in the area. The habitat structures and revegetation work will promote needed rearing habitat for ESA-listed coho and benefit water quality. The area will see periods of total inundation in winter that will benefit juvenile salmonid rearing.
- The project area is highly visible and has public access via a trail system. The restoration work provides a public outreach and community involvement opportunity in an area already utilized by local students for natural resource education.
- The site supports a diversity of birds and wildlife, including an active beaver population.
- The anticipated project schedule is likely to be met, in part because a programmatic permitting process is already underway.

Concerns

- Some logs may move downstream at higher flows because the log structures will not have buoyancy checks on them.
- It is uncertain if the structures will capture smaller materials.
- The project timeline could be impacted if implementation is not well aligned with harvest scheduling that is providing logs for the project.

Concluding Analysis

The Rogue River estuary is relatively small, and a significant amount of historic habitat has been lost due to land use practices. Restoration investments in smaller estuarine systems in the younger Klamath Mountain Province have been small compared to those in the more Northern larger estuarine systems. Since coho depend on estuaries for rearing, creating habitat opportunities in the Rogue River estuary is an important opportunity to restore this critical habitat.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 9

Review Team Recommended Amount

$313,261

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$313,261

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2034-17415 **Project Type:** Restoration

Project Name: Windy Creek Instream Restoration

Applicant: Partnership for the Umpqua Rivers

Region: Southwest Oregon **County:** Douglas

OWEB Request: $72,809 **Total Cost:** $109,511

Application Description *(from application abstract)*

This project is located in Windy Creek, a tributary to Cow Creek in the Middle Cow Creek 5th Field Watershed just northeast of the rural community of Glendale in Douglas County. Windy Creek provides habitat for winter steelhead, coho salmon, Pacific lamprey, cutthroat trout and other native fish. Oregon Department of Fish and Wildlife Habitat Surveys and maps identify Windy Creek as having areas of higher to highest winter intrinsic potential for coho salmon. Winter rearing habitat for fish in the project area is limited by a lack of instream large wood (Middle Cow Creek Watershed Assessment, 2002). PUR, in partnership with Oregon Department of Forestry and Oregon Department of Fish and Wildlife, will place logs and trees at 22 sites throughout 1.06 miles of the creek to generate pools, cover, gravel deposition and access to off-channel areas that are currently limited in the area and needed for quality winter rearing and spawning habitat. Structures will vary by site including trees, root wads, and imported logs for a total of 37 logs and 44 trees placed into Windy Creek. Oregon Department of Forestry will contribute trees from the adjacent timber stand, salvage logs from the Milepost 97 fire and staff time to help manage the project. OWEB funds will be used for PUR project management, logs, log placements, mileage and PUR administrative costs.

Review Team Evaluation

Strengths

- The resubmitted application addresses previous concerns raised about improving project outreach.
- The project implements recommended actions identified in several assessments and action plans by targeting a stream system with high intrinsic potential for coho but are deficient in aquatic habitat for overwintering juvenile ESA-listed coho.
- The design approach is technically sound and the project has a high likelihood of meeting its objectives. The planned wood structures include large numbers of individual pieces of wood of an appropriate size for the system and will improve over-wintering habitat.
- The project partners are experienced in this type of work.
- There is a great deal of partner support and involvement in the project as articulated in the numerous letters of support in the application.
- Large beaver complexes are present on ODF ownership just upstream of the project area as well as downstream areas on private lands.
- There is a likelihood for natural future wood recruitment into the stream.

- Site access and the rehabilitation of excavator access routes is well thought out.

Concerns

- No significant concerns were noted.

Concluding Analysis

The proposal is a well thought out, technically sound project with a high likelihood of meeting objectives. The proposed work addresses watershed limiting factors and complements other restoration efforts within a basin that has high intrinsic potential for coho.

Review Team Recommendation to Staff
Fund

Review Team Priority
4 of 9

Review Team Recommended Amount
$72,809

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$72,809

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2035-17420
Project Type: Restoration
Project Name: Woodward Creek Restoration
Applicant: Coquille Watershed Association
Region: Southwest Oregon
County: Coos
OWEB Request: $273,063
Total Cost: $490,184

Application Description *(from application abstract)*

Woodward Creek is a major tributary to the North Fork Coquille River (NFCR) and has important spawning and rearing habitat for coho, Chinook, steelhead, cutthroat and Pacific lamprey. The project area, near Fairview in Coos County, OR is designated as critical habitat for the ESA listed Oregon Coast coho salmon and it is a BLM Priority Watershed. The Woodward Creek watershed is suffering from the legacy of historic land use practices. The limiting factors currently facing Woodward Creek are a lack of stream complexity, habitat and refugia and excessive sediment loading from the road network, exacerbated by illegal recreational activity. Partnering with the BLM, timber companies, Coos County Forestry Dept. and a private landowner, CoqWA is continuing a holistic restoration effort aimed at addressing all of the limiting factors in Woodward Creek. Restoration actions include wood placement for habitat, installing barriers to restrict illegal recreational activity, replacing three failing culverts on fish bearing tributaries and six on non-fish bearing tributaries, partially decommissioning a valley bottom road and performing education and outreach with the local community. Together, these actions will provide benefits for native fish, water quality and the local community across an extremely important sub-watershed. Specifically, OWEB funding will be used to support the in-stream habitat enhancement, culvert replacements on fish bearing streams, and the partial road decommissioning. In-kind match and cash match from the Coos Bay BLM and Drinking Water Providers Partnership will accomplish the remaining deliverables in this holistic approach.

Review Team Evaluation

Strengths

- The resubmitted application addresses previous review concerns about the culvert design and use of slash materials.
- The project partners are committed to stopping off-road vehicle use in riparian and stream areas. The proposal takes a comprehensive approach in addressing the problem, including outreach to the public and local user groups, blocking access points on main entry roads and arterial roads, placing physical impediments near stream access points, and increased security presence. Some of the ATV barriers are already installed and so far motorized vehicles are not passing. Monitoring will continue to occur to ensure project effectiveness.
- The North Fork Coquille River is the drinking water source for the City of Myrtle Point. The project will help address 303(d) listed water quality issues, including sedimentation and water temperature.

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- The budget has reasonable rates and is cost effective for the proposed scope of work.
- The project will improve instream habitat for ESA-listed coho and builds on the benefits attained from previous large wood placement in the stream.
- Road surveys are planned for 2020, which is timely to ensure project tasks stay on schedule.

Concerns

- There is a lack of detail regarding the $25,000 road decommissioning activity.
- The application lacks information regarding the BMPs and road stabilization tactics that will be used to prevent sediment from entering the stream.

Concluding Analysis

Woodward Creek provides important habitat for ESA-listed coho and also contributes to the drinking water source for the City of Myrtle Point. Project activities will improve instream habitat and water quality. The logs to be placed instream have been staged and the project is ready for implementation. Off-road vehicle activity has been a long-term concern that requires a combination of approaches. The ecological benefit will be high for the cost. Increasing public awareness will be a key component in achieving long-term success.

Review Team Recommendation to Staff
Fund

Review Team Priority
5 of 9

Review Team Recommended Amount
$273,063

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$273,063

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2036-17423
Project Type: Restoration
Project Name: Twelvemile Creek Restoration
Applicant: Coquille Watershed Association
Region: Southwest Oregon
County: Douglas
OWEB Request: $155,081
Total Cost: $310,426

Application Description *(from application abstract)*

This project will restore channel complexity and floodplain connection in Twelvemile Creek, a 24,000-acre drainage to the Middle Fork Coquille River (MFCR). The MFCR has the potential to provide year-round rearing habitat for coho, Chinook, steelhead, coastal cutthroat trout, and Pacific lamprey but lack of spawning habitat in tributaries continues to be a watershed issue. Primary limiting factors affecting spawning habitat in Twelvemile Creek include a lack of stream complexity and poor water quality. Historically, Twelvemile Creek was clear-cut and subjected to stream cleaning. As a result, most of Twelvemile Creek and its major fish bearing tributaries have disconnected floodplains, large sections of bedrock substrate and lack sufficient large wood structures (LWD) and spawning gravel. To address these limiting factors, CoqWA, Roseburg BLM, ODFW and Roseburg Forest Products are working towards a shared goal of improving spawning and rearing habitat for native fish in the Twelvemile Basin. Phase 1 Project components include placing boulders and LWD into Twelvemile Creek and its tributaries. Roseburg BLM is funding wood placement on BLM property and OWEB has funded a TA for road surveys and restoration design. Funds from this solicitation will be used to place log and boulder structures into tributaries and the main-stem of Twelvemile Creek on private lands owned by timber companies, complimentary to the BLM's restoration actions. Together these actions will place wood and boulders into 19 sites in the main-stem of Twelvemile Creek, large wood into 14 sites in tributaries and directionally fell trees at 25 sites. Phase 2 restoration will address road improvements and sediment abatement actions identified during the GRAIP analysis (funded by the OWEB TA grant) to improve water quality.

Review Team Evaluation

Strengths

- The application clearly presents the issues, objectives, and solutions.
- The large wood design is technically sound, and the sites selected are well-suited for wood placement. The boulders incorporated into the design will be a similar size to boulders found naturally instream.

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- Twelvemile Creek is the highest coho tributary in the Middle Fork Coquille River. Besides coho, the stream is also important for lamprey. The stream has high intrinsic potential with good spawning habitats. There is a passage impediment downstream of this site on Twelvemile Creek, located on the Middle Fork Coquille River, that is triggered during low flow periods. ODFW is aware of this structure and is working to address this passage issue.
- The project builds on watershed assessment work for this sub-basin conducted by the applicant. Future project phases will look at addressing sediment inputs from nearby roads.
- The applicant has a proven track record with implementing these types of projects and has put together a partnership of agency technical experts to support project design, funding, and implementation.

Concerns

- No significant concerns were identified in the review.

Concluding Analysis

The project is based on previous watershed assessment work. The effort engages the right partners necessary to develop and implement the project work successfully. The proposal presents a very clear and technically sound project with a high likelihood of achieving success in a cost-effective manner. The stream is important for both coho and lamprey, and these efforts will improve and increase habitat availability for these species.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 9

Review Team Recommended Amount
$155,081

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$155,081

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2037-17431

Project Type: Restoration

Project Name: Greggs Creek Fish Passage and Stream Restoration

Applicant: Curry SWCD

Region: Southwest Oregon

County: Curry

OWEB Request: $50,378

Total Cost: $72,503

Application Description *(from application abstract)*

The proposed project would occur on Greggs Creek, which is a 4.3 km coastal tributary approximately 13 km north of Gold Beach and within Curry County. Greggs Creek has high potential habitat value for coho salmon, steelhead, coastal cutthroat trout, and lamprey, and given its close proximity to the Rogue River, provides critical connectivity to Rogue River fish populations. Undersized culverts were installed at the stream crossing with Greggs Creek Road and over time, the culverts have reduced gravel transport downstream and deposited excess bedload upstream of the crossing. This bottleneck has created a five-foot vertical difference between the channel elevation immediately above and below the crossing. Excess bedload further upstream has raised the streambed elevation, while lack of bedload downstream has incised the channel into the floodplain up to five feet. This vertical instability in the streambed forms a complete barrier to adult fish passage, degrades habitat quality by altering the distribution of sediment, disrupts lateral connectivity of the stream with its floodplain, and poses a significant risk of fill failure. The lack of large wood in this system further degrades habitat quality, since natural wood accumulations would promote gravel and nutrient retention, and form complex pools and off-channel habitat. The proposed restoration would address the primary limiting factors of habitat access, sediment imbalances, and lack of large wood, by restoring fish passage and natural flow conveyance, and adding large wood to stabilize sediment and create instream habitat structure. To do so, we propose to to replace the undersized culverts with a 56-foot span railcar bridge, install 12 grade control log structures up- and downstream of the road crossing, and install five habitat log structures downstream of the crossing. Partners include private landowners, ODFW, NOAA, and Coquille Indian Tribe.

Review Team Evaluation

Strengths

- The application clearly lays out the project objectives and need to provide fish passage at this location.
- There is clear landowner support and ownership in the project as evidenced by project match.
- Downstream landowners were contacted and are comfortable with potential channel aggradation that may occur.

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- Replacing the undersized, failing culverts with a bridge will provide for natural stream geomorphology to occur by allowing the stream to move more freely in its floodplain. The railcar bridge will likely provide an adequate spanning size to cross the stream. Grade structures will be placed above and below the bridge to prevent the stream from downcutting.
- The work will follow Standard Local Operating Procedures for Endangered Species (SLOPES).

Concerns

- It is unclear whether a design alternatives analysis was considered.
- The application lacks information about site conditions needed to better understand the technical soundness of the design approach, such as the active channel width. Also, it is unclear if the design takes into consideration how the relatively weak sandy loam soils affects substrate stability given the amount of water seepage into the area.
- Spruce wetland areas located on the edge of the floodplain terrace could potentially be hydrologically disconnected or dewatered as a result of the proposed actions. It is unclear from the application whether the project design considers potential impacts to these wetlands. It is important to ensure the spruce are protected.
- The grade control structure design needs additional consideration to ensure they effectively function as expected. The applicant is encouraged to consider how the water velocity may displace the size of sediment particles and create scour into the streambed, which could reduce the extent to which the grade control structures maintain the channel gradient.
- Engineered surveys need to be incorporated due to concerns about public safety regarding the bridge placement.
- Additional information on the quality of upstream habitat and fish presence and distribution in the area is needed to understand how providing passage to upstream habitat benefits native fish species. Also, it is unclear whether there are other passage issues downstream of the project site.
- The overall project cost seems low for the proposed work compared to similar projects in the area.

Concluding Analysis

Gregg’s Creek is a direct ocean tributary located near Euchre Creek, North of Gold Beach. This creek would support a dependent rather than an independent population of coho, which is a lower priority population. Brook lamprey have been spotted in the stream, and resident trout and steelhead likely utilize the system. The application does not provide enough details regarding design considerations, including potential impacts on other resources in the immediate area, to understand technical soundness of the project. A technical assistance grant may be the best approach to fully examine the site and determine the soundest course for addressing the culvert issues.

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2038-17452

Project Type: Restoration

Project Name: Lower North Fork Riparian Restoration

Applicant: Coquille Watershed Association

Region: Southwest Oregon

County: Coos

OWEB Request: $281,382

Total Cost: $355,032

Application Description *(from application abstract)*

The North Fork is a main tributary of the Coquille River in Coos County, Oregon near the town of Myrtle Point. This project continues our systematic restoration approach in the North Fork Coquille River (NFCR) to address habitat limiting factors within the entire basin. The four project sites are located at the lower end of the NFCR, near the Myrtle Point drinking water intake plant. This ecological restoration project will address DEQ 303(d) water quality limiting factors by re-establishing processes, functions, and biological and physical linkages between the aquatic and riparian ecosystems. Water quality limiting factors include low dissolved oxygen (DO), high fecal coliform count, sedimentation, and high summer temperatures that are a result of degraded riparian ecosystems and extensive livestock presence. Previous projects were identified with DEQ 319 technical assistance and new projects have come from positive word-of-mouth and continued outreach as the project is located in the Coos Soil and Water Conservation District (Coos SWCD) Focus Area. Restoration activities will include wildlife-friendly fencing to exclude livestock access from the river and establishing native plant communities in the riparian areas. This project will protect approximately 25.5 acres of riparian ecosystem with 15.5 acres to undergo weed treatment and supplemental riparian planting. We will plant 4,800 native trees and shrubs, locally harvest and plant at least 2,550 willows, and install 12,425 feet of livestock-exclusion fencing along 2.6 stream miles. OWEB funds will be used for materials and supplies, travel, project management, contracted services for the planting and fencing, and fiscal administration. Project partners include the Coos SWCD and the North Fork landowners listed in this grant proposal.

Review Team Evaluation

Strengths

- The resubmitted application addresses previous review concerns by incorporating appropriate measures to identify any potential archeological resources.
- The North Fork Coquille River is the drinking water source for the City of Myrtle Point. The watershed is also a focus area for the Coos SWCD and is listed on the DEQ 303(d) list for temperature, bacteria, and dissolved oxygen. The resulting restoration will address water quality impairments, which in turn address limiting factors for ESA-listed coho.
- Project partners have recruited multiple landowners into one project, which demonstrates effective communication and coordination that will result in cost savings and implementation efficiencies.

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- The project is highly visible and may encourage additional project interest in an area where landowner engagement has been challenging. The current list of participating landowners were engaged primarily through word of mouth.
- Each property has an individual conservation plan and sites designs tailored to the individual properties.
- The planting and plant stewardship plans are reasonable for the sites and have a high likelihood of supporting the trees to a “free-to-grow” stage.

Concerns

- No significant concerns were noted in the review.

Concluding Analysis

The proposal demonstrates the progress made by project partners toward implementing a comprehensive approach to restoring water quality in a system important both for coho habitat and to the adjacent community as their drinking water source. Success here could lead to additional restoration opportunities in the watershed.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 9

Review Team Recommended Amount
$281,382

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$281,382

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2039-17459

Project Type: Restoration

Project Name: South Smith River Wetlands Phase 1 and 2

Applicant: Partnership for the Umpqua Rivers

Region: Southwest Oregon

County: Douglas

OWEB Request: $661,656

Total Cost: $1,327,217

Application Description *(from application abstract)*

A concerted, strategic effort has been underway in the tidally influenced areas of the Umpqua River to restore natural drainage, enhance wetlands for winter rearing, increase fish passage and improve water quality to this critical area for anadromous fish. Building upon the success of prior wetland enhancement development work on the Glover Ranch in the lower Smith River, PUR and its partners have developed three more phases of similar project work. South Smith River Phase 1-3 are projects located directly across the river from the Glover Ranch. Phase 1 of the project is the Boniface/Vitek wetland enhancement. A failing 6’ tidegate will be replaced with three 7’ tidegates, 2,300 feet of dike repair is needed to protect the tidegates, 7,705 feet of channels will be regraded to drain properly and a bridge will be placed for farm access on the 82 acre wetland. Each winter, the Muted Tide Regulators (MTRs) will be set to flood 10 acres at each high tide to provide rearing habitat for juvenile fish. The second phase of work is tidegate replacement, channel and dike work on the 85 acre Perry wetland located at the confluence of Otter Slough and the Smith River. A rusted and failing 6’ tidegate will be replaced with four 7’ and one 5’ tidegates. Each winter, the MTRs will be set to flood 12 acres at high tide. Phase 3 work is focused on restoring fish passage, regrading wetland channels, repairing dikes, installing farm crossing bridges and restoring instream fish habitat in Brainard Creek across three owners. Preliminary designs indicated the need for geotechnical and structural engineers and is currently being developed under an OWEB technical assistance grant. Project partners include Oregon Department of Fish and Wildlife, Smith River Watershed Council and private landowners. Umpqua Soil and Water Conservation District, Natural Resources Conservation Service, and National Marine Fisheries Service will provide technical input to the project.

Review Team Evaluation

Strengths

- The project will address two failing tide gates and provide access to over-wintering tidal habitat important to juvenile ESA-listed coho by building connectivity between the estuary and the wetlands. A water management plan will be implemented that will facilitate in the creation of 15 wetted acres during winter months.

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- The project builds on past and future tide gate and habitat enhancement work in the area, including the Glover Tide Gate Restoration Project (220-2011). The site is also adjacent to wetland habitat owned and managed by ODFW.
- The work will support agricultural working lands and build on lessons learned from the Glover Tide Gate Restoration Project.
- The project partners are developing a strategy to address failing tide gates in the Umpqua estuary and are quickly building landowner interest and support in the area for similar restoration work.

Concerns

- One of the participating properties is currently for sale. It is unclear whether this will affect project implementation at this site or the long-term management of the property that ensures the watershed investment is maintained.
- It is unclear whether the required match will be secured because it is dependent on securing funds for phase three of this three-phased project. Phase two is also currently on hold due to land owner concerns. As a result, the project may not be ready for implementation.
- It is unclear how the proposed water level will affect the pasture grass production used for livestock grazing.
- It is difficult to determine whether the extent of proposed riprap is necessary and reasonable to repair the levee because final design of this project component cannot be completed until the levees are mowed in order to visually see their condition.
- It is unclear whether the design addresses potential water drainage issues that could occur due to the connection of the channel draining the properties to both of the current tide gates. It would have been helpful to have information on the water levels and how the infrastructure will work to understand the technical soundness of the design. Inundation mapping of proposed flooded areas would also be helpful for understanding the expected project outcomes.

Concluding Analysis

The lack of detail and uncertainty related to project design, long-term stewardship of restored habitat, securing match through other project phases, and overall readiness makes it difficult to determine the likelihood of success for this project. The applicant should consider seeking a technical assistance grant to address concerns related to the design and approach.

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2040-17476 **Project Type:** Restoration

Project Name: Marlow Creek Habitat Restoration

Applicant: Coos Watershed Association

Region: Southwest Oregon **County:** Coos

OWEB Request: $209,464 **Total Cost:** $309,249

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 have degraded in-stream habitat throughout the basin (Attachment 1). 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). With its high spawning and rearing activity, the Marlow Creek subbasin has been a focal area of previous habitat restoration in the Coos basin for more than two decades, 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, fish passage, and water quality by proposing to 1) place 104 pieces of wood over 4 miles to enhance spawning andrearing habitat, 2) improve passage through an artificial mainstem boulder falls near the 4.5-mile marker on the 1000 Rd to open 2 miles of spawning and rearing habitat, and 3) 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 provide matching funds for contracted services, materials & supplies, and technical assistance.

Review Team Evaluation

Strengths

- The project objectives are clearly articulated in the application.
- 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 access.
- The proposal demonstrates an active working relationship among partners through their involvement in design, implementation, and funding. Restoration actions in Marlow Creek are consistent with recommendations identified in the draft The Coos Watershed Coho Strategic Action Plan.
- The project continues the restoration momentum on this stream by building on completed instream and passage restoration work downstream.

- The existing riparian area has the potential for recruitment of large wood. The Elliott State Forest comprises the upper portion of the system and provides assurance that the riparian forest will remain intact. There may also be future opportunities to convert aging alder stands into conifer stands.
- Marlow Creek is the only consistent stronghold for chum salmon in this system.
- Project partners have established a proven track record for implementing instream habitat enhancement and fish passage improvements.

Concerns

- No significant concerns were raised during the review.

Concluding Analysis

The project design approach has a high likelihood of resulting in a successful restoration project. The project builds on restoration activities implemented downstream of the project reach. The proposed restoration will enhance a functioning system rather than restoring one that is in danger of declining, which is likely to increase Marlow Creek's productivity for ESA-listed coho and other aquatic species.

Review Team Recommendation to Staff
Fund

Review Team Priority
7 of 9

Review Team Recommended Amount
$209,464

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$209,464

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2041-17480

Project Type: Restoration

Project Name: Williams River Habitat Connectivity Project

Applicant: Coos Watershed Association

Region: Southwest Oregon

County: Douglas

OWEB Request: $151,155

Total Cost: $485,818

Application Description *(from application abstract)*

The Williams River is the largest tributary to the S Fork Coos River in the Coos basin, providing critical spawning and rearing habitat for coho, chinook, steelhead, and other aquatic species. In the 1960's road building and quarry operations constrained the channel against a bedrock hillslope, which increased the stream gradient creating the Falls. These falls restrict salmonid access to 21 miles of rearing and spawning habitat. The Federal Recovery Plan for Oregon Coast Coho identified access to high quality habitats supporting winter rearing of juveniles as a major limiting factor. The Falls are the highest priority barrier remaining on the ODFW Statewide Fish Passage Priority List in the Coos basin. This project addresses limiting factors by reconnecting salmonids to 21 miles of habitat and restoring natural processes that will improve water quality and stream complexity. In this project, CoosWA proposes a multi-faceted approach including: 1) widen the channel of the falls nearly 40 feet and reduce velocities to restore salmonid access to 21 miles of critical rearing and spawning habitat, 2) move the 5000 Road 50 feet to increase the distance between the road and stream and 3) revegetate the riparian area with native trees and shrubs to reduce the transport of fine sediments and increase shade. Additionally, these activities will allow natural stream processes to reestablish and restore deposition and retention of gravel and wood to the downstream reaches. OWEB funds will be used for project management, travel, supplies, contracted services, and indirect costs. Weyerhaeuser, WSC, NWFW, ODFW, and OYCC will provide match to cover project designs, permitting, road relocation, contracted services, and technical assistance.

Review Team Evaluation

Strengths

- The fish passage barrier is the final barrier in the system, and restoring passage will build upon other fish passage projects. The project will facilitate passage for multiple species, including Chinook and ESA-listed coho, it is anticipated that juvenile rearing will benefit the most from the project.
- Extensive instream habitat restoration and road improvement work will reduce sediment inputs both upstream and downstream of the site.
- The restoration work will improve juvenile fish access to cool water refugia during summer months. Removing the barrier could mitigate climate impacts by allowing fish easy access to cooler, preferable stream habitats.

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- Project partners have experience in implementing challenging fish passage projects.
- The application demonstrates effective working partnerships and commitments necessary to design, fund, and implement a project of this magnitude.

Concerns

- Fish passage is not a priority limiting factor for coho in this watershed.
- Additional information on sediment abatement measures during and post construction would have been helpful. It was uncertain if only seeding and mulching will be enough to minimize sediment inputs.
- The cost-effectiveness of the watershed health benefit gained is uncertain for addressing a partial barrier at the proposed cost.
- It remains unclear whether the project is “shovel ready” because consultation with NOAA and ODFW has not yet occurred. There is the potential that designs could change as the proposal moves through this consultation process.

Concluding Analysis

The proposed approach to improve fish passage at the site should lessen steep gradients and flow velocities, and assist in both adult and juvenile passage for multiple species. While passage is not a critical limiting factor in this system, the work will complete fish passage restoration efforts and provide connectivity between upstream and downstream habitats. The project is identified in the draft coos Watershed Coho Strategic Action Plan.

Review Team Recommendation to Staff

Fund

Review Team Priority

8 of 9

Review Team Recommended Amount

$151,155

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2042-17503

Project Type: Restoration

Project Name: Ellenburg Creek Instream Restoration

Applicant: Elk Creek WC

Region: Southwest Oregon

County: Douglas

OWEB Request: $190,904

Total Cost: $253,904

Application Description *(from application abstract)*

Ellenburg Creek is a tributary to Sand Creek in the Lower Pass Creek subwatershed of the Elk Creek 5th-field watershed of the Umpqua Basin, north of Drain, Oregon . Elk Creek is an important coho spawning and rearing watershed with more miles of "high intrinsic potential" coho habitat (172 miles) than any other 5th-field in the Umpqua. It was designated a Tier 1 Key Watershed in the Northwest Forest Plan, and ranked #1 for restoration by the Umpqua Basin Watershed Council (1998). Ellenburg Creek has nearly three miles of high intrinsic potential coho spawning and rearing habitat per ODFW. Past land management practices, most notably stream cleaning, removed most of the large wood, increased water velocities in the creek and eroded much of the streambed to bedrock. Though there is ample gravel, there are very few pieces of large wood to retain gravel, aggrade the channel, or create deep pools, all essential for juvenile coho survival. The Ellenburg Creek Instream Restoration project will place 213 key logs, and 100 whole trees with root wads, at 28 sites in 1.5 miles of Ellenburg Creek. Trees with rootwads will augment the five existing structures from a prior project. Large woody debris structures will slow water, capture bedload, and create complex pools that will improve both winter and summer rearing habitat for juvenile coho salmon and steelhead. Cross sections will be established at three sites to monitor project effectiveness. Project partners include BLM (watershed assessment funding), ODFW (instream habitat designs), NOAA Fisheries (fish passage technical guidance), Seneca Jones Timber Company (donated trees with rootwads) and two private landowners.

Review Team Evaluation

Strengths

- The resubmitted application addresses previous review concerns related to the site #28 design.
- The project was identified through a recent rapid bio assessment, which identified the reach as a priority for instream habitat restoration. The system provides important habitat for ESA-listed coho.
- The project partners effectively engaged the landowners in the project. The project could lead to additional downstream landowner interest in similar project work.
- The designs have a high level of clarity with photos, drawings, and an explanation of the purpose of each structure. NOAA staff previously reviewed and approved these designs.
- The potential for habitat improvements providing a watershed health benefit is high for the investment.

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- The project approach is technically sound and has a high likelihood for success.

Concerns

- The time budgeted for project management seems high for a fairly straightforward scope of work compared to similar projects. A breakdown of hours per task would help in understanding this cost.
- Instead of providing links in the application to additional information, integrating critical information from those other locations into the application narrative is necessary for proposal clarity and an effective evaluation of the project.
- The diameter of the wood is smaller and consists of younger stock, which means it will have a shorter lifespan in the stream. While there is still a high likelihood of success in achieving project goals in the short to moderate term (15-20 years), the lifespan of the wood will not last as long as projects incorporating larger diameter wood placements.

Concluding Analysis

The project reflects a successful working relationship between project partners and landowners. The design approach is technically sound and will benefit habitat for ESA-listed coho. The applicant is still encouraged to work with the landowners to reduce sediment runoff into the stream systems from the road.

Review Team Recommendation to Staff
Fund

Review Team Priority
9 of 9

Review Team Recommended Amount
$190,904

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2043-17375

Project Type: Technical Assistance

Project Name: Big Creek Watershed Assessment and Project Development

Applicant: Coquille Watershed Association

Region: Southwest Oregon

County: Coos

OWEB Request: $55,146

Total Cost: $80,018

Application Description *(from application abstract)*

The 16,600-acre Big Creek basin is a tributary of the Middle Fork Coquille River (MFCR), in the community of Bridge (Coos County). Big Creek provides spawning and rearing habitat for coho, fall Chinook, winter steelhead, coastal cutthroat trout and Pacific lamprey. The primary limiting factors in Big Creek are lack of stream habitat complexity and impaired water quality. Timber harvesting has been the leading activity to occur within the watershed and although logging practices have changed the legacy of splash dams, riparian cutting and stream cleaning have remained. These historical practices led to smaller sized riparian conifers and insufficient quantities of in-stream LWD. In addition, there is an extensive road network throughout the basin which contributes to high rates of sediment loading. We will review watershed conditions in order to develop, prioritize, and design habitat/water quality projects in the sub-watershed. Assessments include surveying anthropogenic fish passage impediments, road network surveys (Geomorphic Road Analysis and Inventory Package), macroinvertebrate sampling, and analyze existing ODFW Aquatic Habitat Inventory data to evaluate current watershed conditions and prioritize reaches for treatment. This assessment is timely as landowners in the watershed are anticipating land use activities in the next 3-5 years and we can coordinate and partner on road improvement and in-stream/riparian habitat projects in conjunction with those planned activities. This project is a seamless successor to the county road culvert replacements and LWD restoration occurring on Big Creek tributaries in 2019. This assessment will ensure that we will systematically address the priority reaches of the watershed with initial surveying anticipating development of designs for a minimum of 3 anadromous stream culvert replacements, placement of ~100 LWD components, installation of 200-400+ cross drain/road improvements and conifer understory riparian enhancement.

Review Team Evaluation

Strengths

- The applicant is currently engaged in similar efforts in other sub-basins, this project will continue their approach of first assessing and building strategic plans for sub-basins before engaging in restoration efforts.
- The project involves the right partners and necessary skills sets needed for success. The watershed association is growing in capacity and has established a track record for implementing projects.

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- The expected deliverables have a high likelihood of resulting in priority driven, on-the-ground actions that will benefit a wide variety of fish species, including ESA-listed coho.
- The costs are appropriate for the tasks identified to accomplish project objectives in a sub-basin of this size.
- The project is timely by coinciding with planning efforts by area land managers and presents an outreach opportunity with the local community. The information will be shared with agencies, including ODFW and other stakeholders.

Concerns

- Previous review concerns related to the macroinvertebrate surveys are not addressed, the objectives for this project element and how this information will aid in developing prioritizing restoration actions remains unclear. Looking at presence/absence of macroinvertebrates will not help prioritize actions because this information is more of a verification tool that provides a snapshot of stream conditions. The applicant is encouraged to engage the DEQ Volunteer Monitoring Program in designing the approach for using macroinvertebrate surveys to achieve the goals for this technical assistance project.
- The timeline for DEQ 319 funding is not realistic, which could affect the proposed project timeline. Funds cannot be obtained prior to getting a watershed based TMDL plan in place, and 2021 is the earliest this could occur.
- Additional information is needed to understand the road survey project components, including the total number of road miles in the network, locations of roads (e.g. valley floor), a list of areas prioritized by the roads ecological impact, and a map that provides a visual tool of this information to help better understand the needs and priorities. Also, information describing the effectiveness of surveying portions of the roads with the Geomorphic Road Analysis Inventory Package (GRAIP) process and then extrapolating the data to the full road network is needed to understand the technical soundness of this approach.
- The budget has permit fees associated with county land use, floodplain certification, and DEQ 401 water quality certification, but it is not clear why these were necessary to implement this project.

Concluding Analysis

The scope and scale of the project is feasible and project partners have clearly demonstrated their ability to work collaboratively on similar projects. The assessment will identify and develop actions to address limiting factors impacting water quality and ESA-listed coho, and has a high likelihood of success for delivering future impactful and implementable restoration projects.

Review Team Recommendation to Staff

Fund

Review Team Priority

11 of 12

Review Team Recommended Amount

$55,146

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2044-17384

Project Type: Technical Assistance

Project Name: Elkton Reserve Restoration Project

Applicant: South Umpqua Rural Community Partnership

Region: Southwest Oregon

County: Douglas

OWEB Request: $37,486

Total Cost: $80,986

Application Description *(from application abstract)*

The Elkton Reserve, located on the mainstem of the Umpqua River near Elkton in North Douglas County, comprises 410 acres of complex, high value habitats including mixed hardwood-conifer, Oak meadows, conifer forests, a Northern Spotted Owl nest site and Core Area, ponds, seasonal streams, and two streams identified in the Oregon Statewide Hydrology map as perennial. The Reserve lies within an Oak Woodlands Conservation Opportunity Area defined in the Oregon Conservation Strategy.The property is managed for ecological conservation and restoration in partnership with the US Fish & wildlife Service, the Oregon Department of Forestry, and the Natural Resources Conservation Service. Via the Healthy Forests Reserve Program, NRCS holds majority management rights. The HFRP was developed specifically to enhance recovery of the ESA listed NSO. Signatories to the HFRP agreements include the three agencies and the landowners. Though not a signatory, the USFS NSO Recovery Team is an essential partner. The 501c3 South Umpqua Rural Community Partnership also is a partner.While the HFRP is focused on a single species, the management plan for the Reserve also recognizes other ecological values. Riparian zones along the two perennial streams are mapped as discrete management units, for example. Culvert replacement in 2003 reestablished Coho spawning in Whitehorse Creek and later also removed a fish passage barrier on the other perennial creek.We have proposed to our partners plan revisions for selected management units intended to enhance the overall ecological value of the Reserve. Subsequent to a meeting and a site tour, the agency partners have agreed that our proposal is consistent with the purpose of the HFRP and our contractual commitments (see attachment A, letters of concurrence).The work under this grant would conduct the field surveys necessary to support a subsequent application for implementation of the proposed actions.

Review Team Evaluation

Strengths

- The resubmitted application addresses previous review comments by investigating avaliable resources from USFS and ODF regarding existing forest stand assessment information.
- The landowner is committed to long-term restoration on their property, and approaches current land use management in a very conscience manner by seeking to maximize the property in maintaining and protecting the multiple habitat types on site.

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- A great deal of time and effort has been invested by the landowners and the applicant working with partner agencies, including ODF, NRCS and USF&WS, to develop the expansion of the existing Healthy Forest Reserve Program (HFRP) easement held by NRCS. The resulting process will preserve the HRFP values of the easement and allow the planning process to move forward with a high likelihood that resulting management plans will result in implementable restoration activities that benefit a broad range of ecological values on the property.
- In addition to the HRFP, there is a stewardship agreement with ODF and a Safe Harbor Agreement for spotted owls with USFWS.
- The application links the importance of the work to building climate change resiliency.

Concerns

- It was unclear based on contradictory information in the application whether the final technical assistance product will result in an additional technical assistance application to support design activities or if the next step is a restoration implementation application, or possibly a mix of both. A detailed description on outcomes and next steps would have been helpful.

Concluding Analysis

The project presents an opportunity to restore and protect important upland habitat areas that builds on efforts already in place on this property. The project also provides outreach opportunities for showcasing how properties can be managed successfully for multiple habitat benefits. This work helped lay the foundation for the first oak woodlands working group in Douglas County. The property mainly contains upland habitats but also contains small areas that link to the downslope aquatic habitats. The applicant and project landowners have put in a great deal of effort to work with partner agencies to ensure that products resulting from this proposal will not conflict with the existing HFRP easement and will have a high likelihood of resulting in restoration actions that restore and protect a diversity of ecological values found on the property.

Review Team Recommendation to Staff
Fund

Review Team Priority
10 of 12

Review Team Recommended Amount
$37,486

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2045-17401

Project Type: Technical Assistance

Project Name: McKee Dam Irrigation and Fish Passage Study Phase2

Applicant: Applegate Partnership, Inc.

Region: Southwest Oregon

County: Jackson

OWEB Request: $54,783

Total Cost: $69,367

Application Description *(from application abstract)*

This project will build off of the work accomplished in Phase 1 in order to improve fish passage, irrigation efficiency, and fish screening at McKee Dam (Newberry Dam), an active diversion structure and fish passage barrier at river mile 40 on the Applegate River in Jackson County. McKee Dam impedes adult passage to high quality spawning habitat and completely blocks juvenile access to habitat designated as core cold water habitat and high intrinsic potential habitat. The dam suppresses access to 6.1 miles of habitat for Chinook salmon, 20.2 miles of habitat for ESA-listed threatened SONCC Coho salmon, 25.7 miles of habitat for steelhead and fluvial cutthroat trout, and ESA-listed species of concern Pacific lamprey. McKee Dam is listed on the ODFW Statewide Fish Passage Priority list as Group 2 in the state and #7 in the Rogue River Basin and is on the Rogue Basin Partnership Future Project Priority “Top 10 List” of fish passage projects. Furthermore, the problematic fish screen on Swayne Ditch does not meet current standards and has an appreciable risk of entrainment and mortality for fish; installation of flashboards during high flows in the spring is a hazard to irrigators; and the current conveyance and irrigation system loses an estimated 35% of diverted water.This proposal will refine the developed alternatives and conceptual designs from Phase 1 in order to reach a preferred alternative and complete preliminary designs that will restore access to miles of high quality fish habitat and provide adequate fish screening thereby supporting fish population recovery for ESA-listed species. The developed irrigation efficiency designs will improve fish population and watershed health by increasing water quality and leaving water instream. Project partners include Cowhorn Vineyard & Garden, USFS, BLM, ODFW, OWRD, Jackson County SWCD, Rogue Basin Partnership, and Middle Rogue Steelheaders.

Review Team Evaluation

Strengths

- The project builds on Technical Assistance project 218-2034 to develop alternatives that address fish passage issues at the McKee Dam. The resulting restoration project will improve water diversion efficiencies, as well as open up 20.2 miles for ESA-listed coho salmon and 6.1 miles for other native fish species. The project will also reduce smolt mortalities at the site.
- The project area is rated as a #6 priority for barriers by ODFW in the Rogue River Basin, and this project continues the momentum in the Rogue River Basin to address fish passage.

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- The applicant has a proven record implementing projects, and is working with the Rogue Basin partnership and their fish passage contractor whom brings a great deal of experience to the effort.

Concerns

- Engineering costs are grouped into a lump sum in the budget with a total amount that seems high for the scope or work. Additional detail on the break out of the rates, costs per task, time per task, and how they were determined is needed to determine whether costs align with the work necessary to accomplish the project objectives.
- Water quantity is a key issue impacting fish populations, especially ESA-listed coho, in the Rogue River Basin. Projects looking at fish passage on active irrigation diversions need to seriously examine the potential for building in opportunities for increasing instream flows as a project component. This will become increasingly important in building in climate resiliency.
- Information on why additional technical assistance funding is needed to support activities similar to the first application would provide clarity in understanding the proposal.

Concluding Analysis

Alternatives for addressing fish passage at the McKee Dam were investigated under a previous OWEB technical assistance grant; however, a viable option was not identified and additional work is needed to develop a solution. The proposed project will build on progress made with this previous work by looking at additional options to address passage at the dam, which is a priority barrier in the Applegate River and Rogue River system. The additional habitat that will be made accessible to ESA-listed coho is significant. The approach to develop a solution that addresses the complex issues and needs associated with this diversion is technically sound.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 12

Review Team Recommended Amount

$54,783

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount
$54,783

Staff Conditions

The Project Completion Report will document the circumstances that lead to the need to apply for a second Technical Assistance project, what was learned and applied to this project and how would future projects be approached based on lessons learned.

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2046-17402 **Project Type:** Technical Assistance

Project Name: Slate Creek Fish Passage Project

Applicant: Applegate Partnership, Inc.

Region: Southwest Oregon **County:** Josephine

OWEB Request: $35,470 **Total Cost:** $44,338

Application Description *(from application abstract)*

This project will develop engineered designs for fish passage improvement at Slate Creek Dam, a channel-spanning, fish passage barrier at river mile 9 on Slate Creek in Josephine County. Slate Creek Dam impedes adult passage during low flows to high quality spawning habitat and completely blocks juvenile access to critical rearing habitat including habitat designated as core cold water habitat and high intrinsic potential habitat. The dam suppresses access to over 3.5 miles of habitat for ESA-listed threatened SONCC Coho salmon, 7.6 miles of habitat for steelhead, habitat for cutthroat trout, and Pacific lamprey. Slate Creek Dam is listed on the 2019 ODFW Statewide Fish Passage Priority list and Slate Creek is listed as a priority for the Rogue Basin Partnership. The dam blocks critical access for Coho salmon to spawning and rearing habitat in Upper Slate Creek.This proposal will provide engineered designs to improve access to miles of high quality fish habitat thereby supporting fish population recovery for ESA-listed and state-listed species. Project partners include the landowners, 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 resulting restoration project will improve access to over 3.5 miles of core cold water habitat for ESA-listed coho, and additional miles for other native fish species.
- The application describes a clear need for technical assistance support to design a viable restoration project.
- The applicant has established a proven track record for working to solve fish passage issues in the Rogue River basin, and they will be working with the Rogue Basin Partnership who utilizes a contractor experienced in developing fish passage projects.

Concerns

- Engineering costs are grouped into a lump sum in the budget with a total amount that seems high for the scope or work. Additional detail on the break out of the rates, costs per task, time per task, and how they were determined is needed to determine whether costs align with the work necessary to accomplish the project objectives.

- Water quantity is a key issue impacting fish populations in the Rogue River Basin, especially ESA-listed coho. Projects looking at fish passage at active diversions need to seriously examine the potential for building in opportunities for increasing instream flows as a project component. This will become increasingly important in building in climate resiliency.
- A letter of support from the landowner would provide helpful evidence of their support for the project.
- The need for the eDNA project component and how it contributes to meeting the project objectives is not clear.

Concluding Analysis

Restoring fish access to upstream habitats and cool water refugia has been a priority in the Rogue River Basin and is important to recovery efforts for ESA-listed coho. A great deal of success has been realized from those efforts, and the applicant and project partners are working to continue that momentum. The project is likely to result in restorative actions that will improve access to over 3.5 miles of cool water refugia habitat for ESA-listed threatened SONCC Coho salmon and up to 7.6 miles for steelhead, cutthroat trout, and Pacific lamprey. Slate Creek Dam is listed on the 2019 ODFW Statewide Fish Passage Priority list and Slate Creek is listed as a priority for the Rogue Basin Partnership.

Review Team Recommendation to Staff
Fund

Review Team Priority
8 of 12

Review Team Recommended Amount
$35,470

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2047-17410

Project Type: Technical Assistance

Project Name: Spatial datasets to inform planning on the South Coast - Resubmission

Applicant: Curry SWCD

Region: Southwest Oregon

County: Curry

OWEB Request: $28,518

Total Cost: $95,918

Application Description *(from application abstract)*

The proposed project will cover the service area of the South Coast Watershed Council [SCWC] and the Lower Rogue Watershed Council [LRWC], which includes nine coastal watersheds largely within Curry County, and partially encompasses the service area of the Wild Rivers Land Trust (WRLT). The project area includes the towns of Port Orford, Gold Beach, and Brookings-Harbor. Across and within our partner organizations (SCWC, LRWC, WRLT, and ODFW), we have multiple objectives for the restoration, conservation, and assessment of natural resources. While these objectives may be distinct, they exist for the same purpose of fully functioning watersheds. In 2017, we formally recognized our partnership as the Siskiyou Coast Estuaries Partnership (SCEP) to achieve this common vision. However, these objectives are still identified and prioritized independently of each other in strategic plans, and broadly across watersheds. For our individual organizations and for the SCEP, this makes it difficult to prioritize amongst objectives at a fine scale to efficiently meet multiple objectives. Existing spatial data could be used to prioritize these objectives relative to each other, but this data is not readily available for planning processes, and it is not vetted specifically for our service area. We propose to create multiple high-resolution (~10-30 m), spatial data layers that are continuous across our service area, that depict and prioritize individual organizational objectives, and that also depict shared partnership objectives. All data will be vetted through meetings with technical specialists, and made readily accessible to all partners. The data will be used to develop an implementation strategy for prioritized projects in the SCEP's Strategic Action Plan for the Sixes River Watershed, to be included in a 2022 OWEB FIP Implementation proposal. Project partners will include the SCEP, OPRD, NOAA, TNC, DEQ, USFWS, BLM, USFS, USGS, Weyerhaeuser, Tribes, and WRCA.

Review Team Evaluation

Strengths

- Previous review comments are addressed with clarification on the use of DEQ's Ambient Water Quality Monitoring System data in the project.
- The project will employ professionally accepted and appropriate methodology at the appropriate geographic scale. The proposed analysis builds on both the original watershed assessment and more recent strategic planning efforts undertaken by project partners spanning across Curry County watersheds.

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- NetMap is a technically sound approach for collecting data and prioritizing restoration projects.
- The application demonstrates that the project will utilize the appropriate staff with the right skill sets to achieve project goals and assemble an important data set. The collected data that will be used is from known and reliable sources and will be compatible with other assessment and planning efforts, including the Elk River Coho Strategic Action Plan and supporting TMDL development.
- Project costs are reasonable compared to the watershed health benefits that will be gained.

Concerns

- No significant concerns were identified.

Concluding Analysis

The scope and scale proposed for the project is feasible, and project partners have demonstrated the ability to develop and deliver similar types of projects. The proposed work is important to further prioritize restoration efforts across a large geographic landscape spanning over thirteen watersheds within Curry County. The work has a high likelihood of providing tools that will result in identifying viable restoration projects.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 12

Review Team Recommended Amount
$28,518

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$28,518

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2048-17426

Project Type: Technical Assistance

Project Name: South Smith River Wetlands Phase 3 Technical Assistance

Applicant: Partnership for the Umpqua Rivers

Region: Southwest Oregon

County: Douglas

OWEB Request: $74,300

Total Cost: $102,381

Application Description *(from application abstract)*

Partnership for the Umpqua Rivers and our partners are working collaboratively to restore the health of the Umpqua Estuary by protecting functional habitat, restoring degraded habitat, educating the public and evaluating project effects. The goal of this project is to complete designs for fish passage, tidal channel, and dike work needed to improve the ecological conditions of wetlands in the lower Smith River. Tidal wetlands along the lower Smith River have been significantly altered for urban and agricultural use by clearing, filling in, diking and draining. This habitat is critical feeding and refuge for many aquatic species including steelhead, salmonids, eulachon and Pacific lamprey. This project is located along the lower Smith River and up Brainard Creek. This wetland and stream enhancement project is part of a three phase plan and will increase fish access into the Brainard Creek wetlands as well as up to potential spawning habitat in the headwaters. PUR is working with three landowners and the Smith River Watershed Council to develop the Phase 3 project. Preliminary designs for a tidegate replacement, farm bridge crossings, channel reconstruction, and dike work have been completed. To create a final design for the Phase 3 project, work is needed to 1) finalize the tidegate design, 2) finalize the channel designs, 3) finalize the dike designs, and 4) work with neighboring landowners along Brainard Creek to develop additional restoration work.

Review Team Evaluation

Strengths

- The application clearly describes aneed for technical assistance to support developing designs for restoration.
- The project is located in close proximity to other tidegate and habitat restoration efforts.
- The resulting restoration work will provide access to habitats important for over-wintering ESA-listed coho.
- Project commitment is clearly evident through letters of support from partners and landowners.
- Co-leadership by Smith River WC and PUR will distribute tasks and help to ensure project success.
- Brainard Creek is a spawning tributary that drains directly into the project area.

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- The current project is at 60% design and this technical assistance will complete final, construction ready designs. The applicant will be approaching NOAA for funding to support the resulting restoration work.

Concerns

- The application lacks a clear description of the project specific tasks needed to understand the expected outcomes that will be accomplished from this technical assistance investment.
- The Water Management Plan is identified in the project schedule, but is not described in the application narrative.
- The application does not clearly describe how the resulting restoration will achieve water quality goals.
- The application lacks details compared to the previous application; for example, the selected design approach is not clearly described.
- The design approach will incorporate straight channels into the wetted areas. It is not clear why this is the prefered restoration approach, what the goals and objectives are for the these channel configurations, and why a more natural channel sinuosity could not be incorporated into this landscape.
- It is not clear if or how landowners upstream from the project area will be affected by the resulting restoration, or if they have been engaged to seek their support for the project.
- Engineering costs are grouped into a lump sum in the budget with a total amount that seems high for the scope or work. Additional detail on the break out of the rates, costs per task, time per task, and how they were determined is needed to determine whether costs align with the work necessary to accomplish the project objectives.

Concluding Analysis

Project partners are building interest and momentum in addressing failing tide gates and restoring access to associated critical habitats that ESA-listed coho depend on. The applicant and partners have previously succeeded with this type of project. They have effectively engaged with landowners in developing viable solutions that balance restoration of coho habitat with the ability of landowners to effectively manage their properties.

Review Team Recommendation to Staff

Fund

Review Team Priority

9 of 12

Review Team Recommended Amount

$74,300

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2049-17429
Project Type: Technical Assistance
Project Name: Pistol River Hydraulic Model
Applicant: Curry SWCD
Region: Southwest Oregon
County: Curry
OWEB Request: $43,068
Total Cost: $64,483

Application Description *(from application abstract)*

Lower Pistol River and its estuary, located approximately 10 miles south of Gold Beach in Curry County, are in a degraded condition due to a complexity of issues related to past and present land use. Severe bank erosion and excessive sediment deposition are reducing the quantity and quality of fish habitat, causing the loss of productive lands, and imperiling state and county road infrastructure. Landowners and community members are eager to improve watershed health and fish habitat. However, information necessary to understanding the causal factors and identifying appropriate solutions is currently lacking. This application proposes the development of a two-dimensional hydraulic model that would provide insights into those causal factors. Such a model would allow the identification of potential remediation and restoration actions, provide a science-based understanding of the expected outcomes of those actions, and permit the development of design alternatives. The model outputs would provide a platform for discussing the design alternatives and their expected outcomes with stakeholders and facilitate the selection of a preferred alternative.The development of the proposed hydraulic model would provide substantial support to outreach, project development, project implementation, and monitoring activities associated with the designation of Pistol River as a Strategic Implementation Area. Strategic Implementation Areas (SIA), designated by the Oregon Dept. of Agriculture (ODA), focus efforts from ODA, Oregon Dept. of Environmental Quality, Oregon Dept. of Fish and Wildlife, Oregon Watershed Enhancement Board, and local partners in an attempt to ensure compliance with agricultural water quality regulations, generate ecological uplift in the watershed, and measure the resulting change. Local partners in the Pistol River SIA currently include Curry County SWCD, South Coast Watershed Council, and the Curry County Roads Dept.

Review Team Evaluation

Strengths

- The application describes a clear need for the proposed technical assistance. The approach is likely to result in achieving project objectives.
- Costs are reasonable and clearly relate to work necessary for achieving the project objectives.
- The approach is technically sound and utilizes LiDAR data and HEC-RAS for analysis.
- The project is located in a Strategic Implementation area. The stream system is water quality listed for temperature, dissolved oxygen, and pH.

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- The area supports critical habitat for a dependent population of ESA-listed coho.
- A great deal of landowner outreach has been accomplished to date.

Concerns

- It is not clear whether the approach for monitoring tidal stage change will be effective. Tidal influence and rain events can affect measurements, which needs to be factored into the data analysis.

Concluding Analysis

The proposed technical assistance work has a high likelihood of success for identifying potential restoration actions and locations for project implementation. This effort will provide critical baseline data that can help in restoration design activities, as well as aid in developing and implementing actions to support efforts in the Strategic Implementation Area.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 12

Review Team Recommended Amount
$43,068

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$43,068

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2050-17430

Project Type: Technical Assistance

Project Name: Lower Ashland Creek Habitat Enhancement

Applicant: The Freshwater Trust

Region: Southwest Oregon

County: Jackson

OWEB Request: $49,658

Total Cost: $63,658

Application Description *(from application abstract)*

The Lower Ashland Creek Habitat Enhancement project is located along Ashland Creek at the confluence of Ashland and Bear Creeks on property owned and managed by the City of Ashland and Ashland Parks and Recreation. Ashland Creek is a 5.4-mile tributary of Bear Creek, which is a tributary of the Rogue River. Ashland Creek joins Bear Creek near Ashland in Jackson County. Rogue River salmon and steelhead populations have declined over the last century due to degradation of habitat and other factors. Ashland Creek provides habitat for coho, Chinook, and steelhead. Habitat conditions limiting these fish include altered thermal regime and lack of habitat complexity and diversity. These conditions are present at the project site and are driven by lack of riparian vegetation, lack of LWD, and lack of floodplain connectivity/off-channel habitat.The Freshwater Trust (TFT) seeks funding from OWEB to develop restoration alternatives, risk assessment, and 60% design drawings at the project site to advance anticipated applied restoration work at the site to benefit Ashland Creek salmon and steelhead, as well as water quality. The City of Ashland and TFT are partnering on a multi-year effort to improve water quality at the sub-watershed scale via riparian restoration on Ashland Creek. This project site is a component of this larger work. Additionally, the City of Ashland is relocating their water treatment outfall at the project site from Ashland Creek to Bear Creek. This change will complement the work proposed herein by reducing summer water temperatures in lower Ashland Creek. Project partners at this site include TFT, the City of Ashland and Ashland Parks and Recreation.

Review Team Evaluation

Strengths

- The stream supports habitat important to ESA-listed coho and is one of the few cool water streams in the Bear Creek drainage.
- The property is public municipal land and designated as a natural area. Any resulting restoration work and associated ecological benefits has a high likelihood of being maintained for the long-term.
- Hydrologic and HEC-RAS modeling will be developed, which will support technically sound project design.
- The applicant is experienced in working within this stream system.

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Concerns

- Bedload material transport and adequate gavels and cobbles may be limited due to upstream dams interrupting the transportation of this material. Gravel augmentation may need to be considered because gravel is needed for fish to return to this stream system.
- Based on the project scope of work and the geographic area to be covered, twelve weeks of contractor time seems high compared to similar projects.
- Existing pond complexes could be connected to create off-channel that would increase the impact of the resulting restoration project. The applicant is encouraged to incorporate these ponds into the final design.

Concluding Analysis

The project will build on of other restoration efforts in the upper Bear Creek watershed area. The design approach is reasonable and has a likelihood of resulting in meaningful restoration actions that will be maintained for the long-term and support ESA-listed coho.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 12

Review Team Recommended Amount

$49,658

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2051-17448

Project Type: Technical Assistance

Project Name: Big Tom Folley Creek Watershed Restoration Action Plan

Applicant: Elk Creek WC

Region: Southwest Oregon

County: Douglas

OWEB Request: $48,558

Total Cost: $67,123

Application Description *(from application abstract)*

The Big Tom Folley Creek Watershed Restoration Action Plan will develop a comprehensive restoration action plan for the Big Tom Folley sixth-field subwatershed, located approximately 8 miles west of Drain in the Elk Creek (Middle Umpqua) watershed. The plan will be based on the analysis of reach-scale habitat data collected by ODFW (1993), and data collected by the Elk Creek Watershed Council in the summer of 2019, using a "modified rapid bioassessment" survey protocol compatible with the ODFW Aquatic Inventory protocols. [See Uploads: Elk Creek Modified Rapid Bioassessment Protocols (Chart)] This data has now been entered into a GIS database that can be queried to identify reach-scale limiting factors for habitat parameters supporting juvenile coho survival. (Cascade Environmental, August 2018).ODFW has developed a model (HabRate), based on specific ODFW habitat benchmarks, that assesses the quality of stream habitat contributing to coho survival at the reach scale. Using this model, reaches within the Big Tom Folley subwatershed will be analyzed to identify those specific habitat factors that are limiting coho production, and the restoration plan will include specific, quantifiable objectives for improving those parameters to meet ODFW-desired benchmarks. [See Uploads: ODFW Aquatic Inventory Benchmarks.]In the future, the Big Tom Folley data can be used to document the effectiveness of any restoration projects that may be implemented in the watershed. Since restoration objectives are defined in terms of specific habitat parameters important for coho survival, the data from post-project surveys can show the changes in those parameters over time, and thus the effectiveness of the project to achieve its goals.Most of the Big Tom Folley watershed is owned by BLM and Seneca Jones Timber. BLM has implemented projects on their lands, and Seneca has agreed to support restoration actions that are consistent with their land management goals.

Review Team Evaluation

Strengths

- The scope of work is narrowed down from the previous application submission to focus on Big Tom Folley Creek.
- The project foot print includes areas containing ESA-listed coho critical habitat, and the work has potential for increasing the knowledge about habitat conditions and fish distribution.
- The applicant has the capacity to undertake the project and this work builds on previous rapid bio assessment efforts.

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Concerns

- It is unclear whether the work will lead to meaningful restoration efforts.
- A memo depicting the suite of restoration tools that may be used in this stream system would help illustrate anticipated restoration approaches and provide information needed to understand technical soundness of the design approach.
- A letter of support for the project from the landowner is needed to indicate their commitment to the work.
- BLM RAC funds are identified as pending project match, but the RAC has not met in three years making it unclear how the funds are tied to this effort.
- It is not clear if BLM has been notified about the project.
- There may be some duplication of effort based on proposed surveys and previous survey work.
- The project focuses primarily on instream habitat issues while areas with water quality concerns do not appear to be prioritized.
- The budget has lump sums, which makes it difficult to determine whether costs align with the work necessary to accomplish the project objectives.

Concluding Analysis

The project will provide important habitat and fish distribution data that could inform actions that restore instream habitats important to ESA-listed coho. The focus on instream habitat without fully incorporating water quality related issues reduces the likelihood for the project deliverables to incorporate all the limiting factors impacting the health of the stream.

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2052-17463

Project Type: Technical Assistance

Project Name: Project Design For Habitat Improvement in Large Streams

Applicant: Coos Watershed Association

Region: Southwest Oregon

County: Douglas

OWEB Request: $74,648

Total Cost: $93,862

Application Description *(from application abstract)*

In the Coos basin, the Williams River is the largest tributary to the South Fork Coos River, providing important spawning and rearing habitat to fall chinook, coho, steelhead, and other important aquatic species (Attachment 1). The Williams subbasin has been heavily impacted by past management practices, degrading instream habitat and water quality in the mainstem Williams River. The lower Williams River is a critical distribution and rearing reach connecting the South Fork Coos River to many high quality spawning habitats located in tributary streams of the Williams River, such as Cedar Creek. Many juvenile fish leave these tributaries to look for high quality rearing habitat such as high velocity refugia and habitat cover which unfortunately is very limited throughout the lower Williams River. To improve this critical rearing habitat, Coos Watershed Association (CoosWA) proposes to design and install instream wood structures in the 4 miles of the lower Williams River below the Cedar Creek confluence. While CoosWA has been successful in developing and installing constructed log jams to increase complexity in medium-sized streams, the lower Williams River is a larger, more powerful stream than our traditional log jams were designed to withstand. Through this Technical Assistance project, CoosWA, BLM, and ODFW propose to conduct a hydraulic analysis and collaborate with other groups throughout the region with large stream experience to develop instream structures for large streams. Through this regional collaboration, CoosWA and its partners are looking to build upon lessons learned and best management practices that have been experienced and utilized throughout the region for wood in large river systems. OWEB funds will cover project management, travel, supplies, contracted services, and indirect costs. BLM and ODFW are providing in-kind technical assistance, and the BLM RAC has provided cash match for project management, travel, and indirect costs.

Review Team Evaluation

Strengths

- The proposal presents a unique opportunity and describes an innovative approach to apply instream habitat restoration to a larger stream system. The results could inform other restoration efforts in the state.
- The conversation with landowners on the restoration approaches, likelihood of project success, and possible impacts to infrastructure will be informed by the products from this technical assistance work.

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- The proposed approach is based on previous experience and lessons learned working in other stream systems within the watershed.
- NRCS modeling will be utilized to help develop technical assistance products.
- The project reach is listed for water temperature, and resulting restoration efforts could help reduce stream temperatures.
- The applicant has established a proven track record in restoring smaller scale streams and this effort will increase their knowledge in how to approach restoration in larger streams.
- The project has partner support as evidencd by the letters of support and match contributions.

Concerns

- ODFW habitat benchmarks apply to streams with water levels that are wadeable and this will not apply well to this area because many sections are deeper and not considered wadeble.

Concluding Analysis

The project partners have spent a great deal of effort in assessing the Williams River and implementing restoration work. The proposed technical assistance offers an innovative opportunity to learn potential design approaches for placing large wood structure in a large stream system that is currently simplified and lacks habitat complexity. The project is consistent with the draft Coho Strategic Action Plan that is being developed for the Coos River system, and the resulting work products have a high likelihood of resulting in implementable restoration actions.

Review Team Recommendation to Staff
Fund

Review Team Priority
4 of 12

Review Team Recommended Amount
$74,648

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$74,648

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2053-17464

Project Type: Technical Assistance

Project Name: Winter Lake Phase 3: Hydrologic Enhancement Design

Applicant: Coos SWCD

Region: Southwest Oregon

County: Coos

OWEB Request: $74,946

Total Cost: $118,290

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 disconnected fish access to over 14,000 acres of tidal floodplain habitat in the Coquille River basin 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 adults prior to Euro- settlement to ~18,000 annually today. . In 2017 the largest tidegate project within the Pacific Coast was installed; 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 will aim to incorporate NRCS Conservation Implementation Strategy (EQIP/RCPP) funding with other match sources for implementation of the project. The project team includes: SWCD, ODFW, TNC, BSDD, and Coquille Watershed Council.

Review Team Evaluation

Strengths

- The project is within the footprint of the China Camp Creek Tide Gate 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 are 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 agencies are engaging early in the process with the landowners which will help with plan and design development and permitting.

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- 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. These wetland complexes provide important habitat critical to the life history of ESA-listed coho.
- A Water Management Plan is already in place and allows water exchange with the tide cycle during the winter months so that coho can access Units 1 and 3. The proposed design will enhance fish access to habitat in these two units by replacing existing gated culverts with slide gates. It will also provide additional channel systems for fish to access as well as improve their ability to move back to the main stem as winter flows recede.
- NRCS has completed preliminary work to explore water quality projects with landowners through the EQIP program.

Concerns

- The proposal puts a great deal of focus on the Winter Lake Project as a whole, which makes it hard to determine the ecological uplift that can be expected from the resulting restoration work that will occur in these units managed primarily for agricultural production.
- It is unclear if the proposed grass-lined channels will be grazed during summer months; if so, this could reduce water quality benefits. The resulting project will likely improve habitat conditions from the current state. However, ecological uplift will be limited by the continued land management for primarily agricultural production, including grass and livestock.
- Fencing and planting along channels need to be incorporated as part of the work. It is not clear whether planting on one side of the channel will be a potential option if channel dredging still needs to occur.
- Only one property in the proposed project area has a grazing management plan. Developing additional grazing and/or irrigation management plans would benefit both the producers and water quality by minimizing runoff of manure and fertilizers into the system.

Concluding Analysis

The applicant and project partners have continued to refine the proposal for a design approach that will improve the channel system on agricultural lands found within Units 1 and 3 of the larger China Camp Creek and Winter Lake restoration project. These two units have water levels that are currently operated by a Water Management Plan designed to take into account that coho will have access to these units during the winter months. The restoration work undertaken to replace the tide gates and restore habitat in Unit 2 is currently in a monitoring phase. The project builds on momentum in the basin and coast-wide to improve fish access through tide gate infrastructure and restore the habitat behind them. The application mixes the expected benefits from the resulting restoration that will occur through this planning effort with the overall Winter Lake restoration effort. Focusing the application on the specific anticipated benefits from restoration that will occur within the confines of the Unit 1 and 3 land management uses as a result of this technical assistance project is needed to clarify the expected outcomes of the future restoration work.

Review Team Recommendation to Staff

Fund

Review Team Priority
5 of 12

Review Team Recommended Amount
$74,946

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2054-17484

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: $65,118

Total Cost: $99,104

Application Description *(from application abstract)*

The South Fork Coos River is the largest river draining to Coos Bay. It is an important artery between the uplands habitat and the estuary. This section of river (RM 15 to RM 36) and its tributaries support populations of ESA-listed coho salmon, Chinook and Chum salmon, steelhead, trout and lamprey. The project goals are to address the major limiting factors of the Coos Basin; water quality, summer and winter rearing, and barriers (OWEB 2007). We propose to assess a network of mixed ownership forest roads. 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. CoosWA has successfully used this approach to assess current conditions and have developed many restoration projects that have improved watershed conditions. Bureau of Land Management (BLM), Weyerhaeuser, and ODFW will help to develop future restoration projects. US Forest Service will provide training and support. OWEB funds will be used for surveys, data analysis, project management, training, travel, and limited supplies. CoosWA will provide cash and survey supplies. BLM-RAC funding will be sought to supplement assessment efforts.

Review Team Evaluation

Strengths

- The project will survey 234 miles of road, which will wrap up the last of the road inventories in the watershed needed to collect data and identify high priority areas for road improvements.
- The extent of road miles to be surveyed is reasonable for the cost.
- The project is based on sound science, takes a watershed approach, and uses an established road survey methodology to identify sediment sources. The applicant has successfully utilized this approach in other watersheds.

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- Water quality is a primary limiting factor for anadromous species within the project area and work to address sediment inputs from roads will help improve instream conditions.
- The project will identify and prioritize opportunities that address sediment sources from road crossings and fishing access areas, building on previous efforts that include road improvements, instream habitat restoration, and fish passage improvements located upstream of 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 completed.

Concerns

- No significant Concerns were identified in the review.

Concluding Analysis

The proposed assessment builds on upstream road assessments and restoration activities accomplished in other areas of the watershed. Restoration work resulting from this project can improve water quality by reducing sediment inputs from roads, which will benefit habitats important to ESA-listed coho and other salmon and trout species utilizing the system. Many areas are constrained by the configuration of the forest road network within the riparian area. A similar approach to assessing the conditions in the Tioga Creek sub-basin and the resulting targeted restoration efforts reinforces the effectiveness of the approach.

Review Team Recommendation to Staff
Fund

Review Team Priority
7 of 12

Review Team Recommended Amount
$65,118

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2055-17499

Project Type: Technical Assistance

Project Name: Donaldson Creek Fish Passage Design

Applicant: Curry SWCD

Region: Southwest Oregon

County: Curry

OWEB Request: $44,525

Total Cost: $77,411

Application Description *(from application abstract)*

This project is on Donaldson Creek; a tributary to Willow Creek (Floras Creek watershed) that is located in northern Curry County near the town of Langlois. When Highway 101 was constructed in the early 20th century the downstream end of Donaldson Creek was filled, and the stream was diverted into Willow Creek via the Highway 101 roadside ditch. Over time Willow Creek downcut in response to hydrologic and morphologic changes in the watershed, which by the 1990's created approximately 13 feet of vertical drop within the 225 feet of roadside ditch channel. Most of that drop occurs within 75 feet of the Willow Creek confluence, where armoring of the Highway 101 roadfill created a haphazard series of boulder cascades that block fish passage into Donaldson Creek during most stages of discharge. The roadside ditch diversion, which is an abrupt 90-degree turn, is also a hydraulic dam on the lower Donaldson Creek channel that leads to chronic pasture flooding and secondary diversions that impair water quality and strand fish.Through this TA project the Curry SWCD will work with partners and contractors to (1) collect topographic, hydrologic, and archaeological data; (2) develop alternative conceptual stream channel designs that restore fish passage between Willow Creek and Donaldson Creek; (3) convene Stakeholders to review those designs and select a preferred alternative; (4) design the preferred alternative to ~60%-completion; (5) develop a livestock management and riparian revegetation plan; (6) develop a project implementation budget; and (7) apply for project permits. The resulting deliverable will be a 60%-complete project design that can be used to seek implementation funding, and secured permits for project implementation. Project partners include the landowner, the South Coast Watershed Council, the Coquille Indian Tribe, ODFW, ODOT, BLM, and ODA.

Review Team Evaluation

Strengths

- The Donaldson Creek provides critical habitat for ESA-listed coho.
- The application includes a detailed description of the project reach, as well as alternative routes for the new stream channel.
- There has been a great deal of work done with NRCS's EQIP program in the area, which has potential for leading to additional opportunities in the area.
- This project will build upon previous restoration work that occurred upstream from this project site.

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- The applicant has engaged with multiple public agency partners early on in the planning process.

Concerns

- The application indicates fish are presence at the project site; however, there is no data provided to support this. Fish passage is likely limited by a natural drop that disconnects the stream corridor. Additional information about fish presence and distribution in the area within the context of the larger watershed is needed to understand how this creek can impact the amount of fish habitat potentially available for restoration.
- It is unclear whether private landowners located upstream and downstream of the project site are aware of and support this effort.
- Restoration options are limited due to constraints caused by Hwy.101. All alternatives for restoration will likely be expensive due to how Donaldson Creek flows in relation to the highway. The cost of a future restoration project will be high for the potential watershed health benefit.
- Photos of the stream reach and previous restoration work would provide helpful context for understanding stream conditions in the project area and potential restoration solutions that will be considered.

Concluding Analysis

Donaldson Creek is incised and unlike its former sinuous channel state. Restoration options at the site are constrained by Hwy.101. The resulting restoration efforts will likely be costly with uncertainty about the extent of ecological uplift that can be achieved from restoration. The system supports ESA-listed coho and increasing the habitat available to them is important. It will be important to get both upstream and downstream landowners on board with the project before it moves forward.

Review Team Recommendation to Staff
Fund

Review Team Priority
12 of 12

Review Team Recommended Amount
$44,525

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2056-17352

Project Type: Monitoring

Project Name: Eel Creek Pacific Lamprey Ramp Effectiveness Monitoring 2020-2021

Applicant: Cascade Pacific RC&D

Region: Southwest Oregon

County: Coos

OWEB Request: $69,362

Total Cost: $111,034

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 members 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, The 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 (CTCLUSI) and supplement the ODFW’s Conservation Plan for Lampreys (CPL) with information on coastal lamprey.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application describes a clear need for information about these sensitive species that have cultural significance for the Tribes that are partners on the project.
- If successful, the monitoring project tasks will help the local partners implement the Tenmile Lake Lamprey Management Plan.
- This project will continue to increase understanding of lamprey barriers in the Eel Creek Basin and the effectiveness of the lamprey passage ramp at Eel Lake.
- The applicant will continue to follow established protocols that are consistent with previous phases of this monitoring project.

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- The applicant participates in the Tenmile Lamprey Workgroup and works closely with the statewide lamprey coordinator at ODFW, which helps ensure that data are being applied in a meaningful manner.
- There is an appropriate mix of monitoring parameters that will assess passage timing and success at the lamprey structure and identify where the lamprey adults and juveniles are distributed above and below Eel Lake.
- The applicant proposes to implement actions identified in their outreach plan, which will ensure that data will be shared with a variety of audiences.
- The costs seem reasonable and the partners are contributing significant match to the project, which is reiterated in the letters of support.
- The objectives are clearly stated and the activities are appropriate to achieve the objectives within the timeline described in the application.
- The applicant has had good success completing previous work under OWEB monitoring grants and information has helped them adaptively manage the lamprey passage structure.
- The applicant fully addressed previous review team comments.

Monitoring Team Concerns

- The description of the DNA collection component was vague; while this is not an OWEB funded task, it was challenging to understand how this fit into the overall monitoring effort.

Monitoring Team Comments

• Update project completion reporting timing to occur after monitoring is completed to allow time for analysis of all monitoring data.

Review Team Evaluation

Strengths

- The project employs a watershed approach to understand how the entire system supports lamprey, including an investigation into habitat access, spawning, and rearing.
- A group of committed partners, including local Tribes, support the project as evidenced by match, active engagement in activities, and letters of support.
- The proposal objectives are clear and reasonable for the work and project schedule proposed.
- An outreach component is included in the project that was successfully implemented in previous monitoring work.
- The monitoring results will be used to inform future lamprey passage and restoration projects.

Concerns

- There has been a low success rate with collecting the radio tags due to adult fish mortality after spawning and predation on their carcasses.

- Future applications could be strengthened with the inclusion of a better summary of results from previous efforts.

Concluding Analysis

The project builds on successful partnerships and efforts to monitor and better understand lamprey usage within the Eel Lake system. The Tenmile Lakes Basin 30 Year Pacific Lamprey Management Plan recommends the actions that will be implemented with this project. The applicant proposes to increase the number of tags to help increase tracking and collection success rates. The information learned will guide future restoration work and increase the knowledge and understanding of how lamprey use the Eel Lake watershed.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 4

Review Team Recommended Amount
$69,362

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$69,362

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2057-17374

Project Type: Monitoring

Project Name: Lower Coquille Restoration Effectiveness Monitoring

Applicant: Coquille Watershed Association

Region: Southwest Oregon

County: Coos

OWEB Request: $166,890

Total Cost: $601,840

Application Description *(from application abstract)*

The Lower Coquille Restoration Effectiveness Monitoring Project (Project) will examine the effectiveness of two tidegate replacements and habitat restoration projects in the Coquille River (Coquille/Coos County). The project areas were historically freshwater tidal wetlands that were cleared, diked and drained for agricultural use, a fate typical of over-winter rearing habitat in the Coquille. The depletion of slow-water refugia has been identified as the primary limiting factor affecting the recovery of Oregon Coast coho. For this reason, tidegate replacements are currently ongoing across the coast but it is unclear how juvenile coho respond to the improved access and habitat enhanced behind upgraded tidegates. The proposed Project is part of CoqWA's overarching Lower Coquille Tidegate and Fish Passage Monitoring Program. The goal of this Program is to work collaboratively to examine the functionality of individual tidegate projects and how their compounded uplift promotes recovery of the Oregon Coast ESU coho population. The primary goal for the Project is to improve our understanding of how juvenile coho respond to the varied sizes and complexities of new tidegates and the restored habitat. Additionally, we aim to inform adaptive management of the sites and provide critical information to maximize the effectiveness of future tidegate replacement and habitat enhancement projects. The goals will be achieved through three years of water quality sampling, fish sampling and Passive Integrated Transponder (PIT) tagging at the two project areas (located near river mile 13) and fish sampling and tagging in the Lower Coquille River (funded by a pending NOAA grant). Salmonid movement will be tracked by the installation of PIT antenna arrays on the two MTR tidegates at the two project sites. We intend to widely share results via written reports and through in-person presentations. Project Partners: landowners, ODFW (Charleston, Dalles Research Station, REDD Group) and DEQ.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application describes a clear need to inform Oregon Coast Coho recovery actions and a priority question in the Coquille Indian Tribes' restoration plan related to juvenile fish use of tidal areas where tide gates are present.
- The fish monitoring approach and methods proposed are suitable for the monitoring questions posed in the application.
- The applicant is being proactive in expanding the monitoring effort given the variety of tide gate restoration projects that were recently completed and in close proximity to each other in the Lower Coquille River.

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- The applicant plans to share the datasets with the various interested agencies and stakeholders.
- There is a detailed description about how several ODFW offices with specific expertise will be assisting the applicant in implementing the project.
- The budget provided a detailed break-down of the costs and there is a considerable amount of match being contributed to the project.
- The objectives are clearly stated and the activities proposed will help achieve the objectives.
- The applicant has a good track record implementing monitoring at Winter Lake.
- The maps and additional documents that were uploaded to the application were helpful in understanding the details in this relatively complex monitoring application.

Monitoring Team Concerns

- The water quality and level monitoring methods and data management steps were poorly described, although the uploaded materials provided additional detail that was helpful.
- The success of this project hinges on juvenile fish accessing the floodplain through the tide gate structures (although information about if juvenile fish do not pass the tide gates will be important information to know also, in the event that occurs).
- The application lacked letters of support to understand the interest local partners have in this monitoring information.
- The timeline did not include the water quality and water level monitoring, yet it is mentioned in the narrative part of the application.
- The application did not include an objective about or time in the timeline to develop the monitoring plan, despite this task being mentioned earlier in the application.
- There are several moving pieces of this monitoring project that are already in motion with existing funding, and other aspects of the monitoring for which the applicant is seeking funding to collect more data. The application describes the complexity of the project, but it is not clear what funding is being used for which monitoring.

Monitoring Team Comments

• Include in the schedule/timeline, the deployment and operation of the water quality and level loggers and explain why these data are only being collected October to June each year.

• Coordinate with DEQ early in the project to complete an amendment to the SAP.

Review Team Evaluation

Strengths

- There has been a great deal of momentum with replacing tide gates and restoring areas located behind them to support access to and creation of habitats critical for over-wintering survival of ESA-listed coho juveniles. Understanding the effectiveness of this work and various approaches is critical to informing future design and funding decisions.

- There is significant interest and commitment for the project as evidenced by the letters of support and technical contributions made to the effort.
- The applicant and partners have shown the ability to successfully design and implement monitoring projects, which is demonstrated by providing reports and findings of monitoring results.
- The proposal builds on the monitoring efforts undertaken by the applicant and partners at the China Camp Creek tide gate replacement and the Winter Lake habitat restoration sites.
- While the application has a lot of components, the objectives are reasonable and should be achievable within the time frames proposed.
- There is a critical need for tide gate effectiveness monitoring overall, and the proposed work is timely given the need to inform local and state level planning efforts and future replacement tide gate projects throughout the Oregon coast.

Concerns

- A great deal of different monitoring activities are proposed that will collect a lot of data. However, it is unclear how each component is connected and will work together to answer the proposed monitoring questions, or whether the right questions are being asked. More information on lessons learned by work completed to date from Winter Lake and how it is incorporated into this proposal would provide helpful context for understanding the monitoring approach.
- It is unclear whether the Sampling Analysis Plan provided is finalized because there is no indication it has been approved by DEQ.
- When measuring tidal stage, the applicant should consider adding a physical measurement to verify water velocity.

Concluding Analysis

Understanding and documenting the effectiveness of tide gate replacements and habitat restoration projects is an important need in light of the current emphasis on and coordination efforts around addressing aging tide gate infrastructure. The applicant has established a proven track record with this type of monitoring work, and has the resources and partner support to ensure the project is likely to succeed.

Review Team Recommendation to Staff
Fund with Conditions

Review Team Priority
1 of 4

Review Team Recommended Amount
$166,890

Review Team Conditions

The application timeline will be updated to include the deployment and operation of the water quality and

level loggers and will provide additional detail to explain why these data are only being collected October to June each year. The applicant will coordinate with DEQ early in the project to complete an amendment to the SAP.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$166,890

Staff Conditions

The application timeline will be updated to include the deployment and operation of the water quality and level loggers and will provide additional detail to explain why these data are only being collected October to June each year. The applicant will coordinate with DEQ early in the project to complete an amendment to the SAP.

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2058-17427

Project Type: Monitoring

Project Name: Sullivan Gulch Bottomlands Monitoring for Current Functions and Restoration Effectiveness

Applicant: Curry SWCD

Region: Southwest Oregon

County: Curry

OWEB Request: $23,837

Total Cost: $31,118

Application Description *(from application abstract)*

This proposal is for conducting a comprehensive monitoring effort to evaluate the effectiveness of The Sullivan Gulch Bottomlands Restoration Project that was completed in 2015. This project created and enhanced wetland and side channel habitat within the lower 40 acres of Sullivan Gulch; a subwatershed of the Sixes River that drains into the Sixes River estuary. The project's goals were to restore fish passage through the area, create and enhance overwintering rearing habitat for coho salmon, and create and enhance habitat for other native fish species, migratory birds, and other wildlife within the project area. Some monitoring efforts were initially conducted, but a more comprehensive understanding of project effectiveness and current functions has been identified as a need by both the South Coast Estuaries Partnership (SCEP) and the Curry Watersheds Partnership's (CWP) Watershed Monitoring Program.This project will conduct a suite of monitoring efforts to evaluate how the site is functioning in relation to the initial project goals, inform the SCEP on a number of ecological metrics that have been identified as indicators of overall watershed health, and aid the CWP Watershed Monitoring Program in developing and finalizing a long-term, strategic monitoring plan. The monitoring efforts that will be carried out are: a benthic macroinvertebrate survey of the entire site, continuous summer water temperature monitoring, continuous water level monitoring, riparian tree and herbacious wetland vegetation surveys, and a fish species survey. The CWP will conduct these monitoring efforts in collaboration with CASM Environmental, LLC and the Oregon Department of Fish and Wildlife. Results will be presented to all partners associated with the CWP and SCEP, and made available to the general public through multiple CWP publications.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application describes a clear monitoring need to inform restoration actions intended to benefit coastal coho.
- This monitoring project was identified through a prioritization process aiming to develop a refined monitoring approach for restoration actions they plan to implement in the future.
- The applicant is taking a pilot approach to determine if they have selected the appropriate metrics to track changes associated with floodplain restoration.
- The OPMT appreciated that this project will monitor a restoration site five years after implementation.

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- The application had a good description of and citations for the water quality, vegetation and macroinvertebrate monitoring protocols they plan to follow.
- The application had a good description of how the data will be managed, analyzed and reported.
- The applicant is working with an experienced contractor to implement the macroinvertebrate monitoring, and is coordinating with ODFW to implement the fish monitoring.
- The application describes the plan to submit the macroinvertebrate and water temperature data to DEQ and prepare a final technical report.
- The applicant plans to present and share the final report with local partners and post it on their website.

Monitoring Team Concerns

- Collecting the macroinvertebrate data in a tidally influenced area could be challenging, and interpreting the findings may be difficult as the majority of macroinvertebrate tolerance values are in riverine systems. The data may not provide information on effectiveness of the restoration project.
- This project will generate site-specific information, yet the application did not describe how the information learned from this project will inform adaptive management of this site and/or implementation of future restoration actions in other locations.
- The application monitoring objectives did not consistently have a clear connection with the restoration objectives. The objectives focus on data collection rather than the questions to be answered.
- The application describes one of the restoration objectives as improving winter rearing habitat, yet the proposed fish monitoring will occur during the summer. Summer fish monitoring will show if coho, for example, are rearing there but it will not show if the fish are using the habitat as overwinter refuge from higher mainstem velocities.
- Continuous water temperature data will provide status of temperatures at the chosen site. This information may or may not identify areas of cold water depending on site selection. Specific identification of cold water refugia may require more intense spatial coverage of loggers or a more exploratory approach that expands coverage of spatial heterogeneity if cold water refugia occur at small scales.
- It was not clear why water level and water temperature monitoring was limited to May to October, given that restoration was to improve winter conditions and connectivity.
- The timeline is ambitious and may need more time to analyze all the data and finish the report as proposed.
- It was not clear what Swanson Ecological will be doing to contribute match to the project, as their role was not described in the Project Management section of the application.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The proposed monitoring activities are clearly described. Tying the surveys with the stage height is a sound approach.
- Since the area is 303(d) listed for water temperature, understanding how restoration in the area influences water quality is important.
- There is pre-project vegetation information that will be used as baseline for this effort.
- Involving NRCS and OSU Extension demonstrates the cultivation of effective partnerships.

Concerns

- The proposed data collection may not align well with the original restoration objectives, which will makes evaluating the effectiveness of the original restoration project more difficult. It is unclear how summer habitat monitoring will inform the effectiveness of accomplishing the restoration project objectives tied to over-wintering rearing habitat.
- The fish population data collected with hoop traps cannot effectively be compared with electroshocking data.
- There is no pre-project macroinvertebrate data; without this baseline information it will be difficult to identify what changes occurred in the types and population sizes of the macroinvertebrate community.
- It is unclear how this data from the project will be used to inform future restoration work.

Concluding Analysis

There has not been a great deal of restoration in smaller estuary areas in Southern Oregon as compared to the middle and Northern portions of the Oregon Coast. This elevates the need for monitoring restoration work to inform future restoration efforts in this area. If the application is resubmitted, the applicant is encourage to provide information on the connection between the monitoring activities to their timing to the original restoration projects goals, and how the work will inform future restoration and management activities.

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2059-17438

Project Type: Monitoring

Project Name: Umpqua Basin Stream Flow and Temperature Monitoring Project 2020-21

Applicant: Partnership for the Umpqua Rivers

Region: Southwest Oregon

County: Douglas

OWEB Request: $75,399

Total Cost: $112,046

Application Description *(from application abstract)*

This is a continuation of a successful long-term project which began in 1998 that monitors summer stream flow and stream temperature at sites across the Umpqua Basin in Douglas County (see map). Flow measurements, taken at high priority sites, are used to maintain instream water rights (required minimum flows) for aquatic resource protection and provide data of interest to stakeholders.Summer stream temperature measurements at five representative sites provide a long-term data set used by aquatic specialists in the basin to normalize for annual variability in stream temperatures for land management projects, burned area evaluations, and shorter-term baseline monitoring with small data sets. The trend analysis of this data, in partnership with the DEQ, is integral to understanding the effects of climate change on streams in the basin. The addition of North Umpqua temperature Comparison Sites (from long-term BLM and USFS sites) expands the use of the Reference Temperature data into that subbasin which is of great interest to partners.The data and analyses from previous work on this project has been distributed and presented orally to natural resource professionals working in the basin. They have been widely used by both PUR and partners (Douglas County, ODFW, OWRD, DEQ, BLM, and USFS) as well as by the City of Oakland, PacifiCorp, and NOAA Fisheries and are being funded in part by the North Umpqua Foundation. In addition, they would continue to be used for corroborating regional timing and trends of maximum stream temperatures; managing in-stream water rights; developing fishing regulations during low-flow periods; supporting effectiveness monitoring; investigating climate change impacts; evaluating water allocation applications; implementing TMDLs; and developing 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.

Monitoring Team Evaluation

Monitoring Team Strengths

- The monitoring need is clear and has been identified as a priority through several watershed assessments.
- The information collected will be valuable to many agencies responsible for improving public understanding of salmonid viability and limiting factors.
- The proposed monitoring will provide critical information relevant to the Integrated Water Resources Strategy and TMDLs.
- Information from the project will be used to monitor and regulate for instream water rights to maintain instream flows.

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- The plan to include data in the North Fork Umpqua would add value to the data compilation and analyses proposed.
- The application cites the correct stream flow measurement and follows DEQ methods for water temperature monitoring.
- The plans for analysis are thorough, and provides context about how the data may be used by partner agencies and other interested groups.
- This project is a continuation of previous OWEB funded monitoring effort and covers a broad area across the Umpqua Basin.
- The application had numerous letters of support demonstrating a wide interest in the data and how the data will help meet multiple agencies' needs.
- The costs are reasonable and there is good match contribution being provided by a variety of local, state and federal agencies.

Monitoring Team Concerns

- The application did not describe how the applicant will determine if and how variations in stream temperature are related to land use/anthropogenic factors.
- The application did not describe how the data can be used by PUR to target restoration or management actions.
- The OPMT discussed the limitations of discrete flow measurements, as these data will not document the lowest flows from year to year.
- The application was unclear if the grantee's contractor would be performing the water temperature trend analysis in consultation with DEQ or if DEQ is doing the analysis.
- The application would have benefitted from uploading examples of past data summaries to illustrate products from previous monitoring grants.

Monitoring Team Comments

• Future applications should provide links to or upload examples of previous reports.

• Coordinate with DEQ to clarify what analysis that agency will do and what the grantee will need to do to complete this task as proposed in the application.

Review Team Evaluation

Strengths

- The proposed project continues a successful, ongoing monitoring effort that evaluates summer stream flows and water temperature. This effort has been implemented by a partnership between the applicant, OWRD, and Douglas County.
- The monitoring work focuses on identified priority basins with limited water availability.
- The work supports and builds on a long-term data set.
- The protocol for flow measurement was developed working with OWRD.

- The project will provide valuable flow information, especially during critical low flow periods.
- There is a plan to work with DEQ to perform trend analysis and share the long-term dataset with the broader restoration community.
- The project is technically sound, and will provide high benefit for the cost.

Concerns

- The application lacks clarity due to some redundancy of information provided.
- It is uncertain how the information developed from the project will be used to inform future restoration work.
- Additional information on how the proposed work is related to the larger stream temperature and water quality monitoring effort conducted by the applicant would provide helpful context for understanding the need for the proposed project.

Concluding Analysis

The proposed project is a continuation of a successful program that originated in 1998 to collect baseline flow data and temperatures in high priority basins. The information collected is useful to project partners and supports a variety of activities, including regulating instream water rights to protect aquatic resources, modeling water supply and demand, and providing flow and temperature data for stakeholders and the community at large.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 4

Review Team Recommended Amount

$75,399

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2060-17472

Project Type: Monitoring

Project Name: Smith River ARIS Anadromous Salmonid Monitoring

Applicant: Smith River WC

Region: Southwest Oregon

County: Douglas

OWEB Request: $87,932

Total Cost: $210,227

Application Description *(from application abstract)*

The project location is in Douglas County on the main-stem Smith River, 20 miles east of Reedsport, Oregon. The total monitoring area of the project encompasses 201 miles of Coho bearing stream, including the Upper Smith River (5th field HUC), and the sub-basins of the West Fork Smith River (6th field HUC), Vincent Creek (6th field HUC), and 40% of Spencer-Johnson Creek (6th field HUC). SRWC and Trout Unlimited have implemented the use of an Adaptive Resolution Imaging Sonar (ARIS) camera to estimate ESA listed Oregon Coast Coho, fall Chinook, and winter steelhead run abundances. In conjunction with ARIS monitoring, summer snorkel surveys will be conducted throughout each of the major streams within the monitoring area to provide juvenile production estimates. Run abundances enumerated by ARIS coupled with juvenile salmonid snorkel survey data will fill population data gaps and provide a baseline for anadromous salmonid populations in the watershed. Monitoring of these populations will provide SRWC with insight to population-level responses to in-stream enhancement projects occurring throughout the basin. SRWC and others have implemented these projects in 75.35 stream miles above the monitoring site to mitigate the impacts of past land-use practices common on the Oregon coast. 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 two snorkel surveyors over a 2 month period each season and one technician to collect and record ARIS data. Hired technician will also assist TU in maintaining and repairing equipment.

Monitoring Team Evaluation

Monitoring Team Strengths

- The monitoring data that will be collected will improve understanding of anadromous fish populations in the Smith River.
- The application of this technology is appropriate for the proposed monitoring area and has the potential to be useful given the different species present in the Smith River (particularly steelhead).
- The application had a good description of the protocol to be followed for processing the sonar images to estimate run size.
- The addition of the surveys at Smith River Falls will help process the sonar images during the chinook and coho runs to better understand the proportion of fish migrating upstream.
- The application had good support letters that helped describe the level of interest in the data that is being collected and the funding that is being contributed to the project by partners.

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- The budget is reasonable and has significant match.
- The applicant included information in the application to address previous review team comments.
- The applicant has operated the sonar equipment at the site for one year and has experience processing the imagery. This experience should help them successfully continue to collect and process the date for the time period proposed in the application.

Monitoring Team Concerns

- The objectives described in the application focus on data collection and were not connected to the goals of establishing baseline to determine restoration effectiveness at a landscape scale.
- A majority of the activities associated with the objectives lacked detail on what would be done to implement the objective.
- Describing the effects of tide gate restoration may be challenging given that other restoration actions will be implemented in the watershed concurrently.
- The application did not include time in the timeline or an objective to develop the monitoring plan described earlier in the application.
- The application lacked details on the monitoring methods that will be used at the Smith River Falls to estimate what proportion of the run is chinook vs. coho.
- The application lacked detail about how the Smith River Falls count and snorkel survey data will be managed.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The data collected can help inform restoration practitioners and fishery managers on the fisheries population and possible response to restoration efforts.
- This work will augment other adult and juvenile salmonid sampling efforts in the basin. Life cycle monitoring has been occurring since 1998.
- The data collected will be stored and backed-up regularly; and this information will be made available to agencies and researchers. The effort utilizes state of the art video technology that has been purchased and utilized in the field successfully. Project staff are trained to use the equipment and analyze the data collected.
- The project costs appear reasonable for the proposed work.
- Previous review comments are addressed by adding a juvenile monitoring component.

Concerns

- The project covers a large area with a small amount of staff. The Smith River is a large basin and it

will take a great deal of time and capacity to do the survey, trapping, and video review.

- There is not enough information in the application to understand the survey design, and it is not clear whether ODFW was involved in developing the design.
- Ocean conditions are a key variable impacting salmonid productivity. This will require a very long-term commitment to collect enough data that can establish a sound trend in fish populations, and may not be the best approach to evaluate the effectiveness of habitat restoration. Additionally, fish may not be the best indicator for habitat restoration because there are too many variables affecting their populations.
- The project objectives describe data collection that is not aligned with achieving the goals of establishing baseline data to determine restoration effectiveness at a landscape scale. The data will not likely be able to inform effectiveness of restoration because it is evaluating the fish population, which is at the wrong scale.

Concluding Analysis

The approach proposed to monitor returning adults has merit and employs technology that can track adults and water flow conditions that cannot be done with traditional survey methods. This could prove cost-effective and useful in understanding the timing of fish returns, as well as fish numbers of returning adults. However, using adult fish data at one site to determine the effectiveness of habitat restoration is risky and the information obtained is unlikely to inform future restoration because the data will be for a fish population scale instead of the scale for the completed watershed restoration.

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2061-17477 **Project Type:** Monitoring

Project Name: Coho Life History and Migrations in Tide Gated Lowland Coastal Streams 2020-2022

Applicant: Coos Watershed Association

Region: Southwest Oregon **County:** Coos

OWEB Request: $304,509 **Total Cost:** $432,615

Application Description *(from application abstract)*

This proposal refines long-term monitoring that explicitly examines coho salmon abundance, survival, life histories, habitat use and migrations in Palouse and Willanch Creek, two tide gated lowland streams in the Coos Bay estuary. Tidal ecotone habitats have been identified as critical for the resiliency and recovery of Coos River and Oregon Coastal coho but largely remain highly altered and degraded landscapes. These conditions limit connectivity to off-channel winter refuge habitat for multiple cohorts of juvenile salmon from both upstream natal habitats and across HUC 8 metapopulations that migrate through estuaries. It is assumed that tidal habitats provide resiliency for highly adaptive anadromous species. This project seeks to qualify and quantify the ecological benefits that tidal restoration provides. CoosWA utilizes ODFW Life Cycle Monitoring survey and sampling protocols, seine sampling across habitat types, and PIT mark recapture telemetry tools. The combination of continuous and instantaneous data, including environmental variables, increases statistical power for robust analysis. This projects long term dataset and other regional efforts can be analyzed at even greater spatiotemporal scale. Flexible time-series database and analysis software can leverage multiple data sources to elucidate the intrinsic potential of the tidal zone. Monitoring fish passage at tide gates is a key regulatory uncertainty for all stakeholders. Models of coho life histories and migrations will inform management and regulatory expectations for tidal restoration projects of all scales. ODFW, OSU, USFS, U of O OMIB, UCAN-AmeriCorps, SWOCC, local high schools, volunteers and landowners partner with Coos Watershed Association to provide property access, equipment, technical assistance, and survey effort to implement the proposed objectives. OWEB funds will be used to support technical and management personnel and provide necessary materials and equipment.

Monitoring Team Evaluation

Monitoring Team Strengths

- This application proposes to continue an ongoing monitoring project that leverages a long-term data set.
- The application's focus on tide gates and the muted tide regulator (MTR) to improve fish passage is important and timely to understand cost-benefits with upgrading tide gates given the attention this topic has been receiving along the Oregon coast.
- This project will provide information about coho productivity in tide gated systems on the mid-south coast, which are not monitored by ODFW.

- The sharing of data with a variety of partners and how it has been utilized, referenced, and integrated into understanding the complexity of the tidal zone is extremely valuable.
- The inclusion of the predator piece was interesting and potentially very useful. It is possible that predators can learn to exploit pulses of fish that may occur during the passage windows provided by tide gates.
- The applicant uploaded a variety of letters of support that demonstrate interest in the data and willingness to assist in analyzing the data.
- The applicant is working with a variety of partners, including researchers and the Coquille Watershed Association, to ensure communication across complementary monitoring efforts and interests.
- The applicant has experience collecting and reporting data using established protocols.

Monitoring Team Concerns

- Although the monitoring need is clear, the problem/issue was assessed previously and produced results that showed no clear benefit of tidal restoration on salmon populations. It is unclear how this project will differ in order to address information gaps other than collecting additional baseline data.
- The OPMT questioned why a monitoring plan for this project does not already exist, given previous work. While development of a monitoring plan is noted in the application, the project schedule does not indicate the time needed to develop the monitoring plan and the budget does not include costs for this.
- The objectives are not clearly stated and often contain several sub-objectives within each main objective. They are difficult to follow, and contain details that are unrelated. Project activities are sometimes incorporated into the objective statements, causing confusion as to what exactly is trying to be accomplished.
- The monitoring methods were not fully explained and/or cited and an inconsistent amount of detail in the application was provided.
- The application was inconsistent regarding the level of detail provided about how different data sets will be managed, analyzed and reported in a comprehensive manner. Given the immense amount of data and the complex analyses involved, which likely will require results from one analysis to be incorporated into other analyses. Greater detail should have been provided to ensure that the transfer of data from step-to-step and person-to-person is managed appropriately.
- There is no mention of sharing water quality data with DEQ.
- The project schedule timeline does not describe when data analysis occurs or when a final report would be completed.
- The applicant has a mixed track record given that previous reports for related projects have lacked the complex analyses required to successfully meet their defined monitoring objectives.

Monitoring Team Comments

• Coordinate with DEQ to ensure a Sampling and Analysis Plan covers all of the water quality monitoring and includes a clear plan to submit data to DEQ.

• Require progress milestones to report on the development of a monitoring plan at the beginning of the grant period and to ensure analytical procedures are in place to meet the objectives proposed in the application.

Review Team Evaluation

Strengths

- Strong relationships and commitments are built to support this project as evidenced from the letters of support by technical experts from partnering groups.
- Qualified technical experts will assist with reporting and data analysis.
- The monitoring work provides valuable information on coho life histories, and further value will be provided by the addition of looking at predation at tide gates.
- The project addresses a clear need for collecting monitoring information on how tide gates impact fish access to habitat and coho life histories. Examining the impacts of tide gates and looking at the effectiveness of restoration approaches is a critical need, especially as tide gates up and down the Oregon coast are near the end of their functionality.
- The work builds on previous coho life cycle monitoring efforts successfully undertaken by the applicant. The information collected from previous work is well distributed, has informed the development of the draft Coos Watershed Coho strategic Action Plan, and will be important to monitoring the success of the restoration work resulting from that planning work.

Concerns

- The application objectives are difficult to understand.
- The project area is largely a working landscape with various land uses and activities, including dredging, levees, and other impacts on channel morphology. It is not clear whether consideration of these factors will be incorporated into the monitoring project.
- The benefit of the investment for the cost is difficult to determine. The costs seem high for the product deliverables, especially with the amount of historic life cycle information that has already been collected.

Concluding Analysis

The impacts of tide gates on fish access to habitat and the effectiveness of tide gate replacements with more fish friendly devices is critical information needed by both local and statewide efforts to make the best management decisions that address aging tide gate infrastructure. The applicant has built a long-term dataset in their ongoing efforts to monitor coho life cycles in estuary tributaries affected by tide gates. This proposal will continue this work and increase the understanding around tide gates and their impacts on fish usage of estuarine areas.

Review Team Recommendation to Staff

Fund

Review Team Priority

3 of 4

Review Team Recommended Amount
$304,509

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$304,509

Staff Conditions

Prior to the first fund request the Grantee will coordinate with DEQ to ensure a Sampling and Analysis Plan that covers all of the water quality monitoring and data submission to DEQ. Additionally, a progress report will be required that provides an update on the development of the monitoring plan that shows analytical procedures are in place to meet the project's objectives.

Open Solicitation-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2062-17496

Project Type: Monitoring

Project Name: Rogue Basin Partnership Fish Passage Monitoring Program

Applicant: Rogue Basin Partnership

Region: Southwest Oregon

County: Josephine

OWEB Request: $172,718

Total Cost: $242,803

Application Description *(from application abstract)*

Rogue Basin Partnership (RBP) is proposing a monitoring plan for small dam removal projects in Rogue Basin tributaries including: Illinois River, Applegate River, Evans Creek and the Upper Rogue in Jackson and Josephine Counties. Monitoring efforts to quantify biological response to instream restoration projects are essential to determine reach-scale differences attributable to restoration action (project effectiveness), guide future restoration projects and provide accountability to funding sources at the state and federal level (Roni, P. 2003). While multiple dam removal projects have been implemented in the basin, more than 600 low-head barriers remain on tributary streams. It is important to build understanding of how these barriers and their removals impact the fisheries we are working to restore. Anecdotally, small dam removal improves fish abundance, but there is little systematically collected and analyzed data available to verify these observations. RBP's proposed biological monitoring plan will be implemented for multiple years pre and post project to evaluate the effectiveness of small dam removal projects on tributary streams based on fish use of the habitat made available by the removal of the barriers. To investigate an increase in use of habitat, the monitoring plan is designed to document changes in salmonid abundance, juvenile salmonid movement into the impact reach and Pacific lamprey colonization of habitat made accessible by dam removal. The responses to barrier removal by all fish species occurring in the project streams are of interest, however the study will report specifically on the response of coho salmon (O. kisutch), winter steelhead / rainbow trout (O. mykiss), cutthroat trout (O. clarkii), and Pacific lamprey (Entosphenus tridentatus). Project partners include: Illinois Valley Soil and Water Conservation District, Applegate Partnership and Watershed Council and Rogue River Watershed Council.

Monitoring Team Evaluation

Monitoring Team Strengths

- Understanding improvements for fish populations in response to barrier removal is important, particularly in the Rogue Basin where the warmer, drier climate that fish may experience underscores the importance of fish needing to move freely to access needed habitats.
- The application has a good description of the monitoring protocols.
- The application has a good description of managing, analyzing and reporting the data and outlines a plan to use the data to plan future restoration actions.
- The applicant plans to share the data with ODFW and make it available using the Southern Oregon University library.

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- The applicant is working with an experienced contractor to develop and implement their monitoring plan.
- The applicant acknowledges that monitoring should be modified depending upon the site's characteristics, and this is reflected in the detailed monitoring plan that was uploaded.

Monitoring Team Concerns

- Quantifying the outcome of passage at partial barriers may be difficult, and will require large changes to have detectable results beyond interannual variability.
- The mark-recapture monitoring approach does not allow for assessment of downstream passage success where adults spawn upstream of a barrier and their offspring will be trying to migrate downstream.
- The application lacked a justification as to why the habitat surveys are needed.
- It was not clear if state and federal agencies were assisting with the technical approach for this monitoring project.
- It was unclear when Year 3 data would be reported when looking at the project schedule timeline.
- The application mentioned possible publication of the data in a peer reviewed journal, but this seems premature given most of the data appear to be collected prior to restoration being implemented.
- Some of the objectives were confusing (e.g., Objective 1 is to establish sites, but later in the application and in the uploads, it appears six sites have already been established).

Monitoring Team Comments

• Coordinate with ODFW District staff to a) discuss where electric shocking is occurring and assess the potential impact of this, and b) identify potential for leveraging any existing fish monitoring efforts.

Review Team Evaluation

Strengths

- The Rogue basin currently lacks fish monitoring data and there is a recognized need for this type of work. A great deal of investment and work has been undertaken to address fish passage barriers in the Rogue River watershed and the proposed monitoring could provide information on the effectiveness of this work.
- The application is organized well and clearly describes project activities associated with data analyzing and reporting.
- There is a plan for utilizing the data to inform future restoration actions.
- The proposal ties to projects that are still in development, which provides an opportunity for collecting baseline information prior to project implementation.

Concerns

- Involving agencies, such as ODFW, in developing monitoring would strengthen the project.

- The monitoring approach has some risks that could affect the likelihood of success for the project. For example, electroshocking during summer months can increase chances of juvenile mortality and the mark-recapture approach is subject to variables caused by spawning locations affecting the data.
- There may not be a clear need for the proposed monitoring effort if the hypotheses presented in the application can be answered with other studies, such as the one referenced in the application (p. 30-31 O'Neal et al. 2016).
- Tracking the morphological changes near the construction site, such as longevity of the fish passage solution to the barrier, performance at higher return interannual flows, and stream dynamism, may provide a better understanding for the effectiveness of completed restoration work.
- Seasonal barriers are difficult to compare to other barriers and monitoring them also pose difficulties because it will be challenging to collect comparable data.

Concluding Analysis

The Rogue River has seen a great deal of momentum and investment in removing fish passage barriers. However, there is a lack of fish monitoring needed to understand the effectiveness of the barrier removal work in improving fish access above the former dam sites. The proposal has merit but there needs to be additional coordination efforts with appropriate state and federal agencies to ensure the project and approach monitors parameters that have a likelihood of success in achieving the monitoring goals.

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2063-17358

Project Type: Stakeholder Engagement

Project Name: Illinois Valley Collective Mobilization for Fire and Fish

Applicant: Illinois Valley SWCD

Region: Southwest Oregon

County: Josephine

OWEB Request: $130,529

Total Cost: $243,876

Application Description *(from application abstract)*

The Illinois Valley (IV) supports thriving human and ecological communities across a landscape struggling to recover from historic land management practices that adversely impacted watershed conditions. Project location is entirely within Josephine County and the Illinois River watershed; specifically, private lands within subwatersheds of West Fork Illinois, East Fork Illinois, Sucker, Althouse, and Deer creeks. This encompasses the rural hubs of Selma, Cave Junction, Takilma, and O'Brien. This project seeks to inspire landowners to address, on their properties, (1) dangerous forest conditions compounding catastrophic wildfire risk, and (2) riparian and instream habitat limitations. Partners will come together to: coordinate resources, develop and deliver a strategic marketing plan that will move private landowners to become "ready to act" on watershed health improvement projects, and establish a replicable model to maintain and expand successes. Project partners include: IV Conservation District (IVSWCD), IV Watershed Council (IVWC), IV Community Development Organization (IVCanDO), IV Fire District, City of Cave Junction, Josephine County, Oregon Department of Forestry, Grayback Forestry, Wilson Biochar, KS Wild, NRCS, USFS, and BLM. Each of these partners is already actively participating in the Illinois Valley Fire Resiliency Oversight Group (IVFROG).Partners share a vision to restore watershed function and health for the benefit of all communities, by building relationships and cultivating a local culture of conservation and collaboration. The project has been community-driven from its onset. This style of grassroots leadership increases the efficacy in outreach and engagement. These values emphasize the approach of localized participatory process that permeates this proposal.

Review Team Evaluation

Strengths

- The stakeholder engagement approach is a unique blending of wildfire and aquatic issues, and presents an opportunity for outreach to landowners about these two important resource concerns.
- Consolidating opportunities to engage landowners in addressing fire and aquatic habitat needs creates cost efficiencies by avoiding the need for multiple outreach efforts that approach these conversations separately. Utilizing one coordinator to move the engagement forward will also improve the effectiveness and consistency in delivering the message.
- The appropriate stakeholders and partners will be engaged at an appropriate geography and demographic.

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- The project falls into an existing NRCS EQIP implementation strategy that has focus areas identified in the proposed stakeholder engagement project area. NRCS is poised to spend $1.75 million per year over 5 years on private non-industrial forest lands for brush management, woody residue treatment, forest stand improvement, and pruning. It is expected as people learn more about NRCS forestry work, messaging around NRCS's irrigation efficiency opportunities will also take root.

Concerns

- The proposed activities resemble a marketing strategy instead of implementing multidirectional communications directly with landowners, which may not be effective in leading to eligible restoration projects in a timely manner.
- It is difficult to determine the technical soundness of the proposed work because the project deliverables and outcomes are difficult to understand. The letters of support provide some clarity.

Concluding Analysis

The project could result in actions by landowners to address two important resource concerns in one engagement process. Project partners will coordinate to develop and implement a strategy that engages private landowners in developing actions to improve the health of their watershed. The proposal is timely and will build on efforts already underway by NRCS and other partners.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 2

Review Team Recommended Amount
$130,529

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-2019 Fall Offering
Southwest Oregon (Region 2)

Application Number: 220-2064-17397

Project Type: Stakeholder Engagement

Project Name: South Fork Coquille Watershed Stakeholder Engagement

Applicant: Coquille Watershed Association

Region: Southwest Oregon

County: Coos

OWEB Request: $54,778

Total Cost: $69,357

Application Description *(from application abstract)*

The project will occur in the 283 sq. mi. South Fork Coquille watershed (SFCW). The watershed problems to be addressed are the limiting factors for anadromous fish species: lack of habitat quantity and quality and impaired water quality. Specifically, throughout the SFCW there is a lack of large woody debris, limited riparian vegetation, fish passage issues, high water temperatures and extensive sedimentation and erosion. Moreover, the mainstem South Fork Coquille River (SFCR) has an incised channel that prevents the SFCR from connecting to its floodplain at most flows, limiting fish access to these critical habitats. High velocity flows in the channel also exacerbate bank erosion, damaging workings lands and roads. These issues reduce the capacity of the watershed to produce healthy anadromous fish populations. Additionally, there is a critical need to address the community's concerns about the instability of the mainstem SFCR and disseminate the findings from hydrological studies completed as part of the SFCR Action Plan (SFAP). In doing so, we can identify voluntarily restoration actions we can take with landowners to address limiting factors and prevent damage to working lands. The engagement activities led by CoqWA and CoosSWCD will include: a needs assessment, development of an outreach plan, and implementation of the outreach plan including site visits, meetings, and creating informational materials. The outcomes of the engagement work will be community supported restoration and willing landowners to partner with on feasible restoration actions as identified in the SFAP that address the watershed problems. To effectively implement the SFAP, we have identified that stakeholder engagement is the necessary first step to successful, high priority, and lasting restoration actions in the watershed. Partners include the members of the CoqWA convened Technical Advisory Committee: CoosSWCD, BLM, USFS, NMFS, Coquille Indian Tribe, ODFW, DEQ and Coos/Curry CREP Tech.

Review Team Evaluation

Strengths

- The right mix of stakeholders will be engaged in an important watershed at a scale necessary to result in meaningful actions that address causes of watershed degradation.
- The project is guided by priorities and goals from the 2015 South Fork Coquille Action Plan and a technical advisory committee.

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- Landowner recruitment will employ many techniques, including the coffee klatch approach that utilizes small community meetings hosted by a local land owner. This approach was highly successful in the local Coos River watershed.
- The project is timely because a TMDL is expected to be issued in late 2020. Water quality and watershed processes affecting water quality can be incorporated into the stakeholder conversation, which will facilitate integrating common goals into stakeholder engagement efforts.
- The applicant has developed a proven track record in working with stakeholders and landowners on developing watershed assessments and implementing actions identified.

Concerns

- Sediment and geomorphology are very important issues impacting the South Fork Coquille River, as evidenced by the extent of streambank erosion, that could have been highlighted more in the application. These will be important themes to message in engagement activities.
- It will be important for stakeholder engagement approaches to consider how to find restoration solutions that incorporate instream habitat improvements rather than focusing primarily on bank stabilization.

Concluding Analysis

Stakeholder engagement work will seek to secure community support for, as well as engage willing landowners in developing restoration activities. The project is built on a recently completed watershed assessment and action plan. The applicant's staff and partners have the skillsets needed to work with local landowners and the community to identify and move forward meaningful restoration actions that would improve the health of the South Fork Coquille River.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 2

Review Team Recommended Amount

$54,778

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$54,778

Staff Conditions

None

Willamette Basin - Region 3 Fall 2019 Applications

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Grant Types

- Restoration
- Technical Assistance
- Stakeholder Engagement
- Monitoring

Previous Grants: 1998 - Spring 2019

- Restoration
- Land Acquisitions
- Streams
- Region Boundary

OREGON WATERSHED ENHANCEMENT BOARD

775 Summer St, NE Suite 360
Salem, OR 97301-1290
(503) 986-0178
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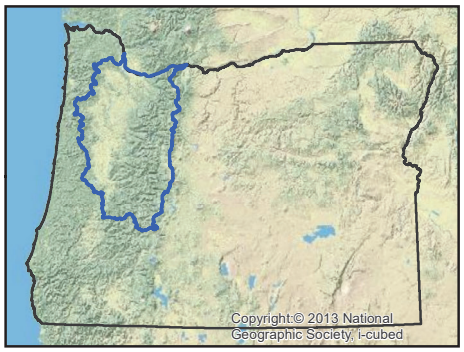

Region 3 - Willamette Basin

Restoration Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Project Modification	Amount Recommended	County
220-3029	Coast Fork Willamette WC	Salyers Family Ranch: Oak Woodland Restoration Phase 1	Rare and degraded Willamette Valley oak woodland, savanna, and prairie habitats impacted by fire suppression, woody encroachment, dense canopy shade, and pressure from nonnative and invasive plant species will be restored over 102 acres on a property located near Creswell, Oregon.		276,675	Lane
220-3022	The Freshwater Trust	Sandy River Basin Aquatic Habitat Restoration Project	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.		337,600	Clackamas
220-3031	Luckiamute WC	Protecting the Best: Upper Luckiamute Mainstem Anchor Habitat Enhancement	Native fish habitat will be restored in the Upper Luckiamute River by placing log structures in the stream, planting conifers along the streamside, and thinning an overstocked Douglas fir plantation on private timberlands to address impacts from historic timber practices, such as logging to the water's edge and log drives.		134,886	Polk
220-3026	Lomakatsi Restoration Project	Willamette Basin Oak Habitat Restoration Project	Best practices in restorative ecological forestry, including invasive plant species treatment, tree thinning, and native plant seeding, will be used to restore 372 acres of Willamette oak habitat, which are some of the most biologically diverse, yet imperiled ecosystems.		250,000	Polk
220-3030	McKenzie Watershed Alliance	Connections in Restoration: Floodplain Enhancement at Deer Creek	Natural stream processes disrupted by past land management practices, such as berm placement and timber harvests, will be addressed on Deer Creek by restoring floodplain connection with the creek, which will maintain a diverse and resilient ecosystem for native fish and wildlife in the McKenzie River basin.		397,248	Lane
220-3033	Benton SWCD	J2E River to Ridge Diversity Project	A ridge to river approach will enhance native fish and wildlife habitats on a small woodlands operation in the Upper Luckiamute basin. Removing invasive plant species, increasing native plant diversity, and adding large wood to a stream will promote pollinator habitat, improve wetlands, and restore stream corridors.		239,915	Benton
220-3024	Pudding River WC	Scotts Mills Dam Removal	A dam located on Butte Creek, in the City of Scotts Mill, will be removed. This will facilitate steelhead and salmon fish passage to 13 stream miles of spawning and rearing habitat.		49,992	Marion
Total Restoration Projects Recommended for Funding by RRT and OWEB Staff					**1,686,316**	

Region 3 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Restoration Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-3025	Yamhill SWCD	Willamette and Yamhill River Confluence Riparian Restoration	A buffer of native vegetation will be established on 28 acres at the confluence of the Yamhill with the Willamette River, which will provide water quality benefits.		186,111	Yamhill
220-3023	Institute for Applied Ecology	Plants for People Phase 3	Willamette prairie and oak savanna habitat will be restored at seven sites, and culturally significant plants will be made available for restoration. Partnerships between the Confederated Tribes of Grand Ronde and public land managers will incorporate traditional ecological knowledge into restoration, increase tribal resources to grow plants, and facilitate tribal access to gathering sites.		234,441	Yamhill
220-3021	Willamette University Business Office	Wet Prairie Restoration at Willamette University at Zena	Oak woodland and savanna, prairie, and streamside habitats will be restored on a Willamette University conservation property located in the Eola Hills. Creating resilient and biologically diverse plant communities will benefit native fish and wildlife habitat in the central Willamette Valley.		149,304	Polk
220-3028	Pudding River WC	Abiqua Creek Aquatic Habitat Enhancement	Log and boulder structures will be placed in Abiqua Creek on private timberlands located in the low elevation West Cascades foothills of the Molalla-Pudding River Watershed to restore stream conditions for native fish.		160,075	Marion
Total Restoration Projects Recommended for Funding by RRT					**2,416,247**	

Restoration Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount Requested**	**County**
220-3027	City of Estacada	Wade Creek Park Phase 3	174,900	Clackamas
220-3032	OSU Office of Sponsored Research & Award Admin	Economic and Ecological Sustainability through Restoration of Lamprey Creek - Phase I	177,071	Benton

Region 3 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance (TA) Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-3034	Institute for Applied Ecology	Champoeg Natural Resource Management Plan	Historic and natural resource values will be assessed at Champoeg State Heritage Area to develop a plan for restoring and conserving some of the Willamette Valley's most imperiled habitats, including prairie, oak, riparian, and ash swale.		69,002	Marion
220-3035	McKenzie River Trust	Finn Rock Reach Floodplain Restoration Engineering and Permitting	Final engineering and permitting design steps will lead to a large-scale floodplain and side-channel habitat restoration project on the McKenzie River, near Blue River in Lane County, that will benefit native salmon and steelhead fish.		7,603	Lane
Total TA Projects Recommended for Funding by RRT and OWEB Staff					**76,605**	

Technical Assistance Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**		**Amount Recommended**	**County**
None						
Total TA Projects Recommended for Funding by RRT					**76,605**	

Technical Assistance Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount Requested**	**County**
None				

Region 3 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Stakeholder Engagement Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-3041	Middle Fork Willamette WC	Engaging Diverse Stakeholders in Floodplain Restoration at Elijah Bristow State Park	Tribes, river and land managers, permitting agencies, and local stakeholders will be engaged to refine final designs for a large-scale flooplain restoration project at Elijah Bristow State Park located at the confluence of the Middle Fork Willamette River and Lost Creek that will improve habitats for native fish and wildlife.		96,971	Lane
220-3043	Long Tom WC	Building Prescribed Fire Capacity in the Southern Willamette Valley	Local tribes, non-profits, public agencies, and private landowners will be engaged to determine prescribed fire capacities and needs across ownership boundaries. Oak-prairie ecosystems will continue declining without prescribed fire to restore these habitats, and hazardous fuels and wildfire risk may increase in the Southern Willamette Valley.		65,973	Lane
Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff					**162,944**	
Stakeholder Engagement Projects *Recommended but Not Funded* in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**		**Amount Recommended**	**County**
None						
Total Stakeholder Engagement Projects Recommended for funding by RRT					**162,944**	
Stakeholder Engagement Projects *Not Recommended* for Funding by RRT						
Project #	**Grantee**	**Project Title**			**Amount Requested**	**County**
220-3042	Cascade Pacific RC&D	Willamette Hazelnut Stakeholder Engagement Project			61,490	Marion

Region 3 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Projects Recommended for Funding in Priority Order						
Project #	**Grantee**	**Project Title**	**Brief Description**	**Project Modification**	**Amount Recommended**	**County**
220-3038	Institute for Applied Ecology	Kincaid's lupine Effectiveness Monitoring	The effectiveness of Kincaid's lupine restoration efforts across the Willamette Valley will be assessed to inform future work and track recovery of this threatened plant species that supports the Fender's blue butterfly, which is listed as an endangered species.		86,848	Benton
220-3037	Calapooia WC	Calapooia Chinook Environmental DNA Monitoring	Spring chinook distribution and habitat use will be monitored in the Calapooia River using eDNA data to inform the selection of instream habitat restoration sites, fish out-planting locations, and insights for future monitoring.		49,101	Linn
Total Monitoring Projects Recommended for funding by OWEB Staff					**135,949**	
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					**135,949**	
Monitoring Applications *Not Recommended* for Funding by RRT						
Project #	**Grantee**	**Project Title**			**Amount Requested**	**County**
220-3036	Willamette University Business Office	Restoration Monitoring at Willamette University at Zena			227,458	Polk
220-3039	Middle Fork Willamette WC	Effectiveness monitoring of floodplain restoration projects in the Middle Fork Willamette			179,596	Lane
220-3040	Coast Fork Willamette WC	The Mosby Creek Salmon Spawning Monitoring Project Phase I			96,393	Lane
Region 3 Total OWEB Staff Recommended Board Award					**2,061,814**	**19%**
Regions 1-6 Grand Total OWEB Staff Recommended Board Award					**10,877,263**	

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3021-17364

Project Type: Restoration

Project Name: Wet Prairie Restoration at Willamette University at Zena

Applicant: Willamette University Business Office

Region: Willamette Basin

County: Polk

OWEB Request: $149,304

Total Cost: $235,947

Application Description *(from application abstract)*

This wet and upland prairie habitat restoration project is located at the 305-acre Willamette University at Zena (WUZ) property in the Eola Hills, central Willamette Valley, Spring Valley Creek 6th order sub-basin of the Middle Willamette River Watershed, Polk County, 8 miles NW of Salem, OR (Figure 1). Throughout the Willamette Valley and at WUZ, human activities such as farming, forestry, and residential development have reduced oak habitat by 90%, increased presence of invasive plant species, altered subsurface and surface hydrology, and decreased ecosystem resilience to climate change. In Phase I restoration (2010-2014) we began restoring 230 acres of prairie and oak woodland, focused primarily on structural restoration (removing conifer plantations and non native shrubs from prairies and thinning oak woodlands), and some compositional restoration of the prairie. In Phase II we propose to focus mainly on compositional restoration of 56 acres of prairie with the goal of creating resilient and biologically diverse wet and upland prairie habitat. Our activities will include: 1) completing compositional restoration of 22 acres of partly restored upland prairie; 2) completing compositional and structural restoration of 24 acres of unrestored wet prairie; 3) creating hydrologic and structural connectivity between upland prairie and riparian habitat in 4 acres of wet prairie; and 4) thinning 6 acres of oak woodland and savanna to support oak regeneration. Effectiveness monitoring will be undertaken as described in a separate monitoring grant in which we propose to expand our quantitative monitoring and to model watershed response to land management activities. Our partners on this Phase II restoration grant include the Oregon Department of Fish and Wildlife, the United States Fish and Wildlife Service, the Institute of Applied Ecology, and Trout Mountain Forestry.

Review Team Evaluation

Strengths

- Project objectives are clearly articulated in the application.
- The proposed project builds on previous restoration work.
- A conservation easement will protect restoration investments over the long term.
- Restoring wet prairie habitat is a priority in the Willamette basin. Wet prairie typically does not receive needed attention even though very little remains of this habitat.
- Project costs are reasonable and are comparable with similar projects.

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- The applicant is engaging appropriate partners with relevant experience to implement the project.
- The project site provides an opportunity for building public awareness about watershed restoration.

Concerns

- It is unclear whether fire was considered as an alternative even though it can be an effective tool for restoring the target habitat.
- The restoration methods rely heavily on plant plugs, which can be a slow and expensive approach with limited success in introducing plant diversity. Using plugs will likely improve overall native plant presence, but may not achieve project diversity goals. Seeding has proven to be a more cost-effective approach after weed treatment.
- The proposed seeding rate may not be adequate for achieving restoration goals and objectives for the target habitats.

Concluding Analysis

The proposed restoration actions are likely to succeed in improving habitat conditions and structure; however, the project scale and methods may limit the extent to which there will be a meaningful impact on the target habitats. As a result, there is a limited watershed benefit for the project cost. It is also unclear whether there is urgency for the proposed project to be implemented in the near-term.

Review Team Recommendation to Staff
Fund

Review Team Priority
10 of 11

Review Team Recommended Amount
$149,304

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3022-17368

Project Type: Restoration

Project Name: Sandy River Basin Aquatic Habitat Restoration Project

Applicant: The Freshwater Trust

Region: Willamette Basin

County: Clackamas

OWEB Request: $337,600

Total Cost: $891,224

Application Description *(from application abstract)*

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 on behalf of the Sandy River Basin Partners (the Partners). The Sandy River originates on Mt. Hood and flows 56 miles northwest before entering the Columbia River, near Portland, Oregon. The proposed project will address primary limiting factors by increasing off channel habitat/floodplain connectivity and large wood abundance in high priority tributaries of the Sandy, including the mainstem Salmon River, Boulder Creek (both in the Salmon River sub-watershed) and Clear Fork (located within the Upper Sandy 6th Field watershed). Proposed work is on public land managed by the USFS and BLM located near Zigzag, Oregon in Clackamas County.Sandy River salmon and steelhead populations have declined over the last century due to degradation of habitat and other factors. The 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. Restoration actions to be undertaken as part of the proposed project include: reactivation of flow to historic side channels and floodplain habitat, construction of large wood habitat structures, and placement of additional large wood in side channels and on stream margins. This project is part of a larger, multi-year watershed scale restoration effort and builds on similar successful projects completed in the basin by TFT and the Partners since 2008. OWEB funding will support TFT staff time for project design/permitting, project management, construction, travel, administration and reporting.

Review Team Evaluation

Strengths

- Previous application evaluation concerns are addressed.
- Past restoration projects are used as an appropriate template for the design of the proposed work.
- The proposed restoration is similar to previous work completed in the watershed that has proven successful as demonstrated by evidence from fish return data. Fish population data will continue to be collected to measure restoration effectiveness.

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- 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.
- The project team has a proven track record as a successful partnership implementing similar projects

Concerns

- There are no concerns identified.

Concluding Analysis

The 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 a 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 11

Review Team Recommended Amount
$337,600

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$337,600

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3023-17392
Project Type: Restoration
Project Name: Plants for People Phase 3
Applicant: Institute for Applied Ecology
Region: Willamette Basin
County: Yamhill
OWEB Request: $234,441
Total Cost: $788,175

Application Description *(from application abstract)*

The purpose of “Plants for People Phase III” is to restore prairie and oak savanna habitat at seven sites in the Willamette Valley in order to improve ecosystem functionality and increase abundance of culturally significant plants while establishing mutually beneficial partnerships between Confederated Tribes of Grand Ronde (CTGR) and public land managers engaged in restoration and conservation. Project locations include: Herbert Farm & Natural Area (near Marys River and Corvallis, Benton County), Champoeg State Heritage Area (near Willamette River and Newberg, Marion County), Rattlesnake Butte (near Long Tom River and Monroe, Lane County) and four other CTGR sites (near South Yamhill River, Polk and Yamhill Counties). Needs to be addressed include the loss of Willamette Valley prairie and oak habitat, failure to incorporate traditional ecological knowledge into habitat restoration, lack of commercial availability of culturally significant plant materials, lack of tribal infrastructure and resources to grow plants and conduct restoration, and minimal tribal access to appropriate gathering sites. Project components include restoring oak savanna and prairie habitat at seven sites throughout the Willamette Valley, including five CTGR-owned sites and two culturally important publicly-owned sites. Tribal staff and community will engage in plant production and restoration and the tribal native plant nursery will grow culturally important species for restoration. Native plant production will be expanded and the production plan updated. A plan for traditional harvest will be implemented at Champoeg. The main project partners include: CTGR, City of Corvallis, Oregon Department of Fish and Wildlife, Oregon Parks and Recreation Department, US Fish and Wildlife Service and Long Tom Watershed Council.

Review Team Evaluation

Strengths

- The application clearly states the project objectives, tasks, and timeline, and has a description of appropriate restoration actions at identified sites.
- The proposed project builds on work completed through previous OWEB grants.
- The application references a number of existing watershed plans that informed the proposed actions.
- Tribal knowledge will be integrated to ensure culturally significant native plants are available for future restoration. This provides a unique social and cultural engagement opportunity among watershed restoration practitioners.

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- The plant species that will be grown will likely provide indirect benefits to native fish and wildlife, including ESA-listed species, because they will be used at restoration sites.
- The applicant has a proven track record with similar projects.

Concerns

- The project measures of success are vague.
- The application has limited information quantifying watershed health benefits that will result from proposed restoration actions, which makes it difficult to assess the ecological value of this work and whether the watershed benefit justifies the project cost. A description of the results achieved from previous project phases would provide helpful context for better understanding potential watershed benefits for the currently proposed work.
- The application budget lacks detail needed to understand project costs. Additional information explaining the process for developing the budget and any assumptions used that informed how costs were determined would provide helpful context for interpreting the budget.
- It is unclear whether the plant material development project component can be sustainable beyond OWEB investments. While plant orders have been made in response to work from previous project phases, it will be some time before this operation is commercially viable.

Concluding Analysis

OWEB investment is needed to integrate tribal knowledge into restoration to build access to culturally significant native plant material into watershed projects. The unique social and cultural benefits resulting from this project are high; however, the direct ecological uplift from this investment is unclear. As a result, the watershed health benefit is uncertain for the cost.

Review Team Recommendation to Staff

Fund

Review Team Priority

9 of 11

Review Team Recommended Amount

$234,441

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3024-17416
Project Type: Restoration
Project Name: Scotts Mills Dam Removal
Applicant: Pudding River WC
Region: Willamette Basin
County: Marion
OWEB Request: $49,992
Total Cost: $98,605

Application Description *(from application abstract)*

The Scotts Mills dam removal project partially addresses the decline in Willamette Basin native salmonid fish populations due to lack of access to high quality habitat. Both ESA-listed Upper Willamette Winter Steelhead and Spring Chinook Salmon are affected as well as introduced Coho Salmon. The project site is in the Molalla-Pudding River Watershed on Butte Creek in the City of Scotts Mills at USGS RM 12.9. Butte Creek is the political border between Clackamas and Marion Counties. Geologically, the site is in a transition zone between the sedimentary rock formations of the Willamette Valley and the basalt lava flows with cascading streams characteristic of the Western Cascade foothills upstream. The project will improve the current degraded physical habitat by allowing the natural annual transport of gravel downstream; a river reach currently scoured to bedrock (Photo 1.a). Completion will also allow more natural fish passage to high quality spawning and rearing habitat (Photo 1.b) for 13.5 RM upstream of the dam. The dam structure (Photo 1.c) will be removed in September 2020. The project implementation strategy is provided by ODFW's Fish Passage Task Force. All concrete removed will be hauled to a local rock quarry and disposal will be provided by K&E Excavating. Marion County Public Works will be invited to provide in-kind hauling and a dump truck. A portion of the gravel that has accumulated behind the dam will be hauled to the quarry. The remainder will naturally move over the basalt falls in the following high flow seasons and will help replenish depleted gravel supply downstream. The sediment transport, evidence of spawning, and any signs of bank erosion will be monitored by ODFW, PRWC, and volunteers from Native Fish Society for three to five years.

Review Team Evaluation

Strengths

- The application describes a technically sound approach to remove a dam and restore fish passage.
- Access to 13 miles of stream habitat will be made available to winter steelhead and Chinook salmon. The overall project cost is low for the number of stream miles that will be made accessible to ESA-listed fish, therefore providing a high benefit for the cost.
- ODFW will lead project construction, which indicates the agency's support for the project while also providing capacity and assuring technical expertise required to successfully implement the project.
- Neighbors were invited to the application review site visit and invited to share diverse perspectives regarding the project. This indicates stakeholders are being heard throughout the project process.

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Concerns

- The application would benefit from additional detail to better understand the project methods; however, this detail was provided at the site visit.
- A portion of the project site is in a county park and it is unclear whether the county will ultimately approve the project. While the Marion County Parks Commission approved the project, County Commissioner approval is still required. The Board of Commissioners are currently considering the project and is planning a public meeting to hear from the community.
- Since the dam sits on a natural waterfall, fish passage will still be challenging once the dam is removed. However, the incorporation of a notch into the rock will create attraction flow for fish that may better facilitate passage upstream.

Concluding Analysis

Dam removal will significantly improve needed fish passage upstream to habitat with cooler water temperatures. There is an element of urgency for this project because ODFW resources may not be available long term for implementation. The extent of stream habitat that will be made more accessible to ESA-listed fish is a significant benefit for the overall project cost.

Review Team Recommendation to Staff
Fund

Review Team Priority
7 of 11

Review Team Recommended Amount
$49,992

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$49,992

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3025-17417

Project Type: Restoration

Project Name: Willamette and Yamhill River Confluence Riparian Restoration

Applicant: Yamhill SWCD

Region: Willamette Basin

County: Yamhill

OWEB Request: $186,111

Total Cost: $360,979

Application Description *(from application abstract)*

The project location is on a 320 acre property, which is about 3 miles outside of the City of Dundee, Oregon in Yamhill County. This proposed 28 acre riparian restoration project would occur at the confluence of the Yamhill and Willamette Rivers and is within the Middle Willamette River Floodplain Conservation Opportunity Area. Within this conservation opportunity area recommended actions include restoring or expanding riparian habitat. This project will leverage funds from the Farm Service Agency's Conservation Reserve Enhancement Program (CREP) to establish an average of 180 foot buffer along 3500 feet of the Willamette River and 100 foot buffer along 4500 feet of the Yamhill River. A small back channel along the Willamette that is approximately 600 feet in length would also be included in the CREP contract. This buffer will be planted at an increased planting density (2400 stems/acre). OWEB funds will be used to fund additional site prep and maintenance treatments not eligible for CREP cost shares and the increased planting density. Partners include US Fish and Wildlife Service, Greater Yamhill Watershed Council, the Farm Service Agency and the Oregon Department of Fish and Wildlife.

Review Team Evaluation

Strengths

- The proposed Rapid Riparian Revegetation (R3) method is appropriate for the project site and is a proven method for restoring riparian buffers in the Willamette basin.
- The project is ready to implement and will leverage the Conservation Reserve Enhancement Program (CREP). The CREP process is also underway for the project site.
- There is currently a lack of floodplain connection to the Willamette River in the project reach. Any opportunity to open and extend this connection, such as the proposed project, will benefit native fish.
- Restoring the riparian buffer will protect water quality by reducing potential sediment transport into the stream.
- Weed treatment best management practices and herbicide protocols will be correctly applied to limit potential impacts from this chemical use.
- The landowner's long-term plans for the property to continue integrating conservation with land management indicate a commitment to a restoration vision.
- The project site provides an opportunity to raise awareness that could lead to future restoration because of the landowner's interest in sharing their work in voluntary conservation.

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- The applicant has a proven track record in implementing similar projects.

Concerns

- The cost per acre is high for the watershed benefit; however, project costs align with the typical rates for successful implementation of the R3 approach.
- A description of irrigation plans for new plants, if needed, would strengthened the application.

Concluding Analysis

OWEB funds are needed to leverage CREP and achieve restoration goals for restoring riparian plant buffers to a free-to-grow state. The project is likely to succeed in improving floodplain and riparian habitat at the confluence of the Yamhill and Willamette Rivers.

Review Team Recommendation to Staff
Fund

Review Team Priority
8 of 11

Review Team Recommended Amount
$186,111

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3026-17422

Project Type: Restoration

Project Name: Willamette Basin Oak Habitat Restoration Project

Applicant: Lomakatsi Restoration Project

Region: Willamette Basin

County: Polk

OWEB Request: $250,000

Total Cost: $1,588,119

Application Description *(from application abstract)*

The proposed oak habitat restoration project will take place on two sites in the Willamette Valley. Restoration locations include Noble Oaks near Willamina in Polk County, on conservation lands owned managed by the Confederated Tribes of Grand Ronde, and the Coburg Ridge Preserve near Eugene in Lane County, on private property with a conservation easement held by The Nature Conservancy. Oak habitats are some of the most biologically diverse, yet imperiled ecosystems in Oregon. Over the past 100 years, Oregon white oak plant associations have significantly declined in abundance and distribution, with approximately 90% of oak habitat lost in the Willamette Valley due to increasing agricultural and urban development. Interruption of the historic frequent low-intensity fire regime that shaped and maintained these oak stands has allowed the establishment of less fire-resistant, yet faster-growing tree species such as Douglas-fir to encroach upon and displace oak trees. The infilling of conifers has altered structural and compositional conditions in remnant regional oak woodlands and savannas, and now many plant and wildlife taxa are considered imperiled; six have been listed under the federal Endangered Species Act. The conservation of oak habitats is a priority in the Oregon Conservation Strategy, the NWPCC Willamette Sub-basin Plan, and many local watershed plans.The proposed work at these sites, all identified as priority locations for oak conservation, will restore 372 acres of oak habitat. Partners will utilize best practices in restorative ecological forestry, and incorporate Traditional Ecological Knowledge and ecocultural restoration approaches. Restoration will include: invasive species treatment, ecological thinning, habitat enhancement measures for wildlife benefit, removal of project biomass and native seeding.Project partners include The Confederated Tribes of the Grand Ronde, Lomakatsi Restoration Project and The Nature Conservancy of Oregon.

Review Team Evaluation

Strengths

- Previous application evaluation concerns are addressed.
- The application describes clear objectives and an appropriate restoration approach for oak and prairie habitats.
- Proposed restoration will build on previous work on both project sites noted in the application.

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- Since both sites are permanently protected for conservation purposes, there is an increased likelihood for the restoration investments to be maintained over the long term.
- After oak stand structure needs are addressed by thinning, fire will be introduced to continue restoring and managing the habitat. The Confederated Tribes of the Grand Ronde has expertise using prescribed fire as a restoration tool.
- Mapped legacy oaks located on the Noble Oaks site elevates the priority for the proposed restoration to ensure these oaks are not lost.
- The applicant has a proven track record managing similar projects in southwest Oregon, and brings transferable knowledge and experience to the Willamette Basin.

Concerns

- The application lacks letters of support documenting that appropriate partners are engaged in the project; however, partners participated in the site visit and described how they will be actively engaged in project implementation.
- While the application has additional budget details compared to the previous application, some costs are still grouped into lump sums. Additional detail is needed to better understand whether costs are reasonable and necessary for the proposed work.
- The proposed tree thinning in the Riparian Management Area (RMA) on the Coburg site could result in a conifer basal area below ODF standards. It is unclear whether fish are present, and if the tree thinning treatment will negatively impact the stream and habitat it provides to fish.

Concluding Analysis

The project provides a unique opportunity for transferring tribal eco-cultural knowledge into restoration and developing tribal work force capacity for oak restoration. There is an element of urgency for treating areas around the legacy oaks to prevent their loss to conifer encroachment. The extent of restoration proposed in priority oak and prairie habitats provides a significant benefit for the cost.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

4 of 11

Review Team Recommended Amount

$250,000

Review Team Conditions

Provide documentation at first payment that ODFW has been consulted and approves basal rates in the RMA at the Coburg site based on fish habitat needs, if determined applicable. Grantee should consider girdling trees and leaving them for future large wood recruitment to the stream as an option.

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund with Conditions

Staff Recommended Amount

$250,000

Staff Conditions

Provide documentation at first payment that ODFW has been consulted and approves basal rates in the RMA at the Coburg site based on fish habitat needs, if determined applicable. Grantee should consider girdling trees and leaving them for future large wood recruitment to the stream as an option.

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3027-17424
Project Type: Restoration
Project Name: Wade Creek Park Phase 3
Applicant: City of Estacada
Region: Willamette Basin
County: Clackamas
OWEB Request: $174,900
Total Cost: $928,350

Application Description *(from application abstract)*

Restoration work associated with the Wade Creek Park Phase 3 project builds upon earlier work funded by OWEB. Earlier work included planting of bioswales and riparian areas around Wade Creek pond, which is located within the City of Estacada west of the Estacada Library and north of Wade Creek Park. The Wade Creek Park Phase 3 project will reestablish a stream channel where the pond currently exists. The new channel will provide pool-riffle habitat, incorporate large wood, and use stream restoration techniques commonly used within the Clackamas River Basin. The project will replace a deteriorated culvert at the inlet to the pond, replace the control structure at the outlet of the pond, and grade the pond area to eliminate steep slopes and create an active floodplain along the new channel. All disturbed areas will be revegetated with native herbaceous and woody plant species. The restoration will complement work being conducted by the Clackamas River Basin Council and others within the basin.The restoration will address problems identified within the Clackamas River Basin including high water temperature, bacteria, and invasive species. The project will eliminate the open water area of the pond and replace it with a narrow stream channel with a vegetated riparian area. This change will eliminate a source of heating as well as a source of bacteria. The narrow stream channel will expose less water to solar radiation, and the riparian vegetation will provide shade. The change in habitat conditions will prevent the large congregations of waterfowl that are common and will prevent the deposition of feces from the waterfowl within the pond and surrounding area. Yellow flag iris and other invasive species found within and around the pond will be removed. The project also provides a significant opportunity for public education, which was identified in the Clackamas River Basin Action Plan as integral to the efforts to protect, enhance, and restore the Clackamas watershed.

Review Team Evaluation

Strengths

- The project is ready for implementation and the proposed objectives are attainable.
- Design alternatives were considered.
- The project provides an opportunity for raising public awareness because the project site is a park adjacent to the public library.
- Overall costs for the proposed actions are reasonable.

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Concerns

- The proposed work is not an action identified in a prioritized geography of a watershed restoration plan for the Clackamas watershed or Wade Creek.
- There is no evidence that partners that could provide appropriate technical expertise are engaged in the project.
- Water temperature benefits will be limited because the stream moves through pipes in adjacent areas, which has a larger influence on stream temperature compared to the proposed actions within the project footprint.
- It is uncertain whether the design approach is appropriate. After a water flow barrier is removed, it is sometimes more effective to wait and see how a stream responds instead of forcing the stream to a designed channel configuration. Forcing a stream to a designed configuration can result in unexpected impacts, such as increased erosion.
- There is limited information known about upstream and downstream conditions, which makes it difficult to determine potential impacts to the project site or adjacent properties. For example, there could be an upstream sediment load that moves into the project area and impact restored stream features.
- Some of the individual project costs seem high when compared to similar projects, including costs for irrigation, permitting, and design.

Concluding Analysis

The proposed project will provide a meaningful community benefit; however, it is difficult to determine the likelihood of success for the proposed project to result in a cost-effective watershed benefit.

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3028-17432

Project Type: Restoration

Project Name: Abiqua Creek Aquatic Habitat Enhancement_CLONE

Applicant: Pudding River WC

Region: Willamette Basin

County: Marion

OWEB Request: $160,075

Total Cost: $207,875

Application Description *(from application abstract)*

This stream enhancement, large wood and boulder project is located on private timberlands in the low elevation West Cascades foothills of the Molalla-Pudding River Watershed. Abiqua Creek, a major east-side tributary to the Pudding River and is fully within Marion County approximately 20 miles southeast of Silverton and 5 miles from Silver Falls State Park. As identified by the 2014 Rapid Bio-assessment, (OWEB 213-3054), the site is located in a geographic transition between the Willamette Valley and West Cascades where cold spring-fed seeps and hyporheic mixing provide thermal refugia to juvenile ESA-listed native salmon and steelhead. At this site, stream rearing habitat conditions are impaired because it is missing the physical, structural element played by naturally occurring large wood recruitment. A total of 14 log structures will be constructed within 0.5 mile per design specifications from Waterways Consulting. Weyerhaeuser, the landowner, has committed to providing boulders and the transport of the boulders to the staging site. Project partners include Weyerhaeuser, Marion SWCD ($12,500 cash match), ODFW Dave Stewart, City of Woodburn, and staff and volunteers from the Pudding River Watershed Council.

Review Team Evaluation

Strengths

- A reasonable explanation is provided as to why project changes were not made in response to previous application review comments.
- Engineered log jams placed on the stream channel margin are an appropriate alternative method for the project site. Locally available logs are not large enough for preferred channel-spanning structures. The cost for securing larger wood material would be unreasonably high, and the resulting watershed benefit would not merit the higher cost.
- Proposed restoration will treat priority watershed limiting factors for steelhead in Abiqua Creek, which is a critical reach in the Pudding River watershed supporting winter steelhead.
- The site is likely to be responsive in restoring the targeted watershed process and function. For example, it is expected that gravel recruitment around the large wood structures will occur quickly because the watershed conditions indicate upstream source material is readily available to move downstream.
- The applicant is engaging a project team with relevant experience and proven track records with comparable restoration projects.

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- Partner support is demonstrated by letters of support specifying partner contributions and involvement in the project.
- Project costs are reasonable.

Concerns

- It appears some project details are not updated in the application; for example, the timeline is no longer accurate.
- Watershed benefits from this project are limited by a design approach that focuses on treating symptoms of watershed disturbance over causes. Placement of large wood on the stream edge instead of installing channel-spanning large wood limits the amount of stream material that can be captured in the large wood structure to build streambed habitat complexity. However, given the limited availability of wood material large enough for channel-spanning structures, this design alternative provides the most cost-effective approach for initiating stream restoration efforts in this area.

Concluding Analysis

While the proposed design will have limited benefits to overall watershed process and function, it is a reasonable approach and cost for the available large wood. Also, stream conditions will be improved for steelhead habitat in a priority area of the Pudding watershed. The resulting project will likely be leveraged by expanding community interest in the watershed and implementing future voluntary projects.

Review Team Recommendation to Staff

Fund

Review Team Priority

11 of 11

Review Team Recommended Amount

$160,075

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3029-17434

Project Type: Restoration

Project Name: Salyers Family Ranch: Oak Woodland Restoration Phase 1

Applicant: Coast Fork Willamette WC

Region: Willamette Basin

County: Lane

OWEB Request: $276,675

Total Cost: $455,190

Application Description *(from application abstract)*

This 102.3 acre project is in Lane County, west of the City of Creswell, in the Camas Swale sub basin. The property (~2000 acres) known as the Salyers Family Ranch is owned by private landowners, the Salyers Family. Approximately 1600 acres of the ranch was recently protected by securing a conservation easement. This property contains rare and degraded Willamette Valley oak woodland, savanna, and upland and wet prairie habitats. The lack of disturbance has allowed open-grown Oregon white oaks within the project area to be threatened by conifer encroachment and overtopping and the establishment of woody vegetation in the understory. This loss of native habitat reduces biodiversity and negatively impacts important species that rely on these open canopy habitats including acorn woodpecker, white-breasted nuthatch, and western gray squirrel. The proposed project will implement oak woodland restoration on 102.3 acres by: (1) thinning firs and small diameter oaks around legacy oak trees; and (2) enhancing the herbaceous understory by controlling undesired species and reseeding with native forbs and grasses; (3) convert closed canopy oak woodland to 40-60% canopy thereby reducing the rate of Oregon white oak woodland loss and habitat fragmentation, with the long-term goal of increased recruitment, structure and function. Partners include Coast Fork Willamette Watershed Council (CFWWC), Salyers Family Ranch (aka Creswell Oaks), Natural Resources Conservation Services (NRCS), and US Fish and Wildlife Service (USFWS).

Review Team Evaluation

Strengths

- Clear objectives and an appropriate restoration approach for oak and prairie habitats are described in the application.
- The project is located in anchor oak and prairie habitat that will support Oregon vesper sparrow. Since this species is under consideration for potential listing on the Endangered Species Act, early action to restore habitat that supports this species is a priority.
- The proposed restoration builds on work completed voluntarily by the landowner and through previous OWEB grants.
- A conservation easement will protect restoration investments over the long term.
- Lessons learned from previous restoration work in comparable habitats are incorporated into this project.

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- The project has potential for serving as a demonstration site to raise awareness about watershed restoration, and the landowner will be an effective ambassador for communicating to the local community about the benefits of voluntary conservation.
- The applicant has a proven track record managing similar projects.
- The landowner has the necessary equipment and skills to accomplish the work.
- Letters of support and match contributions demonstrate that appropriate partners support and are engaged in the project.

Concerns

- It can be challenging to balance grazing with restoring native plant communities. While grazing can be used as a restoration tool to provide a disturbance regime that benefits native plants, the grazing season could be shortened. The grazing management plan developed with NRCS is likely to focus on restoring the plant community by effective integration of grazing.
- There is no evidence that legacy oak are present on the site; however, the scope and scale of the proposed work will provide a meaningful impact for oak and prairie habitats.

Concluding Analysis

Since OWEB funds will leverage a NRCS Environmental Quality Incentives Program (EQIP) investment that will expire in the near term, there is some urgency for the proposed investment to ensure restoration goals are achieved in a priority location for oak habitat. A conservation easement and multi-generational support demonstrated on the site visit ensures the restoration investment will be protected over the long term. The project site also offers opportunity to demonstrate how working lands can effectively be balanced with restoring native plant communities.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 11

Review Team Recommended Amount

$276,675

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$276,675

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3030-17481

Project Type: Restoration

Project Name: Connections in Restoration: Floodplain Enhancement at Deer Creek

Applicant: McKenzie Watershed Alliance

Region: Willamette Basin

County: Lane

OWEB Request: $397,248

Total Cost: $940,232

Application Description *(from application abstract)*

The Connections in Restoration: Floodplain Enhancement at Deer Creek is part of a multi-phased effort designed to restore the physical, chemical, and biological processes that maintain a healthy, diverse, and resilient ecosystem on the lower 1.6 miles of Deer Creek in the McKenzie River Sub-basin. Deer Creek is located 65 miles east of Eugene and 3.5 miles downstream of the Eugene Water & Electric Board's (EWEB) Trail Bridge Dam on public lands owned and managed by the US Forest Service (USFS). Previous project phases were completed in 2016 and 2017, on two discreet lower (0 to 0.4 miles) and upper (0.8-1.6 miles) reaches of Deer Creek. This project will enhance the untreated middle reach (0.4 – 0.8 miles) and portions of the previously treated lower and upper reaches, restoring the processes that create and maintain healthy habitats.Past land management practices in the Deer Creek sub-watershed have disrupted natural processes and negatively impacted habitat for native fish and wildlife. Berm placement, stream cleaning, timber harvest, and the construction of electrical powerlines within the stream channel have reduced wood supply and storage, the amount of available spawning gravel, floodplain connectivity, off-channel refuge habitat, the frequency of deep pools, and contributed to increased stream temperature.As part of EWEB's recently completed relicensing agreement for the Carmen-Smith Hydroelectric Project, powerlines currently in Deer Creek will be relocated to run parallel to FS Road 2654, outside of the floodplain in 2020. After powerline relocation, the USFS and McKenzie Watershed Alliance (MWA) will remove over 28,000 cubic yards of sediment from floodplain berms, aggrade 3.61 acres of Deer Creek, and place 640 pieces of large wood in the 71-acre project area. The project will restore connection to 40 acres of floodplain and enhance 1.4 miles of Deer Creek. Partners include the EWEB, MWA, Oregon Department of Fish and Wildlife, and USFS.

Review Team Evaluation

Strengths

- The application has clear, quantitative objectives.
- Reconnecting a valley bottom using the Stage 0 approach is an appropriate method for restoring watershed process and function.
- The proposed restoration builds on and is informed by previous work completed in the watershed that has proven successful as evidenced by fish returning to Deer Creek.

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- Awareness raised from previous restoration work led to this current project opportunity. The previous success resulted in securing approval from land managers for this project and they are also changing land uses to expand restoration in Deer Creek.
- The project has potential for raising public awareness for watershed restoration and serving as a teaching tool within the restoration practitioner community.
- The resulting ecological uplift will be high, and restoration will provide significant benefit to ESA-listed fish in a watershed prioritized for their recovery
- The applicant and partners have a proven track record implementing comparable restoration.

Concerns

- The letter of support from EWEB indicates moving the power lines out of the floodplain is “tentative,” which could impact the likelihood of success in achieving proposed objectives.
- There is limited data on the cost effectiveness of the Stage 0 approach because it is challenging to determine how to best measure the success of an approach that has a high overall cost to achieve restoration objectives over a large scale. However, evidence of ecological effectiveness is observed by fish returns to previously implemented Stage 0 sites in the McKenzie Watershed.

Concluding Analysis

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. Previous restoration has proven Deer Creek is responsive to Stage 0 in restoring watershed processes that result in stream habitat that is immediately utilized by returning fish. Deer Creek also provides a venue for collaborative learning among watershed restoration practitioners implementing the Stage 0 approach.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 11

Review Team Recommended Amount

$397,248

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$397,248

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3031-17483 **Project Type:** Restoration

Project Name: Protecting the Best: Upper Luckiamute Mainstem Anchor Habitat Enhancement

Applicant: Luckiamute WC

Region: Willamette Basin **County:** Polk

OWEB Request: $134,886 **Total Cost:** $174,376

Application Description *(from application abstract)*

The Upper Luckiamute Mainstem Anchor Habitat Enhancement project area lies within the timberlands of the Upper Luckiamute 6th field hydrologic unit in the northwest corner of the watershed in Polk County. Historical practices such as splash dams, log drives, logging to the water's edge, and log removal impacted upper Luckiamute sub-basins, including the mainstem Luckiamute River. The reach represents some of the best habitat in the Luckiamute watershed and had the highest numbers of steelhead and cutthroat trout observed in the 2008 snorkel surveys. However, the streambed is scoured to bedrock in many areas, riparian conifers are absent in large sections, and there is little channel-floodplain interaction. A 2004 OWEB-funded project supported large wood placement of four structures overlapping the target reach and downstream of the target reach; after 15 years, much of this material has degraded or mobilized. 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 is the highest priority without an active project. Resolving current and future in-stream large wood deficiencies through log placement, conifer enrichment, and thinning an overstocked Douglas fir plantation in the riparian management area will result in both immediate and long-term habitat benefits and restore key ecological processes throughout the 1.6-mile reach. Partners are Hancock Forest Management (on behalf of the property owners), Starker Forests Inc., Institute for Applied Ecology, Xerces Society, and the Bureau of Land Management.

Review Team Evaluation

Strengths

- A proven restoration approach for placing large wood structures instream will be used. This approach has also been effective in restoring watershed function in the same stream system.
- The proposed project builds on previous restoration work.
- Project site selection is based on extensive planning efforts from OWEB-funded technical assistance and monitoring to determine the best locations for stream restoration.
- The project is located within critical cold-water refugia habitat for winter steelhead. Adding large wood to the stream will provide important habitat features along a priority stream reach.
- The cooperating landowner has a history of participating in voluntary restoration in the Luckiamute watershed.

- The applicant has a proven track record implementing similar projects.
- Costs are reasonable for a significant watershed benefit.

Concerns

- It is unclear whether the wet prairie wetland area exists because it is a natural historic wetland or resulted from previous timber harvest-related land use that caused the area to evolve into expressing wetland attributes. As a result, it is difficult to determine the habitat value and priority for this project component. The applicant is encouraged to incorporate a wetland delineation in addition to the botanical survey to better understand the extent and function of the wetland hydrology and soils to inform management recommendations.

Concluding Analysis

Given previous success of the restoration approach in adjacent stream reaches, the proposed project is likely to succeed. Also, the proposed restoration leverages previous strategic investments in the Luckiamute Watershed and will result in a high benefit to winter steelhead for the cost.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 11

Review Team Recommended Amount
$134,886

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$134,886

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3032-17497

Project Type: Restoration

Project Name: Economic and Ecological Sustainability through Restoration of Lamprey Creek - Phase 1

Applicant: OSU Office of Sponsored Research & Award Admin

Region: Willamette Basin

County: Benton

OWEB Request: $177,071

Total Cost: $407,383

Application Description *(from application abstract)*

This project will restore 50 acres of wetland habitat in a 175-acre parcel of Oregon State University (OSU)-owned land along Lamprey Creek, a third order stream in the Oak Creek watershed, Benton County, Corvallis, Oregon. Portions of the creek are channelized and adjoining wetlands have been ditched and drained. Priceless specimen oaks are crowded by encroaching trees and increasingly threatened by wildfire. Blackberry, English hawthorn, and other invasive weeds infest meadows and woodlands. The site has not been actively managed for decades. Situated on the urban fringe, it is also a visible reminder of missed opportunities to demonstrate effective protection of open spaces, sustainable grazing, and wildfire readiness. We propose to reverse the degradation of this natural area using innovative combinations of fuels management, weed treatments, carefully prescribed grazing, and comprehensive floristic reintroduction based on historic diversity documented by OregonFlora. We will remove a dike and return Lamprey Creek to a portion of its historic channel. Beaver dam analog construction and beaver-supportive plantings will support dam-building to restore floodplain function and return complexity to the system. Through partnership with USDA, Oregon DSL, Marys River Watershed Council, private partners, OSU Extension, and several other University labs and programs, this project leverages the unique strengths of OSU by engaging social, biological and biophysical researchers to begin the process of rigorous scientific evaluation of restoration practices. While no research will be funded through this grant, we will create opportunities for faculty and student engagement to generate knowledge that will directly benefit OWEB and other natural resource funders. In particular, we intend to demonstrate that science-based restoration and maintenance of natural habitat can be achieved while meeting agricultural production objectives in an economically sustainable manner.

Review Team Evaluation

Strengths

- The project site has significant habitat potential and the proposed actions will generally provide watershed benefits.
- The project site provides an opportunity for building public awareness about watershed restoration, and showcasing restoration on an OSU property.

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- The project timeline is achievable.

Concerns

- The project objectives and actions are vague. As a result, it is difficult to understand the scope of work and how it will be implemented.
- Some of the monitoring and fire-related work described in the application seem disconnected from the proposed restoration work. More information is needed to understand how these components relate to achieving the project restoration goals and objectives.
- The application indicates innovative techniques will be tested with the proposed work. Since many of the project components are already successfully being used in the region, it is unclear what project components are testing new approaches that offer learning opportunities.
- The application does not include information on whether potential impacts to adjacent properties were considered. For example, it is unclear whether the dike removal and constructed channel has potential for negative downstream impacts.
- Beaver Dam Analogs (BDAs) require careful design consideration to ensure proper function. While BDAs have been effective in other locations, more design information is needed to determine whether the approach is appropriate for the site and whether there are other alternatives better suited for the project location.
- The application has limited information quantifying watershed health benefits that will result specifically from the proposed restoration actions, which makes it difficult to assess the ecological value of this work and to understand whether watershed benefit is commensurate with the cost to.
- Partner involvement in the project is unclear from the application. For example, it is not evident how the NRCS role or contribution relates to the proposed work. Active collaborative partnerships with clear roles would benefit the project by providing broader resources and expertise in project implementation.
- Additional information on the proposed herbicide use and efforts to reduce potential negative impacts is needed to understand the technical soundness of the weed treatment.
- It is unclear whether there is a management plan for this property, or across University properties as a whole, that is guiding the proposed work; or whether watershed-level plans informed the project site selection. It is not clear whether the property and proposed work was selected as a strategic priority to pursue funding, or if instead it is an opportunistic project.

Concluding Analysis

Since resulting watershed benefits from the proposed work are generalized, it is difficult to determine the habitat value that will result directly from the project. It is also unclear what planning efforts indicated the project site is the best site to start restoration on OSU lands, and how the proposed work is connected to other planning efforts in the area by watershed restoration practitioners. There may be merit to pursuing a Technical Assistance or Stakeholder Engagement project to fund a planning and design conversation for determining prioritized actions across OSU properties before initiating restoration action

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3033-17504 **Project Type:** Restoration

Project Name: J2E River to Ridge Diversity Project

Applicant: Benton SWCD

Region: Willamette Basin **County:** Benton

OWEB Request: $239,915 **Total Cost:** $349,883

Application Description *(from application abstract)*

J2E Tree Farm is a small woodlands operation located in the Upper Luckiamute / Vincent sub-basin in northern Benton County. The 338-acre property ranges from 320 to 740 feet in elevation along 1.5 miles of Vincent Creek, a tributary to the Luckiamute River. The varied topography hosts a range of habitat types. Douglas fir trees are encroaching upon a corridor of Oregon white oaks, limiting its potential to provide critical habitat to Taylor's checkerspot butterfly and other sensitive species. Varied wetland habitats that host Nelson's checkermallow and other priority species also face pressures from invasive grasses and other weeds. A fragmented riparian corridor consists of a mix of mature hardwood forest with encroaching invasive weeds. Vincent Creek is incised and scoured to bedrock in many places; a perched culvert on a tributary to Vincent Creek blocks passage to cold-water refuge for native fish. The project proposes a ridge to river approach to enhance these important habitats and support a diversity of fish and wildlife. Douglas fir thinning and understory planting will restore a 16-acre oak corridor in close proximity to the Taylor's checkerspot butterfly population in Beazell Memorial Forest. In all habitats, project partners will work to remove target invasive species and increase the diversity of shrubs and trees and increase the density and cover of appropriate native plants. The actions will promote pollinator habitat, improve wetland conditions, and restore and connect riparian corridors. To address incision and disconnected floodplain in Vincent Creek, partners propose large wood placement and revegetation efforts that promote beaver activity. Placement of boulders will create two pool lifts to resolve the perched culvert. Project partners include Benton Soil and Water Conservation District, Natural Resources Conservation Service, landowners, Luckiamute Watershed Council, U.S. Fish and Wildlife, and Oregon Department of Fish and Wildlife.

Review Team Evaluation

Strengths

- The application has clearly articulated objectives.
- The project takes a holistic approach for addressing a range of watershed limiting factors to restore a diversity of habitats on the property. This includes expanding habitat for the listed Taylor's checkerspot butterfly that has a known presence in the area and extending cutthroat trout access to cold-water refuge habitat.

- The landowner's active engagement in restoration is demonstrated by the amount of work already completed. For example, qualifying for the NRCS Environmental Quality Incentives Program (EQIP) indicates significant planning work was completed to meet the high bar for securing assistance through this program.
- The project has potential for raising awareness about watershed restoration, and the landowner will be an effective ambassador for communicating to the local community about the benefits of voluntary conservation.
- The combination of the applicant's experience implementing similar work integrated with partner support ensures a likelihood of success in implementing a complex project with numerous habitat restoration elements.
- The landowner has a long-term goal of protecting the property, which will maintain the ecological benefits resulting from this restoration investment into the future.

Concerns

- The application budget lacks detail needed to determine whether costs are reasonable and necessary for the proposed work because costs are grouped into lump sums; however, additional budget details were provided as an application attachment.
- The stream project component to improve fish passage at a culvert by using a boulder and step pool design can be challenging to implement and effectively achieve desired fish passage.

Concluding Analysis

While the aquatic project components will have limited ecological uplift, the upland components will provide significant habitat benefits for the cost. The project also provides a unique opportunity to restore a mosaic of native habitats and demonstrate successful voluntary conservation on private lands.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 11

Review Team Recommended Amount

$239,915

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$239,915

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3034-17383

Project Type: Technical Assistance

Project Name: Champoeg Natural Resource Management Plan

Applicant: Institute for Applied Ecology

Region: Willamette Basin

County: Marion

OWEB Request: $69,002

Total Cost: $104,280

Application Description *(from application abstract)*

Champoeg State Heritage Area (Champoeg) is a unique 672-acre state park located in Marion County and managed by Oregon Parks and Recreation Department (OPRD). This popular park is home to a huge variety of fish and wildlife, including a high diversity of bird species and the state-listed peacock larkspur (Delphinium pavonaceum). It also contains some of the Willamette Valley's most imperiled habitats, including prairie, oak, riparian, and ash swale habitats. The Willamette River runs along Champoeg's north edge for three miles, and there are three creeks found within the park boundaries. An initial assessment of soils maps indicate that a large portion of the park's soils are very hydric, indicating that much of the park was or is wetland habitat. In addition, Champoeg has a long history of use and management by the Kalapuya people, who have used and continue to value the site for gathering, accessing the Willamette River, and traditional harvesting. OPRD has partnered with Institute for Applied Ecology (IAE) and Confederated Tribes of Grand Ronde (CTGR) to restore Champoeg Prairie and reintroduce culturally significant species, with the goal of reinstating traditional harvest practices by local tribes at the site. However, Champoeg lacks a formal assessment of the park's natural resources and there is no current prioritization of conservation areas, good understanding of how to protect them, or guidance on which restoration actions are the most urgent. We propose to conduct a thorough assessment of Champoeg's historic and current natural resource values and develop a Natural Resource Management Plan that documents existing conservation values and guides future planning and restoration activities at the park. Partners include IAE, OPRD, CTGR and other tribes.

Review Team Evaluation

Strengths

- The application clearly describes a need for the technical assistance, and provides logical reasons for the activities listed under the objectives.
- The project builds on previous OWEB-funded restoration.
- Tribal priorities and knowledge will be integrated into the planning process.
- The applicant is qualified to accomplish the proposed activities, and has a proven track record with similar projects.
- Costs are reasonable and align with the proposed work.

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Concerns

- It is unclear how park users will be engaged in the planning process.

Concluding Analysis

The proposed assessment and management plan will provide a habitat overlay to an existing park plan that does not currently include this watershed habitat component. The site is culturally significant and located in a priority location for native habitats, including wetlands, prairie and oak.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 2

Review Team Recommended Amount
$69,002

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$69,002

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3035-17418

Project Type: Technical Assistance

Project Name: Finn Rock Reach Floodplain Restoration Engineering and Permitting

Applicant: McKenzie River Trust

Region: Willamette Basin

County: Lane

OWEB Request: $7,603

Total Cost: $13,408

Application Description *(from application abstract)*

The project will provide engineering and permitting assistance to facilitate a middle-McKenzie River floodplain habitat restoration project encompassing approximately 85 acres of floodplain. The project is on a side channel of the McKenzie River, near the town of Blue River, Lane County, only 3.75 miles downstream of the Lower South Fork McKenzie Floodplain Enhancement.The watershed issue to be addressed is the degradation of streams through simplification and removal of large woody debris, and decreased floodplain connectivity. Impaired habitat complexity, diversity, and off channel habitats are limiting factors for spring Chinook salmon. At this site, former gravel extraction pits in the floodplain, and their attendant access road, have created large berms of overburden within the floodplain and disrupted the flow regime within the side channel. Recent Bathymetry shows that the side channel is incising, increasing flow velocities and transporting sediment, partially as a result from these prior human activities. The proposed project will regrade the gravel ponds, much of the side channel itself, and add substantial amounts of large woody debris. The project area will become a depositional environment with increased permanently wetted surface area, floodplain connection, and habitat complexity.The consultant will develop the engineering necessary for the completion of all required permits to implement restoration actions. They will incorporate existing data (hydraulic modeling, aerial mapping, geomorphologic survey data, etc.) on project area from MRT, resource agencies, universities, and other sources and supplement and utilize as required. The consultant will develop and submit all applications and obtain all permits necessary to construct the final design. Environmental compliances associated with listed and or sensitive species and adjacent federal and state land will be obtained. Major project partners include the McKenzie Watershed Council and USFS.

Review Team Evaluation

Strengths

- The applicant clearly describes a need to secure permitting assistance on a complicated project design.
- The proposed work is technically sound, and project timing is appropriate.
- Existing conservation and recovery plans are cited in the application and proposed work will address watershed limiting factors.

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- The applicant is qualified to accomplish the proposed activities, and has a proven track record with similar work.
- Costs are reasonable for the proposed work.

Concerns

- While costs are reasonable, it is unclear whether the budget estimate is high enough to complete the permit process.

Concluding Analysis

The resulting restoration work will increase spawning habitat at a highly visible location with substantial habitat potential. The proposed technical assistance is needed to move the project forward to be ready for implementation.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 2

Review Team Recommended Amount
$7,603

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$7,603

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3036-17366

Project Type: Monitoring

Project Name: Restoration Monitoring at Willamette University at Zena

Applicant: Willamette University Business Office

Region: Willamette Basin

County: Polk

OWEB Request: $227,458

Total Cost: $427,124

Application Description *(from application abstract)*

This project is located at the 305-acre Willamette University at Zena (WUZ) property in the Eola Hills, central Willamette Valley, Spring Valley Creek 6th order sub-basin of the Middle Willamette River Watershed, Polk County, 8 miles NW of Salem, OR (Figure 1). Throughout the Willamette Valley and at WUZ, human activities such as farming, forestry, and residential development have significantly reduced prairie habitat, increased presence of invasive plant species, altered subsurface and surface hydrology, and decreased ecosystem resilience to climate change. In 2010 we began Phase I restoration and monitoring activities. Protocols for monitoring vegetation response in the prairie and oak woodland were piloted and refined, and data collection continues through the present. Monitoring data have been invaluable to us in planning and adjusting our restoration practices. We have also learned that to better understand watershed function, particularly in the face of climate change, we need to expand our monitoring program so that we can begin modeling watershed response to our activities. Our multi-year Phase II monitoring our goals are: 1) to standardize current monitoring efforts, data management, and data sharing; 2) to expand quantitative monitoring to include additional habitats (wet prairie, mixed conifer, and sustainable mixed forest) and additional variables (wildlife, watershed health and quality, stream flow, wildfire risk, and forest insects and disease); and 3) to employ the monitoring data to model watershed benefits of ongoing and future restoration work. These efforts will provide useful information to other landowners and restoration projects, as well as help justify OWEB and ODFW investment in the property. Outcomes will include 15 years of spatially referenced data on restoration effectiveness, public presentation of datasets on the Willamette web page, peer-reviewed publications, presentations, and outreach activities. Project partners include ODFW.

Monitoring Team Evaluation

Monitoring Team Strengths

- The applicant adequately describes the need for monitoring and provided an illustrative example of how past monitoring informed restoration efforts, including what variables restoration can influence.
- The application has clear objectives and logical activities to achieve the objectives.
- The application clearly describes various approaches to making the data available to the public and natural resource professionals.
- The phased approach is technically sound because phasing may result in the applicant emerging from each phase with monitoring that is well streamlined, which will make expansion (e.g., in phase III to streams and fish) efficient and financially sustainable.

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- The contributing professors at Willamette University have the expertise in their respective fields of study to establish the standardized protocols for a broader suite of variables as proposed.
- The data will be used in an eco-hydrological model to estimate the impacts of climate change and restoration treatments on a suite of ecosystem services to better understand the range of outcomes that could occur and explore alternatives.
- The application clearly describes how the different data sets will be managed, analyzed and reported.
- The application includes letters of support from a variety of partners and describes how this information can inform their restoration efforts in oak and prairie habitats.
- The costs seem reasonable given the monitoring data will be collected over five years and considerable university match.
- The applicant has demonstrated their ability to collect data and apply it to inform restoration, based on their past work described in uploads of completed reports.

Monitoring Team Concerns

- The description of establishing a gaging station lacks detail to determine whether the applicant understands the requirements for regular measurements to maintain a rating curve beyond the first year of establishment. Additional maintenance of the stations is critical to providing accurate data (e.g., level surveys, check measurements).
- The monitoring design section of the application does not clearly describe why different monitoring efforts were being done at different time intervals (i.e., some data are proposed to be collected every year and some every other year).
- The budget includes funding for student labor expenses to perform what appears to be a majority of the monitoring; however, the application does not describe how students will be trained and supervised to ensure quality data will be collected.

Monitoring Team Comments

Follow USGS methods for gaging station installation that includes installing a staff plate to check measurements against the electronic instrumentation. Also, ensure the applicant is checking the instrumentation frequently enough to prevent failure and identify electronic drift.

Review Team Evaluation

Strengths

- The project is a comprehensive monitoring effort across a broad range of habitats and species on the Zena conservation property.
- Appropriate protocols will be used to provide a thorough assessment of the site and its response to restoration.
- The applicant has the technical expertise and capacity to accomplish the proposed monitoring.
- There is clear intention to disseminate monitoring results among restoration practitioners.

Concerns

- The monitoring effort is on a property located in a small watershed. It is uncertain the extent to which results can be generalized and effectively applied to other locations at a larger Willamette basin scale as described in the project goals.
- The pathway between the proposed data and how it will be applied to inform future watershed restoration is unclear. The connection between the monitored watershed response variables, which are the data outputs, and what this information can conclude about restoration outcomes is unclear. As a result, it is difficult to understand how this data can inform future watershed restoration action or management decisions.
- Two years of monitoring data may not be sufficient to understand climate change impacts to watershed resilience.

Concluding Analysis

With the amount of data gathered using the proposed protocols, a considerable volume of quality information will be collected; however, it is unclear how this data will be synthesized to learn about outcomes from management and restoration efforts at the Zena site and then use the results to inform other efforts to improve watershed health and resilience to climate change. This uncertainty in applying the information limits the cost benefit of the proposed monitoring work.

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3037-17381

Project Type: Monitoring

Project Name: Calapooia Chinook Environmental DNA Monitoring

Applicant: Calapooia WC

Region: Willamette Basin

County: Linn

OWEB Request: $49,101

Total Cost: $63,701

Application Description *(from application abstract)*

The Calapooia Watershed Council's (CWC) proposed environmental DNA (eDNA) monitoring will collect water samples on the mainstem Calapooia River and Sodom Ditch, from its confluence with the Willamette River in Albany to the end of anadromy on USFS property at RM 72.9, to determine the presence or absence of the Threatened Upper Willamette River (UWR) Chinook. To best manage and restore native fish populations, 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 the capacity of local agencies and the elusiveness of certain species. Thus, management decisions regarding the declining UWR spring Chinook often lacks critical information that would best direct restoration efforts. Spring Chinook in the Calapooia River once numbered as many as 9,500 adults and were listed under the federal ESA in 2005. In order to make the most effective use of future monitoring funds and enable instream restoration targeted at the reach-scale, the CWC seeks to address these information gaps regarding UWR 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, out-planting locations, depict the spatial distribution of spring Chinook in the Calapooia River, and provide insights for future monitoring.OWEB funds will be used to coordinate interns/volunteers, lead training sessions, collect and organize eDNA samples, and discussion and present results to project partners. The CWC will be partnering with the National Genomics Center, ODFW, and Weyerhaeuser.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application builds on past and current monitoring and restoration efforts to understand adult spring Chinook presence and distribution in the Calapooia River during the spawning period.
- The application explains how this information is connected to recovery efforts for spring Chinook in the Upper Willamette River, and could inform future projects.
- The use of eDNA technology is well suited for this purpose.
- The applicant has worked with the contract lab to validate that their existing Chinook eDNA assay will detect the spring Chinook likely to be present in the Calapooia River.

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- The application has a clear explanation of methods and protocol to be followed to collect the water samples and filter these in the field.
- The application describes how the data will be shared with a variety of stakeholders in their area.
- The costs seem reasonable to collect and report the eDNA data.
- The monitoring design, which is adapted from a bull trout eDNA study, is clear about the process for establishing sampling sites at 1-km intervals at the peak of the spawning period.
- The filters will be archived to allow future eDNA analyses to occur in the future, as appropriate.

Monitoring Team Concerns

- It will be challenging to establish when the peak of spawning will occur in the Calapooia by looking at run timing in neighboring watersheds, given differences between the systems.
- The application did not discuss how the eDNA and water temperature data will be reported in a final product to be used in a meaningful way.
- The application timeline and budget did not include data analysis for the water temperature data and incorporation of this information into the final report.
- In order to estimate relative abundance of spring chinook using higher concentrations of eDNA in a given sample, there needs to be stream discharge data available, yet there was no mention of this in the application.
- The application includes the same ODFW support letter that was provided in the original 2018 application, making it unclear if the applicant communicated with the agency about resubmitting the application.
- It is unclear how the applicant intends to apply these data. For example, the application mentions using this data to identify habitat to protect or restore and to identify juvenile rearing habitat, but these uses may not be well suited to spawner distribution data.

Monitoring Team Comments

Include detailed progress tracking reporting requirements.

Review Team Evaluation

Strengths

- Previous application evaluation concerns are addressed by providing more detail needed to understand the project.
- The example DNA report included in the application provides helpful context for understanding the monitoring product.
- Appropriate partners will be engaged to provide training and data collection.
- Partner support is demonstrated by match.
- Data will be shared with state and federal agencies that need the information resulting from this monitoring project.
- Costs are reasonable for the proposed monitoring work.

Concerns

- It is unclear from the application how data will be used to inform future restoration.
- Including flow measurement would improve the effective application of the resulting eDNA data. There are a considerable number of unknowns across a long distance of stream miles influencing fish presence and abundance. Integrating flow data with eDNA concentrations provides a tool for calculating relative fish abundance. This expanded application of eDNA could better inform future restoration.
- The application overstates the benefit of the eDNA data and the information it can provide. This data will provide a presence-absence assessment of fish; it will not provide information about their preferred habitat. Pairing eDNA with stream habitat attribute data would provide more information on where to focus restoration efforts.

Concluding Analysis

The resulting monitoring data will fill a data gap in a priority basin for Chinook habitat restoration. Since the proposed monitoring goal focuses on fish presence-absence during the summer, flow data is not necessary for achieving proposed monitoring goals; however, the applicant is encouraged to consider integrating flow estimates to better understand the eDNA results. A potential resource for flow estimates is Corvallis EPA research that used the Calapooia Watershed as a pilot for estimating discharge on ungaged basins.

Review Team Recommendation to Staff

Fund

Review Team Priority

2 of 2

Review Team Recommended Amount

$49,101

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$49,101

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3038-17388

Project Type: Monitoring

Project Name: Kincaid's lupine Effectiveness Monitoring

Applicant: Institute for Applied Ecology

Region: Willamette Basin

County: Benton

OWEB Request: $86,848

Total Cost: $251,208

Application Description *(from application abstract)*

Less than one percent of the prairies that historically carpeted the Willamette Valley ecoregion remains intact. As a consequence, Kincaid's lupine (Lupinus oreganus) was federally listed as threatened and Fender's blue butterfly (Icaricia icarioides fenderi) as endangered in 2000. The Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington (USFWS 2010) identifies the need to restore and maintain population networks across the species' historic range. OWEB recently awarded the restoration grant "Upland prairie restoration for Kincaid's lupine and Fender's blue butterfly," which aims to implement habitat restoration and Kincaid's lupine augmentation activities to meet recovery goals in the Corvallis West and Salem West recovery zones. In this monitoring proposal, we seek to assess the effectiveness of Kincaid's lupine restoration efforts at the 11 restoration project sites, as well as one additional site. We will implement standardized Kincaid's lupine and habitat quality monitoring protocols to determine if sites meet recovery goals. We will also assess effects of habitat quality and introduction method (seeding vs. plug planting) on the establishment of Kincaid's lupine. Baseline data will be collected and analyzed the first year (2020) and compiled into a brief progress report. Post-project monitoring data will be collected in 2025, three years after restoration actions have been completed. All data will then be analyzed in a final project report. This project helps fulfill the monitoring requirement of nine different local assessment plans in four counties. Partners include U.S. Fish and Wildlife Service, Benton County Natural Areas and Parks Department, Oregon Department of Transportation, Bureau of Reclamation, Greenbelt Land Trust, Yamhill Soil and Water Conservation District, Polk Soil and Water Conservation District, City of Corvallis, Greenbelt Land Trust, Echo Hills Farm (private) and Scott Harris (private).

Monitoring Team Evaluation

Monitoring Team Strengths

- This monitoring will help fulfill the requirements to allow evaluation of the Recovery Plan for the Prairie Species of Western Oregon and SW Washington.
- The objectives proposed in the application are clear and the activities are appropriate to achieve them.
- The monitoring design is adequate to meet the monitoring objectives.
- The applicant will enter the data into US Fish and Wildlife Service's Threatened and Endangered Species Geodatabase to enable USFWS and other partners to access and use the data for a variety of needs.

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- The applicant is working with several partners, and they are contributing match to help implement the project as proposed.
- There are several letters of support uploaded with the application describing the partner's interest in the data and their contributions to the project.
- The timeline is appropriate and includes time for data analysis.
- The applicant has a proven track record and the necessary skills to implement this monitoring project.

Monitoring Team Concerns

- It is unclear if the monitoring is sufficient to interpret the results. For instance, if the monitoring does not show improvements in lupine populations and planting success, will there be information to identify detrimental factors that contributed to the lack of success?
- There was a lack of detail describing why adjustments to the lupine population quadrat monitoring methods were needed based on different plant densities.
- The application, with the exception of the letter of support and cooperative agreement, did not describe the significant match that USFWS is contributing to the project.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- Established protocols are described in the application, and the project timeline is reasonable.
- The applicant is qualified to accomplish the proposed monitoring, and has proven experience with the target plant species and monitoring protocols.
- Tied to existing ESA recovery plans, the resulting data will inform progress tracking and decisions related to the recovery of Kincaid's lupine.
- Significant OWEB funds have been invested in Kincaid's lupine restoration. While not described in the application, the proposed monitoring has potential to quantify the varying success of seeding versus plug planting restoration strategies, which will inform future restoration work.
- Resulting data will be submitted to the USFWS database, which is the federal agency responsible for ESA recovery of Kincaid's lupine.

Concerns

- The application does not describe how monitoring will be directly applied to inform future restoration methods.
- It is unclear how the USFWS match is necessary and related to the proposed monitoring activities, as it appears to be for work considerably broader than the proposed project.

- The application budget lacks detail needed to determine whether costs are reasonable and necessary for the proposed work because costs are shown as lump sums.

Concluding Analysis

There are a number of benefits that will result from the proposed monitoring project. Data will inform ESA recovery decisions for Kincaid's lupine, which will influence restoration strategies among practitioners. The data will also provide opportunities to learn about restoration approaches used in previously funded OWEB projects targeting Kincaid's lupine.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 2

Review Team Recommended Amount
$86,848

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$86,848

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3039-17457

Project Type: Monitoring

Project Name: Effectiveness monitoring of floodplain restoration projects in the Middle Fork Willamette

Applicant: Middle Fork Willamette WC

Region: Willamette Basin

County: Lane

OWEB Request: $179,596

Total Cost: $302,941

Application Description *(from application abstract)*

Through the collection and dissemination of monitoring data at Stage 0 floodplain restoration sites in the Middle Fork Willamette Watershed (MFWW), we hope to further our understanding of the effectiveness, benefits, and impacts of these project types while also sharing the results in approachable ways with a variety of audiences. Needs exist to develop and refine methods to monitor the effectiveness of these types of projects because traditional stream monitoring methods are designed for single-thread river channels and do not evaluate changes to floodplain function. Through this project, we will continue effectiveness monitoring of two recently implemented OWEB-funded projects in the headwaters of the MFWW (Staley Creek and Coal Creek) for two additional years to produce meaningful data to share with scientists, practitioners, funders, and the general public. We will communicate through a variety of mediums with messages tailored to each group so that everyone can understand the benefits and impacts of these projects. We also seek to build off of the monitoring at Staley and Coal Creeks and work with partners who are monitoring other Stage 0 projects throughout Oregon to develop a monitoring plan for Elijah Bristow State Park (EBSP) floodplain restoration. We will then conduct two years of pre-project monitoring at EBSP on Lost Creek and the Middle Fork Willamette River below Dexter Dam, as well as adapt and refine effectiveness monitoring protocols to be implemented post-project. We expect these efforts will not only help us understand the effectiveness of Stage 0 projects in the MFWW, but will benefit the field of floodplain restoration by documenting benefits, highlighting lessons learned, and refining protocols and methods. The primary partners for this project are the Middle Fork Willamette Watershed Council (MFWWC) and the USFS Middle Fork Ranger District (MFRD), with assistance from PNW Research Station, ODFW, and USGS.

Monitoring Team Evaluation

Monitoring Team Strengths

- Understanding the evolution of stream and biotic processes after large-scale floodplain restoration actions is a long-term undertaking, and this monitoring application will provide important data to address questions about response to the initial disturbance and the initial phases of response.
- The application proposes effectiveness monitoring at two completed floodplain restoration projects (Coal and Staley creeks) and builds upon data that has been previously collected.
- The application includes two years of pre-restoration monitoring at Elijah Bristow State Park (EBSP), which is important in order to have a robust data set to compare post-restoration project outcomes.

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- The application includes developing a monitoring plan for EBSP that builds off the monitoring performed at Coal and Staley creeks.
- The applicant is coordinating with several partners that are contributing to the monitoring plan and providing other supporting data.
- The application's objectives are clearly stated and the activities described are appropriate to achieve them.
- The applicant has qualified staff who have working relationships with the US Forest Service and researchers that are currently sharing information to better understand the outcomes of these large-scale floodplain restoration actions.

Monitoring Team Concerns

- The application does not describe methods to install and operate the new gaging station on Lost Creek or the methods to be followed for the dilute tracer methods for measuring stream flow.
- It is unclear if sediment supply was being monitored at the three sites to understand how this might influence the parameters they are proposing to monitor.
- It is unclear if the collection and analysis of the respiration data would account for seasonal fluctuations with discharge.

Monitoring Team Comments

• Work with DEQ early in the life of the project to develop the SAP or QAPP.

• Reference OWRD/USGS methods to install and operate the new gaging station on Lost Creek.

Review Team Evaluation

Strengths

- Monitoring protocols identified in the application are well-documented and the applicant demonstrates a sufficient understanding of these protocols for effective implementation.
- Since Stage 0 is a newer watershed restoration approach with high costs and uplift, there is a clear need to identify the best data to determine success of this approach and monitoring its effectiveness in restoring watershed processes. There is potential for the proposed monitoring approach to be applied at Stage 0 locations across the state to better understand the effectiveness of this process-based restoration approach.
- Previous OWEB-funded Stage 0 projects in the upper Middle Fork Willamette watershed will be monitored. The data will inform restoration in the lower watershed that is related to a pending stakeholder engagement project and a previously funded technical assistance project.
- The applicant has engaged experts with the appropriate technical skills and knowledge necessary to implement the proposed monitoring, and is integrating technical peer review.

Concerns

- If the purpose of the proposed monitoring is to determine the effectiveness of previous Stage 0 restoration, it is unclear whether the chosen parameters have enough connection to the original restoration goals and objectives identified for these project. As a result, the data may not provide evidence for determining whether those goals and objectives were accomplished.
- It is unclear whether the proposed parameters will provide information to determine success of the Stage 0 restoration approach in restoring watershed processes, or to better understand the cost benefit of this technique. It is uncertain whether the proposed primary productivity measures are the appropriate information for understanding Stage 0 outcomes and success. There may be higher priority monitoring questions and parameters for understanding Stage 0 outcomes. For example, there may be benefit to also analyzing sediment transport and habitat features.

Concluding Analysis

The outcome from Stage 0 restoration is not the typical number of linear miles of restored stream, but rather a complex network of restored watershed processes over a larger footprint. Measuring ecological success at these sites requires exploring protocols to determine the appropriate parameters for monitoring the effectiveness of the Stage 0 approach. More information on how and why the proposed monitoring parameters were determined to be the best proxies for understanding success of the Stage 0 approach is needed to understand the likelihood of success for this proposed monitoring project.

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3040-17498

Project Type: Monitoring

Project Name: The Mosby Creek Salmon Spawning Monitoring Project Phase I

Applicant: Coast Fork Willamette WC

Region: Willamette Basin

County: Lane

OWEB Request: $96,393

Total Cost: $132,393

Application Description *(from application abstract)*

Mosby Creek is a large free-flowing tributary in the Upper Willamette, southeast of the city of Cottage Grove, comprising a drainage basin of 97 square miles. It drains the both the low elevation Cascades and the Kalapuya Divide—the ridgeline that runs between the Coast Range and Cascades and dividing the Willamette and Umpqua watersheds. It contributes approximately 30% of the flow of the Row River and about 15% of the flow of the Coast Fork Willamette River (Eugene BLM, 2000). Its landownership pattern consists of a rural residential and small woodlot ownership in the downstream, low-elevation part of the sub-basin, with O&C land managed by private and federal interests in the upper basin.Reintroduction of spring Chinook salmon began in 2012 by Oregon Department of Fish and Wildlife (ODFW). Initial efforts sourced salmon from the McKenzie Hatchery, and beginning in 2014 salmon were sourced from the Willamette Hatchery. While we do know from presence/absence surveys that there are salmon present in Mosby Creek, it is unknown if they are spawning successfully.The Mosby Creek Salmon Spawning Monitoring Project Phase I will help us collect and analyze data to answer key questions. To answer these questions we will conduct both walking and snorkel surveys to enumerate, and presence/absence surveys to determine how many of the returning adults are unmarked. Questions we anticipate the initial monitoring date will answer include:1) How many hatchery and wild Chinook are spawning in the watershed?2) Are Chinook spawning in Mosby Creek producing viable offspring?3) Are juvenile Chinook rearing in Mosby Creek?4) Are juvenile Chinook migrating out of Mosby Creek and rearing in other parts of the system?5) What is the potential production capacity for wild Chinook in Mosby Creek?Project partners include ODFW, Weyerhaeuser, and private landowners. Funding for this proposal will help support CFWWC staff time and travel, ODFW time, and administrative costs.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application proposes to collect information that addresses a defined need that will help inform implementation of the Upper Willamette River Conservation and Recovery Plan for Chinook salmon.
- The application proposes to develop a Mosby Creek Salmon Monitoring Plan and continue to refine the plan for Phase II of the monitoring project as data are compiled and analyzed.
- The applicant is coordinating with ODFW to plan the monitoring, obtain training, and follow ODFW protocols for fish surveys.
- The budget costs and project timelines seem reasonable.

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Monitoring Team Concerns

- The application lacks a description of how the data will be managed and analyzed to inform future restoration actions or evaluate past restoration actions.
- The application does not define the model that will be developed to determine production capacity and who at ODFW would be assisting with this.
- The application lacks detail on the activities for each objective, raising concerns that the objectives may not be achievable as proposed.
- The application lacks detail on monitoring methods. There is no citation for the spawning survey protocol that will be followed. It is difficult to determine what surveys will be done (e.g., determining if there are wild and/or hatchery adult and juvenile fish present in the system) and if they are sufficient to meet their objectives as described.
- The application lacks detail on the study design. It was unclear if adult and juvenile surveys were a complete census of the spring Chinook distribution, targeting specific areas or using some other means of sample site selection, such as spatially stratified or random selection.
- The application lacks detail on efforts to share data with interested stakeholders outside of ODFW, such as private and public landowners in the basin such as Weyerhaeuser and BLM.
- While noted in the budget, the application narrative does not explain that ODFW seasonal staff will be used to accomplish at least some of the field work. Better explanation of data collection roles and responsibilities for the watershed council and ODFW staff would be helpful.
- This is a new monitoring project for the watershed council, thus the applicant’s track record to implement comparable monitoring efforts is unknown.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- The proposed protocols are consistent with ODFW methods.
- A partnership with ODFW increases the likelihood of success for accomplishing the monitoring goals and objectives.
- The resulting data will inform ODFW Chinook reintroduction management.

Concerns

- There is not enough detail in the application to understand how the project will be managed, and whether the applicant has the capacity to implement the work. Additional information on the roles and responsibilities shared with ODFW is needed to understand how the project will be implemented.
- It is difficult to determine how the monitoring data will be shared and used to inform restoration based on the limited information provided in the application.

- There is not enough detail to determine the technical soundness of the monitoring design. Although referenced protocols are likely appropriate, they are not sufficiently described in the application.

Concluding Analysis

While the proposed data will likely be useful, the application lacks enough information to understand the proposed scope of work for the project and how results will inform future watershed restoration.

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3041-17465

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: $96,971

Total Cost: $133,502

Application Description *(from application abstract)*

Elijah Bristow State Park (EBSP) is located just below Dexter Dam at the confluence of the Middle Fork Willamette River and Lost Creek, a free-flowing tributary. At over 850 acres EBSP offers one of the largest undeveloped tracts of floodplain below a series of dams on this river. Despite the lack of current development in this floodplain, flood risk mitigation dams, historic aggregate mining, and berms and levees have resulted in the loss of dynamism and diverse habitat historically present. With support from an OWEB TA grant, we have developed conceptual restoration designs for close to 630 acres – over 4 river miles - that, when implemented, will greatly improve hydrologic connectivity across the floodplain which will have cascading benefits to aquatic and riparian habitat and the species that depend upon those habitats, such as Oregon chub, spring Chinook salmon, western pond turtle, lamprey, and numerous others. These designs are informed by Stage 0 concepts but modified to fit site constraints. Within the Willamette, this type of restoration has been implemented only on federal lands thus far. Therefore, applying it in a popular park with more logistical and social constraints will require significant social engagement to be successful. We are proposing an iterative stakeholder engagement process that begins with awareness about current ecological conditions, builds into deeper engagement surrounding site selection, design refinement, and trails planning, then circles back to creating awareness of final plans. We also plan to engage with tribes, river and land managers, permitting agencies, and other key entities that have interests in the site and can support and inform restoration. Our process will empower stakeholders and help them feel a sense of ownership over this project on public lands. The technical team from the OWEB TA grant will continue working with MFWWC and OPRD in the stakeholder engagement process; this includes ODFW, USFS, USACE, USFWS, USGS.

Review Team Evaluation

Strengths

- The application addresses the previous evaluation concerns.
- The project builds on a technical assistance investment that incorporated a technical team with appropriate expertise to review and recommend restoration alternatives.
- Appropriate stakeholder audiences are clearly identified.

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- The application has a clear description of how engagement will be implemented and what outcomes will be accomplished.
- A diversity of affected stakeholders will be engaged in a variety of multidirectional communication opportunities that will facilitate stakeholder learning about proposed restoration alternatives, and invite their feedback. The flexible approach described for discussing design alternatives will provide space for authentic consideration of stakeholder feedback.
- The logic model included in the application provides helpful context for understanding the stakeholder engagement approach.
- Success indicators are clearly articulated in the application.
- The applicant is qualified to accomplish the proposed activities, and has a proven track record with similar work.
- Costs are appropriate for the project complexity.

Concerns

- There are no concerns identified for the proposed Stakeholder Engagement.

Concluding Analysis

The applicant absorbed previous project evaluation feedback and adjusted the application, which resulted in a high-quality project proposal. The stakeholder engagement is crafted as a conversation in which Stage 0 is presented as a preferred alternative based on a technical assistance process, and balances this with adaptive space that responds to stakeholder feedback. This approach is an example of how the Oregon Plan for Salmon and Watersheds actively engages the community in determining solutions for watershed health.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 2

Review Team Recommended Amount
$96,971

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation

Fund

Staff Recommended Amount

$96,971

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3042-17478

Project Type: Stakeholder Engagement

Project Name: Willamette Hazelnut Stakeholder Engagement Project

Applicant: Cascade Pacific RC&D

Region: Willamette Basin

County: Marion

OWEB Request: $61,490

Total Cost: $116,740

Application Description *(from application abstract)*

The Regional Conservation Partnership Program (RCPP) is a Natural Resources Conservation Service program that encourages collaboration and innovation and can bring large scale funding to active partnerships. Already, partners from drinking water providers, conservation districts, Oregon State University (OSU) extension and the Oregon Hazelnut Commission have met and begun discussing how this group of stakeholders can collaborate and increase voluntary conservation throughout the Willamette Basin. An opportunity has already risen to the top to align with the hazelnut industry. The Hazelnut Commission is already funded to work towards developing a 3rd party stewardship certification, which would include practices that protect water quality and improve soil health. The group already sees promise to be able to work with the commission to offer conservation opportunities and incentives to meet or exceed this stewardship certification.This opportunity is exciting but also newly hatched. We believe deeper conversations are needed about how this might take shape and who is interested in being involved before trying to apply for large scale funding for multiple years of work. We are seeking funding to conduct a series of facilitated sessions with stakeholders throughout the Willamette Basin to develop goals for collaboration and partnerships so that we are able to submit a competitive RCPP application.

Review Team Evaluation

Strengths

- The project design includes multidirectional communications with stakeholders by providing a venue for facilitated conversations.
- Successful implementation of the stakeholder engagement may potentially lead to securing a NRCS Regional Conservation Partnership Program (RCPP) project, which would bring significant funds for conservation actions into the Willamette basin.
- There is potential for the proposed work to result in an Oregon Solutions project.
- There is a clear need articulated for the proposed stakeholder engagement conversation because hazelnut operations do not fit well within the framework of existing certifications, such as Salmon Safe.
- The project will be led by a qualified advisory team with a proven track record in similar work.
- Project support by ODA and Oregon Hazelnut Commission is demonstrated by participation, match, and letters of support.

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Concerns

- It is unclear whether there is support for the stakeholder engagement conversation among SWCDs and from NRCS, and what plans are in place for engaging these stakeholders.
- It is unclear who will provide leadership after the proposed facilitated conversation to maintain momentum and champion efforts towards achieving on-the-ground implementation work.
- It is uncertain whether project timing will provide information needed for the RCPP application. It is not clear whether there are other options available if the RCPP project is not selected to ensure hazelnut producers have resources for timely implementation of conservation practices.
- There is not a clear watershed benefit identified as a target for the RCPP project. It is also unclear whether there is evidence indicating how hazelnut farms negatively impact watershed health to ensure actions taken will effectively address those impacts.

Concluding Analysis

With the increasing number of hazelnut farms in the Willamette, there is a clear need to determine potential impacts to watershed health and identify stewardship practices that effectively address these impacts. If there is not a source of information that provides evidence for the watershed impacts caused by hazelnut farms that should be targeted, it may be too early for a conversation with the farmers and pursuing a RCPP project.

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-2019 Fall Offering
Willamette Basin (Region 3)

Application Number: 220-3043-17485

Project Type: Stakeholder Engagement

Project Name: Building Prescribed Fire Capacity in the Southern Willamette Valley

Applicant: Long Tom WC

Region: Willamette Basin

County: Lane

OWEB Request: $65,973

Total Cost: $100,603

Application Description *(from application abstract)*

This stakeholder engagement proposal intends to address fire suppression and human exclusion in fire-adapted oak-prairie ecosystems in the southern Willamette Valley by way of collaboration among public, nonprofit, and Tribal partners. The majority of land management organizations lack capacity to use fire as a management tool, and current capacity for prescribed burning is largely limited to public and Nature Conservancy lands, while critical habitat remains in need of fire on private, land trust, and tribal lands. We seek to make much needed collaborative progress on understanding how to build lasting capacity for prescribed fire and putting it into practice to support oak and prairie habitat health in priority areas and community resilience. Through research, one-on-one dialogues, and collaborative meetings, we will engage local tribes, land trusts, public agencies, private organizations, watershed councils and private land-owners to understand prescribed fire capacities and needs to be able to approach funding and progressive actions to help all partners. Over the course of these discussions, we intend to grow an understanding of how to incorporate Tribal cultural knowledge and needs into valley-wide burn practices, research the factors affecting the prescribed burn window, build the parameters of a fire coordinator position that will carry longer-term leadership in continuing to build burn capacity, and develop a series of agreements or MOUs that clarify how partners will share resources for prescribed fire. Without increased understanding of how to build capacity for prescribed fire across landownership boundaries, oak-prairie habitat, associated species and cultural practices could continue to decline and hazardous fuels and wildfire risk could continue to increase. The outcomes of this proposal intend to benefit innumerable oak-prairie restoration projects and land managers throughout the WV.

Review Team Evaluation

Strengths

- The application has clearly articulated objectives.
- The applicant has a thoughtful approach for identifying appropriate partners and stakeholders.
- Local tribes will be engaged to incorporate tribal knowledge into prescribed fire practices.
- The applicant is qualified to accomplish the proposed activities, and has a proven track record with stakeholder engagement.
- Costs are appropriate and reasonable.

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Concerns

- The proposed activities are ambitious for one project manager to be responsible for, which could result in a strain on capacity for the proposed work.
- Encouraging fire is contrary to the message currently communicated from agencies to agricultural stakeholders. This could potentially result in confusion or frustration among landowners.
- Increasing the use of prescribed fire for conservation purposes beyond what already occurs in the project area has an associated risk for pushing past the limits of social acceptability for this practice. This could lead to conflict with the public resulting in limiting or removing the use of fire as a conservation tool.

Concluding Analysis

Fire has proven to be an effective tool for restoring oak-prairie ecosystems, and fire suppression is one of the key limiting factors that has led to degradation of this habitat. The proposed stakeholder engagement may provide a unique opportunity to shift public opinion on prescribed burns so that these habitats can effectively be restored at a large scale. Given the complexity of this issue and mixed messaging to landowners, the applicant is encouraged to learn from all resources available on fire and not limit themselves to tribal resources. While there are risks associated with this conversation, the applicant is well equipped for the proposed work and challenging conversation. The potential benefit to the target habitats is high for the cost.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 2

Review Team Recommended Amount
$65,973

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

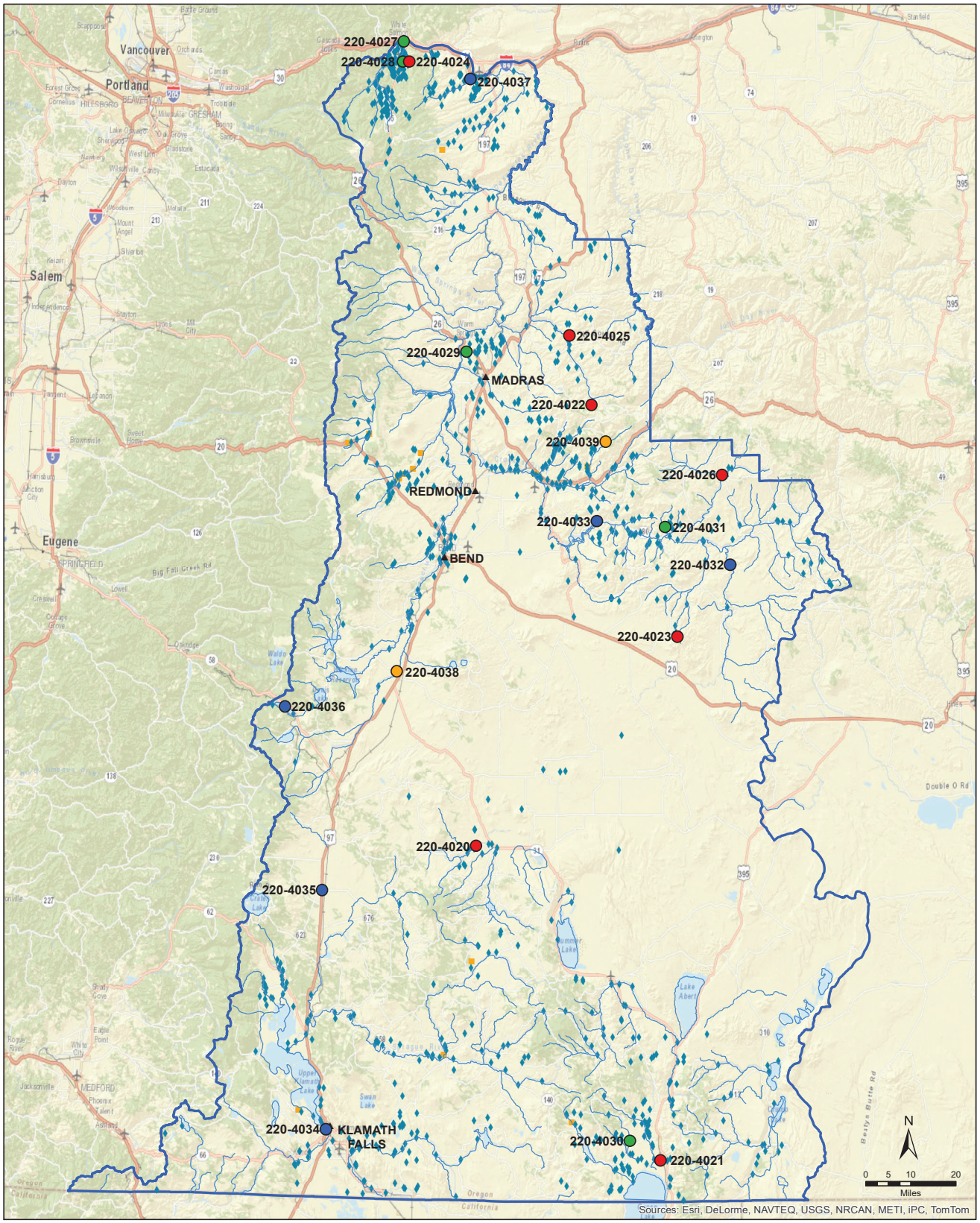
Staff Recommended Amount

$65,973

Staff Conditions

None

Central Oregon - Region 4 Fall 2019 Applications



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Grant Types

- Restoration
- Technical Assistance
- Stakeholder Engagement
- Monitoring

Previous Grants: 1998 - Spring 2019

- Restoration
- Land Acquisitions
- Streams
- Region Boundary

OREGON WATERSHED ENHANCEMENT BOARD

775 Summer St, NE Suite 360
Salem, OR 97301-1290
(503) 986-0178
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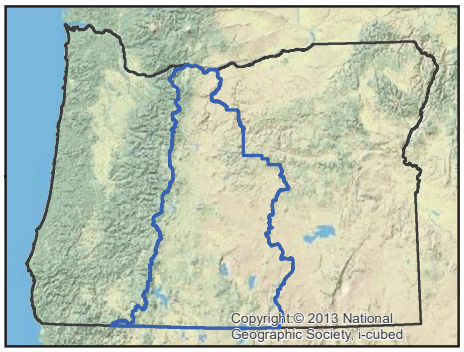

Region 4 - Central Oregon

Restoration Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-4023	Crook SWCD	Fostering the Natural Ecology of Resilient Landscapes on Hampton Buttes	This landscape scale project in Southern Crook County will restore priority resources within sage steppe, aspen woodlands, and natural spring habitat to benefit a multitude of wildlife species.	268,508	Crook
220-4020	Fort Rock/Silver Lake SWCD	Buck Creek - Shaw Ranch Diversion Dam Replacement	The last remaining fish barrier will be removed on Buck Creek, located between Highway 31 at Paulina Marsh, by replacing an old concrete diversion structure with a roughened stream channel.	304,467	Lake
220-4025	Jefferson SWCD	Little Trout Creek Habitat Improvement Project	The last mile of Little Trout Creek will be restored through channel reconstruction, placement of large wood fish habitat structures, and native plant revegetation along this stream reach important for Mid Columbia Steelhead.	130,967	Jefferson
220-4022	Jefferson SWCD	Upper Trout Creek Tributary Rehabilitation	The forest service will implement a variety of restoration approaches across multiple miles of headwater streams in the Upper Trout Creek Watershed to improve instream and floodplain habitat for Mid Columbia Steelhead.	84,601	Crook
220-4021	Lake County Umbrella Watershed Council	Thomas Creek - Amsbaugh Diversion Fish Passage	Fish passage at the last remaining barrier on Thomas Creek, the largest tributary to Goose Lake, will be restored by creating a bypass channel around a channel spanning concrete water diversion.	136,036	Lake
220-4026	Discover Your Northwest DBA: Discover Your Forest	Lower Deep Creek Restoration Project Phase 3	The final phase of restoration along lower Deep Creek will complete instream and floodplain enhancement work by placing large wood fish habitat structure instream, constructing beaver dam analogues, and restoring native plant communities. Streamside fencing and two cattle guards will be installed to protect restored habitats.	162,156	Crook
220-4024	Hood River SWCD	Eastside Lateral Pipeline & Water Conservation Project	Converting miles of open-ditch irrigation canals into an underground, closed-pipe system and eliminating all the end spills will allow three cfs to be permanently conserved instream to the East Fork Hood River.	524,355	Hood River
Total Restoration Projects Recommended for Funding by RRT and OWEB Staff				**1,611,090**	

Region 4 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

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				**1,611,090**	
Restoration Applications *Not Recommended* for Funding by RRT					
Project #	**Grantee**	**Project Title**		**Amount**	**County**
None					

Region 4 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance (TA) Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
220-4030	Lake County Umbrella Watershed Council	Cottonwood Creek Reconnaissance and Design Plan	Eight irrigation diversions will investigated to develop design solutions that facilitate fish passage and improve water delivery along Cottonwood Creek, a major tributary to Goose Lake.	69,355	Lake
220-4029	Jefferson SWCD	Campbell Creek Watershed Enhancement Project	The utilization of beaver dam analogues will be assessed as a water quality solution for reducing sediment and nutrient loading from the headwaters of Campbell Creek prior to it releasing into the Deschutes River via the Pelton Regulating Reservoir.	24,974	Jefferson
220-4028	Hood River SWCD	Neal Creek Instream Habitat Restoration Design	Construction-ready designs will be developed to improve instream and floodplain habitat conditions along two properties on Neal Creek that have been characterized as having the highest restoration potential for ESA-listed fish.	63,433	Hood River
Total TA Projects Recommended for Funding by RRT and OWEB Staff				**157,762**	

Technical Assistance Projects *Recommended but Not Funded* in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
220-4027	Lower Columbia Estuary Partnership	Middle Mainstem Columbia Restoration Action Plan	A restoration inventory and action plan for the mainstem Columbia River from Bonneville Dam to the John Day Dam will be completed to fill knowledge gaps and jumpstart restoration activities in this area.	74,924	Hood River
Total TA Projects Recommended for Funding by RRT				**232,686**	

Technical Assistance Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount**	**County**
220-4031	Think Wild	Technical Support for Crooked River Basin Assessment of Beaver Intrinsic Potential (BIP)	38,057	Crook

Region 4 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Stakeholder Engagement Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
None					
Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff				**0**	
Stakeholder Engagement Projects *Recommended but Not Funded* in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
None					
Total Stakeholder Engagement Projects Recommended for funding by RRT				**0**	
Stakeholder Engagement Projects *Not Recommended* for Funding by RRT					
Project #	**Grantee**	**Project Title**		**Amount**	**County**
220-4038	Deschutes SWCD	Upper Deschutes Forest Health Investment Project		76,107	Deschutes
220-4039	Think Wild	Mill Creek Stakeholder Engagement Project		16,565	Crook

Region 4 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
220-4034	Klamath Watershed Partnership	Final Data Collection and Verification of the Stream Classification Database for Klamath/Lake	The final phase in field assessing a network of streams identified in Klamath – Lake Counties will be completed to verify gaps and opportunities regarding stream presence, habitat availability, fish use, and restoration potential.	130,577	Klamath
220-4037	Wasco SWCD	The Dalles Watershed Fish Monitoring	Monitoring stations will be installed to understand fish use and species composition on three urban streams that flow through The Dalles before releasing into the Columbia River below The Dalles dam.	115,518	Wasco
220-4032	OSU Office of Sponsored Research & Award Admin	Monitoring beaver dam analogs on the S. Fork, Crooked River	The effectiveness of beaver dam analogues (BDA) installed on private land on the South Fork Crooked River will be examined by monitoring a set of physical and biological parameters to understand the ecological response of stream restoration approaches that use BDA's.	39,333	Crook
Total Monitoring Projects Recommended for funding by OWEB Staff				**285,428**	
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				**285,428**	
Monitoring Applications *Not Recommended* for Funding by RRT					
Project #	**Grantee**	**Project Title**		**Amount**	**County**
220-4033	Crooked River WC	Upper Crooked Watershed Redband Movement Tracking		120,268	Crook
220-4035	The Klamath Tribes	Groundwater and Surface-water Trends in Klamath Marsh, Oregon		265,298	Klamath
220-4036	Integrated Ecosystem Sciences Inc	Odell Lake Monitoring & Analysis		165,870	Klamath
Region 4 Total OWEB Staff Recommended Board Award				**2,054,280**	**19%**
Regions 1-6 Grand Total OWEB Staff Recommended Board Award				**10,877,263**	

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4020-17393

Project Type: Restoration

Project Name: Buck Creek - Shaw Ranch Diversion Dam Replacement

Applicant: Fort Rock/Silver Lake SWCD

Region: Central Oregon

County: Lake

OWEB Request: $304,467

Total Cost: $381,457

Application Description *(from application abstract)*

In partnership with the Fort Rock / Silver Lake SWCD, U.S. Fish and Wildlife Service, and the Shaw Ranch of Silver Lake, Oregon, Ducks Unlimited will replace the existing irrigation diversion dam on Buck Creek, a tributary of the Paulina Marsh in Lake County, Oregon. To our knowledge, the Shaw diversion represents the last fish passage impediment between Highway 31 at Paulina Marsh and the headwaters in the public lands ownership. In consultation with the project partners and ODFW fisheries, Ducks Unlimited will finalize engineering designs, secure necessary regulatory permits and clearances, and solicit and award bids to replace the existing diversion dam with a progressive 'roughened surface' / 'rock chute' diversion dam. The new dam will maintain and likely enhance distribution of surface water across the historical Buck Creek floodplain hydrating seasonal wet meadows critical for spring staging migratory waterfowl and waterbirds. Additionally, the new structure will provide perennial fish passage with no management demands, opening up an additional 4.5 miles of fish migration potential on Buck Creek.

Review Team Evaluation

Strengths

- This proposal builds on a previously funded OWEB technical assistance grant that provided engineering support to develop the project design to 60%, which included an alternatives analysis.
- The Shaw diversion is the last remaining complete barrier on Buck Creek from the headwaters downstream to its crossing with Highway 31, and would open up an additional 4.5 miles of high quality habitat.
- The applicant and engineering contractor (Ducks Unlimited) have partnered together to provide passage on four other diversions along Buck Creek, providing confidence in the capacity of the project team to implemented the project successfully.
- The two irrigation diversions associated with the diversion dam will be appropriately screened to ensure fish do not have access to the canals.
- The project will provide control and efficiency in delivering irrigation water which should enhance distribution of surface water across the historic floodplain adding habitat value for waterfowl and waterbirds.

Concerns

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- The project design has not been approved for fish passage by ODFW. Their review may result in unplanned modifications to the design that could alter the project design and budget.
- There was no letter of support from the landowner.

Concluding Analysis

The Shaw diversion represents the last known fish barrier on Buck Creek from its headwaters on public land to its crossing with Highway 31 (~26 miles). The aquatic habitat on Buck Creek through the Shaw ranch is in good condition and provides habitat for a known population of Fort Rock Redband trout. The riparian vegetation along the creek consists of dense populations of Willow providing bank stabilization and cover, as well as acting as a barrier to livestock access. Midway through the planning and design process, the incorporation of the USFWS as a partner altered the design approach which now utilizes a roughened channel as opposed to a concrete fish ladder. This new approach should provide an overall improvement in stream process and fish passage, but will require some additional design details in order to receive approval by ODFW.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 7

Review Team Recommended Amount
$304,467

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$304,467

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4021-17396

Project Type: Restoration

Project Name: Thomas Creek - Amsbaugh Diversion Fish Passage

Applicant: Lake County Umbrella Watershed Council

Region: Central Oregon

County: Lake

OWEB Request: $136,036

Total Cost: $170,631

Application Description *(from application abstract)*

The focus of this project is restoring fish passage connectivity in Thomas Creek, the largest tributary to Goose Lake in the Goose Lake Basin. The Thomas Creek – Amsbaugh Diversion is located 10 miles southwest of the town of Lakeview in Lake County. The Diversion was established approximately fifty years ago to provide irrigation and stock water to one of the largest ranches in the Goose Lake Basin, flood irrigating 1500 acres of pasture and hay ground. Today, the ranch is managed much the same. The structure is located 5 miles upstream from Goose Lake and is the first and last artificial barrier within the forty-mile stream tributary. The concrete weir is a complete upstream barrier due to the structure's vertical height, preventing aquatic species from reaching quality habitat and cooler water temperatures during the warm summer months. Approximately 20 years ago a concrete fish ladder was installed to accommodate fish passage, but the design implemented no longer meets fish passage criteria. It is now considered ineffective and obsolete. Nine native Goose Lake fishes utilize Thomas Creek, including unique species like the Modoc sucker (Listed State Sensitive) and the Goose Lake Lamprey who have no jump height capabilities. This project is a priority for the following reasons: 1) The LakeCounty Umbrella Watershed Council and partners have implemented multiple restoration - fish passage projects throughout the 40-mile stream tributary, 2) All artificial barriers located upstream of this project have been re-designed to provide passage. An alternatives analysis and 60% fish passage design have been completed for the Thomas Creek-Amsbaugh Diversion. The proposed fish passage solution includes installing a bypass channel and improving the 50 ft. irrigation diversion by installing a rail car bridge for operational safety and maintenance. Project partners include the Amsbaugh Ranch, ODFW, USFWS and LCUWC.

Review Team Evaluation

Strengths

- The project site represents the last known fish barrier on Thomas Creek. Once complete, the 40-mile mainstem Thomas Creek will be barrier free from its headwaters on the Fremont Winema National Forest down to its confluence with Goose Lake.
- The applicant and partners have demonstrated capacity by working successfully on similar completed projects on streams throughout Lake County.

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- The project is a result of an OWEB funded technical assistance grant in 2018 that supported an alternatives analysis and 60% engineered designs for the chosen alternative.
- The fish passage barrier was thought to be addressed in the mid-2000's when Ducks Unlimited installed a fish ladder; however, it was later discovered that the ladder did not pass locally important sucker and lamprey species. The project design accounts for all aquatic species that migrate to and from Goose Lake through Thomas Creek.

Concerns

- The application did not characterize hydrologic fluctuations in the project area. Specifically, it would have been helpful to understand the variability of low flow conditions and how this impacts the functionality of the by-pass channel. The site can receive large flows where water commonly spills over the ditch where the by-pass channel will be constructed. When these conditions arise, it was not clear how fish will be kept from spilling over onto the adjacent agricultural fields.
- The cost for the railcar bridge seemed high. It would have been helpful to understand how that cost was generated to determine cost effectiveness.
- The application did not include fish screens as part of this project. From the designs included, fish that enter the bypass channel would also have access to an irrigation ditch. The application and designs failed to describe what mechanisms will be put in place to prevent entrapment.
- The alternatives analysis failed to take into account the potential impacts to wetlands. It appears the by-pass channel will be constructed through a wetland, yet the application did not describe how potential impacts to the wetland will be addressed.

Concluding Analysis

This project is located five miles from the Thomas Creek confluence with Goose Lake and is the first barrier aquatic species encounter migrating up Thomas Creek from Goose Lake. The chosen alternative will construct a by-pass channel around the diversion dam, utilizing a portion of the existing irrigation diversion canal. The by-pass channel was chosen due to its capability to pass all aquatic species; however, it is unclear whether there is enough flow during low flow periods which Thomas Creek experiences during the irrigation season. The function of the proposed stop logs is also unclear. The applicant is encouraged to coordinate with regulatory staff regarding wetlands in the area to understand potential impacts and solutions to move forward with project implementation.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 7

Review Team Recommended Amount

$136,036

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$136,036

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4022-17408

Project Type: Restoration

Project Name: Upper Trout Creek Tributary Rehabilitation

Applicant: Jefferson SWCD

Region: Central Oregon

County: Crook

OWEB Request: $84,601

Total Cost: $505,361

Application Description *(from application abstract)*

The Upper Trout Creek Rehabilitation Package addresses restoration actions in six tributaries to Trout Creek on the Ochoco National Forest, near the town of Prineville in Crook County. Trout Creek is the largest tributary on the east side of the Deschutes River below Pelton Dam and has significant anadromous fish production potential. The watershed presently supports redband and Mid-Columbia River steelhead trout populations and overlaps with listed critical habitat for steelhead. In Trout Creek, the decline in salmonid production has been due to the degradation of instream habitats and water quality from road construction, past timber harvest, grazing and stream alteration activities. The proposed rehabilitation package will increase densities of large wood, pools, and spawning gravels in six tributaries on the forest, as well as localized floodplain construction in key locations and extensive riparian planting. Tributaries include Big Log, Dutchman, Cartwright, Potlid, Dick, and Auger Creek (see enclosed map). Approximately 15.5 miles of large wood placement, 3 miles of floodplain connectivity improvement, and 8 miles of riparian native planting will be implemented. This proposal will partner with ODFW to improve maintenance on a 3,600 acre exclosure on the forest, which is currently managed through a MOU by ODFW. The desire is to bring the exclosure back to full functionality to prevent trespass cattle from entering the forest and sensitive species habitat and convert it to wildlife-friendly fencing. The purpose and need for these restoration activities is to enhance and recover habitat for redband trout, Mid-Columbia River steelhead, Columbia spotted frog and other riparian-dependent aquatic, wildlife, and plant species. A large Pelton application was submitted for this project in 2019; OWEB funding is requested to supplement the Pelton application, along with USFS funds. Project partners include the Middle Deschutes Watershed Council, Forest Service, and ODFW.

Review Team Evaluation

Strengths

- The applicant addressed previous review team comments by including fish abundance and distribution data for the streams their work will occur in.
- The project approach is cost effective due to utilizing forest service road crews directed by qualified forest service staff and incorporating trees adjacent to their restoration areas for construction of large wood jams.

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- The project fits within the context of past restoration in this area of the Ochoco National Forest which included road decommissioning, forest thinning, and stream restoration.
- The application clearly described with maps and narrative the types of restoration treatment that would be implemented in the multiple stream reaches included in the proposed project.
- These headwater streams of Trout Creek provide important habitat for Mid-Columbia steelhead and other aquatic species. Actions proposed overlap with designated critical habitat for Mid-Columbia River steelhead, improving habitat conditions for sections deemed essential for the recovery of the species.

Concerns

- Due to the extensive disturbance and material placement in the channel, it is unclear whether these sites would provide immediate fish passage after restoration.
- It is unclear if the variety of proposed restoration approaches will fit within the scope of the current programmatic permit held by the US Forest Service.
- While the restoration approaches were clearly described, the application would have been clearer if each photo depicting degraded conditions included a description of the restoration approaches for that site.

Concluding Analysis

This project will employ a variety of restoration approaches to improve floodplain connectivity and instream habitat aimed at Mid-Columbia Steelhead in 15 miles of headwater streams in the Trout Creek watershed. All the work will be implemented and supervised by US Forest Service staff that have experience implementing this type of work. The species selection and revegetation strategies are site appropriate. The applicant and partners are encouraged to continue to make exclusion fence a priority to insure long-term sustainability of restoration.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 7

Review Team Recommended Amount

$84,601

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation
Fund

Staff Recommended Amount
$84,601

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4023-17439

Project Type: Restoration

Project Name: Fostering the Natural Ecology of Resilient Landscapes on Hampton Buttes

Applicant: Crook SWCD

Region: Central Oregon

County: Crook

OWEB Request: $268,508

Total Cost: $565,757

Application Description *(from application abstract)*

Hampton Buttes rises nearly 1,000 feet above the expansive rolling sagebrush landscape of southern Crook County and serves an ecological intersection for a variety of sensitive species dependent on sagebrush ecosystems. The project area offers a precious combination of elevation and aspect, giving it the potential to provide highly productive habitat for species in need of seasonal forage and cover like sage-grouse and mule deer. This application corresponds with a well-documented need to enhance the resiliency of sage-steppe ecosystems and in so doing, benefit the wildlife and plant communities that depend on them. Our holistic approach focuses on an area on the north slopes of Hampton Buttes where alterations in natural disturbance regimes have caused plant communities to shift, degrading the native ecology. These shifts include juniper encroachment and the decline of native bunch grasses, forbs, shrubs, and quaking aspen. The project area is predominantly comprised of uplands with a north facing aspect, which respond well to restoration because their deeper soils and cooler temperatures provide the foundation for a resilient native plant community where disturbance is more likely to produce a directional change that aligns with local and statewide management objectives. This project will address many of the limiting factors identified for this area by working with private landowners to address multiple objectives using a landscape approach. Project elements will include: initiating prescribed burns on 1,895 acres of sage steppe that has been invaded by western juniper; cutting junipers on 2,184 acres of sage steppe, rejuvenate 36 acres of aspen woodlands by removing encroaching conifers and reducing browse pressure; Redevelop five springs and add wildlife escape ramps to improve livestock distribution, decrease grazing pressure, and preventing drowning at water sources.Partners include: landowners, NRCS, ODFW, and ODA.

Review Team Evaluation

Strengths

- This project implements a landscape approach to improving a multitude of locally important wildlife habitats including sage steppe, aspen woodlands, and natural springs.
- The application clearly articulates goals, objectives, and ecological outcomes for the variety of proposed habitat treatments.
- The proposed approach to select locations to implement prescribed fire is technically sound, including consideration of important landscape features: soil type, aspect, and slope.

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- The cost to achieve the habitat benefit is reasonable.
- The project has demonstrated support from the appropriate agency partners and landowners.

Concerns

- While the applicant will work with Brothers-Hampton Rangeland Fire Protection Association to develop burn plans, technical soundness could be better assessed with details regarding: 1) the types of conditions needed for the ideal burn window to meet the project objectives; and 2) a description of how the applicant and partners would respond if the prescribed fire did not meet the project objectives.

Concluding Analysis

This project is located in southern Crook County near the headwaters of Camp Creek. The property was recently acquired by a neighboring ranch, which offers an opportunity to implement restoration prior to putting the land into ranch production. The project will catalyze funding contributions from NRCS and ODFW which focuses on sage-grouse and mule deer habitat restoration. The property is relatively free of non-native weed species, making it a good candidate for prescribed fire. Implementing prescribed fire has the potential for unintended outcomes; however, the detail provided in the application shows that the necessary planning tools are in place for success in achieving the desirable ecological outcomes described in the application.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 7

Review Team Recommended Amount
$268,508

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$268,508

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4024-17468

Project Type: Restoration

Project Name: Eastside Lateral Pipeline & Water Conservation Project

Applicant: Hood River SWCD

Region: Central Oregon

County: Hood River

OWEB Request: $524,355

Total Cost: $7,643,359

Application Description *(from application abstract)*

This project will take place on the Eastside Lateral Canal 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. The Eastside Lateral Canal serves about one-third of the District and conveys up to 40 cfs. This open, unlined canal begins at Swyers Drive (45.6123/-121.5073) and ends near Old Dalles Drive (45.6740, -121.4859). There are 14 end spills within the Eastside Lateral's distribution system that lose an estimated 6 cfs. Eliminating these end spills and piping the open canal would leave this water in the river, which would have a significant positive impact on spawning and rearing habitat availability for spring Chinook, coho, and winter steelhead.The proposed work will eliminate 6 miles of open canal by replacing it with HDPE pipe. Work will also include installing 51 irrigation turnouts and 10 sub-lateral line connections, crossing four County roads, constructing two pressure reducing stations, and installing 17 pressure reducing valves along 10 sub-lateral lines. Half of the estimated 6 cfs water savings from this project will be protected with a 3 cfs Conserved Water Allocation. The project has received funding for the first phase of construction from the Natural Resources Conservation Service (NRCS) and Confederated Tribes of the Warm Springs (CTWS). Other project partners include EFID, Hood River Watershed Group (project manager), Hood River Soil & WaterConservation District (applicant/fiscal sponsor), and Farmers Conservation Alliance (technical assistance). Pending funds include an OWRD grant and additional NRCS funds.

Review Team Evaluation

Strengths

- Once complete, this project will permanently conserve 3 cfs instream to the East Fork Hood River at East Fork Irrigation District’s (EFID) point of diversion.
- The EFID has shown commitment in protecting water instream by implementing piping projects in the past.
- This project is identified in a draft watershed plan-environmental assessment developed by NRCS that identifies modernization projects for the entire EFID.

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- This project will eliminate “end spills” that are located at the end of the ditch which run off and drain into tributaries of the East Fork Hood River. Removing these end spills should result in improved water quality.
- The cost per cfs of conserved water instream is reasonable based on other piping projects reviewed by OWEB.

Concerns

- The overall benefit of permanently conserved water to the East Fork Hood River for spring Chinook spawning utilization may be overstated, due to water quality concerns such as glacial till presence and water temperatures, which impact aquatic species productivity.
- There was no plan included that would measure and document the change in water quality from eliminating the end spills associated with this project.

Concluding Analysis

This piping project represents a continuation of the EFID’s effort to modernize irrigation infrastructure while also permanently protecting water instream for public benefit. The eastside lateral canal has 14 end spill locations that would be eliminated, which is how the conserved water savings from this project would be realized. The design is in its final stages and currently under review by NRCS. While the application states that 3 cfs will be conserved instream, it also mentions that diversions will be reduced by 6 cfs. It would have been helpful to gain additional insight on the District’s water management to understand when and how additional water savings would be realized.

Review Team Recommendation to Staff
Fund

Review Team Priority
7 of 7

Review Team Recommended Amount
$524,355

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$524,355

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4025-17469

Project Type: Restoration

Project Name: Little Trout Creek Habitat Improvement Project

Applicant: Jefferson SWCD

Region: Central Oregon

County: Jefferson

OWEB Request: $130,967

Total Cost: $582,353

Application Description *(from application abstract)*

The Jefferson County Soil and Water District (JCSWCD), Oregon Department of Fish and Wildlife (ODFW), and partners (BPA, PGE, Landowner, and Licensed Contractors) seek to restore habitat to benefit federally-listed Mid-Columbia summer steelhead in Trout Creek (Deschutes River). During the early and mid-1900s, Little Trout Creek at the project site was straightened and channelized in order to reduce floodplain habitat and create agricultural fields or livestock pasture. These actions resulted in the loss of beaver dam complexes and an almost total loss of riparian hardwoods. This loss of riparian roughness elements has resulted in a higher stream energy system with reduced habitat diversity, reduced floodplain connectivity, and altered thermal regime. The proposed project seeks to restore instream habitat, improve channel-floodplain form and function, and increase the density and vigor of riparian vegetation to benefit federally listed summer steelhead. The project will restore 1.12 miles of Little Trout Creek and the adjacent floodplain to a geomorphically stable form that provides the habitat diversity, floodplain hydrology, hydraulic and sediment transport function of a naturally occurring, dynamic fluvial environment. The project builds on the success of multiple private landowner projects on Trout Creek that include; stream flow improvements, fish screening, and riparian restoration. These projects are a part of a larger, ongoing effort to restore Trout Creek at the watershed-scale. The project encompasses lower mile of Little Trout Creek, ending at the confluence with Trout Creek. The project site is located on private land, 2.2 miles north of the town of Ashwood, Oregon.

Review Team Evaluation

Strengths

- This project will build upon recently completed stream restoration activities conducted on Trout Creek immediately adjacent and upstream of the project site where Little Trout Creek enters Trout Creek.
- The project design is carefully thought out, prioritizes actions to address key limiting factors, and has been reviewed and approved through a rigorous process conducted by BPA.
- The applicant and partners have a strong track record in successfully implementing this scale of stream restoration in the Trout Creek watershed.
- The application and ecological outcomes associated with implementation are clear and well thought out.
- A recent change in land ownership resulted in receptivity to implement this scale of restoration.

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Concerns

- It is unclear whether consideration was given to alternatives to the proposed hardened stream crossing that would prevent vehicles crossing the stream.

Concluding Analysis

This project will restore the lower one mile of Little Trout Creek by re-meandering the channel, grading the floodplain, building pools and associated large wood complexes, and revegetating the entire project area with native grass, shrubs, and trees. Post restoration, the stream corridor on both sides of the channel will be enrolled into the CREP program. This project is part of a watershed wide approach to improve and restore habitat for ESA listed mid-Columbia Steelhead, for which the Trout Creek watershed is the largest producer of these fish in the Deschutes Basin.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 7

Review Team Recommended Amount
$130,967

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$130,967

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4026-17501

Project Type: Restoration

Project Name: Lower Deep Creek Restoration Project Phase 3

Applicant: Discover Your Northwest DBA: Discover Your Forest

Region: Central Oregon

County: Crook

OWEB Request: $162,156

Total Cost: $240,826

Application Description *(from application abstract)*

The Lower Deep Creek Floodplain Restoration Project encompasses the first 1.5 mi of Deep Creek starting at the confluence with the Wild and Scenic North Fork Crooked River, adjacent to Deep Creek Campground located 52 miles east of Prineville in the Ochoco National Forest. Phase 3 will support and conclude in-stream and riparian restoration activities that were implemented in 2018 Phase 1 and 2019 Phase 2. We seek additional funding to thoroughly protect this project, provide top quality habitat, and increase community engagement in partnership with Discover Your Forest. For background, 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, however it resulted in an extended timeline and budget, transforming this into a multi-phased project. Phase 1 started at the upstream end of Site 4 and covered 0.5 mi of stream. Phase 2 continued from there to complete the 1.5 mi of plug and fill work to aggrade the channel and incorporate wood. An end of season review identified two major needs for Phase 3: cattle guards and wood habitat roughness. The current thermoplastic cattle guard implemented in Phase 1 is simply not working nor are forest visitors diligently closing gates, which is why we seek funds for 2 cattle guards. The wood placed in Phases 1&2 did an adequate job but more is needed near the confluence with the N. Fk. Crooked and sites upstream. The budget for additional wood placement at Sites 1-3 &5-9 upstream was reallocated due to the unexpected extended timeline to complete the floodplain work. Furthermore, due to delay, plants slated for Phase 2 area were concentrated in the Phase 1 area. Consequently we seek additional funds to plant the Phase 2 portion of this project.

Review Team Evaluation

Strengths

- The project area is a cold water refuge for redband trout. Recent monitoring has documented all life stages utilizing Lower Deep Creek.
- The project will build on two years of restoration implemented in Lower Deep Creek by incorporating additional habitat and protection features to complete the effort.

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- The vegetation monitoring strategy proposed to document species composition and densities which will dictate when livestock grazing will begin is thorough and appropriate.
- This project is a high priority for the Ochoco National Forest and is well supported by project partners.

Concerns

- The proposal lacked clarity regarding which activities in the lower Deep Creek restoration site have already been completed and which activities are being proposed. For example, beaver dam analogues (BDA's) and large wood jams are both in the budget, but not in the project timeline.
- The application did not include designs for the installation of BDA's or the large wood jams, making it challenging to understand their technical soundness and justification for costs associated with implementing these activities.
- The goals, objectives, and outcomes associated with the installation of BDA's were not provided in the application. It would have been helpful to explain why these features are being proposed in the locations identified in the map, and the expected ecological objectives for each installation.

Concluding Analysis

The proposal is the final phase of stream and floodplain restoration on the lower 1.5 miles of Deep Creek, a cold water tributary to the North Fork Crooked River in the Ochoco National Forest. The proposed work incorporates additional large wood, a series of BDA's, revegetation, and two cattle guards along with placement of large wood structures further upstream on Deep Creek. While the ecological benefits are significant, the applicant has demonstrated capacity to implement the project, and the project fits within the context of past restoration, the application lacked clarity in a few key areas: the technical justification for selecting the upstream large wood placement sites, design rationale, capability of withstanding wood movement, and maintenance plans for the riparian fence portion crossing the confluence of Deep Creek and North Fork Crooked River, and whether proposed actions are included in the current permit. The application focused heavily on describing past restoration efforts and would have benefited from providing more detail and justification regarding the restoration elements proposed for funding.

Review Team Recommendation to Staff
Fund

Review Team Priority
6 of 7

Review Team Recommended Amount
$162,156

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$162,156

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4027-17379

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: $74,924

Total Cost: $95,718

Application Description *(from application abstract)*

The Lower Columbia Estuary Partnership (LCEP) requests $74,923 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 of the mainstem mid-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. Projects will focus on restoring or enhancing thermal heterogeneity and cold water refuges important for adult steelhead. 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

- The applicant provided clear responses to previous review team comments, including getting commitment from local cooperators throughout their study area.
- The applicant is qualified to conduct this level of work to develop with confidence a high quality product.
- The application proposes a cost effective approach to characterize an extensive number of river miles for fisheries habitat enhancement while also developing a two to three conceptual level designs.

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- The approach of honing in on thermal refuges and connectivity of tributary inputs correlates strongly with limiting factors identified for juvenile fish rearing.

Concerns

- It is unclear why the stakeholder meetings would occur after all the field work and mapping is complete. Incorporating stakeholder input at the onset of the project could provide insight and information that may add more value to the mapping exercise.
- The application did not describe how restoration opportunities would be prioritized; this is a concern given the diverse stakeholder group and the complexities of the project area.

Concluding Analysis

This project seeks to address an information gap in fish habitat enhancement opportunities along the Columbia River from the Bonneville dam to the John Day dam. This 72-mile reach has extensive hardened infrastructure necessary for dam operation and highway transportation, yet nine ESA-listed salmonid species use this corridor twice in their life cycles. There is an inherent lack of information regarding the characterization of this reach that identifies opportunities and challenges in improving habitat for these fish. This study would utilize a similar approach and methodology conducted on the Washington side of the Columbia River to hone in on bringing the right stakeholders to the table to understand and identify restoration opportunities for salmonids. The site visit with the applicant and partners offered a glimpse into the plethora of cut-off water bodies and small tributaries that could provide thermal refuge and habitat for fish.

Review Team Recommendation to Staff
Fund

Review Team Priority
4 of 4

Review Team Recommended Amount
$74,924

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-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4028-17441

Project Type: Technical Assistance

Project Name: Neal Creek Instream Habitat Restoration Design

Applicant: Hood River SWCD

Region: Central Oregon

County: Hood River

OWEB Request: $63,433

Total Cost: $120,833

Application Description *(from application abstract)*

This project will take place on Neal Creek, located within the Hood River Watershed in Hood River County. The two project sites are located in a reach of Neal Creek that has the highest intrinsic potential for salmon and steelhead habitat due to a relatively low gradient (= 2%) and wide valley bottom (CTWS/WPN, 2014). The first project site is located upstream of the Dethman Ridge Road crossing near the town of Pine Grove. The second project site is located just upstream of the Thomsen Road crossing. Neal Creek is one of the few clear water (non-glacial) tributaries of the lower Hood River and contains viable populations of threatened winter steelhead, threatened Coho salmon, cutthroat trout, and resident rainbow trout. Based on ODFW sampling and population estimates, Neal Creek is estimated to provide 5-10% of steelhead production in the Hood River Basin. The primary limiting factors that this project will address are habitat diversity and key habitat quantity, particularly spawning and juvenile rearing habitat. On Neal Creek, the combination of channel alterations, fill from private and county roads, and large wood removal has led to entrenched channel segments with limited amounts of large wood. In 2018, HRWG contracted with Inter-Fluve to complete an analysis of restoration opportunities along Neal Creek and develop conceptual designs for four sites. The sites were prioritized based on intrinsic habitat potential, total habitat area, and risk of raising the 100-year floodplain elevation. This project will develop 90% designs for the two highest ranked projects. This will include hydrologic and hydraulic modeling and 90% design drawings. HRWG will pursue implementation funding with the completed designs. Project partners include Hood River Watershed Group (project manager), Hood River Soil & Water Conservation District (applicant/fiscal sponsor), Confederated Tribes of the Warm Springs (cash match, materials), and project landowners.

Review Team Evaluation

Strengths

- The applicant provided thorough responses to previous review team comments, including the latest understanding of fish use and distribution in Neal Creek.
- The project implements recommendations of a previous basin-wide assessment that identified the two project sites in this application as having landowner support and the highest potential for habitat restoration in Neal Creek.

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- The cost of producing construction ready designs for the project sites is reasonable and appropriate given the project scale and design complexity.
- The applicant and partners have incorporated and planned for potential impacts to wetlands by proposing a wetland delineation.
- Neal Creek is a clear water tributary with no glacial inputs which has high intrinsic potential for ESA-listed salmonids.

Concerns

- The application was utilizing an out-of-date peak flow estimator to calculate basin hydrology, raising question on the validity of the data being used in the designs.

Concluding Analysis

This engineering-focused technical assistance proposal will provide construction-ready designs for two project sites on Neal Creek that have been documented as having the highest intrinsic potential to provide improved instream and floodplain habitat for ESA-listed salmonids. The setting of Neal Creek is rural residential with built infrastructure limiting restoration opportunity; however, the applicant provided sufficient detail and reasoning for justifying the habitat restoration potential for the two project sites that were chosen. The group of partners associated with this project have successfully planned, designed, and implemented similar projects.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 4

Review Team Recommended Amount
$63,433

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$63,433

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4029-17449

Project Type: Technical Assistance

Project Name: Campbell Creek Watershed Enhancement Project

Applicant: Jefferson SWCD

Region: Central Oregon

County: Jefferson

OWEB Request: $24,974

Total Cost: $36,396

Application Description *(from application abstract)*

The project is located along Campbell Creek in Jefferson County, northwest of the City of Madras. Campbell Creek drains directly into the Deschutes River a mile upstream from the Reregulating Dam where water is rapidly discharged to the Lower Deschutes River. The project addresses impaired water quality conditions of the Lower Deschutes River which affect survival and population health of ESA-listed steelhead (Oncorhynchus mykiss) and bull trout (Salvelinus confluentus), spring Chinook salmon (Oncorhynchus tshawytscha), and other native fish and aquatic species. Specifically, the project addresses external loading of nitrate, pesticides, sediment, and E.coli from a tributary of the Deschutes River. The Jefferson County Soil and Water Conservation District (JSWCD) and its partners have identified Campbell Creek as having the highest concentrations of sediment and pesticides of all the tributaries of the Deschutes River currently being monitored under the Middle Deschutes Pesticide Stewardship Partnership. Without identifying cost-effective treatments to improve water quality and complement on-farm conservation actions, Campbell Creek will continue to degrade habitat in the Lower Deschutes River. The JSWCD seeks Technical Assistance funding to develop a project design that promotes ecological uplift and processes to improve water quality before pollutants reach the Deschutes River. This project will complement work currently being implemented by the JSWCD and its partners to reduce the water quality problem on other properties located throughout the watershed. Partners involved in this project include a federal agency (Natural Resource Conservation Service, NRCS), state agencies (Oregon Dept. of Agriculture, ODA and Oregon Dept. of Environmental Quality, DEQ), local partners (Middle Deschutes Watershed Council, MDWC and North Unit Irrigation District, NUID), and private landowners. The JSWCD intends to apply to OWEB for restoration grant funding.

Review Team Evaluation

Strengths

- The need to address water quality in this location is well documented and articulated in the application.
- There are multiple agency partners that identify this geography and water quality problem as a priority focus area, including the Middle Deschutes Pesticide Stewardship Program. Related work on this stream has generated a lot of the data that is being used as a baseline which increases the technical soundness of this proposal.

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- The resulting designs will explore sediment, pesticides, and nutrient inputs in their analysis.
- The contractor identified for leading the beaver dam analogue (BDA) design is well qualified.
- The project is supported by two landowners that own the majority of the riparian area along Campbell Creek downstream of the Highway 26 crossing whom are willing to implement restoration on their property.

Concerns

- The project objectives relative to wetland water quality treatment are unclear. The application should describe the connection between the data sets used to inform designs and the expected treatment outcomes for parameters of concern.
- The application would have benefited from additional details describing water quality loading the project area receives from the watershed and whether the project area is capable of improving water quality conditions in Campbell Creek.
- Utilizing BDAs for the purpose of treating water quality pollutants seems intriguing but there is no literature that supports this as a viable mechanism to do so. It was unclear how BDA's were chosen as a water quality treatment tool of choice.

Concluding Analysis

The application requests funding for planning and design to address known and documented water quality pollutants from the agriculture-dominated headwaters of Campbell Creek downstream of the Highway 26 crossing utilizing BDAs as surrogates for wetland treatment. Design parameters for water quality treatment wetlands are unclear as well as the long-term effectiveness of treatment measures The applicant is encouraged to document and understand the extent of natural wetlands onsite, which may have restrictions for being utilized as water quality treatment areas. The resulting treatments could complement improvements being implemented on the agricultural lands with assistance from NRCS, ODA, and DEQ.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 4

Review Team Recommended Amount
$24,974

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$24,974

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4030-17467

Project Type: Technical Assistance

Project Name: Cottonwood Creek Reconnaissance and Design Plan

Applicant: Lake County Umbrella Watershed Council

Region: Central Oregon

County: Lake

OWEB Request: $69,355

Total Cost: $86,710

Application Description *(from application abstract)*

The proposed Technical Assistance project focuses on improving fish passage, screening, and irrigation efficiency along an eight-mile segment of Cottonwood Creek, one of Goose Lake's largest tributaries. Cottonwood Creek is located seven miles west of the town of Lakeview in Lake County. The creek begins its journey on the National Forest and flows from Cottonwood Meadow Lake to Cottonwood Reservoir, it then exits the reservoir through irrigation gates or the spill way where it continues its path to Goose Lake at valley bottom. Transportation and irrigation infrastructure activities over the last century have restricted fish passage and connectivity within Cottonwood Creek, negatively impacting fish range and distribution while contributing to species vulnerability to seasonal flows, increased temperature, drought, and climate change. The watershed issue extends to stream flows on Cottonwood Creek that serve the irrigation needs of the agriculture community in the Goose Lake Basin as well. The Lakeview Water Users and landowners who hold water rights on this area of Cottonwood Creek would like to address irrigation efficiency concerns and gain insight to improvement options. This proposed Technical Assistance grant will address stream reconnaissance, data collection, passage alternative analysis and irrigation screening and efficiency alternative analysis on this segment of Cottonwood Creek. Alternative design analysis will result in a 30-60% design plan for passage, screening, and irrigation improvement. Design plans will further be assessed, modified, and approved by partners – leading into an implementation agenda. Project partners include Lake County Umbrella Watershed Council, Lake County Water master, Lakeview Water Users Inc, ODFW, USFWS Partners Program, Cottonwood Cattle Company LLC, Otterson Ranch, and the KV Bar Ranch.

Review Team Evaluation

Strengths

- The project will employ a comprehensive approach to developing design solutions to pass fish at all barriers on Cottonwood Creek from the Cottonwood reservoir downstream to Goose Lake.
- The project is well supported by a variety of partners, including a previously reluctant stakeholder, the Lakeview Water Users.

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- This project is a critical step in attempting to reconnect the fragmented habitats that provide value to a variety of native fish species in the Goose Lake basin including the locally important redband trout and parasitic Goose Lake lamprey.
- The applicant and partners have successfully completed similar reconnaissance and design planning on neighboring Thomas Creek, which has led to restoration projects.
- The project is cost effective, developing partial design sets for all eight barriers identified in the proposal.

Concerns

- The application states that 30% - 60% designs will be developed for each barrier. Typically, there is a significant difference in detail presented in 30% designs compared to that presented in 60% designs. It is unclear what level of design will be developed for each barrier, and whether more advanced designs will be prioritized for some barriers.

Concluding Analysis

Cottonwood Creek is a major tributary to Goose Lake which boasts a wide variety of fish species, some endemic to the Goose Lake basin. The project capitalizes on interest and support from water users and agricultural producers in the area to improve fish passage, irrigation efficiency, and delivery of water. This project will complement a suite of activities in the area, including a recent OWEB-funded project on Muddy Creek, a tributary to Cottonwood Creek that will remove multiple fish barriers and improve instream habitat for fish.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 4

Review Team Recommended Amount

$69,355

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$69,355

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4031-17493

Project Type: Technical Assistance

Project Name: Technical Support for Crooked River Basin Assessment of Beaver Intrinsic Potential (BIP)

Applicant: Think Wild

Region: Central Oregon

County: Crook

OWEB Request: $38,057

Total Cost: $49,637

Application Description *(from application abstract)*

1) This project is located in the Crooked River Basin in Crook County. The GIS modeling portion of the project will encompass the entire 9,548 miles of stream within the basin. Target projects involving field verification will take place in Lost Creek and Mill Creek watersheds, which feed into the Crooked River. Nearest towns to target projects are Post and Prineville. 2) Current understanding of beaver habitat potential in Central Oregon is limited. While many practitioners and landowners recognize the value that beaver bring to degraded landscapes, introducing beaver or beaver-mimicking tools to a riverine system requires an understanding of the system's ability to support beaver and/or sustain the resulting changes. 3) Think Wild | Beaver Works Oregon (TW | BWO) proposes to adapt a habitat model for Beaver Intrinsic Potential (BIP), developed by Dittbrenner et al. (2018) for the Snohomish River Basin in Washington, to the Crooked River Basin, followed by a comprehensive field survey of the habitat factors critical for beaver establishment along our target projects on Lost Creek and Mill Creek. Deliverables will include a Beaver Intrinsic Potential (BIP) map for the Crooked River Basin to be distributed for restoration planning, and a detailed map and report addressing current habitat suitability for each target sub-basin (Lost and Mill Creeks). 4) Local project partners include Brooke and Andy Gray, TNC Stewards of Juniper Hills Preserve, and two landowners along Mill Creek. Other partners include the Crooked River Watershed Council (CRWC), Crook County Soil and Water Conservation District (SWCD), and Deschutes Land Trust (DLT). Partners lending expertise in BIP and beaver habitat monitoring include Jakob Shockey, Nick Weber, and Benjamin Dittbrenner. Jefferson Jacobs will contribute expertise in eastside riparian ecology. GIS experts lending services include Thera Lombardi, Aspect Consulting and GIS students from COCC.

Review Team Evaluation

Strengths

- The project will use an existing intrinsic potential mapping tool to determine where to focus efforts on improving habitat availability for beaver.
- Utilizing beaver habitat potential as a surrogate for identifying opportunities to improve watershed function for native fish and wildlife is a technically sound approach.

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- The focus on Lost Creek at the Nature Conservancy's Juniper Hills Preserve will complement previous efforts employed to improve fish and wildlife habitat across the 14,000-acre preserve.

Concerns

- The proposed watershed map identifying intrinsic potential would be done at such a coarse scale that it is unclear how valuable it will be in evaluating on-the-ground conditions suitable for beaver habitat and how it would be used by partners.
- The application failed to identify the spatial data layers that will be used to generate the watershed intrinsic potential map, making it difficult to evaluate the technical soundness of the approach.
- The field verification exercise does not address several key questions including how many data collection sites there will be along Lost and Mill Creeks, what characteristics will dictate the need for data collection, the types of data that will be collected, and how the data will be analyzed to inform future restoration.
- It is unclear how this effort will inform future restoration. The applicant is not a restoration practitioner, and while the application includes letters of support from restoration partners in the Crooked River basin, it is unclear how this information will be used or if it addresses a priority need among restoration practitioners.
- The application failed to describe how features on the landscape (biological and physical) are characterized as being preferable habitat types utilized by beavers.
- The focus on Mill Creek was not clear. It would have been helpful to understand why Mill Creek was chosen as a site for field verification, including the broader watershed context and the importance of Mill Creek with respect to native fish and wildlife habitat and water quality.

Concluding Analysis

This planning level technical assistance grant would complete a watershed-wide mapping exercise to understand beaver habitat suitability preference as well as field verify two small sub-watersheds in the Upper Crooked River Basin that would inform future potential restoration opportunities. It is unclear what type of restoration this effort would lead to, and how recommendations will be prioritized by the restoration practitioners in the basin.

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-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4032-17369

Project Type: Monitoring

Project Name: Monitoring beaver dam analogs on the S. Fork, Crooked River

Applicant: OSU Office of Sponsored Research & Award Admin

Region: Central Oregon

County: Crook

OWEB Request: $39,333

Total Cost: $75,872

Application Description *(from application abstract)*

The South Fork of the Crooked River is a tributary of the Crooked River near Paulina, Oregon (Crook County; Figs. 1 & 2). It is disconnected from its floodplain and lacks woody riparian vegetation. We will monitor five beaver dam analogs (BDAs) installed in 2016 on a 3.3 km reach. A study on Bridge Creek showed promising results for BDAs as a restoration tool, but BDA implementation has outpaced monitoring. The South Fork has a lower gradient than Bridge Creek (0.25 - 0.04% S. Fork vs. 1 - 3% Bridge Creek), which may not transport enough sediment to promote aggradation behind BDAs. Pre-existing woody riparian vegetation is virtually absent on the South Fork, and nothing is known about the influence of BDAs on newly planted vegetation, even though plant establishment often limits restoration success. We know little about effects of BDAs on groundwater during low flows and on temperatures when there is little shade from vegetation. Like real beaver dams, BDAs require maintenance, but no detailed information exists on the effort needed to maintain structures, which is important for adaptive management planning. Deliverables include measurements of sediment gains and losses five years after baseline data were taken across 5 acres at structures in a range of stream gradients (0.25 - 0.04%); growth of 24 coyote willow copses (352 cuttings) planted near and far from BDAs to known depths and at two different distances from the stream; continuously monitored groundwater levels at 8 locations in the vicinity of two structures; continuous measurements of stream temperatures at 13 locations; and a time budget of BDA maintenance. Methods and analyses assuring high quality data will be developed with the Oregon Department of Environmental Quality and a registered geologist. Vegetation, temperature, groundwater, and maintenance monitoring will be conducted by OSU-Cascades faculty and trained upper-division science majors. Aggradation measurements will be done by Anabranch LLC.

Monitoring Team Evaluation

Monitoring Team Strengths

- This application will provide valuable information to understand a variety of outcomes associated with beaver dam analogs (BDAs) in a low gradient stream.
- The applicant is connecting these monitoring activities to numerous management plans in this part of the watershed.
- The applicant proposes to work with DEQ to develop a sampling and analysis plan (SAP).
- This project leverages existing data that already has been collected to track spatial and temporal trends across the treatment reach.

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- The project documents match from OSU and a competent contractor, thus contributing to the likelihood of success.
- The uploaded documents show that the applicant has a good track record to collect, analyze and report the data in a meaningful way.
- The objectives are clearly stated and the work proposed will support them.
- The budget is reasonable and includes a great amount of detail to describe how expenses were calculated.
- The applicant has been responsive to previous review comments, and this has resulted in a more focused application.
- The uploaded response to past reviewer comments was clear and in a useful format to understand how previous comments were incorporated into this application.

Monitoring Team Concerns

- The cross sections above and below each BDA may not comprehensively describe the sediment aggregation and degradation variability along the entire reach.
- There was a lack of detail about how they plan to disseminate findings to the general public or landowners that may be interested in the findings.

Monitoring Team Comments

Consider performing a longitudinal profile, in addition to the cross sections, to describe the sediment aggradation and degradation.

Review Team Evaluation

Strengths

- The applicant provided thorough responses to previous review team comments. In particular, this application describes a more focused effort on monitoring a few parameters that will generate meaningful and useful data to inform future BDA restoration planning.
- The application had clear goals and outcomes associated with the objectives listed.
- The need for this type of monitoring is timely given the use of BDAs in stream restoration is growing and there is a lack of scientific literature regarding the application of these features along streams in Oregon.
- Initial results of this monitoring project are currently under review for publication in peer reviewed scientific literature, indicating a high likelihood the final results of this project would also be published.
- The project is cost effective, continuing to generate useful data comparisons regarding the impacts BDAs have on stream restoration and revegetation success.

Concerns

- The BDAs were installed as single features, which is an uncommon approach. This suggests that the

transferability of the aggradation analysis will have limitations.

- The lack of longitudinal profiles in the monitoring strategy is a missed opportunity which would provide additional detail regarding changes in channel and stream bed characteristics.
- Green LiDAR should be considered for use due to its capability of penetrating the water column in order to map bathymetry of shallow waters. This tool may offer a better solution with additional data capture opportunity than what is proposed in the application.

Concluding Analysis

This monitoring project is located on the South Fork Crooked River and will continue to examine the effectiveness of five BDAs installed on private land. The applicant will closely monitor a set of physical and biological parameters associated with understanding the ecological response of stream restoration using BDAs. In particular, the tasks associated with vegetation response and BDA maintenance could have broad applicability and be of great value to the broader restoration community. The applicant is encouraged to coordinate with Oregon Water Resources Department (OWRD) regarding the groundwater wells, as what is proposed in the application may not fit as a geotechnical hole and may require additional permitting. This project represents a good opportunity to contribute much needed scientifically reviewed literature regarding the use of BDA's in stream restoration.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 3

Review Team Recommended Amount
$39,333

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$39,333

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4033-17382

Project Type: Monitoring

Project Name: Upper Crooked Watershed Redband Movement Tracking

Applicant: Crooked River WC

Region: Central Oregon

County: Crook

OWEB Request: $120,268

Total Cost: $199,428

Application Description *(from application abstract)*

Reservoir, City of Prineville, Crook County Oregon. The project site extends east for 40 miles where the Upper Crooked River splits into North Fork and South Fork. The geographic reach for the Upper Crooked River Watershed encompasses a 1.5 million acre area with many tributaries running into the mainstream Upper Crooked from the northern Ochoco Mountains and the southern Malheur Mountains. The entire reach suffers from agriculture legacy issues, lack of riparian zone, over wide incised channels, degraded failing banks from sheep and cattle grazing high temperatures and impassable barriers from agriculture. Redband trout exist throughout the entire watershed; with sample studies from ODFW showing their range. However no data exists in the area on redband trout connectivity through the watershed. This information is vital to pin pointing possible barriers, avoidance and or temperatures that change how fish travel. We know fish are present but as climate change persists and temperatures raise we need to know how, when and where they use their environment. Moreover with 1.5 million acres of watershed, it would be beneficial to have the fish show us what areas need the most attention for their survival and future; we can use the data from a fish movement study to pin point possible works in a relatively cost affective way compared to on the ground landowner engagement. This proposed project would bring several agencies and the Oregon State university together to help fund a graduate level student to conduct a radio tag fish tracking project on redband trout in the Upper crooked River Watershed. The United States Forest Service and Oregon Department of Fish and Wildlife both have interests in this data for pin pointing areas of aquatic habitat concern in connectivity of the watershed. Dr. Jonny Armstrong from the OSU Fish and Wildlife department has conducted several of these studies already on fish in the Klamath Basin, and Willamette basin with success. The study will

Monitoring Team Evaluation

Monitoring Team Strengths

- The data will describe where barriers and warm water temperatures influence adult redband trout movement.
- The monitoring concept is innovative, aiming to track fish movements and collect information across a large area.
- The applicant is working with a contractor who is an expert in this type of monitoring and has implemented similar projects in the Willamette and Klamath basins.

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Monitoring Team Concerns

- The application did not describe the monitoring need and if this information has been identified as a need in any existing local watershed assessments or management plans.
- This project focuses on tracking spawning-age fish leaving Prineville Reservoir, giving only a partial picture of the impacts of water temperature and passage barriers to redband trout.
- The project timeline is limited to one year of tagging and tracking adult fish leaving Prineville Reservoir. Which will provide a snapshot that may be different in different years (e.g., high or low flows and warm or cool years).
- The application lacked detail on how the data will be analyzed to help inform how the data will be used.
- The application lacked detail on water temperature monitoring methods and if those data will be submitted to DEQ.
- The application did not explain the partnership with OSU and what role the watershed council will be playing.
- Some parts of the application describe PIT tagging, but is not clear if this will be implemented since the budget does not include PIT tags and a majority of the sampling is relying on the radio tags.
- Overall, there was a lack of detail in the application and the application contained numerous typos.

Monitoring Team Comments

Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and ensure the data are submitted to DEQ.

Review Team Evaluation

Strengths

- There is an acknowledged need for this level of data regarding redband trout abundance and distribution in the Upper Crooked River watershed.
- The information gathered through this proposal could lead to beneficial restoration projects.
- The applicant’s partner at Oregon State University (OSU) has successfully completed similar monitoring projects within other watersheds in Oregon.

Concerns

- An objective in the proposal is to better understand fish barriers. It is unclear if the applicant is aware of ODFW’s fish barrier database, and whether this effort will add data if gaps are discovered.
- The application mentions the use of pit tags and radio tags; however, it was unclear which method will be used. It would have been helpful to provide more clarity on methods used for tracking fish.
- It is unclear what methods will be used to capture adult fish, and whether ODFW is aware of the proposed project.

- The application did not describe the locations where temperature monitoring would take place nor the methodology for data collection and analysis.
- Understanding where thermal refuge and cold springs are located throughout the study area is valuable information; however, the application did not describe the method for data collection and analysis.
- The study area for this proposal is almost exclusively private land. It is unclear whether landowner access would be granted if access to sites from public roads is not feasible.
- The study proposes only one year of monitoring adult fish. This approach is limited to a narrow snap shot in time of only adult fish movement.

Concluding Analysis

This proposal seeks to engage with OSU staff to better understand redband trout use and distribution in the Upper Crooked River watershed above Prineville Reservoir. The application fell short on providing critical information regarding methodology and protocols relating to data collection, analysis, and reporting. There was not enough information provided in the application to understand how this project would be implemented and reported. The applicant is encouraged to coordinate with OSU and ODFW to develop a detailed plan that clearly outlines the project methods, protocols, and rationale. Once this occurs the applicant is encouraged to reapply.

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-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4034-17391

Project Type: Monitoring

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

Applicant: Klamath Watershed Partnership

Region: Central Oregon

County: Klamath

OWEB Request: $130,577

Total Cost: $166,296

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 for the second and final phase 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. Planned 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. ODF will be communicating and coordinating with the state level to provide data to the USGS for the National Hydrography Dataset. KWP is also working with ODFW and Trout Unlimited to ensure that data collection efforts regarding fish passage barriers are complementary, and not duplicative.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application describes the need for the information to update the stream classification database to inform forest management on private lands.
- This information will benefit landowners, local partners, and ODFW by better describing where fish are present, identifying barriers and informing potential restoration projects.
- The applicant is working with ODF to use the same staff to build on the success made under the current OWEB monitoring grant collecting the same information.
- The applicant’s contractor, ODF, will be coordinating with USGS to share data to improve resolution and accuracy of the National Hydrography Dataset (NHD) in the upper Klamath Basin.

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- The contractor (ODF) is working closely with ODFW to follow up on observations to confirm fish presence.
- The application well describes the monitoring protocols, including data collection above natural barriers.
- The applicant provided a response that explains how the application addressed previous review team comments.

Monitoring Team Concerns

- Although the application describes that the database protocol will be refined, the timeline does not indicate when this will occur.
- The application lacked detail about how the monitoring locations will be prioritized.

Monitoring Team Comments

Encourage data sharing to inform the USGS Probability of Streamflow Permanence (PROSPER) model.

Review Team Evaluation

Strengths

- Phase I of this project was funded by OWEB in 2017. Thus far, the project has yielded tangible results that have proven valuable to ODF and ODFW.
- The project addresses a critical need in field verifying gaps and opportunities regarding stream presence, habitat availability, fish use, and restoration potential.
- The data collected through this project is uploaded to the USGS's National Hydrography Dataset (NHD) providing broad access to the data.
- The project has been beneficial in engaging with ODFW in validating fish presence.

Concerns

- No concerns were raised.

Concluding Analysis

This application is for the final phase of field verifying the network of streams in Klamath and Lake Counties. To date, the project has been successful in achieving the goals and objectives outlined in the proposal. While the project has resulted in limited restoration opportunities, the proposed geography for this final phase include the upper North Fork Sprague, upper Sycan, and upper Williamson watersheds, all areas of importance for native fish where priorities for restoration projects may be higher.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 3

Review Team Recommended Amount
$130,577

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$130,577

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4035-17435

Project Type: Monitoring

Project Name: Groundwater and Surface-water Trends in Klamath Marsh, Oregon

Applicant: The Klamath Tribes

Region: Central Oregon

County: Klamath

OWEB Request: $265,298

Total Cost: $356,940

Application Description *(from application abstract)*

This project is located in the Klamath Marsh area in the Upper Williamson River watershed located 50 miles north of Klamath Falls and 15 miles east of Crater Lake. Water levels in the Klamath Marsh have been very low in recent years leading to negative impacts on plants, fish and waterfowl that inhabit the marsh. Also water flowing out of the Marsh into the middle Williamson River has been low and intermittent except during the spring months. Various hydrologic stresses cause decreased water levels in the Marsh and flows downstream of the Marsh; these stresses include climatic and anthropogenic factors such as surface-water diversions and groundwater pumping. It is important to monitor groundwater and surface-water levels in the Marsh to better understand the hydrology of the system to refine programs which protect, manage and restore wetlands within the historic Klamath Tribes reservation. This project will monitor groundwater and surface-water levels in and adjacent to the Klamath Marsh for two years. The Klamath Tribes will monitor 10-15 shallow groundwater wells in the Klamath Marsh and conduct surface-water monitoring at 3 established stations in the Williamson River. Additionally, water balance monitoring including snowpack, rainfall, and evaporation will be conducted by the Klamath Tribes. USGS will conduct monitoring on 12 groundwater wells adjacent to the Klamath Marsh; develop a multidecadal time series of irrigated land surrounding the marsh using Landsat imagery; develop a time series of the extent of open-water in the marsh using Landsat imagery; and publish the data in the USGS data archive, ScienceBase.The project partners include: the Klamath Tribes, US Geological Survey, and the US Fish and Wildlife Service.

Monitoring Team Evaluation

Monitoring Team Strengths

- There is a clear need to collect information to better understand drivers of change between marsh water levels and Williamson River streamflow.
- The area to be monitored and the various monitoring parameters are appropriate to understand the inputs and outputs to develop a water balance for Klamath Marsh.
- The applicant is partnering with USGS and cites USGS protocols that will be used for groundwater and streamflow monitoring efforts.
- The application leverages the prior and ongoing data collection efforts in and around Klamath Marsh.
- USGS will make the data available on Science Base, and the Klamath Tribes will develop a final report in coordination with USGS.

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Monitoring Team Concerns

- The application provided limited detail on monitoring methods and there was no mention of methods to collect the precipitation, snowpack, and evaporation data.
- The application did not describe how the different data sets will be analyzed and incorporated to understand what is driving the water levels in the Klamath Marsh and Williamson River.
- The application mentions that a model will be developed, but provides little detail about the process for developing the model, when it would be developed, or how it will be used to inform future restoration actions.
- The application does not describe the timeframe for the retrospective aerial imagery assessment.
- Overall, the information provided to describe the sampling design was limited.
- The different monitoring locations were not identified in a map, making it challenging to know which monitoring locations would be operated by USGS and The Klamath Tribes.
- It was not clear why the USGS will monitor their wells quarterly and The Klamath Tribes were sampling their wells weekly.
- The application lacked letters of support to understand how they have engaged local, state, and federal partners, and how they plan to integrate data into their decision making process.
- The budget lacked detail and included multiple lump sums, making it difficult to understand if the costs were reasonable.

Monitoring Team Comments

Coordinate with Ken Stahr at the Oregon Water Resources Department to access the field boundaries being mapped in the statewide evapotranspiration study that is underway.

Review Team Evaluation

Strengths

- The Klamath Marsh is an important resource for a multitude of native fish and wildlife species; this effort aims to improve water availability and habitat conditions.
- The applicant and partners have a strong history of working collaboratively.
- The attached report on Klamath Marsh hydrology and water rights is helpful in establishing the context and need for this work.

Concerns

- The proposal lacks clarity in identifying where new wells would be installed, making it challenging to understand how they further the goals and objectives of the proposal.

- The application identifies the need to understand the impacts of irrigated agriculture adjacent to the Klamath Marsh, yet does not indicate any coordination with the agricultural community to understand the crops grown and water use for the time period of interest. This is a missed opportunity to engage key stakeholders.
- The intended use of the data is unclear. It would have been helpful to articulate what the data will be used for and how it will support actions that benefit native fish, wildlife, and water quality.
- There are recent groundwater studies in the Upper Klamath Basin; it is unclear how that data will be used to inform or be incorporated into this effort.
- The budget included lump sums, making it challenging to determine cost effectiveness.
- It is unclear if the surface water monitoring would use existing gages or install new ones. Due to aggressive aquatic plant growth, stream gaging in this area is challenging. It would have been helpful to understand what practices would be employed to mitigate the risk of aquatic plant growth on monitoring equipment.
- The application includes data collection for snowpack, but does not reference coordination with NRCS, who operate and manage SNOTEL sites in the basin.

Concluding Analysis

This project proposes an extensive study within the Klamath Marsh to understand surface water and groundwater trends with assistance from the USGS. The applicant and partner have a history of completing scientifically sound projects together, yet this proposal fell short in providing critical detail. The project lacks clarity on where monitoring would occur and which entity would be responsible for data collection and analysis. The OWRD has completed similar studies in the basin, but there is no indication of agency coordination. It is unclear how the monitoring effort will inform the USFWS management objectives for Klamath Marsh.

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-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4036-17473 **Project Type:** Monitoring

Project Name: Odell Lake Monitoring & Analysis

Applicant: Integrated Ecosystem Sciences Inc

Region: Central Oregon **County:** Klamath

OWEB Request: $165,870 **Total Cost:** $214,693

Application Description *(from application abstract)*

(1) The project location is Odell Lake, Klamath County, and contained within the Deschutes National Forest. (2) The need for the project is to document, describe and analyze water quality in Odell Lake over an annual time-frame to allow for better understanding of nutrient sources and cycling within the lake. Specifically, the project aims to test the hypothesis "does internal loading of nutrients from the pelagic fish population cause or contribute substantially to cyanobacterial blooms in the lake"? Past monitoring projects have collected water quality data for limited time-frames which were inadequate to calibrate water quality models that would be used for testing the relationship between nutrient sources and responses.(3) The proposed work will consist of (a) monitoring the lake at three locations and multiple depths for a full annual cycle. Additionally, major tributaries to the lake and the lake outlet (Odell Creek) will be sampled as well. If groundwater sources to the lake can be located, they will be added to the list of monitoring sites. The parameters that would be measured include TP, PO4, TN, NO3, NH3, SiO2, chlorophyll, phytoplankton community composition, zooplankton community composition, and in-situ lake profiles of temperature, pH, DO, conductivity. Data loggers for recording temperature, DO, pH and conductivity will also be deployed in the lake center. Fish biomass will be measured using . A weather station will be installed at the lakeshore. Rating curves will be developed for the major inflow (Trapper Creek) and outlet (Odell Creek) and discharge will be calculated using stage generated from pressure transducers. All of the relevant data collected will be used to calibrate a hydrodynamic model (CE-QUAL-W2).(4) ODEQ/PSU measured related WQ parameters 4 times in 2019. They have applied for funding to continue this monitoring in 2020 to verify the accuracy of satellite imagery in identifying cyanobacterial blooms in Odell Lake

Monitoring Team Evaluation

Monitoring Team Strengths

- This application will help address water quality impairments in Odell Lake and will build upon previous water quality and fish biomass monitoring efforts.
- Monitoring this headwater lake in the Deschutes Basin is important given the recreational and other beneficial uses it supports.
- The applicant proposes to develop a Quality Assurance Project Plan (QAPP) before monitoring begins.
- The applicant proposes collecting data for a variety of parameters and at several locations to develop a hydrodynamic model describing nutrient dynamics in the lake.

- The applicant has an effective track record collecting and reporting water quality data in lake ecosystems, including Odell Lake.
- The applicant plans to leverage ongoing monitoring efforts by ODEQ, Portland State University and Deschutes National Forest.

Monitoring Team Concerns

- It is unclear how the source of the problem and proposed solution were determined; the solution may be unlikely to be implemented in a lake where few bull trout remain.
- While the application mentions the development of the QAPP, the timeline does not reflect when this would occur and there is no mention of submitting the water quality data to DEQ.
- The application lacks detail to describe the monitoring methods and there was no mention of methods to install and operate the gaging stations on the inlet and outlet of the lake.
- It is unclear if this monitoring approach will determine whether sediment is a source of nutrients.
- The application lacks sufficient information about the sample design to understand the location of the monitoring sites in the lake, depths at which samples are to be collected in the lake, and timing of the sampling events.
- It is not clear if the applicant is closely coordinating with DEQ to incorporate the agency's existing data set, and if this is an appropriate source of match.
- The application lacks support letters from USFS and ODFW explaining how this information could be applied to address the water quality issue in Odell Lake.

Monitoring Team Comments

• Coordinate with DEQ to develop a sampling and analysis plan (SAP) for all of the water quality monitoring and ensure the data are submitted to DEQ.

• Clarify the DEQ match and ODFW coordination on this project.

Review Team Evaluation

Strengths

- The proposal seeks to understand solutions to a known water quality problem in Odell Lake.
- The applicant is considered a regional expert in water quality and is well qualified to undertake this study.
- Odell Lake has a small remaining population of ESA listed bull trout; improving water quality is likely to improve conditions for these ESA-listed fish.

Concerns

- The application lacks a description of how the partners will work together. It is unclear what each of

the partners' roles will be.

- It does not appear that agency partners are aware of or support this project.
- The need for this project is not clearly identified. The referenced water quality report informing the project was completed in 2006. The application failed to articulate the water quality problem in relation to its impacts on native fish and wildlife. Odell Lake is not hydrologically connected to the Upper Deschutes River.
- DEQ is listed as match, however the work referenced was conducted on Odell Lake in 2019 and is separate from this proposed work. There is no commitment included from DEQ that describes their support of this project.
- The comparison made to problems identified on Diamond Lake is not relevant. The biological composition of Diamond Lake is different than that of Odell Lake, and cannot be used as an example of what future management considerations may look like on Odell Lake.

Concluding Analysis

This monitoring efforts aims to document, describe and analyze water quality in Odell Lake to better understand nutrient sources and cycling within the lake. It's acknowledged that Odell Lake suffers from toxic cyanobacteria blooms, and more information is necessary to understand the problem. The applicant has experience conducting this level of monitoring on Odell Lake, but fell short in documenting important components that suggest this project is being implemented in a collaborative manner with stakeholders. Due to the presence of bull trout, the USFWS should have been consulted. The land surrounding Odell Lake is owned and managed by the USFS; documented interest or support from USFS is not provided. The application hypothesizes that fish biomass is the cause of the water quality problem, yet there is no support or documentation from ODFW suggesting their interest or collaboration in this study. The application failed to make key connections regarding project partnerships and the value this effort would have on the watershed.

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-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4037-17488

Project Type: Monitoring

Project Name: The Dalles Watershed Fish Monitoring

Applicant: Wasco SWCD

Region: Central Oregon

County: Wasco

OWEB Request: $115,518

Total Cost: $154,067

Application Description *(from application abstract)*

We propose to provide status and trend monitoring of three anadromous salmonid populations (ESA listed steelhead, Coho salmon, and coastal cutthroat trout) present in three streams located in The Dalles Watershed: Mill Creek (located in Wasco & Hood River Counties), Threemile Creek and Chenoweth Creek (located in Wasco County). All three creeks flow into the Columbia River through the boundaries of the City of The Dalles. Baseline anadromous salmonid productivity and life history in the three creeks has not been established. Baseline data for salmonid production in the three creeks is also needed to provide a reference for evaluating the fish response to basin-wide efforts to improve the Mill Creek watershed and to restore riparian habitat. We propose to monitor the production and life history of anadromous salmonids in the three creeks for a period of four consecutive brood years in order to establish a baseline. The Mill Creek baseline will include brood years 2014–2017; and were selected for Mill Creek because the majority of baseline data was collected during the OWEB project “Lower Mill Creek Side Channel” as part of the effectiveness monitoring. The Threemile Creek and the Chenoweth Creek baseline will include brood years 2020–2023. The Oregon Department of Fish and Wildlife (ODFW) will provide technical assistance in estimating anadromous fish production metrics and in describing the life history of anadromous salmonids present in the Mill Creek, Chenoweth Creek, and Threemile Creek Watersheds for a period of four consecutive brood years. Deliverable metrics provided by the Oregon Department of Fish and Wildlife for the adnadromous salmonids include: annual migration year smolt abundance estimates, age structure, migration timing; and brood year smolt production estimates, smolt-adult return to Bonneville Dam & Mill Creek, and adult return timing to Bonneville Dam & Mill Creek. Project Partners include Wasco County SWCD, ODFW, & The Dalles Watershed Council.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application proposes to collect important information to better understand steelhead productivity in understudied streams in the Fifteenmile Distinct Population Segment.
- This monitoring will leverage the existing data and pit tag arrays established in Mill Creek with the current OWEB monitoring grant.
- The information will help understand freshwater productivity.
- The information will help provide baseline information to compare to after restoration actions are implemented.

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- The application describes the fish monitoring methods in good detail.
- The budget is appropriate for the amount of work proposed in the application.
- The applicant is working closely with ODFW to collect the data, and a good track record exists for collecting data in Mill Creek.

Monitoring Team Concerns

- It is unclear what efforts are underway to implement restoration actions in these tributaries that would help explain the immediate need for and timeliness of this work.
- The application does not describe the applicant's plans to prioritize restoration actions in these watersheds and how they plan to share findings with landowners to apply the data in a meaningful way.
- The application does not describe the methods or protocol to be followed to collect water temperature data and their plan to submit it to DEQ.
- The project management table listing the key personnel working on the project does not describe individual roles of each personnel member in the monitoring project, and does not include the Biological Aide for which a majority of the funds are requested.
- The timeline is unclear about when a final report will be produced to summarize the data collected under this monitoring application. The application describes a final report being produced in 2029, but provides no description to explain if additional monitoring applications will be submitted to collect data in the future to place this date in context.
- The application lacks detail about the process for analyzing together the various datasets for water temperature data, fish migration timing across all of the pit tag arrays and fish scale analyses, or who would perform this analysis.
- It is unclear whether ODFW water temperature loggers will be provided as in-kind match or if they are included in the requested OWEB budget.
- It is not clear what SWCD staff would be doing for the amount requested in the budget, given that ODFW is doing the monitoring.

Monitoring Team Comments

Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and ensure the data are submitted to DEQ.

Review Team Evaluation

Strengths

- This proposal is timely and cost effective, building on a similar previous effort on Mill Creek and utilizing equipment, knowledge gained, and lessons learned that are applicable to the monitoring sites proposed in the application.
- The continuation of monitoring on Mill Creek will allow fisheries managers to understand a full life cycle utilization of Mid-Columbia steelhead for that system.

- This level of baseline fisheries data is important to justify and generate restoration projects to benefit listed fish within these urbanized streams.
- There is a lack of knowledge regarding fish presence within these three streams in and around The Dalles. The previous monitoring on Mill Creek provided surprisingly positive results in fish use; therefore there is a strong need and desire to learn what fish are using these streams.

Concerns

- The ability to generate trend analysis with only three to four years of monitoring for salmonids is questionable.
- The purpose and applicability of the temperature logger at each trap site is unclear

Concluding Analysis

This monitoring project seeks to understand fish use on three urban streams that flow through The Dalles before releasing into the Columbia River below The Dalles dam. The proposed effort on Mill Creek will continue efforts that were conducted for brood years 2014-2017. The Wasco SWCD and ODFW have partnered on past efforts along Mill Creek which have generated useful data. ODFW's role in the project is well documented; however, it is unclear how District staff will participate in the monitoring. This type of monitoring could help inform future restoration projects, although the application did not provide details in this regard.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 3

Review Team Recommended Amount
$115,518

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$115,518

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4038-17436

Project Type: Stakeholder Engagement

Project Name: Upper Deschutes Forest Health Investment Project

Applicant: Deschutes SWCD

Region: Central Oregon

County: Deschutes

OWEB Request: $76,107

Total Cost: $114,220

Application Description *(from application abstract)*

The Deschutes Soil and Water Conservation District and our partners through Project Wildfire are seeking a cooperative stakeholder engagement grant focused on private landowners in southern Deschutes and northern Klamath Counties. The project goal is to increase an understanding and awareness of dry forest ecosystems, forest management strategies and awareness of local, state and federal assistance to private landowners outside Home Owners Associations (HOA's) and Firewise USA sites, with the expectation of accelerating implementation of forest health practices. These private landowners provide a unique set of challenges associated with understanding forest health concepts and engagement in government programs. The project will engage landowners and stakeholders though three neighborhood forums within areas identified as high risk for wildfire. Engaging these landowners is vital to increase the robust effort of many local, state and federal partners in restoring the forest ecosystem in southern Deschutes and northern Klamath Counties. Key partners involved in this project are, Deschutes County, US Forest Service (USFS), Natural Resource Conservation Service (NRCS), Oregon Department of Forestry (ODF), OSU Extension, Oregon Department of Fish and Wildlife (ODF&W), Project Wildfire, Central Oregon Cohesive Strategy Initiative (COCSI), and Walker Range Fire Patrol Association (WRFPA). Both Klamath and Deschutes County Commissioners along with the Klamath SWCD endorse this project. In addition, this project reinforces goals and objectives of four Community Wildfire Protection Plans (CWPP), and ODF&W Conservation Strategy.

Review Team Evaluation

Strengths

- The need to address forest health in the proposal's geography is well documented.
- The project is well supported by the appropriate partners as documented by the letters of support included in the application.
- The concept of soliciting influential landowners to host public workshops at their properties for neighbors in the community is an effective approach.
- The application acknowledges that landowner engagement is a critical first step in seeking solutions to address forest health concerns.

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Concerns

- The application does not identify the three landowners and their locations relative to the neighborhood workshops. This makes it challenging to evaluate whether landowner engagement is being focused in high priority areas.
- A contingency plan would have helped to build confidence that the activity would proceed if all three host landowners could not be secured for the workshops.
- The application maps provide appropriate context; however, it would have been helpful to include the highest priorities within this larger geographic area and to identify specific threats at the neighborhood scale. This type of information at a refined scale will be more impactful to landowners so they can understand the threats specific to their properties.
- The pathway from landowner engagement to on-the-ground restoration is unclear. Specifically, it is unclear who will be responsible for developing plans and funding agreements with the sources of funds identified (NRCS and Joint Chiefs). It is unclear who will facilitate treatment plans and funding agreements and how this work will be executed.
- With roughly 2% landowner involvement anticipated within the target area, the impact of this landowner engagement seems relatively low. This low participation rate across a large geography raises concerns regarding project effectiveness.
- The overall project cost associated with the deliverables is high. The budget describes developing workshop materials and putting on workshops as tasks associated with the applicant; however, the application also states that the partnering agency staff will be conducting the workshops. A better understanding of the applicant's role in the project would have been helpful to justify the cost for salaries, wages, and benefits.
- In order to better gage the likelihood of project success, detail on how the two SCWD's would coordinate across counties lines would have been helpful.

Concluding Analysis

This effort across two counties is seeks to increase awareness among thousands of rural, non-industrial forest landowners regarding forest health and to generate interest in developing and implementing restoration projects. This geography is characterized by poor forest conditions. The format and content of the workshops were not discussed in the application; it would have been helpful to describe a typical session and its format (e.g. presentations, hands-on, field tours). This geography has previously received Joint Chiefs funding for forest health; however, funds had to be returned because of a lack of private landowner engagement. It is not clear that this application applies lessons learned from previous work. The applicant is encouraged to work with their partners to evaluate strategic priorities, partnership roles, and define the mechanics for putting implementation funding on the ground to improve forest health on private land.

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-2019 Fall Offering
Central Oregon (Region 4)

Application Number: 220-4039-17495 **Project Type:** Stakeholder Engagement

Project Name: Mill Creek Stakeholder Engagement Project

Applicant: Think Wild

Region: Central Oregon **County:** Crook

OWEB Request: $16,565 **Total Cost:** $22,025

Application Description *(from application abstract)*

1-The Mill Creek Stakeholder Engagement Project will focus on landowners and stakeholders within the Mill Creek sub-basin, a tributary into Ochoco Creek, located in the Crooked River Watershed.2-Beavers (Castor canadensis) - recognized by OWEB, ODFW and other wildlife and land stewardship organizations as a beneficial species to riparian and wildlife habitat and watershed function (see * below) – exist within Mill Creek but only intermittently; as ecological and management conditions are not fully present for the animal's long-term success and establishment.With multiple landowners along the Mill Creek reaches (approximately 8 miles total in private lands along the stem) we believe a holistic, community sub-basin approach and a shared vision for beaver's presence within the Creek is essential to building long-term successful beaver outcomes in Mill Creek.(* Ref. 2011 Report on "Landowner Incentives and Tolerances for Managing Beaver Impacts in Oregon") 3-We will send print, phone and email surveys and conduct one to one interviews with approx. 20 different landowner and 10 stakeholders with interest along Mill Creek to gauge general attitudes about, interests in, and experiences related to beaver within the creek. We will also seek to understand overall knowledge of ecosystem benefits of beaver, and approaches to managing (actively or passively) beaver within landowner property areas. Informed by above we will create and distribute outreach materials on readily available, non-lethal, DIY mitigation techniques for when conflicts occur. We will facilitate a sub-basin wide shared vision for beaver among landowners and stakeholders. 65% participation with the shared vision will pave the way for in-stream field verification of the desktop data compiled from the Crooked River Basin BIP Mapping Project (Fall 2019 Grant Application).4-Confirmed project partners include CRWC, ONDA and SWCD and two private residents.

Review Team Evaluation

Strengths

- One on one interviews with streamside landowners is an effective engagement tool that should yield meaningful results.
- Seeking to develop a middle ground with private landowners to help them live with beavers is an appropriate approach to achieve project objectives.
- The effort engages the right partners for the geography with a project focus necessary for success.

Concerns

- The application reads more like an opportunity to provide landowner tools and education to mitigate beaver damage, making it unclear how the engagement would lead to future restoration.
- The importance of Mill Creek relative to native fish and wildlife is not described making it unclear why this stream was chosen as a target for engagement work.
- The application discusses a shared vision, but does not elaborate on what this means or who shares the vision.
- Stream flow ranges provided in the application are inaccurate by a magnitude of ten.
- The application maps depict priority intrinsic potential locations but it is unclear if the landowner engagement will focus in these high priority areas or across the entire sub-watershed.

Concluding Analysis

This application seeks to engage streamside property owners along Mill Creek to inform and educate landowners about the positive impacts beaver can have on streams. The project will employ a variety of tactics to engage landowners, including mailings, one on one interviews, videos, and web content. It is acknowledged that beavers can play an important role in constructing, maintaining, and providing available habitat for fish and wildlife; however, the application failed to describe how engagement will facilitate on-the-ground restoration. The ecological context and priority of Mill Creek is unclear.

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

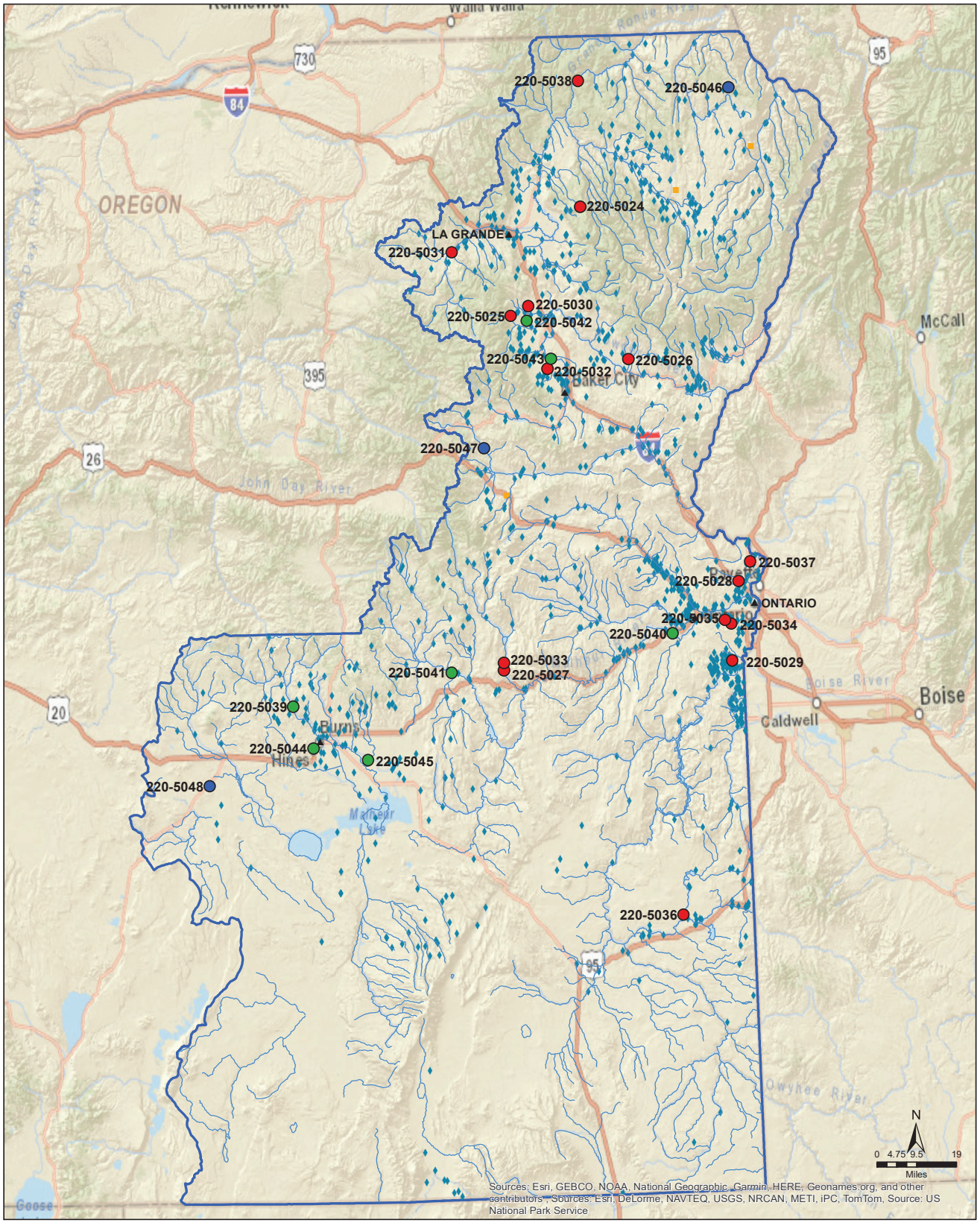
Staff Recommended Amount

$0

Staff Conditions

None

Eastern Oregon - Region 5 Fall 2019 Applications



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ESRI ArcMap 10.6, NAD 1983 Oregon Statewide, Lambert Feet Intl OWEB- PK Wills 20191106

Grant Types

- Restoration
- Technical Assistance
- Stakeholder Engagement
- Monitoring

Previous Grants: 1998 - Spring 2019

- Restoration
- Land Acquisitions
- Streams
- Region Boundary

OREGON WATERSHED ENHANCEMENT BOARD

775 Summer St, NE Suite 360
Salem, OR 97301-1290
(503) 986-0178
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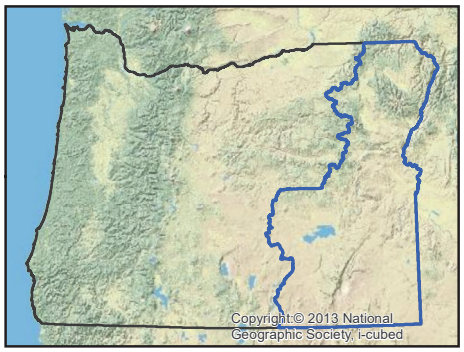

Region 5 - Eastern Oregon

Restoration Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-5033	Malheur WC	Restoring the NF Malheur in the Shadow of McClellan Mountain	Streambank conditions, water quality, and stream habitat will be improved by restoring streamside plant vegetation and fencing the project area, which is located on the North Fork Malheur River north of Juntura.	95,706	Malheur
220-5025	Baker Valley SWCD	Elkhorn Wildlife Improvement X 2	A temporary stream crossing will be purchased to implement best management practices while thinning overstocked forests in the Elkhorn Wildlife Management Area near North Powder, Oregon. The crossing will eliminate vehicles driving through streams and prevent adverse effects to water quality.	47,375	Union
220-5027	Malheur WC	Having a Halladay on the North Fork Malheur River	Water quality, stream habitat, and floodplain connectivity will be improved by fencing streamside acres, planting native hardwoods, and removing a berm along the North Fork Malheur River, north of Juntura.	109,009	Malheur
220-5034	Malheur SWCD	Morgan Feedlot Pipeline	Sediment, nutrient, and bacteria transport to the Malheur and Snake River will be reduced by converting an earthen irrigation delivery canal that serves 333 irrigated acres to pipe, which will also improve irrigation water managment in the area.	179,925	Malheur
220-5024	Union SWCD	Union Soil and Water Conservation District/Clark Creek Pasture Fence	Portions of Clark Creek and twelve acres of wet meadow and wetlands will be protected from domestic livestock impacts by installing an exclusion fence. This will improve streambank and channel conditions, which will benefit water quality and ESA-listed steelhead habitat in Clark Creek, a tributary to the Grande Ronde River near Elgin.	19,181	Union
220-5029	Owyhee WC	Branch Water Quality Improvement	Sediment, nutrient, and bacteria contributions to irrigation water conveyance canals will be elimiated by converting 88 flood irrigated acres to center pivot and big gun sprinklers, which will improve water quality in the Owyhee and Snake Rivers.	80,365	Malheur
220-5031	Tri-County CWMA	Upper Grande Ronde Invasive Weed Control Phase V	A long standing effort to control leafy spurge, spotted knapweed, and diffuse knapweed will be continued in the Upper Grande Ronde River Watershed, and will complement stream and floodplain as well as upland restoration work occuring in the project area.	34,670	Union
220-5035	Malheur SWCD	Horses on the Corner II	Water quality will be improved by converting 40 flood irrigated acres to sprinkler application with a center pivot and solid set sprinklers. Waste water will be eliminated from these acres, which will improve water quality in the irrigation conveyance system and the nearby Malheur River.	76,729	Malheur

Restoration Projects Recommended for Funding in Priority Order (continued)

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-5030	Baker Valley SWCD	Little Creek Stockwater	Water quality will be improved in the Powder River and rangeland health will be maintained on 620 acres by installing upland water sources that will reduce livestock pressure on Little Creek, a tributary to the Powder River, and improve domestic livestock distribution.	19,943	Union
220-5026	Keating SWCD	Clover Creek Irrigation	Sediment, nutrient, and bacteria contributions to Clover Creek and the Powder River will be reduced by converting flood irrigated acres to center pivot irrigation, which will eliminate wastewater runoff from the property and improve water quality.	45,975	Baker
220-5028	Malheur WC	It Can't Get Much Steeper: Jacobsen Gulch revised	Sediment, nutrient, and bacteria contributions to Jacobsen Gulch and the Snake River near Ontario, Oregon will be eliminated by converting flood irrigated acres to center pivot, solid set sprinklers, and mobile big guns.	37,061	Malheur
Total Restoration Projects Recommended for Funding by RRT and OWEB Staff				**745,939**	

Restoration Projects *Recommended but Not Funded* in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-5037	Malheur SWCD	Unruly Conversion	Sediment, nutrient, and bacteria contributions to adjacent irrigation canals and the Snake River near Ontario, Oregon will be eliminated by converting 61 flood irrigated acres to center pivot and hand line sprinkler systems.	74,160	Malheur
Total Restoration Projects Recommended for Funding by RRT				**820,099**	

Restoration Applications *Not Recommended* for Funding by RRT

Project #	Grantee	Project Title	Amount	County
220-5032	Baker Valley SWCD	Old Wingville Irrigation	114,366	Baker
220-5036	Malheur SWCD	Mind Over Matter	226,447	Malheur
220-5038	Wallowa Resources	Wallowa Canyonlands Landscape Scale Integrated Weed Management	95,653	Wallowa

Region 5 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance (TA) Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
220-5043	Powder Basin WC	Powder Basin Groundwater Records Review	Groundwater levels will be assessed in Baker County using a protocol by DOGAMI and OWRD to summarize existing groundwater records, compile geologic information from well logs, identify groundwater level trends, and use this information to identify restoration needs and data gaps.	29,390	Baker
220-5040	Malheur WC	Improving Wildlife and Riparian Habitat Along the Malheur	A multi-disciplined partnership will develop a conservation and restoration plan along 2.6-miles of the Malheur River that will include enineered designs to address streambank erosion, strategies to improve streamside and wildlife habitat conditions, farm practice guidance, and a prescription to address invasive plant species.	36,564	Malheur
220-5045	Harney SWCD	Harney Basin Water Conservation Through Irrigation	The NRCS Conservation Implementation Strategy for Saving Groundwater will be implemented by working with irrigators to complete structural and management practices that improve irrigation application efficiency in the Greater Harney Valley Groundwater Area of Concern.	72,881	Harney
Total TA Projects Recommended for Funding by RRT and OWEB Staff				**138,835**	

Region 5 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance Projects *Recommended but Not Funded* in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
220-5044	Harney SWCD	Addressing Gaps in Sage-Grouse Habitat	Site Specific Plans will be developed with landowners participating in the Greater Sage-Grouse CCAAs in Harney County to promote land stewardship and sage grouse survival by addressing the primary sage-steppe ecosystem threats, including juniper encroachment, annual grass invasion and wildfire.	74,972	Harney
220-5041	Malheur WC	Drewsey Reclamation Ditch: Can We Pipe it?	Engineered plans to pipe the Drewsey Reclamation Ditch will be developed to improve irrigation water delivery efficiency, reduce erosion, and improve water quality in the Malheur River.	24,035	Harney
220-5042	Powder Valley Water Control District	C-1 Pipeline Water Conservation Project	Engineered designs will be completed for converting 11 miles of earthen delivery canal to pipeline serving 1,950 irrigated acres, which will prolong reservoir storage, improve water quality in the Powder River, and enable on-farm irrigation conservation in the area.	35,000	Union
Total TA Projects Recommended for Funding by RRT				**272,842**	

Technical Assistance Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount**	**County**
220-5039	Harney County Watershed Council	Silvies River Watershed Riparian Assessment	18,920	Harney

Region 5 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Stakeholder Engagement Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
None					
Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff				**0**	
Stakeholder Engagement Projects *Recommended but Not Funded* in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
None					
Total Stakeholder Engagement Projects Recommended for funding by RRT				**0**	
Stakeholder Engagement Projects *Not Recommended* for Funding by RRT					
Project #	**Grantee**	**Project Title**		**Amount**	**County**
None				**0**	

Region 5 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
220-5046	Wallowa Resources	Monitoring the Effects of Management on Stream Channels and Streamside Vegetation (MIM): Phase 2	The Multiple Indicator Monitoring protocol will be used to collect data on streambanks, stream channels, and streamside vegetation that will inform adaptive management of instream and riparian resources in actively grazed livestock alotments.	30,308	Wallowa
220-5047	Powder Basin WC	North Fork Burnt River Stream Gage	The operation, maintenance, and flow record production for a stream gauge located north of Unity, Oregon on the North Fork Burnt River will be continued to inform fisheries, irrigation, and restoration actions.	38,088	Baker
220-5048	OACD	Sage Grouse Monitoring - OACD	Sage grouse protection plans in Crook, Harney, Lake, and Malheur Counties will be monitored at 41 private lands locations to determine sage gouse population viability, document increased habitat connectivity, and provide guidance to conservation efforts.	58,250	Harney
Total Monitoring Projects Recommended for funding by OWEB Staff				**126,646**	
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				**126,646**	
Monitoring Applications *Not Recommended* for Funding by RRT					
Project #	**Grantee**	**Project Title**		**Amount**	**County**
None				**0**	
Region 5 Total OWEB Staff Recommended Board Award				**1,011,420**	**9%**
Regions 1-6 Grand Total OWEB Staff Recommended Board Award				**10,877,263**	

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5024-17341

Project Type: Restoration

Project Name: Union Soil and Water Conservation District/Clark Creek Pasture Fence

Applicant: Union SWCD

Region: Eastern Oregon

County: Union

OWEB Request: $19,181

Total Cost: $28,951

Application Description *(from application abstract)*

The Clark Creek Riparian Fencing Project is located on the La Grande Ranger District, Wallowa-Whitman National Forest within the West Minam C&H allotment. The project area lies in the headwaters of Clark Creek, a tributary to the Grande Ronde River, and specifically within the Grande Ronde River sub basin, Grande Ronde-Indian Creek watershed, Clark Creek sub-watershed (HUC 170601040904).Past land management activities have impacted geomorphic processes and aquatic habitat along Clark Creek and resulted in poor stream channel and riparian area conditions. Specifically in this project area, livestock concentrate in the riparian and wetland areas during the late summer and early fall as upland forage dries and water becomes more scarce. This project proposes to construct fencing to exclude livestock from a fragile portion of the Clark Creek channel, floodplain and associated wet meadow where riparian management objectives are not being met. Project objectives are to improve streambank vegetative cover and streambank stability, reduce herbivory of streamside deciduous hardwoods and reduce livestock trampling of wetland soils and features adjacent to the stream channel. This project proposes to construct approximately one mile of three-strand barbed wire let-down fence to control livestock access to 1,990 feet of stream and 12 acres of wet meadow and wetlands. Project partners include the USDA Forest Service, Union Soil and Water Conservation District, Oregon Watershed Enhancement Board, and the West Minam C&H allotment permittees.

Review Team Evaluation

Strengths

- A letdown fence design is proposed rather than a conventional fence. The proposed design will reduce impacts to wildlife and increase longevity in this area of heavy snow loads.
- The project will benefit water quality by providing off-channel water opportunities for livestock. The proposed fencing design will include a water gap and an off-channel water development will be installed.
- Watershed concerns in the project area are livestock-induced streambank instability, streambank erosion, and suppressed riparian vegetation. The letdown fencing as prescribed will help address the cause of watershed degradation.
- PACFISH INFISH Biological Opinion (PIBO) monitoring sites are established in the project area and will help inform project results.

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- The new permittee in the allotment has taken initiative to implement the allotment management plan and is interested in finding a solution to reduce the livestock damage evident in the project area.
- Similar fencing work has proven effective on the Wallowa Whitman National Forest.
- Fencing costs are reasonable and were calculated based on recently completed projects on the Wallowa Whitman National Forest.

Concerns

- Aerial photos would be helpful in the application to provide information on existing conditions and identify site preparation necessary for fence construction.
- The proposed letdown fence design will not address elk browse occurring in the project area.
- Fence construction costs for the type of fencing proposed are more expensive than permanently standing fence. The lack of aerial photos showing the landscape make it difficult to determine if this added cost is justified.

Concluding Analysis

The applicant is proposing to restore stream channel function and floodplain conditions that will support the riparian vegetation community and improve water quality in Clark Creek, a tributary to the Grande Ronde River near Elgin, Oregon. The installation of letdown fence will provide the grazing permittee the necessary infrastructure to exclude livestock from Clark Creek and the adjacent riparian area. Clark Creek is host to steelhead and the proposed project will improve riparian habitat for this ESA-listed fish species. Letdown fencing costs are higher than costs for typical fence construction; however, this type of fence has less impact on wildlife, is less prone to damage in high snow load areas, and will last longer than typical fencing if well maintained by the permittee.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 12

Review Team Recommended Amount

$19,181

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$19,181

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5025-17367
Project Type: Restoration
Project Name: Elkhorn Wildlife Improvement X 2
Applicant: Baker Valley SWCD
Region: Eastern Oregon
County: Union
OWEB Request: $47,375
Total Cost: $63,475

Application Description *(from application abstract)*

Located within the Baker Valley Soil and Water Conservation District (SWCD), the North Powder Tract of the Elkhorn Wildlife Management Area (EWA) consists of 4,557 acres of dense, overstocked stands of coniferous forests including; montane true fir, ponderosa pine, western larch and Douglas-fir. The Elkhorn Wildlife Improvement project will begin the process of addressing these unhealthy characteristics found within the EWA through the thinning of 400 acres. Overstocked forests have created a multitude of problems in the Pacific Northwest; issues consistent with the project site include increased catastrophic fire risks, high levels of insects, disease and decreased wildlife habitat. Anthony Creek and Rodger Creek (Map 2) flow through the project site and would directly impact the Powder River Watershed if a catastrophic event including wild fire and insect/disease mortality were to occur. The Oregon Department of Forestry (ODF) and Oregon Department of Fish and Wildlife (ODFW) has realized these issues and came to the Baker Valley SWCD seeking assistance in acquiring the necessary temporary bridges to complete the thinning project. ODF will oversee and manage pre, active, post and fire inspections/operations during the forest thinning as well as bridge installations on Anthony Creek (a fish bearing stream) and the Coughenour ditch (a tributary to Pilcher Creek reservoir). It is also worth noting that no revenue will be paid to ODF through the thinning of the proposed 400 acres. ODFW will complete both bridge installation and de-construction for this proposed project.

Review Team Evaluation

Strengths

- This application is a resubmittal and the applicant has addressed most of the concerns identified in the prior review, including a letter of support from ODFW and documentation of secured match.
- The availability of temporary stream crossings will reduce aquatic impacts resulting from forest management operations in Baker County, specifically erosion and sedimentation, aquatic habitat degradation, and channel substrate compaction.
- Forest thinning provides ecological benefit from a forest health perspective and can reduce wildfire severity.
- The Elkhorn Wildlife Management Area (EWA) near Baker City is used as an outdoor classroom by local schools and Scout Troops in Baker County.
- The current timber management plan for the EWA is to relocate roads from the draw bottom and riparian areas upslope to reduce stream impacts.

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- Investing in temporary bridge structures will have a long-lasting water quality benefit as demonstrated by similar structures currently in use in neighboring counties over the past twenty years.

Concerns

- Details regarding how revenues generated from forest thinning will be used are not included in the proposal.
- Soil moisture monitoring in actively managed forests is helpful to quantify long-term watershed health benefits resulting from vegetation management. Monitoring is not included in this application and would have been a beneficial addition.

Concluding Analysis

The availability of temporary stream crossings will assist in implementing best management practices during forest management operations in the upcoming EWA thinning project in Baker County. Temporary crossings eliminate the need for log hauling across stream fords which compromises stream channel integrity and water quality. The project partners involved are appropriate for the proposed action where Baker SWCD is the fiscal agent, ODFW will install and remove the crossings for the EWA thinning project, and ODF will store, manage, and make the crossing available for future work in Baker County. Thinning in the area will reduce fire risk, reduce forest stand compromising insects and disease, and improve wildlife habitat. A temporary crossing will benefit aquatic habitat in the EWA as well as in upcoming forest management projects in the area.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 12

Review Team Recommended Amount
$47,375

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$47,375

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5026-17373
Project Type: Restoration
Project Name: Clover Creek Irrigation
Applicant: Keating SWCD
Region: Eastern Oregon
County: Baker
OWEB Request: $45,975
Total Cost: $95,975

Application Description *(from application abstract)*

Located within the Keating Soil and Water Conservation District (SWCD), Lower Powder Strategic Implementation Area (SIA) and the Powder Brownlee Ag Water Quality Management Plan, the Clover Creek Irrigation project will address water quality and water quantity in Clover Creek, a tributary to the Powder River.Currently 65 acres of agricultural farm ground is flood irrigated through a series of four earthen ditches diverted out of Clover Creek, a perennial stream. The tail water from the use of flood irrigation at the project site contributes all sediment, debris, organic matter and inorganic matter directly into the Powder River Watershed. In addition to degraded water quality, the current inefficient form of irrigation requires 1.4 cubic feet per second (CFS) to be diverted out of Clover Creek using 36% more water than a center pivot system would require at 0.9 CFS. This project proposes to install one center pivot irrigation system improving the use of and water quality on 65 acres. Project partners include the Keating SWCD and the landowner.

Review Team Evaluation

Strengths

- The project proposal is straightforward and clearly describes the irrigation conservation actions proposed on this 65-acre farm field.
- Converting from flood to sprinkler irrigation will have water quality and quantity benefits to Clover Creek.
- The project area is located in the Lower Powder ODA Strategic Implementation Area (SIA).
- If installed, this irrigation conversion could be a catalyst for other conservation projects in the Lower Powder SIA.
- The landowner is actively working to treat weeds on their property and is engaged in proactive land management indicating that the project would be implemented appropriately.
- Project costs are reasonable based upon past similar projects and the budget contains ample detail to understand project costs.

Concerns

- The application does not describe the watershed context for the project, including surrounding land use, farm practices, and irrigation water use in the area.

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- While on-farm irrigation benefits are understood, overall watershed benefits expected from the project are not well described.
- Water quality benefits expected from the project are limited to a short stretch of Clover Creek below the proposed pivot installation due to the presence of several irrigation ditches and a small reservoir downstream from the project site.

Concluding Analysis

Converting 65 acres from flood to sprinkler irrigation in the Keating Valley will reduce water diversion and improve water quality in Clover Creek. The Partnership of the Keating SWCD and the landowner working to improve water resource conditions is in support of ODA's Lower Powder SIA program and may encourage additional on-farm conservation in the area. While overall watershed benefits are not clearly described the proposal and budget articulate a flood to sprinkler irrigation project that will have clear benefit at the point of installation.

Review Team Recommendation to Staff
Fund

Review Team Priority
10 of 12

Review Team Recommended Amount
$45,975

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$45,975

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5027-17385

Project Type: Restoration

Project Name: Having a Halladay on the North Fork Malheur River

Applicant: Malheur WC

Region: Eastern Oregon

County: Malheur

OWEB Request: $109,009

Total Cost: $192,051

Application Description *(from application abstract)*

1) The project is on the NF Malheur River about 7 air miles to Juntura. It is part of the Strategic Implementation Area (SIA) designated by the Oregon Department of Agriculture.2) Need: Riparian vegetation is not in good condition at the site. There is not enough woody species present to modify water temperature and improve aquatic habitat. The banks have been trampled and are eroding which iscontributing to excessive sediment entering the stream. The North Fork is listed by DEQ for not attaining water quality standards for dissolved oxygen and for lacking aquatic habitat. According to ODFW, redband trout a state designated sensitive species use the area.3) Our goal is to improve stream, and riparian function. This will improve water quality, habitat for fish, amphibians, and other aquatic life. To accomplish this we propose to:-- Build 2,500 feet of fence to control livestock access to the river. The fence will will be built 35 feet (on average) away from the top of the bank on the west side of the NF Malheur River. The enclosed riparian area will be about 12.4 acres. --Plant: -- 750 vertical bundles and/or cluster plantings planted at waters edge -- 600 posts (cottonwood and tree willow) planted up from the bank in 2 rows -- 1,004 willow clumps or bundles along 4,0016 feet of side channel emergent wetland areas-- Remove 8,455 cubic yards of rock and gravel artificial berms from 4 acres along the NF Malheur. This will: -- Increase flood plain connectivity, reconnect side channels, relieve erosion pressure on adjacent banks, and trap sediment from upstream sources.-- Install a bridge across the NF Malheur to help restrict cattle access to the river and riparian area, and facilitate proper management of the pasture. 4) Partners include the Landowners, RSI engineering, and the Malheur WSC.

Review Team Evaluation

Strengths

- The proposed project addresses watershed function and ecosystem processes by removing a berm, which is the cause of channel confinement and a disconnected floodplain.
- Fence construction and livestock exclusion from the river and riparian area will reduce bacteria input to the North Fork Malheur River and will result in improved management of the property.
  The project is located within an ODA Strategic Implementation Area (SIA), a prioritized geography, which includes monitoring that can help inform adaptive management decisions. The project is the result of change in land ownership and management direction. There is confidence that the new landowner will continue to improve stewardship on the property.

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- The project site is adjacent to a public road, is highly visible, and could encourage future restoration in the area.
- While the focus of the project is water quality, significant watershed benefits will be realized through floodplain connectivity and aquatic habitat improvement.
- Budgeted costs for materials and contracted services are reasonable.

Concerns

- Concerns
- The landowner is not interested in entering the project area into a CREP agreement, and is instead considering flash grazing the riparian area. Flash grazing is not defined in the application and if the project area is overgrazed, benefits will be reduced.
- A grazing management plan should be produced as part of the project and should include a description of proposed flash grazing and consider whether fall grazing would be detrimental to riparian vegetation conditions.
- The application did not articulate the purpose and ecological value of the bridge.
- Riparian planting on its own may not allow the channel to aggrade and a riparian buffer averaging 35 feet may not provide enough room for the unconfined stream following berm removal.
- Project actions address the symptoms of erosive flows during high flow events and not the root cause, which is altered hydrology due to the upstream Beulah Reservoir. Flow volume fluctuates dramatically as a result of irrigation or storage practices, and this management is out of the control of the landowner.
- It is unclear why the lower berm is not included as part of the project; it may be feasible to remove and provide additional ecological benefit to the project.
- Bridge costs are a high portion of the project budget and the ecological value is questionable.

Concluding Analysis

The project is located in an ODA Strategic Implementation Area and on a stream reach listed by Oregon DEQ as impaired for dissolved oxygen, temperature, and biological criteria. Controlling livestock access to the river, planting locally adapted riparian hardwoods, reconnecting the river to its floodplain, and improving land stewardship are all actions that will support water quality improvement in the area. A new conservation minded landowner manages the property and the addition of Malheur Watershed Council and a locally experienced consultant comprise a capable team to implement this project and additional phases as they are developed. While some proposed actions are the treatment of symptoms rather than the root cause of landscape degradation it is understood that flow management on the North Fork Malheur River is beyond the project team's control. This project is a logical first step to improving on-farm management, may lead to additional project phases, and due to visibility may catalyze future restoration in the area.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

Review Team Recommended Amount
$109,009

Review Team Conditions

Provide a grazing management plan with a primary objective of riparian planting success prior to the first funding request.

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund with Conditions

Staff Recommended Amount
$109,009

Staff Conditions

Provide a grazing management plan with a primary objective of riparian planting success prior to the first funding request.

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5028-17386

Project Type: Restoration

Project Name: It Can't Get Much Steeper: Jacobsen Gulch revised

Applicant: Malheur WC

Region: Eastern Oregon

County: Malheur

OWEB Request: $37,061

Total Cost: $87,471

Application Description *(from application abstract)*

1) Jacobsen Gulch -- an NRCS priority Area. About 6 air miles to Ontario. Adjacent to I -84.2) A 20-acre hay/pasture field and an adjacent 11- acre pasture are currently being flood irrigated. The water flows off the 20- acre field and down a extremely steep slope, flows to Jacobsen Gulch and eventually the Snake River. Tail-water from the 11- acre pasture enters the Gulch at the same point. This tail-water is causing several large gullies to form on the steep hill between the two fields, and gullies are forming in the fields themselves. Thus, a significant amount of sediment is being delivered to the Snake. Since both the 20 and 11-acre pastures are grazed, a substantial amount of bacteria and nutrients are in the irrigation tail-water as well. The Snake River is listed for bacteria, nutrients, sedimentation and other water quality problems. This is a priority project for the Council because of the extreme steepness of the fields, the high levels of sediment, bacteria and nutrients being delivered to the Snake River, and because it is in an NRCS priority area.3) We plan to convert the 20 acre field from flood to pivot and the 11 acre pasture to big guns moved by a cart. This will mean installing ;pivot on the 20 acre fieldhooking up to the electrical grid, 1,000 feet of 6-inch mainline,7.5 hp pump for the pivotsprinkler system for the upper corner missed by the pivot 160 feet of 4-inch pipe 720 feet of 3-inch pipe 10 riser assemblies 2 hp booster pump for the corner sprinklers2 big guns to irrigate the lower 11 acre field 1,540 feet of 4 inch pipe to supply water4 riser assemblies4) Partners are the landowner, NRCS, and the Malheur WSC.

Review Team Evaluation

Strengths

- The application is improved from the previous submission, is technically sound, and addresses concerns identified in the previous review.
- The proposal is straightforward and proposed actions are well-described.
- Submitted designs are reasonable and represent a clear improvement over what was previously submitted. Prior submitted designs were challenging to decipher, included flood irrigation, and allowed for continued contaminated runoff to enter Jacobsen Gulch
- The project area is located on steep ground in the Jacobsen Gulch NRCS priority area and the project addresses irrigation practices compromise Snake River water quality.

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- Converting from current flood irrigation to sprinkler irrigation will reduce irrigation waste water with resultant reductions in sediment, nutrients, and bacteria entering Jacobsen Gulch and the Snake River.
- Located near Ontario and adjacent to Interstate 84, the project location offers high visibility and contributes to public awareness of on-farm conservation.

Concerns

- Irrigation of the upper southeast corner could be accomplished more cost effectively than the proposed solid set sprinkler approach.

Concluding Analysis

The applicant proposes to convert 31 acres from flood to sprinkler irrigation in the NRCS Jacobsen Gulch priority area. In addition to providing design clarity, the application includes more than one irrigation company quote and an alternatives analysis. The project team is capable of implementing this conservation project and obtaining proposed watershed benefits.

Review Team Recommendation to Staff

Fund

Review Team Priority

11 of 12

Review Team Recommended Amount

$37,061

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$37,061

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5029-17394 **Project Type:** Restoration

Project Name: Branch Water Quality Improvement

Applicant: Owyhee WC

Region: Eastern Oregon **County:** Malheur

OWEB Request: $80,365 **Total Cost:** $242,839

Application Description *(from application abstract)*

1. The Branch WQ Improvement project is located approximately 6 miles NW of Adrian2. Water quality improvement in the Owyhee Basin is one of the top restoration priorities. Water quality improvement is achieved through on-farm irrigation infrastructure improvements and management. Owyhee Watershed Council in cooperation with irrigation districts, NRCS, and private landowners have been systematically improving water quality through irrigation system conversions over the past 16 years across the Owyhee Basin. 3. The Branch Water Quality Improvement project will implement 2 pivot systems, big gun sprinklers and related conveyance infrastructure to convert 88 Acres from flood to sprinkler irrigation and improve water quality in the Lower Owyhee and Snake Rivers. 4. Project partners include Owyhee Irrigation District, private landowner, and Owyhee Watershed Council.

Review Team Evaluation

Strengths

- The proposal is well written, addresses water quality parameters of concern in the area, and proposed project actions will address ODA and DEQ priorities.
- Watershed benefits, specifically water quality in the Owyhee and Snake Rivers, are generally described, with reductions in sediment, nutrients, and bacteria expected based on modeled estimates.
- Maps and photos provided in the application are high quality and describe the project context well.
- The project team considered several alternatives, described those alternatives, and provided rationale as to why the selected alternative was chosen.
- Crops grown at the project site include alfalfa, corn, onions and sugar beets. The project location is steep, clearly eroding, and application maps show flood irrigation runoff routes to Bishop Drain.
- The Owyhee Local Advisory Committee has designated this area as a high priority and the Owyhee Watershed Council is leading the way to implement irrigation conservation work.
- The capacity of the applicant is demonstrated by a long track record of similar work and consistent submittal of high quality applications.
- The application budget contains appropriate detail, units, and unit costs.

Concerns

- The designs show that pivot end guns provide sufficient irrigation coverage in the field corners. It is not understood why solid set corner big gun sprinklers are also included in the design. Big guns on the corners are not as cost effective as other alternatives.

- The applicant provided only one irrigation system cost estimate. The application states that the landowner chose the less expensive estimate and that the second estimate was lost in a house fire.

Concluding Analysis

This project proposes to convert 88 acres from flood to sprinkler irrigation in the Bishop Drain watershed near Adrian. Located in an area designated as a high priority by the local NRCS working group this conversion would eliminate sediment, nutrients, and bacteria laden runoff to Bishop Drain, the Owyhee River, and the Snake River.

Review Team Recommendation to Staff
Fund

Review Team Priority
6 of 12

Review Team Recommended Amount
$80,365

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$80,365

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5030-17395
Project Type: Restoration
Project Name: Little Creek Stockwater
Applicant: Baker Valley SWCD
Region: Eastern Oregon
County: Union
OWEB Request: $19,943
Total Cost: $26,227

Application Description *(from application abstract)*

Located within the Baker Valley Soil and Water Conservation District near North Powder, Oregon; the Little Creek Irrigation project aims to improve water quality entering the Powder River Watershed and maintain upland rangeland health. The project site consists of two pastures; pasture one (150 acres) and pasture two (470 acres) totaling 620 acres with Little Creek, located in pasture two serving as the only source of water for both pastures. Utilizing Little Creek as the only source of livestock water for these pastures contributes additional sediment, debris, inorganic and organic material to flow into the Powder River Watershed through the channel degradation created from livestock use. In addition to water quality concerns, pasture one is currently enrolled in CRP expiring in 2022. After being enrolled in CRP for 10 years, the landowner would like to re-introduce this pasture into his grazing rotation which would extend the amount of time needed by livestock to use Little Creek as a watering source. The completion of this project will provide two reliable off channel watering locations in two separate pastures through the installation of one solar pumping station in an existing well, one 2,500 gallon cistern, two rubber tire watering troughs and grazing plan. Project partners include the Baker Valley SWCD and the landowner.

Review Team Evaluation

Strengths

- The proposal to develop a well, install service pipeline, and install 2 rubber tire watering troughs serving two pastures is clearly written.
- The landowner has a flexible management approach, will consider water quantity in the stock water system, and adjust pasture stocking rates according to water availability.
- The stock watering system design will facilitate improved distribution of domestic livestock on the property, encourage upland use, and reduce pressure on Little Creek.
- Developing upland water sources may encourage wildlife to stay in the uplands and out of nearby farmland, reducing human and wildlife conflict while adding potential water quality benefit.
- Encouraging domestic livestock to occupy the adjacent uplands will have water quality and riparian area benefits along Little Creek.
- The landowners have been successful with prior conservation efforts, are diligent with grazing management, and have been exemplary rangeland stewards.
- The stock watering system will be served by an existing and tested well, improving cost effectiveness.

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Concerns

- Pasture use, feed availability, and capacity are not well described in the application and the grazing management plan should describe animal unit months (AUM's) available in each pasture.
- The project need is unclear given the distance of the project site to the Powder River.
- Per NRCS standards the water storage tank is undersized for the number of livestock the landowner intends to graze on the property.
- Pasture #1 will be removed from CRP in 2022 which may represent a lost benefit to wildlife.
- Due to project size and cost the application may have been better suited for an OWEB small grant application.

Concluding Analysis

The applicant and landowner intend to provide off channel livestock water in 2 pastures totaling 620 acres of rangeland near North Powder. Off-channel water will provide the infrastructure necessary to improve grazing management on the property and reduce cattle pressure in and along natural waterways coursing through the area. Improving rangeland conditions, water quality, and wildlife habitat are all priority actions in the Powder Basin and installing watering troughs in the area will work towards meeting those objectives. Overall the project is cost effective and the likelihood of success to improve watershed conditions is high.

Review Team Recommendation to Staff

Fund

Review Team Priority

9 of 12

Review Team Recommended Amount

$19,943

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$19,943

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5031-17399

Project Type: Restoration

Project Name: Upper Grande Ronde Invasive Weed Control Phase V

Applicant: Tri-County CWMA

Region: Eastern Oregon

County: Union

OWEB Request: $34,670

Total Cost: $61,670

Application Description *(from application abstract)*

Located within the Upper Grande Ronde River Watershed, approximately 10 miles west of La Grande, the Upper Grande Ronde Invasive Weed Control Phase V project seeks to contain and control leafy spurge, spotted knapweed, and diffuse knapweed. Since 2016, OWEB has continuously supported Tri-County's efforts to inventory, treat, and monitor leafy spurge, spotted knapweed, and diffuse knapweed in this watershed. Leafy spurge is the primary target of this project and due to its longevity, consistent herbicide treatments are necessary for effective control. Historic anthropogenic disturbances in this area have negatively impacted many fish and wildlife species, including Chinook salmon, steelhead, and bull trout. Many of these disturbances have introduced invasive species, such as leafy spurge, and have promoted the spread of these species throughout the watershed. This project began treating high priority areas, such as the Grand Ronde River, in Phase I, and has worked outwards towards the larger infestations by Phase IV. The goal of Phase V is to treat all known leafy spurge sites along the Grande Ronde River and provide follow-up treatments of leafy spurge in the Phase IV project area. Tri-County is already contracted with the Confederated Tribes of the Umatilla Indian Reservation and the Oregon Parks Dept. to treat all noxious weeds within their project areas along the Grande Ronde River in 2020 and coordinates treatment efforts with the US Forest Service. Given the aggressive nature of leafy spurge, this project is more important that ever to continue given the recent large-scale efforts to restore native fish habitat in the Upper Grande Ronde Watershed.

Review Team Evaluation

Strengths

- The selected protocol of early detection and rapid response is appropriate for this project location, given the topography and existing vegetation in the project area.
- The application targets priority weed species in an important location of active riparian, floodplain, and stream channel restoration.
- Working in the upper Grande Ronde River Watershed helps to prevent weed seed transport to the lower watershed.
- Over the previous four phases of this weed treatment effort the applicant has achieved demonstrable success in treating priority listed weeds.

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Concerns

- Providing spatial information demonstrating how target species have responded to treatments would have been useful in evaluating prior project phase success and inform progress at the watershed scale.
- The maps provided in the application do not have information demonstrating trends over time, which would be helpful to assess effectiveness of this type of investment.
- While photos submitted with the application are descriptive, adding dates would provide more clarity.
- Weeds are a persistent problem that require annual treatment and the application only covers one season. The applicant should consider developing a multi-year proposal, which may also be a more cost-effective approach.

Concluding Analysis

The applicant is working cooperatively with many restoration partners in the Upper Grande Ronde River watershed, a Focused Investment Partnership (FIP) area. Weed treatment is not an identified action in the FIP geography and the work proposed is complementary to ongoing river, floodplain, and riparian restoration actions implemented in the watershed. Proposed weed treatment follows standard protocols, success has been demonstrated over the previous four phases of work, and the applicant works across social, political, and land management boundaries. While the application lacks clarity regarding spatial success over the history of work, the actions described in the proposal support work ongoing in this watershed that is home to ESA-listed Chinook salmon and steelhead.

Review Team Recommendation to Staff
Fund

Review Team Priority
7 of 12

Review Team Recommended Amount
$34,670

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$34,670

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5032-17403
Project Type: Restoration
Project Name: Old Wingville Irrigation
Applicant: Baker Valley SWCD
Region: Eastern Oregon
County: Baker
OWEB Request: $114,366
Total Cost: $210,663

Application Description *(from application abstract)*

Located within the Baker Valley Soil and Water Conservation District (SWCD), near Baker City, Oregon the Old Wingville Irrigation project will address 92 acres of flood irrigated pasture receiving surface water from and returning to Pine Creek, a tributary to the Powder River. Sourced from Pine Creek Reservoir, Pine Creek a continuous perennial fish bearing stream collects cool clean water from the Pine Creek drainage located within the Elkhorn Mountains. Once in the Baker Valley floor, Pine Creek is used as a source for many irrigation diversions as it meanders through the valley joining Salmon Creek and then the Powder River. As flood irrigation is pushed across the field it collects sediment, debris, organic and inorganic material adding it to the Powder River Watershed. In addition, flood irrigation requires more water than what is necessary to refill the soil profile in comparison to a pivot system that allows the landowner to apply water when and where it is needed. The completion of this project will convert 92 total acres from flood irrigation to sprinkler irrigation through the installation of two pivots: one three quarter circle (37 acres) and one full circle (55 acres). Project partners include the landowners and the Baker Valley SWCD.

Review Team Evaluation

Strengths

- Project designs submitted with the application are appropriate for the setting.
- Local agencies including ODA, NRCS, and Baker SWCD are focused on improving irrigation efficiency and water quality in the area.
- The applicant has a track record of completing similar work in Baker County and the project team has the capability to successfully implement the proposed project.

Concerns

- A water right transfer of 92 acres is part of this project and it is unclear if the transfer is temporary or permanent. A permanent transfer is necessary for the project to be successful.
- The application does not articulate watershed benefits beyond the project footprint.

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- An alternatives analysis describing why pivots were chosen over other irrigation application methods is lacking in the application. The proposed irrigation method requires a long conveyance pipeline, increasing project cost, and there may be less costly alternatives to apply irrigation water to pasture #2.
- The project site is flat and water quality benefits may not be as robust as other similar irrigation projects located on steep ground with greater potential for erosion.
- The application does not describe how irrigation water will be managed following the water right transfer and pivot installation. Currently Pasture #1 is not irrigated due to water emerging subsurface; transferring those rights to Pasture #2 will increase demand for irrigation water, and it is unclear how OWRD will manage calls for water during irrigation season.
- Project costs were generated by averaging similar project line item costs in the basin. Cost estimates generated by quotes from irrigation company suppliers would have been more informative and the lack of irrigation company bids creates uncertainty around project cost.

Concluding Analysis

Located in Baker Valley north of Baker City, the application proposes to transfer the place of use for a water right from a 92-acre field where irrigation is compromised due to a high water table, to a field without a water right, and install pivot irrigation systems. While these actions may have merit by improving water quality, the application would benefit by including an alternatives analysis describing why this action is chosen, providing bids from irrigation company suppliers, describing watershed benefits beyond the project footprint, describing irrigation water management and distribution in the area, and coordinating with other agencies to implement conservation resulting in greater watershed benefit. The applicant is encouraged to complete the required water right transfer prior to seeking restoration funding.

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5033-17405

Project Type: Restoration

Project Name: Restoring the NF Malheur in the Shadow of McClellan Mountain

Applicant: Malheur WC

Region: Eastern Oregon

County: Malheur

OWEB Request: $95,706

Total Cost: $126,854

Application Description *(from application abstract)*

1)The project is on the NF Malheur River about 7 air miles to Juntura. It is part of the Strategic Implementation Area (SIA) designated by the Oregon Department of Agriculture.2) The sites for bank stability restoration were chosen after 2019 drone survey data was compared to 2015 LIDAR data taken at the same location. These two selected sites lost a combined 787 cubic yards of material in the four intervening years. The North Fork is listed by DEQ for not attaining water quality standards for dissolved oxygen and because it lacks aquatic habitat. According to ODFW, redband trout, a state designated sensitive species, use the area.3) The bank stability techniques were chosen to maximize protection of the bank, improve riparian vegetation, and to maximize aquatic habitat improvements. We plan to treat 1,400 feet of bank at two sites by installing:-- 78 large juniper trees with limbs still attached (20 foot long 24 inch dbh)-- 83 rocks (3 foot by 3 foot by 3 foot)-- 1,400 willow whips forming a brush mat/bundles/ clumps behind the juniper trees-- 463 cubic yards of mixed native fill. We propose to improve riparian vegetation by planting two rows of tree willows/cottonwoods on the top of the bank behind the bank stability work. The post plantings will be protected from grazing by cages and fencing. We will fence an additional 4,000 feet of eroding areas to protect them until we can do more bank stability measures. Total riparian acres protected will be about 4.8 acres.4) Partners are the landowner, RSI engineering and the Malheur WSC.

Review Team Evaluation

Strengths

- Proposed fencing will help with localized erosion by keeping cattle off the eroding streambanks in the project area.
- The proposed project is the result of a prior OWEB Technical Assistance grant and 90% designs are included in the application. The final designs will be completed in the project construction phase.
- The project will improve the health of the riparian buffer which will address water quality concerns in the project reach.
- The project location is adjacent to and complementary to neighboring proposal 220-5024, expanding ecological benefit of both projects.
- The applicant has completed similar project types successfully and has direct experience with the proposed restoration techniques.

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- Prescribed work protects the toe of slope rather than laying the streambank back. This is a more cost effective method to achieve streambank stabilization and riparian vegetation improvement.
- Cost efficiencies are achieved with the complementary project 220-5027 nearby offering the opportunity to procure one contractor to construct both projects, therefore reducing mobilization and administrative costs.

Concerns

- The fence design is not continuous within the project area and rationale for this is not explained in the application.
- Streambanks in the project reach are steep and it is unclear if vegetation alone without grading will achieve project objectives.
- The project actions address symptoms and not the root cause of bank instability, which is altered hydrology due to the upstream Beulah Reservoir. Flow velocity fluctuates widely based on management of water in the reservoir, and this management is beyond the project team's control.

Concluding Analysis

The project is located in an ODA Strategic Implementation Area and on a stream reach listed as impaired by Oregon DEQ for dissolved oxygen, temperature, and biological criteria. Controlling livestock access to the river, planting locally adapted riparian hardwoods, and improving land stewardship are all actions that will promote water quality improvement in the area. A conservation-minded landowner, Malheur Watershed Council, and a locally experienced consultant comprise a capable team to implement this project and additional phases as they are developed. This project is a logical first step to improving on-farm management, may lead to additional project phases, and due to visibility may raise public awareness leading to future restoration.

Review Team Recommendation to Staff

Fund with Conditions

Review Team Priority

1 of 12

Review Team Recommended Amount

$95,706

Review Team Conditions

Provide a grazing management plan with a primary objective of riparian planting success prior to the first funding request.

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund with Conditions

Staff Recommended Amount
$95,706

Staff Conditions

Provide a grazing management plan with a primary objective of riparian planting success prior to the first funding request.

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5034-17437
Project Type: Restoration
Project Name: Morgan Feedlot Pipeline
Applicant: Malheur SWCD
Region: Eastern Oregon
County: Malheur
OWEB Request: $179,925
Total Cost: $245,095

Application Description *(from application abstract)*

1) The project is in the Malheur SWCD, Oregon Department of Agriculture, and NCRS designated priority area of Morgan Bench. The pipeline is located 6 miles west of Ontario and services bench ground. Owyhee Irrigation District identifies the feedlot lateral as their top priority to pipe.2) Excessive sediment, nutrients, and bacteria are being delivered to the Malheur River caused by irrigation induced erosion and a leaking lateral in the feedlot. This lateral ditch serves 333 acres of crop ground. We have 111 acres under under flood irrigation on the lateral to date. Potentially these fields could deliver 2 to 5 tons of sediment per acre per year to the Malheur River, that empties into the Snake River. The lateral itself is a source of sediment and e-coli as it is a open ditch until it reaches the feedlot and goes into a buried concrete pipe that is leaking before it ends a t the junction box on the other side of Morgan Avenue. Because of this problem, the runoff from the lateral is picking billions of bacterial colonies from animal waste . 3) We are proposing to:-- Abandon 484 feet of leaking buried concrete pipe-- Pipe 6860 feet of open lateral canal.-- Install 7 turnout assemblies with flow meters to feed adjacent fields-- Remove junction box on the north side of Morgan Avenue and connect the two landowners at the end of the pipeline. -- Install a cleaning screen at the lateral in the North Canal to keep debris out of the pipeline.-- Install various kinds of air vents, pressure reducers, valves, and gates.4) Partners are:-- NRCS-- Owhyee Irrigation District-- Malheur SWCD-- Oregon Department of Agriculture-- Malheur Watershed Council

Review Team Evaluation

Strengths

- The conversion from open lateral conveyance to pipeline will improve water quality and promote DEQ and ODA water quality improvement objectives.
- The proposed solution is appropriate for the site and piping the irrigation lateral will provide the opportunity for future irrigation water management and flood to sprinkler irrigation conversions.
- The project is located in the NRCS designated Morgan Bench priority area, is supported by ODA, and is a high priority for the Owyhee Irrigation District.
- The project will reduce sediment, nutrient, and bacteria transport to local waterways. The installation of this piped lateral carries additional benefit by abandoning a leaky pipeline under a feedlot, further reducing bacteria transport.
- Installing this lateral and infrastructure will build on prior work done in the priority area.

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- The project team has done a considerable amount of water quality sampling to refine the project location and proposed actions.
- The project team of Malheur SWCD, Owyhee Irrigation District, and NRCS are experienced and have a long track record of installing similar projects in the Malheur River Basin.

Concerns

- The application lacks clarity regarding how many turnouts and flow meters will be installed. Clarity is also lacking regarding existing and proposed water quality and quantity monitoring, and connections to other nearby projects.

Concluding Analysis

Converting an open lateral conveyance canal in the Morgan Bench priority area to a buried pipeline will continue the long standing effort to improve water quality in the Lower Malheur River Watershed. The continuation of these actions reduces sediment, nutrient, and bacteria transport into irrigation conveyance systems, the Malheur River, and the Snake River, which are all high priorities as stated in both DEQ's TMDL and ODA's Senate Bill 1010 Plans. The application lacks clarity, however the applicant is supported by a capable project team with ample experience installing similar projects.

Review Team Recommendation to Staff
Fund with Conditions

Review Team Priority
4 of 12

Review Team Recommended Amount
$179,925

Review Team Conditions

Consult with Oregon DEQ and ODA regarding the locations of the flow gauges and water quality sampling sites.

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund with Conditions

Staff Recommended Amount
$179,925

Staff Conditions

Prior to first payment, consult with Oregon DEQ and ODA regarding the locations of the flow gages and water quality sampling sites and report the results of consultation to the OWEB project manager.

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5035-17443
Project Type: Restoration
Project Name: Horses on the Corner II
Applicant: Malheur SWCD
Region: Eastern Oregon
County: Malheur
OWEB Request: $76,729
Total Cost: $127,414

Application Description *(from application abstract)*

1. The Horses at the Corner project is located about 8 miles southwest of Ontario, Oregon and consists of approximately 40 acres of irrigable cropland. It lies within the NRCS 'Valley View Priority Area'. The Horses at the Corner project eventually drains into the Nevada Ditch to be used by other farmers or spilled into the Blanton Drain and into the Malheur River and into the Snake River. Sediments and nutrients that wash off fields are passed onto the downstream users and contribute to overall water quality impairments.The NRCS 'Valley View Priority Area' is located from about 4 miles southwest of Ontario, Oregon, south of OR Highway 20-26 stretching from Cairo Junction 6.5 miles west and approximately 2 miles south. The NRCS 'Valley View Priority Area' consists of approximately 3275 acres with approximately 2000 acres of irrigable cropland. The entire area is in Malheur County.2. Most of the sediment, nutrients, and bacteria in The Blanton Drain come from polluted irrigation return flows or livestock access to surface water. Historically farmers in the area fertilize their land and a residual amount of chemicals, e-coli and nutrients can be carried off the field with the runoff from flood irrigation. This farm is fairly typical and currently using 100% surface irrigation.3. By installing a partial swipe center pivot with the accompanying solid set sprinklers, pipeline, pump and flowmeter, the landowner will be able to achieve a zero water runoff practice that will enhance the downstream water quality. 1520 feet of open ditch irrigation canal will be covered.4. The partners for this project are the landowner, Malheur County SWCD, NRCS, ODA, and Owyhee Irrigation District.

Review Team Evaluation

Strengths

- Piping 1520 feet of open ditch irrigation canal will maintain water quality of the irrigation water that moves through the project site and to downstream users.
- The project is located on erodible steep ground in the 3,275 acre NRCS Valley priority area.
- Converting from flood to sprinkler irrigation on the 40-acre project site will eliminate irrigation waste water and reduce sediment, nutrient, and bacteria transport to local waterways.
- Piping the irrigation lateral will provide the opportunity for future irrigation water management and flood to sprinkler irrigation conversions for down ditch water users.
- The project team of Malheur SWCD, Owyhee Irrigation District, and NRCS are experienced and have a long track record of installing similar projects in the Malheur River Basin.

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Concerns

- The application lacks clarity regarding water quality and quantity monitoring. It is difficult to ascertain sampling locations in relation to the project area, how the monitoring will inform project results, and how budgeted costs relate to the monitoring.
- It is assumed the pipeline that is replacing the open delivery ditch is sized appropriately for delivery to down ditch water users; however, this is not stated in the proposal.
- As designed, delivering water to the field corners for the solid set sprinklers is less cost effective. Less expensive and effective options may exist.
- The proposed installation of 4-inch and 8-inch pipe in the same trench will save costs on backfill and this was not accounted for in the budget

Concluding Analysis

Converting an open lateral conveyance ditch to buried pipeline and converting 40 flood irrigated acres to sprinkler application in the Valley View Priority area will continue the long standing effort to improve water quality in the Lower Malheur River Watershed. The continuation of these actions reduces sediment, nutrients, and bacteria transport into irrigation conveyance systems, the Malheur River, and the Snake River. These actions are high priorities as stated in both DEQ's TMDL and ODA's Senate Bill 1010 plans.

Review Team Recommendation to Staff
Fund with Conditions

Review Team Priority
8 of 12

Review Team Recommended Amount
$76,729

Review Team Conditions

Consult with DEQ and ODA regarding the locations of the flow gages and water quality sampling sites.

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund with Conditions

Staff Recommended Amount
$76,729

Staff Conditions

Prior to first payment, consult with DEQ and ODA regarding the locations of flow gages and water quality sampling sites and report the results of consultation to the OWEB project manager.

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5036-17458
Project Type: Restoration
Project Name: Mind Over Matter
Applicant: Malheur SWCD
Region: Eastern Oregon
County: Malheur
OWEB Request: $235,563
Total Cost: $327,127

Application Description *(from application abstract)*

1) The Mind Over Matter project is located approximately 20 miles southwest of Jordan Valley in the community of Danner, and consists of 1556 acres of sagebrush steppe rangeland that is bordered by both Jordan Creek and Cow Creeks. The site profile includes elevations ranging from 4000-4600 feet, with average precipitation of 8-12 inches per year. Terrain is very rocky, comprised with dense basalt formations, and soils in the range of silty-loam. The project site, located within a 2 HUC priority area, with Greater sage-grouse being the species of concern. Thisk is the first phase of a NRCS rangeland management plan on 6,729 acres to restore plant communities, and improve habitat and forage quality for a number of species.2) Medusahead (Taeniatherum caput-medusae) and Cheatgrass (Bromus tectorum) have extensively invaded this project site and now dominate the plant community, both within project bounds and on bordering BLM lands. Annual grass invasion has placed considerable strain on this section of sagebrush steppe rangeland, and in some other sections, has created thatches so dense that all other vegetation has been eradicated.3) The work proposed for this project includes aerial application of herbicide in the fall of 2020, followed by broadcast seeding of a drought tolerant, introduced seed mix in fall of 2021. A grazing management plan has also been included to allow for proper rest rotations and establishment of plant seedlings.4) Project partners include Jordan Valley CWMA, NRCS, and Malheur SWCD.

Review Team Evaluation

Strengths

- Fall and winter grazing is unlikely to impact the reestablishment of perennial grasses.
- The grazing plan is based on utilization and this approach implies they will be monitoring the site and making grazing decisions according to vegetation health.

Concerns

- No descriptions are provided with the photos, making it hard to understand application content.
- The application states that the project will improve sage-grouse habitat; however, the maps lack clarity regarding whether the project site includes such habitat.

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- It is unclear whether the extent of native vegetation has been appropriately assessed. The NRCS plan describes the presence of some native vegetation and adaptive management should have been considered as an approach to see if there is natural recruitment of native vegetation.
- Success rates for the proposed type of work are variable and the applicant did not identify an adaptive management approach with the project plan.
- Objectives are not defined for resuming grazing in the project area following seeding.
- Seeding options are not well described and no alternatives analysis was presented. More details explaining the approach, including whether certified seed will be used, would have been useful in evaluating the application.
- The applicant did not provide significant information about the importance of working in this area, especially as it does not encompass designated high priority sage grouse habitat. The project is located in an area comprised of low priority habitat or in areas without a designation.
- Capacity of the applicant to implement this type of project is unclear since the application did not indicate experience implementing similar project types.
- It is unclear what the budget line item “project consultation” entails.

Concluding Analysis

The application proposes to restore 1,554 acres of sage-grouse habitat located in a 6,729 acre NRCS rangeland management area. Project objectives include the control of Medusahead and cheat grass, restoring the sage brush understory with desirable grasses, and improving the overall health of the landscape. Project objectives are consistent with rangeland priorities in southeast Oregon; however, the application lacks necessary detail to inform a funding decision. The application lacks a compelling argument describing why the project is necessary at this location and at this time.

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5037-17460
Project Type: Restoration
Project Name: Unruly Conversion
Applicant: Malheur SWCD
Region: Eastern Oregon
County: Malheur
OWEB Request: $74,160
Total Cost: $221,934

Application Description *(from application abstract)*

1) This project is located 12 miles north of Ontario on Hyline Road, across from 218-5047 Circling Hyline, and 1 mile from 217-5050 Hunting WQ in Sheperd Gulch and is located in the Sheperd / Coyote Focus Area Action Plan (FAAP).2.) Approximately 61.5 acres of irrigable cropland drains into Sheperd Gulch) to be used by other farmers or spilled into the Snake River. Sediments and nutrients that wash off fields are passed onto the downstream users and contribute to overall water quality impairments. Most of the sediment, nutrients, and bacteria in Sheperd Gulch come from polluted irrigation return flows or livestock access to surface water. Historically farmers in the area fertilize their land and a residual amount of chemicals, e-coli and nutrients can be carried off the field with the runoff from flood irrigation. This farm is fairly typical and currently using 100% surface irrigation. 3) We are proposing to: Install, hand lines for the corners on 57.5 acres.Install 3 pivots; 1 full circle pivot and 2 wipe pivotsHandlines on corners and field XBury 2700 ft of 10 inch pipe Bury 4999 ft of 6 inch pipeBury 1512 ft of 8 inch pipeBury 2609 ft of wireInstall 1 orifice weir to measure on farm delivery by Owyhee Irrigation District with with Weed Rack4) Partners are:--Landowner-- NRCS-- Owyhee Irrigation District-- Malheur SWCD

Review Team Evaluation

Strengths

- Project designs including pipeline, pivots, and hand lines appear reasonable and appropriate for the terrain.
- The project is located a half-mile from the Snake River and will result in water quality benefits including reduced sediment, nutrient, and bacteria transport to local waterways.
- The project team of Malheur SWCD, Owyhee Irrigation District, and NRCS is experienced and has a long track record of installing similar projects in the Malheur River Basin.
- The project budget is reasonable and the use of hand lines in the corners results in a more cost-effective project.

Concerns

- Uploaded maps are limited in detail, do not demonstrate existing conditions, and lack clarity.

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- Data provided for water quality monitoring in the area is not summarized and therefore has limited utility for project review. More current data exists for this area and could have been used in the application to better make the case for the project.

- The need for the project is not made clear from the application. The application does not describe why the applicant chose the project location and why it is critical to implement at this time.
- The installation of pivots as proposed can result in reduced wildlife habitat due to the removal of brush, fence lines, and irrigation ditches which are often the only remaining wildlife habitat in farmland settings.
- The project vicinity map does not demonstrate how this project fits in with other projects in the Shepard/Coyote priority area.
- The description of the bacteria and water quality issues needs improvement as the information provided is outdated and from previous funding applications.

Concluding Analysis

Converting 61.5 acres from flood to sprinkler irrigation in the Shepard/Coyote focus area will reduce sediment, nutrient, and bacteria transport to the nearby Snake River, all water quality improvement priorities in the area. The applicant is supported by an experienced project team including NRCS and the Owyhee Irrigation District, project designs appear appropriate for the setting, and cost effectiveness is reasonable. Application maps lack detail, photos are not annotated, and water quality data is not summarized, all of which compromise understanding of the project and setting. The applicant is encouraged in future applications to upload supporting materials that help to demonstrate project need.

Review Team Recommendation to Staff
Fund

Review Team Priority
12 of 12

Review Team Recommended Amount
$74,160

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5038-17466

Project Type: Restoration

Project Name: Wallowa Canyonlands Landscape Scale Integrated Weed Management

Applicant: Wallowa Resources

Region: Eastern Oregon

County: Wallowa

OWEB Request: $95,653

Total Cost: $163,365

Application Description *(from application abstract)*

The Wallowa Canyonlands Partnership (WCP) is a cooperative weed management area and a program of Wallowa Resources. WCP strives to implement land management strategies across jurisdictions. A key element to the success of WCP has been to engage private landowners neighboring federal lands on key invasive weed treatment issues to find creative solutions that benefit the entire landscape. The project area encompasses the Oregon portion of the Grande Ronde River watershed, the Imnaha River watershed and the Zumwalt Prairie (See Map?). Within the project area the USFS is the largest landowner and they continue to experience declining resources for treating noxious weeds, most recently with the unpredictability of Title II funds. Their declining capacity to address infestations shared with neighboring landowners puts the efficacy of past and future weed management efforts on both public and private lands at risk. This application would provide crucial resources for continuing landscape-scale integrated weed management strategies. Our USFS partners and the numerous private landowners that neighbor USFS land support this project because they see it as key to maintaining the land's ecological and economic integrity.

Review Team Evaluation

Strengths

- None identified.

Concerns

- The maps provided with the application have numerous data points and are challenging to understand.
- The application lacked maps with spatial information regarding population trends of target species over time. The static maps provided are not useful in evaluating the success of this type of investment over time.
- No photos were provided with the application and photos are critical to understand the landscapes proposed for treatment.
- OWEB has made numerous previous investments in this project area and the outcomes of funded projects were not described within the application.

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- It is unclear how the priority areas were determined. Rationale supporting priority area selection would be helpful in determining where there is the best chance of success and how the strategy has been developed.
- Wallowa County Weed Department support is missing from the application. It is unclear how the various weed treatment entities are coordinating in the project area and whether the appropriate partners are engaged in this project.
- The project costs seem unusually high for some of the budget categories, including project management.

Concluding Analysis

The application proposes to continue a long standing weed treatment effort in Eastern and Northern Wallowa County in an area that is remote and characterized by deep canyons and prairie grasslands. The application lacks critical detail to inform the likelihood of project success, partnerships are not well described, and past project monitoring results are not included in the application. Future applications should include monitoring results that demonstrate results of past weed treatment efforts, rationale supporting the selection of prioritized areas, and a description of partner roles and responsibilities.

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5039-17371

Project Type: Technical Assistance

Project Name: Silvies River Watershed Riparian Assessment

Applicant: Harney County Watershed Council

Region: Eastern Oregon

County: Harney

OWEB Request: $18,920

Total Cost: $23,920

Application Description *(from application abstract)*

The purpose of the technical assistance is to provide dedicated staff to compile agency and private landowner information on riparian conditions for the purpose of providing a uniform assessment of conditions across the Silvies River watershed. There has been significant discussion among the public agencies and private landowners about current evaluations and a Calibration Group made up of Bureau of Land Management (BLM), U.S. Forest Service(USFS), Oregon Stare University Extension Service Rangeland Specialist (OSU) and Harney Soil and Water Conservation District (SWCD) riparian specialists has developed a method to use different forms of information to provide a common evaluation of riparian conditions as it affects water resource conditions. The evaluation will use existing photographic records and other common data that can be applied to a basin wide evaluation. This effort will provide a uniform evaluation usable to identify restoration opportunities and management options. Project partners include the USFS, BLM, Harney SWCD and private landowners as they are willing to share information. The primary purpose of the project is to compile existing information and use it to develop a common understanding of what appears to be riparian conditions and where significant information gaps exist that could affect water resource planning.

Review Team Evaluation

Strengths

- The budget request is reasonable for the proposed deliverables.

Concerns

- The application would benefit by more information on cursory outreach results that are indicative of the potential for landowner recruitment success.
- It is unclear who would be taking photographs of the properties, whether a photo taking protocol would be established, and it is unclear whether existing photographic records would provide an accurate depiction of restoration needs.
- It is unclear how different data types would be aggregated and incorporated into an evaluative analysis. The applicant plans to use existing and common data as a starting point, but no other details are provided.

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- The application specifies that the community based integrated water planning program has developed a methodology that will integrate private landowner information, but this methodology is not described.
- The number of miles involved in the proposed assessment may not be possible to complete with the limited hours that were included for project management. More detail on the project management approach would strengthen the application.
- Consultation with ODFW would be helpful to describe what metrics will be valuable for fish.
- Cost-benefit is difficult to ascertain as it depends upon how many landowners will participate in the effort.

Concluding Analysis

This applicant seeks to develop an evaluation of riparian conditions and how those conditions affect water resources using common and available data. Supported by many stakeholders in the Silvies River Watershed, comprised of public land management agencies and the recruitment of private landowners, the applicant proposes to hire one staff person to accomplish the assessment of over 595 stream miles in the watershed. Project deliverables do not appear attainable for the amount of funds requested and the application lacked clarity to determine likelihood of success.

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5040-17377

Project Type: Technical Assistance

Project Name: Improving Wildlife and Riparian Habitat Along the Malheur

Applicant: Malheur WC

Region: Eastern Oregon

County: Malheur

OWEB Request: $36,564

Total Cost: $50,764

Application Description *(from application abstract)*

1. The project is located approximately 6 miles west of Vale and south of Highway 20 on 980 acres.2. This 2.6-mile section of the Malheur River was adversely affected by significant high flow events in the 1980's and again in 2017. Sections of the banks are eroding as a result of these high-flow events that impacted water quality, riparian habitat and infrastructure. 3. OWEB funds are all targeted to the riparian and streambank issues-the primary focus of this project. A drone will be used for a topographic survey of the entire 2.6 mile reach of the Malheur. Riparian and geomorphic analyses and hydrologic and hydraulic analyses will be conducted. A 60% design will provide alternatives for future restoration project. Sections of the riparian area (32 acres) requiring future planting will be identified along with a suite of optimal shrub and tree species. A secondary focus addresses upland issues more generally-- providing a road map for future action. Upland areas will be reviewed for further improvement options. --Wildlife habitat to be reviewed and recommendations developed by ODFW. -- Planted fields will be assessed by NRCS to determine if improvements can be made. -- Invasive weeds adversely affecting wildlife habitat will be identified for treatment options with recommendations by Malheur County Weed Department. A prescription addressing expanding Russian-olive will also be sought.4. Project partners include Bully Creek LLC, Malheur Watershed Council, Warm Springs Irrigation District, NRCS, ODFW and Malheur County Weed Department.

Review Team Evaluation

Strengths

- The application describes how conservation and restoration alternatives will be developed and that alternatives will be reviewed and considered by the project team.
- The alternatives analysis as described will address project area concerns and is a reasonable approach to evaluate future project options.
- This reach of the Malheur River has good potential for restoration work, is used by wintering deer, resident and migratory birds, and riparian and streambank work would improve water quality.
- The applicant extensively collaborates with partners including ODFW, NRCS, Malheur County Weed Department, and others as clearly stated in the proposal.
- The landowner(s) are engaged and enthusiastic and presented many restoration options during the project site visit.

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- Malheur Watershed Council has a proven track record having implemented many similar projects in the past.
- Cost saving measures will be developed with the alternatives analysis approach as stated in the proposal.
- Project footprint is 2.5 river miles and adjacent floodplain and is a broad geography for the proposed cost.

Concerns

- The application addressed project scope and scale, and that subsequent restoration would enhance storage and release of floodwaters; however, it is unclear whether proposed designs will consider the how restoration could affect neighboring areas, adjacent infrastructure, and erosion.

Concluding Analysis

• The application addressed project scope and scale, and that subsequent restoration would enhance storage and release of floodwaters; however, it is unclear whether proposed designs will consider the how restoration could affect neighboring areas, adjacent infrastructure, and erosion.

Concluding Analysis

The project team comprised of diverse partners representing multiple disciplines proposes to develop a restoration project that will not only improve instream conditions and water quality in the Malheur River, but address upland resource issues including farming practices and invasive plant species management. The project proposal clearly describes the technical assistance process of planning, survey, analysis, modeling, and identification of treatments through an alternatives analysis. While it is unclear how restoration actions may effect adjacent or downstream landowners, the methods proposed are sound and have been implemented by this applicant in past projects.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 6

Review Team Recommended Amount
$36,564

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$36,564

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5041-17387

Project Type: Technical Assistance

Project Name: Drewsey Reclamation Ditch: Can We Pipe it?

Applicant: Malheur WC

Region: Eastern Oregon

County: Harney

OWEB Request: $24,035

Total Cost: $33,335

Application Description *(from application abstract)*

1) The Drewsey Reclamation Ditch diverts water from the Middle Fork of the Malheur River, and ends 14-miles later near the town of Drewsey. This project is within ODA's Strategic Implementation Area.2) The Ditch is old and leaky. A conservative estimate made by a consultant firm in 2007 estimated ditch loss at 25 to 30%. Managers of the Ditch estimate that it could be as high as 50% loss. They can divert 90 cfs into the ditch, and over the course of the 14-mile-long ditch there is a notable amount of lost water. If one projects this percent loss to the projected maximum flow of 90 cfs in the canal, the potential seepage losses could be as high as 22.77 cfs.Maintaining the ditch is becoming more difficult. There is the possibility of bank failure, similar to what happened to the Smith Ditch in Baker County. If the ditch were to fail the soil deposited into the river would be enormous and would cause great environmental damage.A solution to address both problems would be piping at least part of the ditch in the most critical areas. That is the leakiest spots and the most unstable. The saved water would be protected as an instream right.Keeping more water in the stream will benefit aquatic habitat in general but specifically help redband trout, a state sensitive species, and bull trout, a federally listed species. Historically, bull trout used this part of the river for a least part of their life cycle and redband are present for some part of their life history. About 5 years ago, ODFW and others helped the Ditch Company install a fish friendly diversion and fish screen at the point of diversion for this ditch. 3) We are applying for funds to hire an engineer to complete a survey, conduct a feasibility analysis, develop alternatives, conduct a water right review and develop a 60% design.4) Project partners include the irrigators and Board Members of the Drewsey Reclamation Ditch Company, Malheur WSC, ODFW, USFWS, DEQ, ODA, and NRCS.

Review Team Evaluation

Strengths

- This reach of the Malheur River is designated as a migratory channel for bull trout.
- There is a fish screened irrigation diversion at the head of the ditch installed by the irrigators and ODFW.
- Piping the ditch would result in additional on-farm conservation measures including conversion from flood to sprinkler irrigation due to the availability of pressurized water.
- Current flood irrigation practices are contributing to erosion and sedimentation and this project would begin to address this resource concern.

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- The applicant has assembled a diverse and experienced project team who have the demonstrated capability to implement this technical assistance project.

Concerns

- The application did not include a process to quantify instream water rights resulting from Allocation of Conserved Water, which is necessary to estimate instream benefits following project implementation.
- Letters of support from potential restoration funding agencies would strengthen the application.
- The resultant pipeline project will be expensive given the length of the ditch (14 miles) and the size of pipe that will be required (5'). The cost of the pipeline compared to the watershed benefit may not be favorable given the uncertainty of bull trout presence and uncertain water quality benefits.

Concluding Analysis

Redband trout currently exist in the project reach and bull trout are thought to have used this stretch of the Malheur River in the past. Improvement to instream flow through water conservation with resultant water quality benefits would benefit these fish and other aquatic species in an identified ODA Strategic Implementation Area. While converting from open canal irrigation delivery to pipeline would enable additional on-farm conservation, watershed benefits stated in the application are uncertain at this time.

Review Team Recommendation to Staff
Fund

Review Team Priority
5 of 6

Review Team Recommended Amount
$24,035

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5042-17406

Project Type: Technical Assistance

Project Name: C-1 Pipeline Water Conservation Project

Applicant: Powder Valley Water Control District

Region: Eastern Oregon

County: Union

OWEB Request: $35,000

Total Cost: $45,500

Application Description *(from application abstract)*

1. The project is located in the City of North Powder, Union County, Oregon.2. The Powder Valley Water Control District (PVWCD) is an irrigation district within the Powder Basin Watershed in the City of North Powder, Union County, Oregon. The PVWCD delivers water to irrigators in Baker and Union Counties. Water is stored for irrigation and recreational use in Wolf Creek and Pilcher Creek Reservoirs. Much of the water distribution system is composed of historic open ditches that are inefficient and represent significant water loss. This water could be used more efficiently for irrigation purposes or to meet in-stream needs. 3. The Baker Valley Soil and Water Conservation District (SWCD) obtained an Oregon Watershed Enhancement Board (OWEB) grant for the design of a 6,780-foot long pipeline to replace approximately 8,330 feet of open ditch from the PVWCD's Coughanour Ditch to a farm with approximately 400 acres of irrigated land. The engineered design drawings have been completed for the original project. During the design phase of the original pipeline project, the PVWCD contacted landowners in the vicinity that could benefit from an extension to the original pipeline. The first portion of the pipeline could be increased in size and the pipeline would then continue on to irrigate a total of approximately 1,950 acres. The larger pipeline would eliminate the original 8,330 feet of open ditch with the potential to eliminate another 51,800 feet of open ditch that currently delivers water to the additional acres. This request to OWEB would be to help fund the design engineering and Contract Documents for the pipeline that would serve the larger project area. The larger pipeline would serve almost five times the number of acres as the original design. The pipeline would be a significant step forward in the efficiency of irrigation water delivery. 4. PVWCD members are the project partners.

Review Team Evaluation

Strengths

- The project proposal is clear and the approach well-described.
- The restoration project resulting from the proposed project designs is likely to improve water quality.
- In addition to saving water from ditch loss, the resulting pipeline project would lead to on-farm conservation measures being implemented including conversion from flood to sprinkler irrigation.
- The prior OWEB funded technical assistance project engaged additional landowners, resulting in an expanded project footprint.

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- The applicant has demonstrated capacity in completing similar successful work. Previous projects implemented by PVWCD have conserved irrigation water and saved the District money by improving water management efficiencies.

Concerns

- Increasing fall storage in Wolf Creek Reservoir is stated in the application as a benefit to bull trout. This increased fall storage will benefit stocked rainbow trout, not bull trout.
- The proposal does not identify a benefit to instream flow. There are not direct benefits to instream flow by improving reservoir storage longevity.
- Designs produced with the previous technical assistance grant will not be utilized, although that prior phase did encourage more landowner participation.

Concluding Analysis

The application is clearly written. Water conservation and water quality improvement are priority watershed concerns in the area; however these benefits are not well articulated in the proposal and extending reservoir storage is not a significant watershed benefit. The applicant has demonstrated the capacity to not only complete the proposed technical assistance phase but the subsequent pipeline installation project.

Review Team Recommendation to Staff

Fund

Review Team Priority

6 of 6

Review Team Recommended Amount

$35,000

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5043-17407

Project Type: Technical Assistance

Project Name: Powder Basin Groundwater Records Review

Applicant: Powder Basin WC

Region: Eastern Oregon

County: Baker

OWEB Request: $29,390

Total Cost: $37,567

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, identify restoration needs to mitigate declines in groundwater 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 application is clearly written and the proposed actions and expected results are evident.
- Similar groundwater assessment work in neighboring basins and has proven effective for groundwater management and informed the technical soundness of this application.
- The proposed review will provide needed baseline information on groundwater and could lead to additional restoration work, refinement of groundwater monitoring, and identification of data gaps or anomalies.
- The applicant will work closely with OWRD and DOGAMI, both of whom will ensure proper protocols are followed and serve as mentors to project managers. Leveraging these agency resources also results in project cost savings.
- Broad support in the Baker Valley exists for the project including the identified report review team and the Baker County Court.
- The project is a cost effective way to get ahead of emerging groundwater issues in Baker County.

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Concerns

- Wells are grouped within the analysis in order to protect landowner identities, potentially reducing the precision of the analysis. The rationale for this is unclear since the data to be collected from the OWRD database is public information.
- A majority of the wells in the OWRD database are sampled annually and this sampling frequency may not be representative of groundwater levels, which fluctuate by season. More reliable data could be obtained from the 20 wells sampled by OWRD quarterly. This sampling frequency will capture groundwater depth by season and be much more accurate than those wells sampled annually.

Concluding Analysis

The Powder Basin Watershed Council is taking a proactive approach to assess groundwater conditions in the Powder Basin in Baker County. In observance of neighboring counties where declining groundwater has led to moratoriums precluding additional wells, the watershed council is working with OWRD and DOGAMI to develop a database that will utilize existing groundwater data to determine if groundwater decline is a potential threat in the Powder Basin. Broad and diverse support is evident for this action in Baker County and when complete the database could inform future restoration actions, identify areas of concern, and advise monitoring to augment areas where data is lacking.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 6

Review Team Recommended Amount
$29,390

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$29,390

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5044-17500

Project Type: Technical Assistance

Project Name: Addressing Gaps in Sage-Grouse Habitat

Applicant: Harney SWCD

Region: Eastern Oregon

County: Harney

OWEB Request: $74,972

Total Cost: $112,641

Application Description *(from application abstract)*

1) The project location is within Harney County and is focused on Greater sage-grouse habitat restoration outside of the current Focused Investment Partnership (FIP) areas. It is comprised of multiple private properties which border federally owned lands. These properties have signed letters of intent to enroll in the Harney Greater Sage-Grouse CCAA, or are currently enrolled in a CCAA.2)Harney county landowners have been waiting since 2014 to have their Site Specific Plans developed in order to be enrolled in the Greater Sage-Grouse CCAA. The limiting factor is lack of funding outside of the FIP boundaries. Another restricting element is the lengthy process that exists for CCAA, Site Specific Plan (SSP), development. Additional capacity is needed in order to complete SSP's in a timely manner. CCAA's are the keystone for landowners to obtain needed financial support for conservation measure implementation. The most limiting factor is that HSWCD lacks the resources to fund the positions that will inventory land , consult with landowners, and write the many SSPs for private landowners to enroll in the programmatic CCAA. HSWCD seeks to obtain funding for two Range Specialists, and one Range Technicians to continue developing SSPs that will expand sage grouse habitat conservation efforts.3)HSWCD employees will work with participating landowners to develop an individual Site Specific Plan that is intended to promote good land stewardship and sage grouse survival. Within the grant time frame, these employees will work with landowners and other partners to gather data, develop maps, write plans, plan treatments, and manage CCAA's. The primary sage-steppe ecosystem threats being addressed are juniper encroachment, annual grass invasion and wildfire.4.) Harney County Landowners, USFWS, BLM, ODFW , ODA and NRCS will assist as partners.

Review Team Evaluation

Strengths

- The application is clearly written and describes what is required when writing site specific plans (SSP) for each landowner enrolled in a Candidate Conservation Agreement with Assurance (CCAA).
- The Harney SWCD is experienced in writing SSPs, the methods used to develop the SSPs follow accepted protocol, and completed plans have produced intended results. At this time Harney SWCD has completed 18 SSPs covering 300,000 acres.
- Plans developed by the applicant have been highly regarded and have connected landowners to conservation funding sources helping them to implement prescribed work benefiting sage grouse

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Concerns

- It is unclear whether plans are needed throughout the mapped geography.
- It is unclear whether SSP development will be prioritized based on habitat or other factors.
- The application states that at least 18,000 and up to 40,000 acres will be inventoried over the duration of the project. It is unclear why there is a range and how those amounts were determined.
- The staffing plans are unclear; the budget includes a CCAA Planner and a Sage-grouse Coordinator, but the narrative states that two Range Specialists and one Range Technician would develop the plans.
- The existing or proposed staff qualifications are unclear.

Concluding Analysis

Current staff at Harney SWCD have proven capacity to perform the proposed scope of work and are supported by many partners including US Fish and Wildlife Service, BLM, ODFW, ODA, and NRCS. The application would be improved with more information regarding geographic extent, prioritization methodology, required qualifications for project managers, and staff budget.

Review Team Recommendation to Staff
Fund

Review Team Priority
4 of 6

Review Team Recommended Amount
$74,972

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-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5045-17502

Project Type: Technical Assistance

Project Name: Harney Basin Water Conservation Through Irrigation

Applicant: Harney SWCD

Region: Eastern Oregon

County: Harney

OWEB Request: $72,881

Total Cost: $180,118

Application Description *(from application abstract)*

The project location is in Harney County with prioritized focus within the Greater Harney Valley Groundwater Area of Concern (See the attached CIS for a Map of the GHVGAC). Groundwater dependent ecosystems have been analyzed and identified in the Great Basin Ecoregion that includes the Harney Basin. It has been found that there is a substantial aquifer decline. More detailed evaluations are being conducted, and conservation efforts have been employed by local working groups and federal partners. In this effort, there is a need for an employee to work specifically on implementation of the NRCS Conservation Implementation Strategy for Saving Groundwater in the Harney Basin Using Efficient Irrigation Technologies (CIS). Specifically, the employee will Implement structural and management practices to reduce water use through the agricultural irrigation efficiency program. This person will serve as a member of the Community Based Water Planning Collaborative Agriculture Working Group, and will help producers convert to more efficient irrigation systems. The employee will also conduct outreach, educate consumers,and attend and conduct meetings. Project partners include NRCS, OSU, TNC, ODA, The Burns-Paiute Tribes, Private Landowners, Harney County Watershed Council, Harney County Court, and Oregon Water Resources Department.

Review Team Evaluation

Strengths

- The project focus is aquifer decline and the need for groundwater conservation is well understood.
- Implementing plans developed for engineered sprinkler conversions from MESA (mid elevation sprinkler application) to LESA (low elevation sprinkler application) on pivot systems will result in water savings.
- NRCS engineering staff will approve the plans generated by the new staff person and provide mentorship.
- The position created will be a full-time position and combine two programs including the Conservation Implementation Strategy in the Harney Basin and the Bonneville Power Rebate Program.

Concerns

- It is unclear whether the new staff person will be a certified NRCS planner. An NRCS certified

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planner would be an asset to the program as becoming certified incurs ample cost, training, and time.

- The application lacks detail regarding desired qualifications of the potential staff person.
- It is unclear why the budget includes over 700 hours of staff time for the NRCS position whose time will be reduced by the hiring of the new SWCD staff position.

Concluding Analysis

This application from Harney SWCD proposes to hire a groundwater conservation manager to develop conservation plans, guide landowners to appropriate financial assistance mechanisms, and develop conservation practice specifications. The staff person would be working in the Greater Harney Valley Groundwater Area of Concern under the guidance and mentorship of NRCS who currently lack staff in Harney County to implement Farm Plan programs. The applicant proposes to convert 6,243 acres with MESA sprinkler systems to LESA sprinkler systems, reducing demand on groundwater resources in Harney County.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 6

Review Team Recommended Amount
$72,881

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$72,881

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5046-17412

Project Type: Monitoring

Project Name: Monitoring the Effects of Management on Stream Channels and Streamside Vegetation (MIM): Phase 2

Applicant: Wallowa Resources

Region: Eastern Oregon

County: Wallowa

OWEB Request: $30,308

Total Cost: $40,608

Application Description *(from application abstract)*

The USFS, Wallowa Resources and Eastern Oregon University initiated the Eagle Cap Partnership to achieve the common goal of stewardship, and enable a larger and growing body of partners to participate in the social and scientific mission of the Wallowa-Whitman National Forest. The Partnership seeks to target civic engagement in natural resources management. Toward that end, the WWNF and WR developed a collaborative range monitoring initiative. Other partners include grazing permittees and OSU Extension.Multiple Indicator Monitoring (MIM) provides information to adaptively manage in-stream and riparian resources. The MIM protocol is designed to be objective, efficient, and effective for monitoring streambanks, stream channels, and streamside riparian vegetation. This protocol is considered to be the best available and is used by the National Marine Fisheries Service when evaluating grazing impacts.The WWNF has identified 128 pastures across 33 grazing allotments with 182 streams that host ESA-listed fish. The partners started establishing the 128 MIM sites in 2009 and have established 59 to date, 27 of which were supported in part by an OWEB grant. Most of these sites are actively grazed; however, a few reference sites are not. The interest in riparian status and trend data by range managers and fisheries biologists continues to increase and outpace the ability of the US Forest Service Range Program to collect the data. This OWEB Grant seek funding for two field seasons (2020-2021) to establish an additional 22 MIM sites. The partnership had originally hoped to complete the remaining plots in three fields seasons; however, the new schedule of establishing the plots over the next six field seasons better aligns with the US Forest Service Range Program's capacity to establish new plot locations and their long-term schedule of monitoring the plots on a five-year rotation.

Monitoring Team Evaluation

Monitoring Team Strengths

- This project will collect important information to assess grazing impacts to riparian areas and inform management changes on public lands that provide habitat for sensitive fish species.
- The applicant will follow well-established monitoring methods outlined in the MIM Handbook.
- The budget includes funding for training, if needed, given that U.S. Forest Service (USFS) may not be able to cover the cost of training.
- The data will be stored with the USFS and Wallowa Resources, and both entities are committed to sharing information with a variety of audiences as outlined in the application.

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- The applicant has an effective partnership with USFS, which submitted a letter of support describing their contribution to the project.
- The monitoring objectives are clear and the information that will be collected will address the questions described in the application.
- The application describes the process used to select the designated monitoring area that is most sensitive to management influences, using a stratified random sampling design and illustrates the areas monitored in each phase in the uploaded map.
- The applicant has made progress on the previously funded monitoring grant to collect the same information they are proposing in this application, and will likely continue in a timely manner if this project is funded.

Monitoring Team Concerns

- There was no description of the specific process that will be used to apply the monitoring results in a timely manner to inform adaptive management to minimize grazing impacts to riparian areas.
- Because the information gathered is site-specific, it likely is not transferrable to other areas.
- The application lacked a description of when or how the data will be analyzed to create a report to answer the monitoring questions.
- It was not clear what role/tasks will be provided by Wallowa Resources relative to the staff wages requested in the budget.

Monitoring Team Comments

• Work with the applicant to be sure there is a clear path to report the monitoring findings to meet the project completion reporting requirements.

Review Team Evaluation

Strengths

- MIM protocol training emphasizes “key areas” which are intended to represent the area as a whole. If each site is placed and developed according to protocol, then monitoring data will demonstrate grazing management change effects on riparian and instream resources.
- The MIM protocol developed by BLM is a monitoring method accepted by the US Forest Service and National Marine Fisheries Service and is an established practice.
- Wallowa Resources, US Forest Service, and partners are methodically working through and prioritizing the establishment of MIM monitoring sites in Wallowa County on Forest Service managed lands where domestic livestock grazing occurs.
- This phase 2 monitoring effort is part of a long-term monitoring plan on the Wallowa Whitman National Forest that started in 2009.
- Information obtained from the MIM monitoring program will be used to inform domestic livestock herd management, ESA Consultation, the Forest Plan, Regional Aquatic Conservation Strategy, and restoration/conservation project effectiveness.

- Monitoring data resulting from the MIM protocol provides understandable information by which range managers can communicate with permittees regarding herd, range, riparian, and instream management.
- US Forest Service range staff have the capacity and funding to continue the MIM monitoring once each site is established. A plan is in place to monitor each site every five years ensuring the longevity of the monitoring investment.

Concerns

- Monitoring data gathered according to the MIM protocol is specific to each monitoring site and is not transferrable to other areas.
- The goal of this monitoring project is to provide baseline data to inform management decisions and activities to improve conditions in fish bearing streams. Achieving this goal on Forest Service managed lands in Wallowa County requires a long-term commitment to adaptive management by grazing permittees.

Concluding Analysis

The partnership of Wallowa Resource, US Forest Service, Eastern Oregon University, Oregon State University Extension Service, and grazing permittees are coordinated and have a plan to implement the program over the coming years. The establishment of a MIM site determines baseline conditions and subsequent monitoring at 5 year intervals will document status and trends in the monitored pasture. The monitoring data will inform future management and provide a tool for communication with grazing permittees.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 3

Review Team Recommended Amount
$30,308

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation

Fund

Staff Recommended Amount

$30,308

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5047-17446

Project Type: Monitoring

Project Name: North Fork Burnt River Stream Gage

Applicant: Powder Basin WC

Region: Eastern Oregon

County: Baker

OWEB Request: $38,088

Total Cost: $48,463

Application Description *(from application abstract)*

PROJECT LOCATIONThe North Fork Burnt River (NFBR) watershed is located north of the town of Unity in Baker County, Oregon and encompasses roughly 124,202 acres. Its main stream, NFBR, is one of four main tributaries that drain into Unity Reservoir and it is a major contributor. A stream gage exists on the NFBR (Station ID # 13269450) on the Wallowa-Whitman National Forest (WWNF) and is approximately 6 miles upstream from Unity Reservoir. It measures stream flows off 76,800 acres of the watershed.PROPOSED NEEDIn 2019, Oregon Water Resources Department (OWRD) announced they were planning to discontinue operation of this stream gage due to budget constraints. In March of 2019 the WWNF solicited comments on the proposed Patrick Vegetation Management Plan in the watershed. The project would involve about 48,753 acres of forestland managed by the WWNF upstream of the NFBR stream gage in a watershed where all the streams are 303d listed for temperature and/or habitat conditions. The long period of record (27 years) makes the gage especially valuable for detecting changes in stream flow related to this project because past management actions have been limited to ongoing livestock grazing and limited harvest and prescribed burns.PROPOSED WORKThe Powder Basin Watershed Council (PBWC) is requesting funds from OWEB on behalf of a group of partners to partially fund the continued operation of the NFBR stream gage from 2020-2022.PARTNERSGroups partnering with the PBWC via financial contributions are Greater Hells Canyon Council, Oregon Wild, OWRD, and local concerned citizens. Groups that have submitted letters of support include Burnt River Irrigation District, Idaho Power, and the WWNF. The broad support for the continued gage operation indicates its value. The information provided will document any management related changes that occur (positive or negative) to stream flows in the NFBR and help guide project development.

Monitoring Team Evaluation

Monitoring Team Strengths

- Continued operation of the gage would provide input to the recently completed Wallowa-Whitman National Forest Patrick Vegetation Management Plan, which tracks changes in streamflow due to land- use management to inform the redband trout conservation plan and agreement.
- This streamflow gage is important to inform reservoir management by irrigators and other water users and managers.
- The Oregon Water Resources Department will continue to operate this gage through a contractual agreement and make the information available to the public on their website.

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- The letters of support and monetary contributions to the budget demonstrate support from a wide range of partners.

Monitoring Team Concerns

- The application did not describe the process for analyzing data to determine if and how the vegetation management actions affect streamflow.
- The application does not state if a report will be written to summarize monitoring findings.
- Three years of monitoring likely will not be a long enough time period to determine if the streamflow change is associated with the vegetation management actions.
- It was not clear if a long-term funding strategy is in place to maintain this streamflow gage, which clearly has value to many stakeholders, including reservoir management for irrigation.

Monitoring Team Comments

• Encourage the applicant and partners to create a long-term funding strategy to operate this gauge.

• Confirm that water temperature data will be submitted to Oregon Department of Environmental Quality, in accordance with OWEB reporting requirements.

Review Team Evaluation

Strengths

- This long-term data set can inform vegetation management projects planned for the watershed upstream of the gage while supporting other monitoring efforts including fisheries, habitat restoration, irrigation water management and storage, and the effects of climate change.
- The USGS protocol implemented by OWRD to operate and maintain the flow gage is established and appropriate to obtain high quality flow data.
- Flow data from this gage provides a useful comparison for nearby watersheds lacking flow data for development of instream projects, hydrologic analysis, and monitoring.
- In the context of landscape scale vegetative treatments flow data can provide information on the hydrologic implications of forest management.
- The North Fork Burnt River is the main tributary to the Unity Reservoir and the Burnt River Irrigation District uses flow data from this gauge to manage the reservoir and inform irrigation water distribution.

Concerns

- A long-term funding strategy to operate this gage is not in place.
- The duration of the monitoring timeframe (2 water years) associated with this grant is limited and it will take a longer time to show changes associated with vegetation management in the watershed.
- It is unclear whether the scale of vegetation management upstream of the gage will be significant enough to result in detectable hydrologic change at the gage.

Concluding Analysis

Continued flow data collection on the North Fork Burnt River will benefit many partners including irrigators, conservation and restoration project implementers, and natural resource management agencies. OWRD has maintained the gauge for many years, their continued operation will ensure that high quality data is collected using appropriate methods, and all data will be available in real time on the OWRD website. This project would provide two additional years of data for a long standing flow gauge and help bridge the gap until a stable funding source is identified.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 3

Review Team Recommended Amount
$38,088

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$38,088

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Eastern Oregon (Region 5)

Application Number: 220-5048-17447 **Project Type:** Monitoring

Project Name: Sage Grouse Monitoring - OACD

Applicant: OACD

Region: Eastern Oregon **County:** Harney

OWEB Request: $58,250 **Total Cost:** $158,250

Application Description *(from application abstract)*

• The project location is on privately owned rangelands in four counties: Crook, Harney, Lake and Malheur. The uploaded map (CCAA Monitoring Project Map) shows habitat areas designated for greater sage-grouse protection within those counties. The 41 plans to be monitored lie within those boundaries. • The U.S. Fish and Wildlife Service (USFWS) made a determination in 2015 not to list the sage-grouse as a candidate species, based largely upon securing letters of intent from landowners to enroll their acreage in Candidate Conservation Agreements with Assurances (CCAAs). Site specific plans (SSPs) were completed for the 41 plans, enrolling acreage in designated practices to protect habitat. • The plans must be monitored for 30 years and information made available to USFWS. The proposed monitoring will meet requirements from the agency. (See upload “CCAA Baseline Data Collection and Monitoring Requirements and Associated Cost-Estimate – 5 Year Forecast”). The schematic (upload) was provided by the USFWS. This grant would cover one year of monitoring these 41 plans when paired with funds from USFWS. • The four soil and water conservation districts—Crook Soil & Water Conservation District (SWCD), Harney SWCD, Lakeview SWCD and Malheur SWCD—have limited resources from which to provide monitoring services while maintaining their primary function of providing technical assistance services to all county residents. The districts have small staffs yet serve thousands of acres and many constituents. Without outside funding resources, the monitoring will not be able to be accomplished. • The CCAAs provide protection to the landowners similar to a “safe harbor” agreement under the Endangered Species Act (ESA). If the sage-grouse is listed in the future, these agreements will be particularly critical to the landowners so their actions will not be a take under the ESA for their customary operations. • Active partners include the four districts and USFWS.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application describes a clear need to collect information that is required by the Candidate Conservation Agreements with Assurances (CCAA) for sage-grouse.
- The data will provide information to track vegetation changes in sage-grouse habitat.
- The applicant is working with the Lakeview, Malheur, Harney, and Crook Soil and Water Conservation Districts (SWCD) to collect the data, with participation from landowners and U.S. Fish and Wildlife Service.
- Staff collecting the data are experienced and familiar with the monitoring protocol.

- The applicant plans to communicate the summarized information to a variety of partners at regularly scheduled meetings.

Monitoring Team Concerns

- It was not clear how all the objectives described in the application can be met with a single year of monitoring and no formal analysis.
- The application lacked clarity to understand what data would be collected and the methodology to be followed. It was unclear if all monitoring uses the Pace 180° method and where photos are taken. The monitoring design was not described adequately to determine if the proposed monitoring will be adequate to provide the information needed across the large area the CCAAs cover. It was not clear how many of the sites to be sampled would be annual or 5-year monitoring.
- The application does not describe how the data will be analyzed by the local SWCDs to apply the data in an adaptive management framework, and what role USFWS will play to analyze the data to inform progress across all of the CCAAs.
- It was not clear what information is provided to USFWS and if and how summarized information will be shared with partners.
- It was not clear if the landowners are contributing match to support the required annual monitoring, and if a long-term strategy to support completion of this monitoring exists.

Monitoring Team Comments

• Encourage the applicant and partners to collaboratively develop a long-term funding strategy to complete this monitoring and reporting.

Review Team Evaluation

Strengths

- The four SWCDs and OACD involved in this monitoring project are working on a long-term funding strategy.
- Monitoring on each property is done every 5-10 years, property enrollments are staggered, and every landowner participating in the program is not monitored annually making the proposed work manageable. Many of the 41 properties have the required baseline data collected at this time.
- Participating SWCDs have worked with a broad group of partners to develop the monitoring protocols. Partners providing protocol input include academic groups, regulatory agencies, and natural resource management agencies.
- The time consuming PACE 180 protocol was originally required for all participating landowners where restoration trajectory was unknown. Other protocols, including photo points are now allowed in place of PACE 180, adding efficiency while maintaining completeness.
- This is a comprehensive monitoring approach and the request covers four counties. Implementation of the monitoring will foster collaboration between landowners, SWCDs, and US Fish and Wildlife Service.
- The project covers a large geography with a wide distribution of landowners. As such, the work will achieve a landscape scale network of properties involved in sage-grouse conservation.

- Information is used in real time to inform conservation actions on private land. This enables the connection of what is happening on the land with what is prescribed in ecological assessments and provides a framework for land management recommendations.
- The monitoring and management recommendations can be used to link landowners with funding sources.
- Ecological threat based models have proven to be an effective communication tool with landowners due to their clear categories and identified steps that could be taken to improve ecological conditions.

Concerns

- This application provides funding for one year of a thirty-year monitoring program and it is uncertain how the remaining 29 years will be funded.
- For those properties that do not have baseline data collected, the proposed work establishes baseline data without security that there will be follow-up monitoring.
- Protocol information in the proposal may not reflect the most current monitoring approach.
- Due to the privacy requirements of CCAAs there may be limited applicability for off-site data use.

Concluding Analysis

The Partnership of OACD and Malheur, Harney, Crook, and Lakeview SWCDs are proposing to monitor 41 CCAAs on private land, in four counties, covering 508,283 acres to guide sage-grouse conservation over a large geography. The protocol guiding the monitoring effort has been assembled with input from several partners and has been tested in the region as demonstrated by compiling baseline data for several of the 41 landowners participating in the CCAA program. Staggered landowner enrollment, follow up monitoring every 5 – 10 years, and the allowance for protocol variance makes this annual monitoring effort achievable. At this time funding for this program beyond 2020 is uncertain, however the project partnership and US Fish and Wildlife Service are exploring stable funding sources with longevity to continue the effort.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 3

Review Team Recommended Amount
$58,250

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

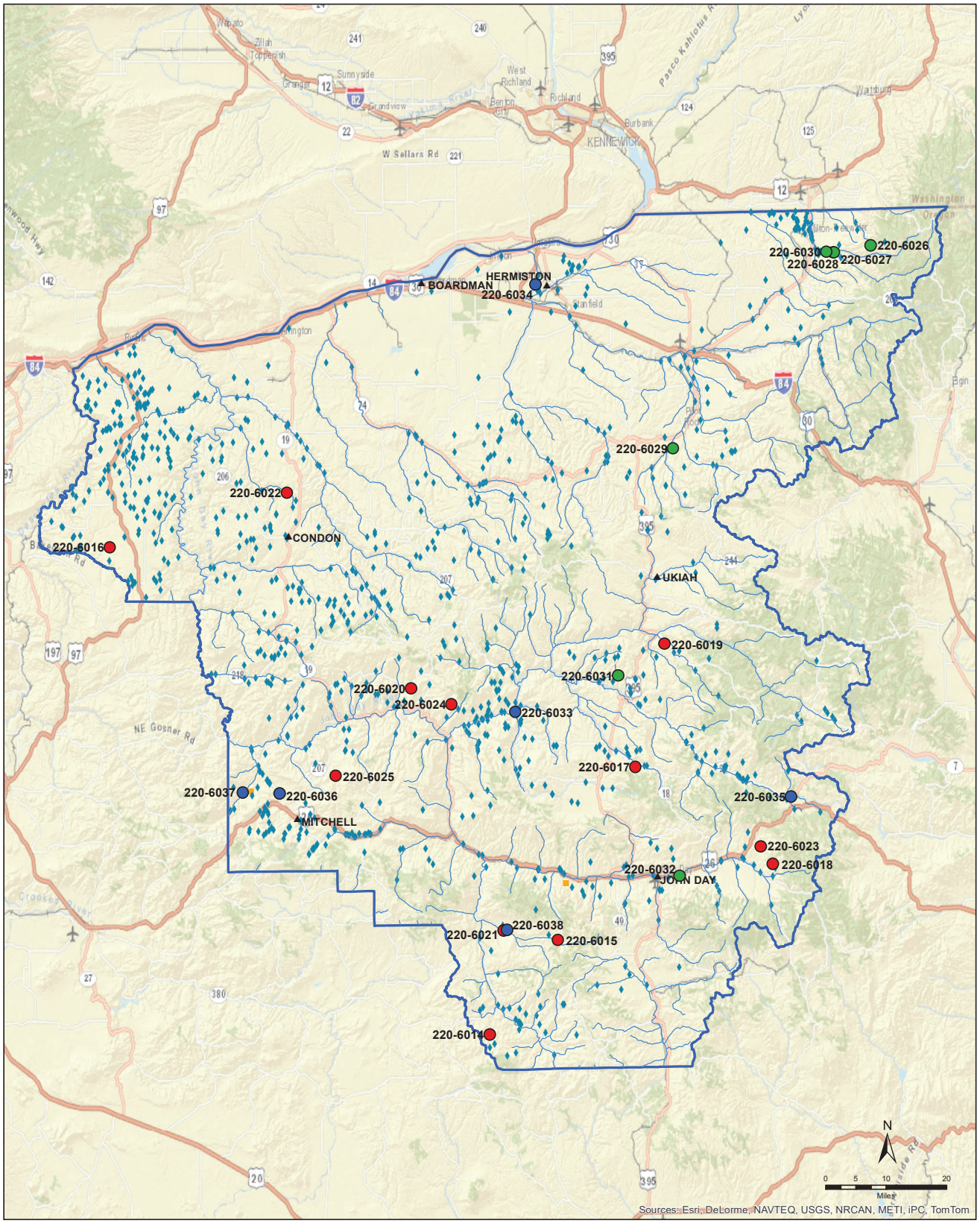
Staff Recommended Amount

$58,250

Staff Conditions

None

Mid-Columbia - Region 6 Fall 2019 Applications



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Grant Types

- Restoration
- Technical Assistance
- Stakeholder Engagement
- Monitoring

Previous Grants: 1998 - Spring 2019

- Restoration
- Land Acquisitions
- Streams
- Region Boundary

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775 Summer St, NE Suite 360
Salem, OR 97301-1290
(503) 986-0178
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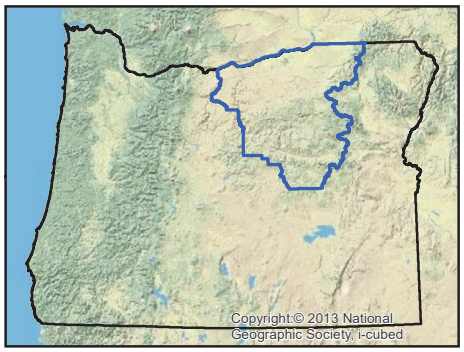

Region 6 - Mid Columbia

Restoration Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-6021	South Fork John Day WC	Murderers Creek Ranch Enrichment	Multiple partners are collaborating to enhance and protect over two and a half miles of Murderer's Creek, located on the ODFW Phillip Schneider Wildlife area in Grant County. Restoration actions include establishing beaver habitat, improving conditions for steelhead and other native fish, fencing to exclude livestock, and encouraging high flows to spread out on the floodplain.	197,808	Grant
220-6022	Gilliam SWCD	Upper Hay Creek Restoration of Rare and Declining Habitat	Expanding on existing riparian protection and enhancement along the entire Hay Creek system, low-tech restoration structures will be used to reconnect the floodplain to the stream, create more pool and wet sections for fish, fence off the creek, and plant native plants along a perennial stream in Gilliam County.	146,810	Gilliam
220-6025	Wheeler SWCD	Shoofly Watershed Restoration	Juniper will be removed to increase the health of native grass and shrub communities along slopes adjacent to Shoofly Creek in Wheeler County. In addition, three Aspen stands and one mile of Shoofly Creek will be fenced to exclude livestock; and three springs will be developed in the uplands to provide water for livestock and wildlife.	83,879	Wheeler
220-6015	South Fork John Day WC	Tex Creek Restoration	Structures, such as beaver dam analogs and channel spanning large wood structures, will be installed to trap and store water and fine sediments that will extend the season of flow in Tex Creek and provide improved conditions for steelhead in Grant County.	175,037	Grant
220-6023	Grant SWCD	Blue Mountains Vegetative Health Initiative - Dads Creek Unit	Forest health will be improved over 500 acres of private forests by addressing overstocked conifer stands that are prone to severe fire and disease, and 250 acres of Juniper infested rangeground that is impacting natural grass communities and rangeland hydrology will be treated in the Dad's Creek basin in Grant County.	405,640	Grant
220-6017	North Fork John Day WC	South Fork Long Creek Uplands	Enhancing forest health on slopes adjacent to South Fork Long Creek and Jordan Creek in Grant County will be accomplished by removing juniper, and restoring and protecting three aspen stands.	50,310	Grant

Restoration Projects Recommended for Funding in Priority Order (continued)

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-6014	South Fork John Day WC	Brisbois Aspen Health	Junipers and encroaching conifers will be removed from declining aspen stands along Brisbois Creek in Grant County; aspen will then be protected with wire cages and an upland spring will be developed as a water source outside the riparian areas for both wildlife and livestock.	54,431	Grant
220-6020	Bridge Creek WC	Kahler Watershed Improvement 2	Native grass and shrub communities will be restored on Kahler Creek and an unnamed tributary in Wheeler County by removing juniper, treating invasive plant species, reseeding areas with native plants, and installing cross fencing to protect areas.	48,485	Wheeler
Total Restoration Projects Recommended for Funding by RRT and OWEB Staff				**1,162,400**	

Restoration Projects *Recommended but Not Funded* in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-6018	Grant SWCD	Greenwood Upland Improvements	Conservation actions will be implemented on a property in Grant County, located on a dry ridge above Isham Creek, that include improving four existing ponds and constructing four new ponds to catch runoff and snowmelt as a water source for wildlife and livestock, installing a solar pump to provide water for livestock in the uplands, and fencing portions of the creek.	132,800	Grant
Total Restoration Projects Recommended for Funding by RRT				**1,295,200**	

Restoration Applications *Not Recommended* for Funding by RRT

Project #	Grantee	Project Title	Amount	County
220-6016	Sherman SWCD	Sherman County Range Restoration	152,461	Sherman
220-6019	North Fork John Day WC	Desolation - NoName Creek Restoration	41,628	Grant
220-6024	Monument SWCD	Bologna Basin Aspen Restoration	97,571	Grant

Region 6 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Technical Assistance (TA) Projects Recommended for Funding in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-6031	Grant SWCD	Ritter Fish Habitat Assessment	A comprehensive plan for identifying, prioritizing, and developing future restoration efforts that improve habitat and passage for ESA-listed summer steelhead will be developed for 23 miles of Six Mile, Eight Mile and Granite Creeks, which are tributaries of the Middle Fork John Day River.	53,244	Grant
220-6029	Umatilla Basin WS Foundation	Stanley Creek Culvert & Haskell Dam Removal Design	Engineered designs will be developed to remove an abandoned water diversion structure on West Birch Creek and correct an undersized culvert on Stanley Creek, which will address impaired fish passage to important cool water habitat upstream in Umatilla County.	40,475	Umatilla
220-6028	Walla Walla Basin Watershed Foundation	Upper Walla Walla Ground-Based Habitat Assessment	A stream habitat survey will be completed along the Walla Walla River in Oregon in partnership with CTUIR to inform the CTUIR's watershed assessment and action plan.	60,389	Umatilla
220-6030	Walla Walla Basin Watershed Foundation	Joe West Bridge Reach Walla Walla River Habitat Design	Construction-ready designs will be developed to improve conditions for aquatic species, including steelhead, Chinook and bull trout, along a stretch of the Walla Walla River with recent flooding that impacted nearby residences and degraded the river for fish.	61,620	Umatilla
Total TA Projects Recommended for Funding by RRT and OWEB Staff				**215,728**	

Technical Assistance Projects *Recommended but Not Funded* in Priority Order

Project #	Grantee	Project Title	Brief Description	Amount Recommended	County
220-6026	Confederated Tribes Umatilla Indian Reservation	Upper Walla Walla River Watershed Assessment and Strategic Action Plan	A Watershed Assessment and Strategic Action Plan will be developed to identify issues impacting salmon and other fish in the Walla Walla River and provide a guide to correcting those issues through restoration.	75,000	Umatilla
Total TA Projects Recommended for Funding by RRT				**290,728**	

Technical Assistance Applications *Not Recommended* for Funding by RRT

Project #	Grantee	Project Title	Amount	County
220-6027	Confederated Tribes Umatilla Indian Reservation	Walla Walla River Forks Floodplain Reconnection and In- stream Enhancement Design	75,000	Umatilla
220-6032	Grant SWCD	Increasing Summer Streamflow in the John Day Watershed	73,502	Grant

Region 6 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Stakeholder Engagement Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
None					
Total Stakeholder Engagement Projects Recommended for funding by OWEB Staff				**0**	
Stakeholder Engagement Projects *Recommended but Not Funded* in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
None					
Total Stakeholder Engagement Projects Recommended for funding by RRT				**0**	
Stakeholder Engagement Projects *Not Recommended* for Funding by RRT					
Project #	**Grantee**	**Project Title**		**Amount**	**County**
None					

Region 6 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Projects Recommended for Funding in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
220-6037	Bridge Creek WC	Bear Creek Steelhead Monitoring	The effectiveness of Beaver Dam Analog (BDA) structures in restoration will be monitored to identify resulting impacts on steelhead, stream temperature, and stream conditions on Bear Creek in Wheeler County where more than 70 BDA structures have been installed.	84,834	Wheeler
220-6033	Monument SWCD	NF John Day tributary Smallmouth Bass Monitoring	The abundance, distribution, and diet of smallmouth bass will be assessed in three tributaries of the North Fork John Day River in Grant County to determine how bass interact with salmon and steelhead. This data will inform restoration prioritization and development that focuses on salmon, which is especially important as tributaries become warmer with climate shifts.	245,746	Grant
220-6036	Utah State University Office of Sponsored Programs	Long-term Population Impacts of Beaver Restoration: Bridge Creek Intensively Monitored Watershed	Long term monitoring of low-tech beaver dam analogs will continue on Bridge Creek in Wheeler County to assess impacts of these structures on steelhead and salmon and whether floodplain reconnection can prevent channel incision.	239,338	Wheeler
Total Monitoring Projects Recommended for funding by OWEB Staff				**569,918**	
Monitoring Projects *Recommended but Not Funded* in Priority Order					
Project #	**Grantee**	**Project Title**	**Brief Description**	**Amount Recommended**	**County**
None				**0**	
Total Monitoring Projects Recommended for funding by RRT				**569,918**	

Region 6 ~ OWEB: Restoration, Technical Assistance, Stakeholder Engagement, and Monitoring October 28, 2019 Grant Offering

Monitoring Applications *Not Recommended* for Funding by RRT				
Project #	**Grantee**	**Project Title**	**Amount**	**County**
220-6034	Umatilla Basin WS Foundation	OXBOW Rapid Bio-Assessment	36,539	Umatilla
220-6035	OSU Office of Sponsored Research & Award Admin	Monitoring Groundwater Conjunctive Use in the Middle Fork of the John Day River	149,621	Grant
220-6038	South Fork John Day WC	Annual Grass Amendment	189,252	Grant
Region 6 Total OWEB Staff Recommended Board Award			**1,948,046**	**18%**
Regions 1-6 Grand Total OWEB Staff Recommended Board Award			**10,877,263**	

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6014-17365
Project Type: Restoration
Project Name: Brisbois Aspen Health
Applicant: South Fork John Day WC
Region: Mid Columbia
County: Grant
OWEB Request: $54,431
Total Cost: $81,436

Application Description *(from application abstract)*

Brisbois Creek is located on the Keerins Ranch, near Izee, Oregon, in the Southwestern corner of Grant County. Brisbois Creek is listed on DEQ's 303d list for temperature and sedimentation. The upper reaches of Brisbois Creek contain Aspen stands, and are forested. This project area continues from the previously funded OWEB grant #: 219-6015, Big Flat Juniper Removal, which included portions of the headwaters of Brisbois Creek for Juniper Removal.The NRCS Forest Health priority area has been identified as the Upper South Fork John Day region, and the Keerins Ranch has enrolled to have forest health practices in the Brisbois watershed. In between these Forest Health units there are many Aspen stands. These stands were identified in the South Fork John Day Watershed Council's Aspen Inventory as lacking overstory component and suffering from conifer encroachment. OWEB funds are being requested to remove encroaching Western Juniper and Conifer from the Aspen stands, install wire cage enclosures for Aspen sucker protection, and install an upland water source.

Review Team Evaluation

Strengths

- Strengths
- Removing conifers from aspen stands is an appropriate management practice.
- Using individual cages to protect saplings has proven successful in similar aspen restoration projects.
- The project site provides habitat for resident redband trout, deer, elk, and other wildlife.
- The proposed project builds on an OWEB-funded technical assistance project that located and prioritized aspen stands in the South Fork John Day Basin, including the proposed project sites.
- The applicant has a history of successfully completing projects similar in scope.
- The application budget provides detail needed to determine costs are reasonable, and cost-benefit for the restoration investment is favorable.
- The project expands ecological benefits realized by an adjacent NRCS-funded forest health project.

Concerns

- No significant concerns were identified.

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Concluding Analysis

Riparian vegetation in the Brisbois Creek drainage, particularly aspen, is showing the impacts of conifer and juniper encroachment. If not reversed, the habitat value on this stream corridor could significantly decline. The applicant is using their recent aspen inventory to assure the sites selected are most likely to flourish with treatment. Previous project experience indicates caging adjacent aspen saplings once aspen grows above browse height extends the life of the investment.

Review Team Recommendation to Staff
Fund

Review Team Priority
7 of 9

Review Team Recommended Amount
$54,431

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$54,431

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6015-17372
Project Type: Restoration
Project Name: Tex Creek Restoration
Applicant: South Fork John Day WC
Region: Mid Columbia
County: Grant
OWEB Request: $175,037
Total Cost: $220,633

Application Description *(from application abstract)*

The Tex Creek within the Project area occurs in an unconstrained reach within the ODFW-owned Phillip W. Schneider Wildlife Area. The Project area is entirely on public land and includes the lower 0.35 miles of Tex Creek and associated floodplain at the confluence with Murderers Creek near river mile (RM) 15.6. Some of the earliest documentation of limiting factors in Tex Creek includes a study done in the early 1960s by the Oregon State Game Commission (OSGC 1965). This study noted losses of young steelhead due to dewatering in the lower reaches, and attempts were made to improve surface flows and fish survival by installing a series of eight weirs in the lower 0.5 miles of stream.The most recent documentation of aquatic conditions specifically in lower Tex Creek includes the South Fork John Day Fish Barrier Survey (Neal 2017, OWEB grant #:216-6031), and ODFW steelhead redd surveys. The fish barrier survey identified the lower 1,850 feet of Tex Creek as a fish barrier due to dewatering during the period from July 1 up until fall rains occur each year and ranked the site as the third highest priority for restoration in the Murderers Creek watershed. Annual redd counts by ODFW indicate that no redds have been found in the lower 2.5-mile survey reach of Tex Creek in the last five years (from 2014 to 2018). Prior to that counts ranged from 0.0 to 3.2 redds per mile in the period from 2009 to 2013 (ODFW 2019).The South Fork John Day Watershed Council (SFJDWC) secured funding through OWEB grant #: 219-6011, in order to obtain design plans to remedy this dry channel passage barrier.We are requesting OWEB funds in order to implement design to install naturally occurring structures such as beaver dam analogs (BDA's) and channel spanning large wood (LWD) structures to trap and store water and fine sediments, with the goal of extending the season of flow in Tex Creek.

Review Team Evaluation

Strengths

- The application clearly describes the proposed actions and objectives.
- Design elements incorporating channel-spanning structures have shown success on streams with similar limiting factors.
- The proposed project builds on two previously funded OWEB technical assistance grants that identified this fish passage barrier as a priority in the South Fork John Day watershed and provided comprehensive, shovel-ready designs.
- ODFW records provide evidence that steelhead historically used Tex Creek and that dewatered sections cause fish mortality.

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- The project will extend the timing of perennial flows that will allow fish access to upstream habitat and reduce fish mortality.
- Confederated Tribes of Warm Springs is collaborating on the riparian planting, sharing their extensive experience in successful vegetation establishment.
- The applicant has previously collaborated with ODFW on multiple restoration projects.
- Partners with the relevant technical expertise are involved in the project.

Concerns

- The overall project costs are high; however, ODFW will provide the trees to help offset costs.
- Certain budget items, such as “Clearing and Grubbing” and “Cleaning,” appear high for the short project reach.
- There is a natural barrier downstream on Murderers Creek that limits some passage during low flows, which could reduce benefits from addressing the proposed barrier.

Concluding Analysis

Local partners and ODFW have identified Tex Creek, a 5.7-mile long cold-water tributary to Murderers Creek, as a high priority for restoration. Historical documentation show this stream once produced high numbers of steelhead juveniles when flow and connectivity to Murderers Creek existed.

Review Team Recommendation to Staff

Fund

Review Team Priority

4 of 9

Review Team Recommended Amount

$175,037

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$175,037

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6016-17376

Project Type: Restoration

Project Name: Sherman County Range Restoration

Applicant: Sherman SWCD

Region: Mid Columbia

County: Sherman

OWEB Request: $152,461

Total Cost: $203,737

Application Description *(from application abstract)*

This project takes place on 6 private properties: 2 in the Pine Hollow/Jackkife Watershed, 3 in the South Sherman Watershed, and 1 in the North Sherman Watershed. 4 properties are in the Deschutes River basin and 2 in the John Day River basin. The rangeland and riparian areas in Sherman County have been degraded over decades of overgrazing and livestock over-utilization. This watershed degradation has caused a decline in native grasses and other native plants, allowed increases in non-native weed populations, reduced upland water infiltration, and increased erosion. Further, livestock utilization of riparian areas has caused bank erosion and channel widening as well as reduced the native plant populations and available wildlife habitat. Range and riparian degradation have reduced upland and riparian function and hence wildlife and aquatic habitat quantity and quality. This project will implement several range restoration strategies to improve upland function and reduce the pressure on riparian areas. We will construct cross fences to improve rotational grazing opportunities and keep livestock out of riparian areas. This project will also develop springs and install solar pumping plants to provide upland water sources for wildlife and livestock and reduce the use of riparian corridors. Finally, 43 acres of range will be seeded with perennial grasses to improve forage, wildlife habitat, and water infiltration. Partners in this project are Sherman County Area Watershed Council, Natural Resource Conservation Service (NRCS), landowners and operators, and Oregon Watershed Enhancement Board (OWEB).

Review Team Evaluation

Strengths

- There were no identified strengths.

Concerns

- Understanding project scope and assessing collective ecological benefit is difficult when project sites are scattered throughout multiple watersheds.
- The overall project cost is high for minimal ecological benefit.
- Since the Conservation Reserve Enhancement Program (CREP) requires landowners to keep livestock out of buffers and the original CREP contract could have covered fencing costs, it is unclear why OWEB funds are requested for fencing.

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- The status of the Conservation Reserve Program (CRP) fields adjacent to or potentially affected by the proposed project components is unclear from the application. Additional information explaining whether the CRP contracts are being renewed or whether those fields will be grazed or farmed is needed to better understand the proposed project.
- A management strategy incorporated into the application explaining how grazing will enhance or maintain the project objectives and investments is needed to determine the likelihood of success for this rangeland restoration project.
- It is not clear how water developments and cross fencing will improve livestock distribution on some of the sites.

Concluding Analysis

Lands in Sherman County could benefit from more rangeland restoration; however, it is difficult to understand the cumulative impacts of the proposed restoration because the project sites are spread across a broad geography. Also, without information on grazing management strategies it is difficult to determine the cost effectiveness of the proposed work. If resubmitted, the application would be stronger by focusing on a watershed approach to restoration.

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-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6017-17419
Project Type: Restoration
Project Name: South Fork Long Creek Uplands
Applicant: North Fork John Day WC
Region: Mid Columbia
County: Grant
OWEB Request: $50,310
Total Cost: $64,510

Application Description *(from application abstract)*

This project is located on the South Fork of Long Creek in Northern Grant County, a tributary to Long Creek, near the headwaters of the Middle Fork John Day River. The South Fork of Long Creek provides much needed cold water habitat to Long Creek, and subsequently, the Middle Fork of the John Day River system. The location of this significant cold water input to the Long Creek subwatershed is primarily located on private land and is being overrun by juniper encroachment. Landowners in this area have great concern for the quality and quantity of water available for livestock and wildlife, and have great concerns for their neighbors downstream. In addition to managing for phase II juniper encroachment, Quaking aspen is also a sensitive and important habitat feature that landowners in the area value and seek to protect. This project seeks to cut and pile 92 acres of large juniper encroachment, and protect 3, one-acre, Quaking aspen stands through installation of buck and pole style protection fence, on the South Fork of Long Creek and Jordan Creek.Project Partners include the Landowner, Norb Volny and the North Fork John Day Watershed Council.

Review Team Evaluation

Strengths

- The application clearly describes the elements of this technically sound project.
- The conifer edge ecosystem is an appropriate location for the prioritized treatment sites.
- Protecting aspen clones with buck and pole fencing balances both timber fall and wildlife use, as well as handling heavy snow loads.
- Steelhead use the South Fork Long Creek for spawning; juniper removal and riparian vegetation protection will help maintain cold water regimes.
- The healthy condition of the understory reflects previous livestock management that effectively protected habitat conditions.
- The motivated landowner increases the likelihood for project success.
- The cost of the project is reasonable for the proposed objectives.
- The applicant has a proven record of accomplishment on similar projects.

Concerns

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- Maps showing more detail on individual treatment areas would have strengthened the application.
- More attention should be given to slash management to prevent unintended impacts to the habitat.

Concluding Analysis

The project property, located near the town of Long Creek, is in an area with limited requests for voluntary watershed restoration. The landowner is actively engaged in the project and is looking for technical advice on how to restore proper functioning conditions on his land. Encroaching juniper are crowding out the aspen in this drainage where significant ground moisture and seeps indicate that historically aspen would have thrived in this watershed.

Review Team Recommendation to Staff
Fund

Review Team Priority
6 of 9

Review Team Recommended Amount
$50,310

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$50,310

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6018-17425 **Project Type:** Restoration

Project Name: Greenwood Upland Improvements

Applicant: Grant SWCD

Region: Mid Columbia **County:** Grant

OWEB Request: $132,800 **Total Cost:** $213,400

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 fence off a small section of Isham Creek. Partners include NRCS and Blue Mountain Land Trust all match will be provided by the landowner. This proposal was submitted in Fall, 2018 and was not recommended for funding due to four concerns; a copy of the evaluation and information which addresses these concerns has been uploaded as an attachment to this proposal.

Review Team Evaluation

Strengths

- The application addresses concerns identified in the previous evaluation.
- Project components will improve distribution of livestock and encourage forage health.
- The hydrologic analysis provides more detail on the amount of anticipated water runoff and collection.
- Other large-scale restoration projects are evident on the property and indicate a systems approach to conservation.
- The landowners are motivated to improve the ecological condition of their land and are in the process of pursuing a conservation easement to protect fish and wildlife habitat and restoration investments into the future.
- The short, fenced section of Isham Creek will protect habitat for steelhead.
- The applicant has experience with this type of project with engineers on staff to address any project complexities.

Concerns

- Clay soils may preclude the need for pond liners; however, the applicant addressed prior evaluation

comments to address this concern and explain why pond liners are still included in the project approach.

- The lower grasslands are predominantly invasive annual grasses and require significant management to restore; however, the landowner has successfully treated some Medusahead sites using a granular herbicide and has plans to continue this treatment.
- While the application includes a draft grazing management plan, a finalized version of the plan would have been beneficial to the review.

Concluding Analysis

One of the main limiting factors to managing this upland site is the lack of water. With minimal spring sites, neighbors on both sides of Isham Creek have attempted to drill wells with no success. Four ponds on this property have provided some short-term water for livestock and wildlife but the main water source is still Isham Creek, a steelhead creek running along the north side of the property. Siting the ponds strategically across the property will support new grazing strategies to both improve upland perennial grass stands and protect Isham Creek from livestock.

Review Team Recommendation to Staff
Fund

Review Team Priority
9 of 9

Review Team Recommended Amount
$132,800

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

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6019-17433

Project Type: Restoration

Project Name: Desolation - NoName Creek Restoration

Applicant: North Fork John Day WC

Region: Mid Columbia

County: Grant

OWEB Request: $41,628

Total Cost: $53,978

Application Description *(from application abstract)*

This project is located on the Desolation Creek, LLC (DCLLC) property in Northern Grant County, approximately 1.5 miles northeast of Dale, Oregon. The DCLLC property takes in the lower 10 miles of Desolation Creek beforeflowing in to the North Fork John Day River.Livestock have severely degraded many of the stream banks across the DCLLC property. This is a result of their preference for these sensitive systems, and decades of intensive, and minimally restrictive use. Stream banks have been trampled and are “hummocked” to the extent that water is pooling in hoof-prints and remaining on the surface, rather than saturating hyporhyic zones and holding through the season. Water contained in hoof-prints that is unable to permeate the soil due to the level of compaction will be subsequently lost to evaporation. What doesn't evaporate, is warmed significantly before re-entering ground water or stream flow. Additionally, springs and gullies have been deprived of soil holding vegetation, causing down-cutting, channel incision, and riparian degradation. Grazing in riparian areas has been shown to considerably reduce soil pore space, and as a result soil water storage, impacting ecosystem productivity, biogeochemistry, stream temperature, and flows (Hammersmark 2008). The "Moderate" and "High" OWEB Limiting Factors that this project will address are: Altered Species Composition, Habitat Connectivity, Loss of Shade/Cover, Altered Habitat Structure, Altered Thermal Regime and Altered Sediment Regime.This project will hire a contractor to install 1.9 miles of NRCS guided livestock exclusion fence on 1 perennial, non-fish-bearing, stream in a priority stream system. Additionally, one off-channel water trough will be developed to water livestock and wildlife.The partners for this project include Ecotrust Forest Management(EFM) and NFJDWC.

Review Team Evaluation

Strengths

- This is a technically sound project with goals to improve water quality and quantity.
- The overflow shut-off and flow-regulating design has proven effective in conserving water quantity, which provides additional ecological benefit.
- Fencing in the holding pasture will protect the stream and riparian vegetation.
- The project builds on past restoration that focused on protecting and enhancing fish-bearing streams and wet meadows.

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- The applicant has experience in implementing projects similar in scope.
- Spring development is an appropriate method for keeping livestock out of the creek channels.

Concerns

- The ecological benefit of the proposed fencing, other than in the holding pasture, is unclear on this non-fish bearing stream. Furthermore, this fencing will require maintenance to protect the investment long term.
- The watershed benefit is low for the high cost of the investment.
- An explanation of how this project fits within the property's landscape-scale restoration plan and why this project is a priority would provide better context for the proposed project.
- The spring development could be a better fit for the OWEB small grant program.

Concluding Analysis

Over the past five years, extensive restoration has been implemented to protect and restore the significant ecological benefits of Desolation Creek watershed's healthy timber, aspen communities, native fish habitat and high-elevation, wet meadow ecosystems. Much of the work included fencing that requires long-term fence maintenance because of damage from snow load, elk, timber fall, and livestock use. Future applications should include comprehensive justifications for future fencing locations in terms of habitat benefit, and information relating to fence maintenance.

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-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6020-17444 **Project Type:** Restoration

Project Name: Kahler Watershed Improvement 2

Applicant: Bridge Creek WC

Region: Mid Columbia **County:** Wheeler

OWEB Request: $48,485 **Total Cost:** $65,314

Application Description *(from application abstract)*

This project is located in the Kahler Creek Watershed in northeast Wheeler County. The increase of juniper and invasive species has created a decline in desirable shrubs and herbaceous vegetation in the watershed. Decreased infiltration and increased runoff reduce water quality and quantity in the watershed during critical times of the year. The project will remove 197 acres of western juniper, treat and reseed 51 acres of noxious weeds, primarily medusahead, and install 4500' of cross fencing to create two riparian exclusion areas on Kahler Creek and an unnamed tributary. This is the second phase of upland work in the Kahler Creek watershed and includes new landowners, not part of the Phase 1 project. Project partners include three landowners, OWEB, and Mid John Day-Bridge Creek Watershed Council.

Review Team Evaluation

Strengths

- This project builds on previous restoration work in the area, leveraging NRCS funds on private lands and USFS work done on the adjacent national forest.
- Restoration is gaining momentum in an area where landowners have been reluctant to participate.
- Kahler Creek and certain tributaries provide some steelhead habitat that could potentially be expanded with continued restoration in the basin.
- The budget provides clear detail and costs seem reasonable for the proposed work.

Concerns

- The application would be stronger with additional background on other restoration in the area.
- It is not clear how site prioritization is determined, whether it is based solely on opportunity or ecological benefit.
- The ecological benefit of the proposed cross fencing is not explained.
- More detail on the juniper removal strategy is needed to determine the technical soundness and cost-benefit of this project component.

Concluding Analysis

This is the second phase of upland projects in the Kahler Basin. Previous work with NRCS has successfully engaged landowners to consider restoration on their properties. The first phase is nearing completion and is proving to be an effective tool for engaging other landowners in the basin. While the objectives of improving upland health is clear, more information on how the overall restoration strategy will result in ecological uplift in the basin is needed to better understand the watershed benefits for the OWEB investment.

Review Team Recommendation to Staff
Fund

Review Team Priority
8 of 9

Review Team Recommended Amount
$48,485

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$48,485

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6021-17445 **Project Type:** Restoration

Project Name: Murderers Creek Ranch Enrichment

Applicant: South Fork John Day WC

Region: Mid Columbia **County:** Grant

OWEB Request: $197,808 **Total Cost:** $455,422

Application Description *(from application abstract)*

The Murderers Creek watershed covers approximately 84,962 acres and is a tributary to the South Fork John Day River in Grant County, Oregon. The project area is located about 3 miles upstream of the confluence with the South Fork John Day River and extends another 2.5 miles along Murderers Creek. The property within the project area is owned by the Oregon Department of Fish and Wildlife (Reclamation, 2019). Murderers Creek is part of the John Day River system, one of the last major free-flowing rivers in the Columbia River system, and is one of the last to contain wild steelhead. Murderers Creek is the largest of the 5 tributaries used by steelhead and therefore is very valuable to sustaining or increasing steelhead production. It is also one of the most important tributaries for spawning and is used by about 59% of steelhead that enter the SF John Day River (MCWA, 1997).The Murderers Creek Watershed Assessment states that steelhead are limited by suitable habitat and water temperatures. However, they note that beaver dams would probably increase late season flow which in turn would provide rearing habitat and juvenile survival. The Bureau of Reclamation provides technical assistance to address key limiting factors to protect and improve survival of salmon and steelhead listed under the ESA. We are proposing to add large wood structures to establish beaver habitat, improve fish cover, increase sediment retention and expand the floodplain. Earth moving work will include removing existing berms, rock rip rap and forming pilot channels to increase floodplain activation. In addition, we will enhance riparian habitat through expanded fencing, plantings and preventing establishment of non-natives. Partners for the project include; ODF&W Wildlife Area, ODF&W District Office, CTWS, BOR & SFJDWC

Review Team Evaluation

Strengths

- The application has clear objectives and contains sufficient detail needed to determine technical soundness and likelihood for success.
- The project designs and monitoring plan clearly explains an appropriate approach and how tracking will document improvements or identify when there is a need for adaptive management.
- This watershed scale project incorporates a phased approach that will increase the likelihood of success for achieving restoration objectives.
- Riparian fence buffer is adequate for the near term, and has potential for future expansion.

- Murderers Creek has high potential for increased steelhead production and provides habitat for juvenile Chinook as well. Restoration actions will improve habitat for spawning and rearing for steelhead, and rearing for juvenile Chinook.
- Beaver have successfully colonized both up- and downstream of the project site. Project components will encourage beaver to utilize the treatment reach as well.
- ODFW will implement some of the work using their equipment, which helps to keep costs reasonable for 2½ miles of instream restoration.
- The applicant has a proven record for managing complex projects.
- Partners on the project bring a high level of expertise and relevant experience, which increases the likelihood for this project to succeed.

Concerns

- A map showing the project reach in relation to the entire watershed and other restoration projects in the area would provide helpful information to understand watershed context.
- The application did not provide details describing project monitoring, and how data will be used to inform adaptive management.

Concluding Analysis

Murderers Creek, a major tributary to the South Fork John Day River, provides cool water habitat to both steelhead and juvenile Chinook. ODFW spawning surveys, starting in 1969, indicate Murderers Creek is highly productive for steelhead; however, the channel is currently straightened, diked, and armored in the project reach. This has reduced native fish production in this reach compared to reaches located above and below the project site. The restoration actions identified in this application restore stream function and process, and ultimately increase native fish productivity, and protect clean, cool water for longer periods of time.

Review Team Recommendation to Staff

Fund

Review Team Priority

1 of 9

Review Team Recommended Amount

$197,808

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Fund

Staff Recommended Amount

$197,808

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6022-17456

Project Type: Restoration

Project Name: Upper Hay Creek Restoration of Rare and Declining Habitat

Applicant: Gilliam SWCD

Region: Mid Columbia

County: Gilliam

OWEB Request: $146,810

Total Cost: $323,429

Application Description *(from application abstract)*

The project is located on the Dryfork of Hay Creek approximately 15 miles from the mouth in the uppermost perennial reach of the watershed. The Dryfork of Hay Creek is a tributary to Hay Creek, Hay Creek is a tributary to the John Day River and the John Day River drains into the Columbia River. It is approximately 8 miles north of Condon in Gilliam County. The major watershed issue for this reach is intermittent flow during the summer months and very little riparian vegetation. The reaches upstream and downstream have perennial flow and this project aims to extend those wetted reaches. This project will use various floodplain connection actions to create pool habitat and extend perennial flow. Once perennial flow is established riparian plantings will begin. The District will utilize the Farm Service Agency Conservation Reserve Enhancement program to install a riparian fence and establish riparian plantings following the Low-Cost Process-Based Restoration structure installation. Project partners include FSA, OWEB, NRCS, ODFW, DSL, and Gilliam SWCD.

Review Team Evaluation

Strengths

- The application clearly states project objectives and includes photos representative of the project site.
- The identified technical solutions addressing limiting factors on this stream reach are sound.
- This project builds on existing restoration and riparian protection downstream on Hay Creek.
- Improved habitat and increased flows resulting from this project could encourage downstream beaver colonies to move upstream.
- Steelhead use Hay Creek in the lower reaches and this project could expand available habitat.
- The applicant has experience with this type of restoration and completing complex projects.
- The restoration approach will keep overall costs reasonable for the length of stream treated.

Concerns

- Fish use is unknown this high up in the Hay Creek system.
- Consideration should be given to prevent restoration actions from causing low flow passage barriers.

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- The justification for hiring consulting engineers is unclear given the low-tech nature of the restoration designs.

Concluding Analysis

Hay Creek is a lower John Day Basin steelhead stream that has seen extensive restoration completed downstream. This project and an additional future phase on the same property on a different fork, will complete stream protection along the entire Hay Creek system. The objectives of reconnecting floodplains to serve as a sponge to store high flow events could improve late season flows and encourage riparian shading from vegetation. The low-tech instream structures will also create added complexity that improves pool habitat for fish and encourage them to move into these headwater areas. If beaver can be encouraged to move in from downstream complexes, the project footprint could potentially expand and be naturally maintained.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 9

Review Team Recommended Amount
$146,810

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$146,810

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6023-17461

Project Type: Restoration

Project Name: Blue Mountains Vegetative Health Initiative - Dads Creek Unit

Applicant: Grant SWCD

Region: Mid Columbia

County: Grant

OWEB Request: $405,640

Total Cost: $867,063

Application Description *(from application abstract)*

The project is located in the Upper Mainstem John Day River upstream of Prairie City, OR. Unmanaged upland vegetation has resulted in impaired watershed function. Overstocked conifer forests have created conditions which are prone to severe fire and disease; juniper encroachment has impacted natural grass communities and the hydrology of the rangelands. Together with partners NRCS, ODF and Private Landowners, Grant SWCD proposes to treat a total of 500 acres of private forest ground and 250 acres of Juniper infested rangeground. This effort will compliment the District's Regional Conservation Partnership Program (RCPP); over the last two years, the program has treated 376 acres of forest and 299 acres of juniper in the subject unit. Site prioritization and treatment specifications will follow RCPP protocols for consistency between projects regardless of funding source.Program partners have identified three areas or "units" as high priorities for enrollment. Each unit is located within a watershed where a USFS treatment project is occurring; the subject unit for this proposal is known as the "Dads Creek" unit. The other two units, "Magone" and "Headwaters" will be the subjects of similar cost share requests over the next few, upcoming OWEB cycles.

Review Team Evaluation

Strengths

- Thinning efforts will reduce mistletoe and disease in these overstocked timberlands.
- The involvement of Oregon Department of Forestry as a partner and technical advisor increases the likelihood of success.
- The methodology used for site prioritization assures the best locations for restoration investments will be selected, including factoring in potential impacts to adjacent steelhead streams.
- The identified actions will help improve forest health and reduce the risk of stand-replacing wildfires.
- Significant NRCS RCPP funding will be leveraged to increase the scale of forest restoration.
- The project provides opportunities to engage landowners in conversations on forest health best management practices.
- The applicant has a proven record of restoration implementation.
- The budget is reasonable for the proposed scope of work.

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Concerns

- While the fuels reduction benefits of the proposed project are clear, the application lacked details on watershed benefits.
- There is no discussion of post-project slash treatments. This element is critical to overall project success, and will likely be addressed with ODF as a partner.

Concluding Analysis

Grant SWCD is collaborating with NRCS on this landscape-scale, forest health initiative in several watersheds in the upper John Day Basin. Leveraging these funds will significantly increase both the ecological scope and impact of the project. GIS and follow-up site visits will be used to assure the best sites for treatment are identified. Landowners in this area are motivated to improve their forest stands after recent catastrophic wildfires. This has provided an opportunity to discuss forest management practices to help keep these stands healthy into the future.

Review Team Recommendation to Staff
Fund

Review Team Priority
5 of 9

Review Team Recommended Amount
$405,640

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$405,640

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6024-17474 **Project Type:** Restoration

Project Name: Bologna Basin Aspen Restoration

Applicant: Monument SWCD

Region: Mid Columbia **County:** Grant

OWEB Request: $97,571 **Total Cost:** $179,576

Application Description *(from application abstract)*

1) This project is located in the East Bologna Creek drainage, a sub watershed of the NF John Day River in Grant County OR. 2) Bologna Basin is a 5,068 acre sub basin of the North Fork John Day River watershed that serves as important winter range habitat for big game (elk, mule deer). The east and west forks of Bologna Creek also provide essential spawning and rearing habitat for ESA-listed summer Steelhead. However, East Bologna Creek is water limited due to watershed function impairment. Historically, East and West Bologna Creeks ran to the North Fork John Day year-round. Due to the encroachment of juniper on this site, watershed health and function has been impaired by 30% as was determined in a survey of the site using the Western Guide to Juniper Treatment (Barrett 2007). The abundance of juniper is causing competition with native vegetation for water, space, sunlight, and available soil nutrients. Therefore, removal of juniper from the riparian and spring areas along with restoring native plant communities is crucial for stream recharge3) We propose a targeted aspen restoration project at three upland spring sites along the East Bologna Creek drainage. Specifically, this project aims improve upland function and restore native plant communities at these sites through the following activities:1) Felling 24 acres of western juniper2) Treating 13.1 acres of noxious weeds with herbicide and re-seeding with native grasses3) Planting a total of 330 aspen trees 4) Installing 2533 feet of wildlife exclusion fencing to protect aspen plantingsAdditionally, we will conduct bi-annual post-implementation site visits to monitor aspen establishment and overall restoration effectiveness at each site. 4) Project Partners include Monument Soil and Water Conservation District, Landowner Jeffrey Kee, Natural Resource Conservation Service, The North Fork john Day Watershed Council, and the Confederated Tribes of Warm Springs.

Review Team Evaluation

Strengths

- The application clearly describes project goals, objectives, and activities.
- This project complements NRCS-funded and previous OWEB-funded work on the property.
- The landowner has been actively engaged in restoration, which is demonstrated by previous projects.
- The budget includes details needed to understand costs.
- Steelhead spawn on both forks of Bologna Creek.

Concerns

- The cost is high for the proposed ecological benefit and number of acres to be treated. Given the level of contracted services budgeted, it is unclear why the high cost for personnel is needed for achieving the project goals.
- Buck and pole fencing may not be adequate to protect newly planted aspen from deer population; individual caging may be a more appropriate approach.
- Planting aspen in a site without a history of aspen vegetation is a risk and a technique new to this region. Additional detail on successful use of this method is needed to assess the technical soundness of this approach.
- Fence installation costs appear, inadequate, but it is unclear whether match dollars were allocated to this component.
- The USFS could potentially be a partner on the one spring site located on the border of the national forest and this property.
- Due to the significant distance between proposed project sites and Bologna Creek, it is not clear how realistic the expected watershed benefits to the stream will be from these treatments.

Concluding Analysis

This headwater region of Bologna Creek has seen extensive restoration in recent years. The landowner is interested in continuing to improve the fish and wildlife habitat on the property; however, some of the project design elements may not be the best alternatives for the site and there is uncertain watershed benefit for the high project 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

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6025-17494
Project Type: Restoration
Project Name: Shoofly Watershed Restoration
Applicant: Wheeler SWCD
Region: Mid Columbia
County: Wheeler
OWEB Request: $83,879
Total Cost: $146,483

Application Description *(from application abstract)*

1)The project is located in the Shoofly Watershed approximately 15 miles Northeast of the town of Mitchell in Wheeler County. 2) Western Juniper encroachment has increased over the years due to historic wildfire suppression creating both a water quantity and quality issue, as well as a loss of native vegetation resulting in degraded wildlife habitat. 3) This project seeks to reduce the negative impacts Western Juniper imposes on the watershed functions by hand cutting 85 acres of juniper, and machine cut and pile of 175 acres, 33 of which lay within the floodplain. In addition, the project will protect 3 declining Aspen stands, enroll 28.90 acres of Shoofly Creek into CREP, treat 70 acres for herbaceous weeds, and provide off site stockwater in 3 locations to help distribute grazing patterns. 4) Project partners include USDA Farm Service Agency, the landowner, Wheeler SWCD, and OWEB.

Review Team Evaluation

Strengths

- The application contains significant detail on project components and ecological benefits, including quantified groundwater inputs and reduced sediment from erosion.
- The site selection and prioritization process is clearly explained in the application.
- Treating weeds prior to fence construction is a technically sound method.
- The identified herbicide is appropriate to both the sites and the targeted weeds.
- Cutting juniper in the floodplain and placing it instream will help disperse stream flow energy and aggrade the channel.
- The project provides an opportunity for raising awareness and could encourage neighboring ranches to consider restoration.
- The applicant has a history of implementing this type of project that expands the CREP conversation into larger scale restoration.
- Landowner support and involvement increases the project likelihood of success and potential that the ecological benefits will be maintained into the future.
- There are sections of the riparian area with monocultures of introduced tall wheatgrass, which could be challenging to eradicate; however, this is a domestic version of Great Basin Wildrye that can provide wildlife cover and prevent invasive grasses from establishing.

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Concerns

- Actual steelhead or other native fish use in Shoofly Creek is not clear.
- Including detail on plans to inventory and address downstream barriers would provide some assurances for future ecological benefit on this stream system.
- The application does not include plans to prevent juniper re-establishment. However, on past projects the landowner has successfully used prescribed and jackpot burns as a management practice.
- The budget includes lump sums that lack the detail needed to understand project costs, particularly on the spring developments.

Concluding Analysis

Shoofly Creek, although currently blocked from steelhead use, is a perennial stream with the potential for providing riparian habitat for other aquatic and terrestrial species. The landowner has successfully completed extensive restoration on his ranch and continues to improve wildlife habitat. Improving water quality in this headwater region of the stream system could positively affect downstream habitat.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 9

Review Team Recommended Amount
$83,879

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$83,879

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6026-17338

Project Type: Technical Assistance

Project Name: Upper Walla Walla River Watershed Assessment and Strategic Action Plan

Applicant: Confederated Tribes Umatilla Indian Reservation

Region: Mid Columbia

County: Umatilla

OWEB Request: $75,000

Total Cost: $300,000

Application Description *(from application abstract)*

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources Fisheries Program is currently requesting proposals from qualified contractors to develop an Upper Walla Walla River watershed assessment and strategic action plan in collaboration with co-managers. The project will be focused on the Walla Walla River from the confluence with Dry Creek near Lowden, Washington, to the headwaters of the North and South Forks of the Walla Walla River in northeast Oregon. The project study area is primarily located in Walla Walla County, Washington and Umatilla County, Oregon, with a small portion in Wallowa County, Oregon. Funding from this grant will support work in the Oregon portion of the watershed only. The watershed assessment will identify the current and historical functioning of natural geomorphic and hydrologic processes that are linked to focal species habitat, as organized by the CTUIR River Vision (Jones et al. 2008) and Upland Vision Touchstones (Endress et al. 2019) and the effect of land use on the function of these processes. The assessment will identify limiting factors and watershed issues, focusing on those that affect salmonid species. The strategic action plan will provide: 1) a quantitative prioritization of geographic areas according to the potential for restoration of natural processes and 2.) itemized restorative actions that may be applied to each geographic area to restore watershed processes and achieve multi-species uplift.CTUIR will partner with the Walla Walla Basin Watershed Council, Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, United States Forest Service, Bureau of Land Management, as well as other stakeholders.

Review Team Evaluation

Strengths

- The project could help inform future restoration on the Upper Walla Walla River, which is a complex and highly mobile river system.
- Information resulting from the summarization of existing data will be useful, including identifying where information is lacking, and where restoration opportunities could reduce limiting factors to the aquatic species using the river.

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Concerns

- The application is not clear on what new data needs to be collected versus what analysis of existing data is needed.
- The budget contains lump sums and lacks detail necessary to determine whether costs align with the proposed work.
- Instead of attaching large uploads to the application, integrating critical information from those attachments into the application narrative would improve proposal clarity.
- More detail on how the information will be shared, stored or used would provide context necessary to determine the likelihood of success for the project to lead to future restoration efforts.

Concluding Analysis

There is a clear need for an assessment and action plan to guide restoration and protection along the main stem Umatilla River; however, it is difficult to determine technical soundness and likelihood for success in leading to eligible restoration without additional application details describing how information will be made available and used by appropriate stakeholders.

Review Team Recommendation to Staff

Fund

Review Team Priority

5 of 5

Review Team Recommended Amount

$75,000

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-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6027-17339

Project Type: Technical Assistance

Project Name: Walla Walla River Forks Floodplain Reconnection and In-stream Enhancement Design

Applicant: Confederated Tribes Umatilla Indian Reservation

Region: Mid Columbia

County: Umatilla

OWEB Request: $75,000

Total Cost: $300,000

Application Description *(from application abstract)*

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Department of Natural Resources Fisheries Program is currently requesting proposals from qualified Contractors to design a habitat restoration project on the Walla Walla River at the confluence of the North and South Fork Walla Walla RiverThe project is located on the mainstem Walla Walla River at River Mile (RM) 50.0-51.0, the North Fork Walla Walla River at RM 0.0-0.5, and the South Fork Walla Walla River at RM 0.0-0.5. The project area is approximately 5 miles SE of Milton-Freewater, OR in Umatilla County, OR.The Walla Walla River and North Fork Walla Walla River are highly channelized in this area. The Walla Walla River Valley is highly agricultural and the river was historically straightened and leveed to accommodate agricultural development. Channelization and related agricultural activities has had adverse effects on water quality, in-stream habitat, peripheral and transitional habitats, floodplain quality and function, riparian condition, and fish passage (particularly for Chinook salmon, Pacific lamprey, Mid-Columbia steelhead, and bull trout).The design will address the historic and current agricultural influences on the Walla Walla River in the project area based on CTUIR River Vision (Jones et al. 2008). The main goal of the design is to increase floodplain interaction, increase habitat complexity, and improve fish passage at all flows. Specific conservation actions will likely include levee setbacks, alteration of irrigation diversions to improve fish passage, construction of enhanced off-channel habitat, construction of high-flow relief channel between the South Fork and mainstem Walla Walla River, and large wood additions. The design will likely be on less than 1 river mile of the mainstem Walla Walla River and less than 0.5 river miles on the North and South Fork Walla Walla Rivers.CTUIR will partner with the Walla Walla Basin Watershed Council as well as four private landowners.

Review Team Evaluation

Strengths

- The project provides an opportunity for improving side-channel habitat and floodplain reconnection with a landowner new to restoration.
- Steelhead and bull trout use this section of the Walla Walla River.
- The applicant has a successful record of accomplishing restoration on similarly complex projects.

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Concerns

- The application's proposed solution section breaks objectives into five design stages, rather than providing detail on design objectives that address limiting factors, such as the need for instream wood or pool habitat.
- The project scope is not well defined.
- It is unclear if the design process will consider impacts to the irrigation diversion directly across from the project site on another landowner's property if the berm is removed and the historic side channel reactivated.
- The upper water diversion appears to be a seasonal partial barrier to fish passage; however, without more detail on conceptual solutions relating to this diversion, it was difficult to assess the level of ecological benefit.
- The costs appear high for design and the budget lacks sufficient detail to determine whether line items align with the proposed work.
- The project location is in a geomorphically complex area where the confluence of two forks of the river form the main stem Walla Walla River. Without more detail on conceptual project elements, it is difficult to assess if the approach is technically sound.

Concluding Analysis

The Walla Walla River is a highly manipulated river system, with flood levees and rural residential infrastructure along the banks and in the floodplain. This river is also critical habitat for steelhead, bull trout and reintroduced Chinook. While opportunities to work with landowners on reconnecting floodplain habitat are rare, in this situation additional detail is need to determine the soundness of the proposed technical assistance for design. If the application is resubmitted, the applicant is encouraged to address the identified concerns.

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-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6028-17413

Project Type: Technical Assistance

Project Name: Upper Walla Walla Ground-Based Habitat Assessment

Applicant: Walla Walla Basin Watershed Foundation

Region: Mid Columbia

County: Umatilla

OWEB Request: $60,389

Total Cost: $150,205

Application Description *(from application abstract)*

The Walla Walla River originates from basalt springs in the Blue Mountains of northeast Oregon. The springs provide surface water flow to both the North and South Fork Walla Walla Rivers, which flow west from the mountains before converging and flowing west and north through the City of Milton-Freewater in Umatilla County and on to the Columbia River. Healthy populations of ESA-listed summer steelhead, bull trout and reintroduced spring Chinook salmon are limited by inadequate stream flow, high summer water temperatures, high sediment loads, limited pools, LWD, riparian vegetation, and habitat complexity and also fish passage obstructions. Limiting factors have been well documented by numerous planning efforts, yet published data documenting specific conditions on a reach by reach basis are not available. The proposed Technical Assistance would help fund a stream and habitat survey of the Walla Walla River from the Oregon-Washington state line to the upper reaches of both the North and South Forks of the river. Field work will be conducted following the ODFW Aquatic Inventories Project Field Survey Methods. Survey data will be processed using ODFW's data analysis tool to generate data summaries and reports. The project deliverables will include a georeferenced data set as well as the outputs produced by the ODFW analysis tool. The proposed stream habitat survey will provide data needed for a system-wide habitat assessment currently led by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). That assessment will utilize both aerial (LiDAR) and physical habitat survey data to characterize current watershed conditions and develop a quantifiable, holistic approach and prioritization to floodplain/riparian/river restoration on the mainstem Walla Walla River and headwater tributaries. Project partners include the CTUIR, private landowners, City of Milton-Freewater, Umatilla County, Umatilla National Forest, and the Bureau of Land Management.

Review Team Evaluation

Strengths

- The application is clearly written and easy to understand.
- The applicant is collaborating with multiple partners who have a stake in the success of the project.
- The Walla Walla River is a priority area for steelhead, Chinook and bull trout, especially in the upper watershed.

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- Using the ODFW habitat protocols ensures data quality will be repeatable and maintained.
- The project is at an ideal scale for surveying and the budget appears reasonable to cover the scope of the project.
- Information gathered will feed into the complementary CTUIR assessment project.
- The applicant has a history of successfully implementing projects and building landowner relations in the project area.

Concerns

- There were no significant concerns.

Concluding Analysis

This ground-based survey will provide important data in an area with increased interest in watershed restoration. By collaborating with the Confederated Tribes of the Umatilla Indian Reservation, the information gathered by the applicant will ground truth and add accuracy to a GIS-based analysis that is underway, as well as provide an opportunity to communicate about restoration with the many rural residential landowners in the area.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 5

Review Team Recommended Amount
$60,389

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$60,389

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6029-17450

Project Type: Technical Assistance

Project Name: Stanley Creek Culvert & Haskell Dam Removal Design

Applicant: Umatilla Basin WS Foundation

Region: Mid Columbia

County: Umatilla

OWEB Request: $40,475

Total Cost: $97,555

Application Description *(from application abstract)*

Partners in the Umatilla Basin are seeking technical assistance funding for engineering designs that address fish passage on West Birch Creek and Stanley Creek, both located near the town of Pilot Rock, Oregon in the Umatilla Basin (HUC 17070103). Stanley Creek Culvert and the Hascell Dam on West Birch Creek are both listed statewide priority barriers. Due to their close proximity to each other, the designs for each project will be packaged together. This application seeks design funding that will also include the required permitting for project implementation. ODFW's priority list and the Birch Creek Assessment and Action Plan identify these areas as a priority for restoring fish passage to the Blue Mountain region. Partners include the Umatilla Basin Watershed Council, Oregon Department of Fish & Wildlife, Confederated Tribes of the Umatilla Indian Reservation, Umatilla County Public Works and Planning and Zoning, and the City of Pilot Rock,

Review Team Evaluation

Strengths

- The application is clearly written and easy to understand.
- The landowner is new to restoration and the resulting restoration project could lead to future restoration opportunities in the watershed.
- The level of design review is adequate for ensuring that a technically sound approach will be used.
- Partners on the project have experience in successfully designing and implementing similar restoration projects.
- The applicant has recently implemented a complex bridge project.
- Costs for contracting two designs are reasonable.

Concerns

- Although the match from the Confederated Tribes of Umatilla Indian Reservation is marked as secured, there is no letter of support provided in the application.

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Concluding Analysis

A recent watershed assessment and action plan identified these two fish passage barriers as priority restoration opportunities. Removing these barriers will provide steelhead access to upstream spawning and rearing habitat. Successful implementation of the proposed project could also lead to future restoration opportunities with the landowner of this ranch located in the headwaters of these two streams.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 5

Review Team Recommended Amount
$40,475

Review Team Conditions

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$40,475

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6030-17453

Project Type: Technical Assistance

Project Name: Joe West Bridge Reach Walla Walla River Habitat Design

Applicant: Walla Walla Basin Watershed Foundation

Region: Mid Columbia

County: Umatilla

OWEB Request: $61,620

Total Cost: $85,969

Application Description *(from application abstract)*

This proposal would provide funding to design a habitat improvement project along a half mile reach of the upper Walla Walla River, located about three miles upstream of Milton-Freewater, Oregon, in Umatilla County. Landowners along the river are interested in a project that will create better instream habitat, create meanders and pools, improve the riparian area, floodplain connection, and improve bank stability. This reach is utilized by ESA listed bull trout and steelhead, and also reintroduced spring Chinook salmon and is upstream from the Lampson project, a similar floodplain re-connection project. A previously funded OWEB technical assistance grant helped fund a geomorphic assessment and development of habitat enhancement design in 2016. The project was not successful in receiving BPA implementation funding at that time as it was perceived to have too much stream bank protection and not enough habitat improvements. Since that time, the river has changed dramatically. The property owners have been impacted by flooding and have lost a barn and corral during the last two years of Spring runoff. The river is now threatening a house and has been starting to flow over a County road instead of the entire river going under a County bridge. The landowners have attempted to protect their property with boulder (rip-rap) revetment, but would prefer not to install more boulders along the riverbank and instead allow a more holistic, environmentally friendly solution with more riparian area and has been meeting with the Walla Walla Basin Watershed Council, ODFW, DSL, Umatilla County, and others to discuss options of completing a more comprehensive habitat restoration project than what was proposed with the previous designs. This project will provide a channel survey and final designs necessary for restoration permitting and costing out a half mile long habitat project. OWEB funds would be used for project management, contracted design services, and fiscal administration.

Review Team Evaluation

Strengths

- The application clearly explains a well-thought out project that includes a discussion of alternatives considered to determine a solution to a complex situation.
- The applicant has experience successfully designing and implementing complex restoration projects.
- The upper reach of the Walla Walla River provides spawning and rearing habitat for steelhead, Chinook and bull trout.

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- The project will address an irrigation structure as a part of the solution.
- Some of the proposed restoration will expand an existing cottonwood gallery.
- There is potential for habitat improvements; however, the design solution will need to balance habitat with protecting existing infrastructure.
- The contractor identified has relevant experience in successfully implementing restoration projects of this size and complexity.
- Costs seem reasonable for a project with significant challenges.

Concerns

- This is a complicated project involving a county road, bridge, and homes that are likely to limit and influence design options.
- The project would have more impact if the upstream and adjacent neighbors were also participating.
- The proposed design approach may result in addressing a symptom rather than the cause of watershed limiting factors.

Concluding Analysis

The section of the Walla Walla River in the project area has high flows and is a mobile system characterized by significant lateral migration with extensive bedload. Since recent high flows and the destruction of personal property, the landowner is willing to reconnect sections of the floodplain on her property. Possible solutions under consideration include restoring multiple channels, reconnecting the floodplain, and adding riparian vegetation.

Review Team Recommendation to Staff
Fund

Review Team Priority
4 of 5

Review Team Recommended Amount
$61,620

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation

Fund

Staff Recommended Amount

$61,620

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6031-17454
Project Type: Technical Assistance
Project Name: Ritter Fish Habitat Assessment
Applicant: Grant SWCD
Region: Mid Columbia
County: Grant
OWEB Request: $53,244
Total Cost: $67,287

Application Description *(from application abstract)*

The Middle Fork John Day River (MFJD) watershed in the Ritter Land Management Team (RLMT) area contains more than 80 miles of tributary streams that serve as spawning and rearing habitat for listed Mid-Columbia Wild Summer Steelhead and juvenile spring Chinook, as well as an essential water source for agriculture, domestic livestock and terrestrial wildlife species. Overgrazing, stream channelization and other land management practices have degraded stream conditions, reducing water quality and quantity and negatively impacting fish habitat and landowner economic viability. The Ritter Land Management Team is committed to correcting these problems and seeks funding for a stream assessment on private lands. The proposed project will encompass three tributaries of the MFJD within the RLMT project boundary (Six Mile, Eight Mile and Granite Creeks), totaling over 23 survey miles.The purpose of this project is to provide RLMT area landowners and partners with a robust understanding of aquatic conditions that will guide a comprehensive strategic plan for identifying, prioritizing and developing future restoration efforts. This information, which is critical for attaining the RLMT vision for effective watershed scale restoration does not exist. A private consultant (Jeff Neal, retired ODFW District Fish Biologist) will plan and conduct the the surveys and the data management. RLMT Executive Director Bob Parker and the project Technical Team will collaborate with Mr. Neal on the survey and data management. Grant Soil and Water Conservation District will be the grant administrator. OWEB funds will be used for contracted services, travel, and materials to publish findings and communicate with landowners and other stakeholders.

Review Team Evaluation

Strengths

- A similar and successful assessment completed on the South Fork John Day River is the model for this proposal.
- Many of the private land holdings are allowing surveys to occur for the first time.
- The application clearly describes next steps and how results will inform future restoration.
- The Atlas Scoping process was used to identify streams to include in the survey.
- Previous efforts by the Ritter Land Management Team resulted in a number of landowners expressing interest in restoration.

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- The applicant has a proven track record of successfully completing grants and working with landowners.
- The contractor that will complete survey work has relevant experience.
- The project is timely because a NRCS CSP program will be available in this area.
- The costs are reasonable to accomplish project objectives.

Concerns

- The application would have been stronger with more detail explaining protocols for how stream shade will be determined.
- Protocols explained in the application do not appear to be an industry standard but has proved useful in a similar project in the South Fork John Day River watershed.
- The project would be strengthened by adding stream temperature monitoring.

Concluding Analysis

Properties in this area are a mix of private timber, ranches, rural residential, and absentee landowners. Formed several years ago, the Ritter Land Management Team informs landowners of potential restoration benefits and provides data necessary to identify and prioritize restoration opportunities. The proposed technical assistance is modeled after work completed on the South Fork John Day River, where the barrier inventory prioritization resulted in correcting multiple fish passage barriers.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 5

Review Team Recommended Amount
$53,244

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount

$53,244

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6032-17492

Project Type: Technical Assistance

Project Name: Increasing Summer Streamflow in the John Day Watershed

Applicant: Grant SWCD

Region: Mid Columbia

County: Grant

OWEB Request: $73,502

Total Cost: $104,377

Application Description *(from application abstract)*

Adequate streamflow is essential for supporting wild fish species in the Pacific Northwest. This is particularly important in the late summer when streamflow is low and stream temperatures are high. The John Day watershed is uniquely positioned to ensure the resilience of salmon in the Pacific Northwest; it is the largest un-impounded watersheds in the Columbia River basin that support wild salmon populations.In the last century, western juniper has expanded their range by 12-fold in the John Day Watershed. Likewise, conifer forests across the western U.S. have become unnaturally dense. Forest and sagebrush restoration through the removal of western juniper and conifer species has been demonstrated to elevate groundwater levels and increase streamflow. But these gains in streamflow are highly dependent on the climate of the landscape, and specifically the amount of precipitation, where the trees are removed. Furthermore, the timing of streamflow and if those gains in flow occur later in the summer are dependent on soil and geological characteristics of the landscape. This project will develop a GIS-based model that will simulate the potential for western juniper and conifer removal to increase summer streamflow in the John Day Watershed to benefit sensitive fish species.Project partners include Washington State University, Oregon State University, Grant SWCD and NRCS.

Review Team Evaluation

Strengths

- N/A

Concerns

- N/A

Concluding Analysis

This application was withdrawn prior to review.

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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-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6033-17390

Project Type: Monitoring

Project Name: NF John Day tributary Smallmouth Bass Monitoring

Applicant: Monument SWCD

Region: Mid Columbia

County: Grant

OWEB Request: $245,746

Total Cost: $335,836

Application Description *(from application abstract)*

1) This project will occur on Cottonwood Creek, Wall Creek, and Rudio Creeks in Grant County, OR. 2) Invasive species are a major threat to native salmonid recovery throughout the Columbia River Basin- with nonnative fishes being of particular concern (ISAB Report, 2008). Climate change compounds this threat by promoting the spread of non-native fish into habitats used by ESA listed steelhead and salmon for spawning and rearing. In the John Day River Basin, smallmouth (SM) bass are one of the most abundant non-native predators of salmonids throughout much of the system with a significant upstream range expansion predicted by 2080 (Rubenson & Olden 2019). However, very little is known about the status and trend of SM bass in the John Day's tributary streams. Furthermore, the lack of information regarding their abundance, distribution, and impact on salmonids in the critical spawning and rearing tributaries of the North Fork John Day sub basin is of of particular concern. If recovery efforts are to be successful at a basin-wide level, monitoring and assessment of nonnative fish in these critical spawning and rearing tributaries must be collected to inform restoration and management decisions that maximize juvenile salmonid survival. 3) This project will assess the abundance, distribution and diet of SM bass in three tributaries of the NF John Day River (Cottonwood, Wall, and Rudio Creek) over a three year period. Activities will include a combination of snorkel surveys, mark-recapture monitoring with Passive Integrated Transponder (PIT) tags, stomach content sampling, sagittal otolith aging, stable isotope analysis, and bioenergetics modeling. Findings from this project will be made available via a report on the ODFW website. Additionally, a Baseline Bass Impact Modeling (BBIM) manual will be created to assist managers with assessing SM bass populations and predation in other spawning and rearing tributaries.4) Monument SWCD, ODFW, CTWS,

Monitoring Team Evaluation

Monitoring Team Strengths

- This proposed monitoring is timely, given the limited salmonid habitat and the newly identified expansion of smallmouth bass in these tributaries.
- The application describes how this project will build on the lessons learned from the current OWEB monitoring grant in Cottonwood Creek.
- The potential solutions to address smallmouth bass issues (e.g., streamflow restoration, riparian restoration) are reasonable.

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- The applicant has effective relationships with landowners and is likely to be successful when implementing both the monitoring and potential solutions if smallmouth bass are identified as stressor to native fish in these tributaries.
- The project addresses a priority action listed in the John Day Basin atlas.
- The applicant is working with a variety of ODFW staff who can contribute their expertise to the different elements of this project.
- The stable isotope monitoring combined with the bioenergetics model will give a better picture of how smallmouth bass are manipulating the food web beyond simply understanding how many native fish they are eating.
- The budget provides the details necessary to identify the expenses associated with each task and when work will occur.
- This project will develop a comprehensive manual to outline the process to collect data and develop the model, and this manual will be updated throughout the project.
- This application complements the smallmouth bass monitoring occurring on Thirtymile Creek.

Monitoring Team Concerns

- The application lacked detail to describe how the data from the different tributaries will be incorporated in the development of the biogenetic model for Cottonwood Creek.
- Description of water temperature monitoring methods and protocol citation was lacking.
- It was not clear if the applicant intends to submit the water temperature data to DEQ.
- The timeline to complete the final report is ambitious given the final report is scheduled to be complete at the same time the data collection ends.

Monitoring Team Comments

Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and ensure the data are submitted to DEQ.

Review Team Evaluation

Strengths

- The well-written application clearly explains a unique study design.
- This is a reasonable first step in identifying when and how smallmouth bass affect juvenile steelhead.
- The proposed monitoring will identify and quantify the problem of small bass predation, and can provide critical information on future tributary restoration projects.
- The proposed project builds on other monitoring efforts in the region to expand available data on smallmouth bass.
- Collaborating with the ODFW Research Department assures the right technical expertise is involved.
- The project design is based on climate change scenarios and the potential for tributary streams becoming increasingly warmer.

Concerns

- The application budget is high for the benefit provided.
- The application would be stronger with more detail on how partners will access the resulting information and how that information will be used to inform watershed projects.
- Including Wall Creek in the study will result in minimal data on a short section below where the stream becomes a steeper gradient and cooler stream temperatures.

Concluding Analysis

Smallmouth bass in the John Day Basin are not a new problem. However, there is a lack of data on where and how far up the stream system they are traveling on important steelhead tributaries, and the extent to which they prey on juvenile steelhead. The location of this proposal will expand on and complement smallmouth bass and steelhead data collected by ODFW on Thirtymile Creek lower in the basin.

Review Team Recommendation to Staff
Fund

Review Team Priority
2 of 3

Review Team Recommended Amount
$245,746

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$245,746

Staff Conditions

Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and ensure the data are submitted to DEQ.

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6034-17440 **Project Type:** Monitoring

Project Name: OXBOW Rapid Bio-Assessment

Applicant: Umatilla Basin WS Foundation

Region: Mid Columbia **County:** Umatilla

OWEB Request: $36,539 **Total Cost:** $47,077

Application Description *(from application abstract)*

The 222-acre OXBOW site is located in Hermiston, Oregon on the Umatilla River (HUC 17070103) from RM 6.6 to RM 8.1. The property was purchased in 2000 by the Bureau of Reclamation under provisions of the Umatilla Basin Project Act of 1988 for mitigating losses to anadromous fishery resources. The proposed project seeks funding to achieve numerous goals in the 2007 OXBOW Site Management Plan; primarily, collect baseline biological data for use in identifying and implementing habitat enhancement and riparian restoration projects. For the sampling area, the project team has identified a twelve mile reach from 3-mile Dam to OXBOW, as well as one mile up the mouth of Butter Creek. Project partners include the Bureau of Reclamation, Hermiston Parks & Rec, Trout Unlimited, the Confederated Tribes of the Umatilla Indian Reservation, Umatilla Soil & Water Conservation District, and the Oregon Department of Fish & Wildlife.

Monitoring Team Evaluation

Monitoring Team Strengths

- The focus on monitoring in this area complements other restoration investments in the lower river.
- The application articulates the problem with adult fish mortality in this area and the need for more information to identify restoration opportunities.
- The protocols for RBAs are well established and the applicant reached out to an expert in developing and applying the method.
- The budget is commensurate with work proposed to be completed.
- One of the landowners (BOR) provided a letter of support.
- Objectives were clearly articulated.

Monitoring Team Concerns

- The application lacked a clear description of what information they are seeking and how the RBA will provide this needed information to plan restoration efforts on the Oxbow property.
- RBAs are a snapshot of the fish abundance and distribution at one moment in time, thus the information will have limited value depending on the size of the run and water conditions at the time of the survey.

- It was not clear if the established RBA protocols work on this larger river and if they could be applied successfully in the winter when stream flows are greater and water is more turbid.
- There was only one letter of support.
- It was not clear what other work partners are doing in the surrounding area, which resulted in the application lacking broader context about how monitoring results may contribute to other restoration planning beyond the Oxbow property.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- There is little fish data available for the lower reach of the Umatilla River.
- Both Chinook and coho spawn in the project area.
- The resulting information will fill a data gap in the assessment planned by the Umatilla tribes for the upper reaches of the Umatilla River.
- The project is timely because there is increased landowner interest in restoration along this reach of the Umatilla River.

Concerns

- Overall, the application lacks critical detail to determine whether the project is likely to succeed, particularly the sampling protocols.
- The landowner information provided is confusing and monitoring locations are not clearly identified.
- Snorkeling surveys for juveniles may not be feasible in a stream system of this size.
- It is not clear how the monitoring information will inform future restoration.
- The application does not describe how data dissemination will occur.
- The application mentions a presentation; however, it is unclear how or when the presentation would occur and how it will be used to advance restoration.

Concluding Analysis

There is a clear need for the proposed data on the lower reach of the Umatilla River; however, additional information and detail is needed to assess whether the project is ready for implementation. If resubmitted, the applicant is encouraged to respond to the multiple 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

None

Staff Recommendation

Staff Follow-Up to Review Team
None

Staff Recommendation
Do Not Fund

Staff Recommended Amount
$0

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6035-17451

Project Type: Monitoring

Project Name: Monitoring Groundwater Conjunctive Use in the Middle Fork of the John Day River

Applicant: OSU Office of Sponsored Research & Award Admin

Region: Mid Columbia

County: Grant

OWEB Request: $149,621

Total Cost: $206,055

Application Description *(from application abstract)*

This project seeks to address a lack of data on groundwater status in the headwaters of the Middle Fork of the John Day River (MFJD). Over the last decade restoration projects have been completed to supporting salmonids in the region as it it prime spawning grounds for salmonids. Issues still persist, however, like water temperatures of the Middle Fork surpassing the incipient lethal limit of federally listed steelhead and spring Chinook. We wish to investigate groundwater and monitor potential fluctuations in water table elevations to provide understanding of local groundwater. This would provide a basis for management of groundwater in conjuncture with surface water especially during the early summer months when concerns peak over salmonids and the associated issues of summer flows. We firstly seek to establish the current status of groundwater and to monitor changes as a result of small scale use of water from the aquifer. This data would be collected using piezometers surrounding a pumping well over a period of several field seasons to include spatial and temporal extent of drawdown from a pumping and annual spring snowmelt recharge. Finally the data would be modelled to identify relationships between factors. These data are relevant to partner groups The Freshwater Trust, in modeling stream temperature restoration in the area, and the Oregon Water Resource Department who manage the water rights. The project site is in the meadows of Austin Ranch owned by the Voigts, located upstream from Bates State Park in Grant County, OR. The landowner will provide access to the land and is supportive of exploring alternative water management strategies. Oregon State University researchers will oversee the installation of the pumping wells and piezometers, conduct monitoring, undertake modeling of the system, and create a deliverable that addresses the viability and application of these methods.

Monitoring Team Evaluation

Monitoring Team Strengths

- Warm water temperature issues in the Middle Fork John Day River are well documented, and there is a need for alternative ways to address temperature issues prior to the full recovery of riparian vegetation.
- The applicant proposes a novel approach to address irrigation impacts to water temperature.
- The monitoring methods and analytical approach described are appropriate.
- The applicant has a proven record and experience conducting this type of monitoring.
- The development of the practitioner guide to inform future applications would be useful.

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Monitoring Team Concerns

- It is unclear whether the well water will be used instream or for supplemental irrigation.
- There is some monitoring that is implied (e.g., flow meter on well and stream temperature monitoring), but not explicitly described in the application.
- It is possible that the well will be regulated, given surface water right regulation in the basin; if surface water rights are regulated at all, the well will be shut off.
- The timeline is not reasonable. Based on timing of grant decisions and the time required to obtain a water right from WRD, it is unlikely that the applicant will be able to install a well and begin pumping for the irrigation season of 2020.
- The pumping rate that the applicant hopes to achieve is high and may not be possible with one well.
- It was not clear why 50 piezometers are needed to meet the objectives described in the application.
- There were no letters of support describing a need for this information and intent to apply it to restoration and conservation planning.
- The water right permit cost was not included in budget.
- Given that cows are grazing on the property there would be a need for fencing to prevent them from impacting the ground water monitoring wells.
- The downstream gage and water temperature monitoring is too far away to represent local flow impacts as a result of the proposed water management changes.

Monitoring Team Comments

- Install a flow meter on the irrigation well, as this will be required as part of the permit.
- Monitor water temperature downstream of the flow augmentation site.

Review Team Evaluation

Strengths

- The proposed monitoring is a novel approach to improving stream temperatures in the Middle Fork John Day River, where warm water is a critical limiting factor.
- Once the model is constructed and validated, and the practitioner guide developed, restoration practitioners could find the information useful.

Concerns

- The proposal is confusing and lacks enough detail to review for technical soundness; for example, it is unclear whether the well water will be used instream or for supplemental irrigation. Also, information on the meadow substrate would be helpful to understand whether it could influence the connectivity of the groundwater.

- The application does not describe the disposition of the project infrastructure after the monitoring project is finished.
- It is unclear if the well will have the capacity to offset the diverted irrigation right.
- The well construction estimate appears low, and the budget does not include costs for conveying the water to the Middle Fork John Day River, decommissioning both the pumping site and monitoring wells, or obtaining permits.
- Pumping test controls are lacking – the well needs to be metered and monitoring needs to occur before, during, and after pumping.
- Model calibration and validation is not described.
- The application does not characterize whether the aquifer is confined or unconfined, or confirm whether the applicant has hydrogeologic information describing the aquifer, such as aquifer area, composition and thickness.
- The cost and details of installing a production well and piezometers are not clear. Detail on the anticipated depth and diameter of the well and piezometers is not included in the application. The application does not clarify whether a licensed well driller is required and if the costs in the budget reflect that added expense.
- The downstream gage and water temperature monitoring are too distant to represent local flow impacts resulting from the proposed water management changes.

Concluding Analysis

Innovative solutions to the low flow and high temperatures occurring on the Middle Fork John Day River are needed; however, this application lacks the detail needed to determine the technical soundness and likelihood of success for the proposed monitoring project. If resubmitted, the applicant is encouraged 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

None

Staff Recommendation

Staff Follow-Up to Review Team

None

Staff Recommendation

Do Not Fund

Staff Recommended Amount

$0

Staff Conditions

None

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6036-17482

Project Type: Monitoring

Project Name: Long-term Population Impacts of Beaver Restoration: Bridge Creek Intensively Monitored Watershed_CLONE

Applicant: Utah State University Office of Sponsored Programs

Region: Mid Columbia

County: Wheeler

OWEB Request: $239,338

Total Cost: $510,742

Application Description *(from application abstract)*

The consequences of channel incision include a lowering of the water table and reduced channel complexity leading to a loss of riparian vegetation, simplified habitat, and declines in biota. Incised channels can take millennia to reconnect to their floodplain (aka Stage-0). In Bridge Creek, a degraded incised stream, 4-yrs after the addition of 121 beaver dam analogs (BDAs) the number of dams built by beavers increased nearly 8-fold. These structures captured sediment raising the stream bottom and surface water, reconnecting the floodplain, increasing ground water storage, decreasing temperature and generally increasing fish habitat quantity and complexity leading to a 168%, 52%, 175% increase in fish abundance, survival, and production respectively. While we demonstrated large short-term responses to this restoration strategy, the longer-term responses as beaver dam complexes mature into more wetland meadow-type habitat still need to be evaluated. Recently, a large flood event blew out many of the beaver dams, allowing us to test our original hypothesis, that properly functioning floodplains will be resilient to floods that previously led to incision. Also, as of this year, tributary water from a reservoir will augment lows flows that may allow for greater restoration responses in the more thermally limiting section of lower Bridge Creek. This project would provide the only long-term monitoring data as to whether floodplain reconnection can prevent channel incision and how these changes affect steelhead, native non-target and non-native fish populations, and native and non-native vegetation. This grant would continue the 12 years of detailed monitoring by USU, ELR, NOAA, and ODFW to evaluate the response of fishes and other biota to shifts in conditions initiated from this inexpensive restoration approach to assist beaver. Given the rapid and abundant adoption of this restoration approach, the longer-term evaluation is critical for further guidance.

Monitoring Team Evaluation

Monitoring Team Strengths

- The application describes a clear need to continue collecting data to assess outcomes associated with beaver dam analogs.
- The data to be collected will inform implementation of the Mid-Columbia Steelhead Recovery Plan and the John Day Basin TMDL.
- This project provides an opportunity to understand how resilient the system has become to a high flow event 10 years after BDAs were installed and assess watershed-scale response.

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- The applicant and project team are likely to apply this information in a variety of ways to inform several different audiences involved in restoration scoping, planning and implementation.
- The applicant is coordinating with ODFW and leveraging existing monitoring infrastructure to understand steelhead survival and productivity.
- This application improved since the last submission by providing greater detail on sampling methods, including letters of support, and describing the expenses in the budget.
- The applicant has a proven track record to collect, analyze, and report the data they are proposing to gather, and the scope of the project is reasonable.

Monitoring Team Concerns

- The application lacked a description of the methods for water temperature monitoring and how the data will be analyzed.
- The application did not clearly describe how the drone monitoring methods will be applied to track changes with vegetation.

Monitoring Team Comments

• Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and ensure the data are submitted to DEQ.

Review Team Evaluation

Strengths

- The project scope is watershed-wide rather than focusing on a reach scale, and builds on a long-term data set.
- The project team has a proven track record of collecting and analyzing data.
- The applicant effectively disseminates useful information from monitoring projects, and this project is likely to inform future restoration.
- The application addresses comments from a previous application evaluation.

Concerns

- The application lacks a description of water temperature monitoring protocols and data analysis.
- Extraneous information uploaded to the application is difficult to review and comprehend.
- It was not clear where the resulting data will be stored, nor how it will be accessible.
- The restoration actions being evaluated may take multiple decades to show results.
- The budget lacks sufficient detail to determine cost effectiveness.

Concluding Analysis

This resubmitted monitoring application builds on more than ten years of intensive monitoring in the Bridge Creek watershed, as a part of NOAA and the NW Fisheries Science Center's Intensively Monitored Watershed (IMW). Following implementation of landscape scale restoration using beaver dam analogs and low-tech, process-based restoration structures, the opportunity to continue monitoring the watershed as stream morphology changes is unique. Partnerships on this project have a successful history of working together on complex monitoring ventures.

Review Team Recommendation to Staff
Fund

Review Team Priority
3 of 3

Review Team Recommended Amount
$239,338

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$239,338

Staff Conditions

• Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and ensure the data are submitted to DEQ.

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6037-17486 **Project Type:** Monitoring

Project Name: Bear Creek Steelhead Monitoring

Applicant: Bridge Creek WC

Region: Mid Columbia **County:** Wheeler

OWEB Request: $84,834 **Total Cost:** $107,289

Application Description *(from application abstract)*

This project is located on Bear Creek, a tributary to Bridge Creek in Southwest Wheeler County. Large sections of Bear Creek are currently the subject of restoration efforts designed to increase juvenile steelhead rearing habitat quality and quality. The monitoring plan has been designed to fill several information gaps that exist concerning the relationship between juvenile steelhead habitat use in intermittent systems, and restoration practices being implemented to improve intermittent stream habitat quality. These information gaps include:1. What are the movement patterns of juvenile steelhead rearing within stream reaches that are seasonally intermittent, and does movement or lack of movement influence steelhead productivity (i.e., growth and survival)2. Can beaver dam restoration structures alter the timing and delivery of flow such that the duration and extent of surface flow is enhanced within seasonally intermittent stream reaches to the benefit of juvenile steelhead.3. Do beaver dam restoration structures impede juvenile steelhead movement during intermittent or low flow periods, and does decreased movement result in greater mortality and a negative impact to steelhead populations.The monitoring project will leverage existing beaver dam restoration implementation on the Canyon Creek Ranch on Bear Creek, where greater than 70 beaver dam restoration structures have been installed from 2017 - 2019. The projects also includes existing monitoring and an established experimental design for studying restoration impacts. Monitoring will largely consist of capture, tagging, and resight of juvenile steelhead using passive integrated transponder (PIT) tags to document the movement, growth, and survival of steelhead in stream reaches with and without BDA structures.Partners include Oregon Department of Fish and Wildlife, Confederated Tribes of Warm Springs, EcoLogical Research, NOAA, Canyon Creek Ranch, and Mid John Day-Bridge Creek WC.

Monitoring Team Evaluation

Monitoring Team Strengths

- There is a need for information on how BDAs may affect juvenile steelhead movements in intermittent streams.
- The information that will be collected will inform implementation of the Mid-Columbia Steelhead Recovery Plan.
- The water extent surveys will help describe how effective BDAs are at increasing wetted area during the low flow period.
- This application will leverage existing monitoring data collected by partners to describe habitat changes before and after restoration actions.

- A majority of the monitoring is a continuation and annual reports summarizing this monitoring have been written, which increases the likelihood of success.
- The applicant is working with the authors of the Process Based Restoration Guide, and this information will help inform future restoration implementation.
- The application described several online sites on which the data will be publicly available and presentation of the findings at several venues to ensure it is reaching a wide audience.
- This application includes letters of support from a diversity of private, state, tribal and federal organizations.
- The monitoring project seeks to utilize passive and mobile pit tag detections to understand fish movement at key time periods.
- The contractors have the experience and necessary skills to implement the project as proposed.

Monitoring Team Concerns

- It was not clear how the water temperature data will be analyzed, including how the temperature data could increase understanding of thermal dynamics in the study area.
- The application does not cite methods to collect the aerial images, or how the imagery data will be managed and analyzed over time to meet the objectives described in the application.
- Some of the application is difficult to understand.

Monitoring Team Comments

• Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and ensure the data are submitted to DEQ.

Review Team Evaluation

Strengths

- The well-written application is clear and provides sufficient detail to evaluate likely success.
- The study design includes information on monitoring protocols.
- The project will address an identified data gap regarding the impacts of beaver dam analogs on intermittent streams.
- The resulting information will be useful in ongoing discussions related to permitting these types of restoration structures.
- Bear Creek is an important steelhead producing stream, in spite of the limiting factor of intermittent flow and a lack of connectivity between wetted reaches.
- The project builds on other monitoring efforts and will inform future restoration in the area.
- The John Day Basin Partnership and other restoration practitioners will benefit from the summarized data.
- The contractor has successfully disseminated information that aids future restoration efforts.
- ODFW has a long history of annual spawning surveys on this stream.

- A pending conservation easement on the property will protect both past and future monitoring and restoration efforts.
- There is a significant benefit for the investment.

Concerns

- The application identifies a lower section of Bear Creek on BLM property as a “control reach”; however, there has been some restoration implemented there so it is not a true “unaffected control reach.”

Concluding Analysis

Beaver dam analogs and low-tech, process-based restoration approaches are becoming more common in the John Day Basin. Effectiveness monitoring of these structures on a typical intermittent stream is critical and will provide useful information to all restoration practitioners in the basin.

Review Team Recommendation to Staff
Fund

Review Team Priority
1 of 3

Review Team Recommended Amount
$84,834

Review Team Conditions

None

Staff Recommendation
Staff Follow-Up to Review Team
None

Staff Recommendation
Fund

Staff Recommended Amount
$84,834

Staff Conditions

Coordinate with DEQ to develop a sampling and analysis plan for the water temperature monitoring and

ensure the data are submitted to DEQ.

Open Solicitation-2019 Fall Offering
Mid Columbia (Region 6)

Application Number: 220-6038-17491
Project Type: Monitoring
Project Name: Annual Grass Amendment
Applicant: South Fork John Day WC
Region: Mid Columbia
County: Grant
OWEB Request: $189,252
Total Cost: $239,814

Application Description *(from application abstract)*

Exotic annual grasses have invaded large areas and altered the landscape of the South Fork John Day Watershed as well as many other areas of the Intermountain West in North America. Such invasion has reduced ecosystem goods and services including forage and habitat for wild and domestic ungulates. Reduced bio-diversity and increased fine fuel loads at annual grass invaded sites promotes more frequent and expansive fires, and decreases resistance to invasion and resilience to disturbance, promoting post-fire reinvasion by annual grasses (i.e., annual grass-fire cycle). After decades of above ground management strategies failing to halt the expansion of annual grasses and restore native perennial plant communities, a new, and more intensive below ground approach may be required. Pre-invasion disturbance, or invasive plant-mediated soil conditioning, may leave lasting soil legacies that promote the persistence of early-seral plant communities. We offer a restoration strategy based on the concept of intensively managed restoration islands that will serve as strongholds for native plant communities, and anchors of resistance and resilience. Post-herbicide soil treatments will include a control, low-nitrogen compost, bio-char application, and inoculation with mycorrhizal fungi in order to create soil conditions that more closely resemble soils associated with mid and late-seral plant communities. We will monitor the effects of each treatment on the growth of the native bunchgrass Pseudoroegneria spicata (bluebunch wheatgrass), and the exotic annual invasive grasses Taeniatherum caput-medusae (medusahead), and Ventenata dubia (ventenata). The project will be located on the Murderers Creek Sub-watershed of the South Fork John Day Watershed, which is located in Grant County, near Dayville, OR. Project partners include Oregon State University and the Oregon Department of Fish and Wildlife, Phillip W. Schneider Wildlife Area.

Monitoring Team Evaluation

Monitoring Team Strengths

- This application proposes a unique project that could provide beneficial information to inform restoration actions aiming to address region-wide challenges with invasive annual grasses.
- The applicant is working with contractors who have expertise to implement this project as proposed.
- The applicant is working with the landowner (ODFW), and the letters of support expressed a need for tools to help managers address the invasive plant issue.
- The timeline is reasonable to complete the tasks described in the application.
- The application describes a variety of ways the information will be shared with practitioners, including at local meetings and in journal articles and local news outlets.

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Monitoring Team Concerns

- The application did not describe the impacts of annual grasses to watershed function beyond habitat for wild and domestic ungulates.
- The monitoring of these treatments is proposed to occur only on a small portion of the watershed, thus results may reflect site-specific conditions rather than being more broadly applicable.
- The application lacked some details about monitoring techniques, potentially assuming that reviewers already are familiar with this information. Also, there was no description about how soil chemistry data would be collected and reviewed to ensure quality.
- The budget expenses lack detail and seem high given the short period of time data will be collected.
- The application lacked detail about how the information can be applied to inform future restoration or conservation actions. It was not clear if a cost-benefit analysis will be done to determine if it is reasonable to amend soils across a large landscape if results show improvements in native vegetation.
- There is no information about the process for developing a practitioner guide to apply these results in a meaningful way.

Monitoring Team Comments

None

Review Team Evaluation

Strengths

- Annual grass invasion is a significant habitat degradation problem in the John Day Basin.

Concerns

- The proposed work is structured more like a research project than the type of monitoring they selected – landscape scale effectiveness.
- The application lacks details about some monitoring techniques needed to understand the proposed protocols. For example, there is no description of the protocols for collecting soil chemistry data and associated data quality control processes.
- It is not clear where the data will be stored, how the public could access the data, and how the data or resulting analysis will be useful to land managers.
- It is unclear how information will be used to inform or direct watershed restoration projects.
- Since there are many bunchgrass communities being invaded by medusahead, there is no need to replicate the condition in order to monitor the effectiveness of restoration. ODFW has been treating medusahead with granular herbicides in this area; these treatments could be monitored for effectiveness.
- The application does not include plans to provide economic analysis of the grass treatments.
- The application would have been stronger with a discussion of other invasive grass treatments.

Concluding Analysis

Annual invasive grasses, including medusahead and ventenata, are both high priority limiting factors to upland health in drier grassland ecosystems. Multiple efforts using other tools to help keep annual grasses in check have had limited success. This application lacks a study design to accomplish the selected project type – landscape scale effectiveness monitoring. The study design analyzes small plots within a pasture, rather than actual restoration treatments at a broad scale.

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

June 10 & 11 2020 OWEB Board Meeting

Public Comment

Open Solicitation

Umpqua River

Partnership for the Umpqua Rivers
3012 W. Harvard Ave
Roseburg, Oregon 97471
April 17 2020

Eric Hartstein
Oregon Watershed Enhancement Board (OWEB)
775 Summer Street NE
Salem, Oregon 97301

Thank you for the opportunity to comment on the Fall 2019 Open Solicitation Monitoring Project Application for the Umpqua Basin Flow and Temperature Monitoring Project 2020-21 (Grant Application #219-2045-16625).

This project was approved for funding by the OWEB Review team, but fell below the funding line. We would like to ask that if after the Board approves project funding, if there are any smaller amounts of monies remaining, they might consider partially funding this project (see proposals below). We appreciate the positive comments as well as those on how to improve in the future and responded to the Evaluation Comments in the attached document.

There are two aspects of this project: stream temperature and flow. The five reference stream temperature sites contain a long term data set with continuous summer stream temperatures since 1998. If we were to not collect a year of data, it would break the continuous data set and would diminish the ability of PUR and other stakeholders to utilize the data for corroboration and comparison to ongoing projects in the Basin lacking long-term data. It will also severely inhibit the status and trend analysis. This data and analysis is used by PUR to compare to data at all of their existing monitoring sites as well as by many others throughout the Basin. We have a new partner with the North Umpqua Foundation that has contributed funds towards the 2020 Reference Temperature study which will allow for starting on this project; however, we lack funding to cover the remainder of the field work and analysis.

In addition, this year, flows are already below normal, with the forecast being for more dry weather. The flow measurements taken with this project ensures that the minimum instream flows required for fish and other ecological values is achieved during the critical low flow period with water being put back into the streams within days after the stream flow measurements are taken.

As stated above, we are willing to take partial funding to continue this project. Below are proposals for limited funding in order of preference. All of these are for one year funding versus two years in the grant application.

1st Preference - $30,814

Reference Temperature (2020), and Flow (2/3 season), and New North Umpqua Temperature Site Analysis (2 additional BLM and USFS sites)

- Reference Temperature project – (we have $1000 of matching) $7,400
  (Hydrologist – Reference Temperature and N. Umpqua Comparison Site Analysis – Mileage included)
- Hydrologist – North Umpqua Temperature Comparison Analysis $4,800
  (Additional BLM and USFS sites) (New Analysis)
- Flow - Hydrologic Technician (2/3 of a year – yearly cost $16,512) $11,063
- Hydrologist – Project Manager $800
- Hydrologist – Project Completion Report $480
- Hydrologist Technician – Mileage $3,100
- Hydrologist Technician's Equipment including waders, batteries, cold water gear, etc. $300
- Office Supplies and Mailing Cost $70
- Indirect cost (10% of $28,013) $2,801

TOTAL COST: $30,814

2nd Preference - $25,534

Reference Temperature (2020) and Flow (2/3 season) – no analysis of additional North Umpqua Temperature Sites

- Reference Temperature project – (we have $1000 of matching) $7,400
  (Hydrologist – Reference Temperature and N. Umpqua Comparison Site Analysis – Mileage included)
- Flow - Hydrologist Technician (2/3 of a year – yearly cost $16,512) $11,063
- Hydrologist – Project Manager $800
- Hydrologist – Project Completion Report $480
- Hydrologist Technician – Mileage $3,100
- Hydrologist Technician's Equipment including waders, batteries, cold water gear, etc. $300
- Office Supplies and Mailing Cost $70
- Indirect cost (10% of $23,213) $2,321

TOTAL COST: $25,534

3rd Preference - $8,536

Reference Temperature (2020) – No Flow measurements and no analysis of additional North Umpqua Temperature Sites

- Reference Temperature project – (we have $1000 of matching to start) $7,200
  (Hydrologist – Reference Temperature and N. Umpqua Comparison Site Analysis – Mileage included)
- Hydrologist – Project Manager $240
- Hydrologist – Project Completion Report $320
- Indirect cost (10% of $7760) $776

TOTAL COST: $8,536

4th Preference - $2500-$8000 – Objective: continued temperature data collection

Reference Temperature (2020) – abbreviated report – No Flow measurements and no analysis of additional North Umpqua Temperature Sites

- Reference Temperature project – (we have $1000 of matching to start) (Hydrologist – Reference Temperature and N. Umpqua Comparison Site Analysis – Mileage included) – data would be collected to maintain a continuous record and the scale of the report would be dependent on available funding. $2000-$7000
- Hydrologist – Project Manager variable
- Hydrologist – Project Completion Report variable
- Indirect cost (10%) variable

TOTAL COST: $2500-$8000

Thank you for your time. If you have any questions, don't hesitate to contact me at kevin@umpquarivers.org or 541-673-5756.

Sincerely,

Kevin Keller
Acting Executive Director

Enclosures:

- Comments on Evaluation of Application for the Umpqua Basin Flow and Temperature Monitoring Project 2020-21 (Grant Application #219-2045-16625)
- Reference Temperature Report – 2017
- Reference Temperature Report – 2018
- Appendix for Reference Temperature Report – 2018

Comments on OWEB Evaluation of
Umpqua Basin Stream Flow and Temperature Monitoring Project 2020-21
(Grant Application #220-2059-17438)

Review Team Evaluation - Concerns

The application lacks clarity due to some redundancy of information provided.

In future applications we will attempt to reduce redundancy and increase clarity. We realize from other Monitoring Team and Review Team comments that this lack of clarity may have reduce the reviewers' ability to easily locate information in the document.

It is uncertain how the information developed from the project will be used to inform future restoration work.

Additional information on how the proposed work is related to the larger stream temperature and water quality monitoring effort conducted by the applicant would provide helpful context for understanding the need for the proposed project.

We will attempt to respond to these two questions together since they are interrelated:

In future applications, we will try to be more specific as to how this data will inform future restoration work. While the response to this question was addressed partially in several different locations in the application, it may have been difficult for the reviewer to locate concisely. In an attempt to not be redundant, we apparently lacked the specificity in response to the "inform future restoration" question. PUR and natural resource professionals in the Basin will continue to use the Reference Stream Temperature data to account for annual variability in stream temperature data for their projects, burned area evaluations, and shorter-term baseline monitoring. The long term data set from Reference Temperature sites throughout the basin offer sites of different climactic conditions and drainage areas for comparison. There are specific tools described in the annual Reference Temperature reports (see attached) for normalizing short term data sets using the Reference Temperature data.

In the "inform future restoration question" it states that: "As the PUR updates its Strategic Plan in 2019 and 2020, previous data and analyses from this project will be consulted as it reviews and refines its goals and objectives. The stream flow and temperature data can aid in the PUR strategic planning process by identifying and prioritizing potential project areas." It lists some ways that the flow and temperature data can help with this.

In the "inform future restoration" question and "benefit to watershed planning, and project implementation" questions, there are statements from PUR and many agencies and groups (USFS, three BLM Districts, NOAA Fisheries, ODFW, DEQ, PacifiCorp, City of Oakland). We paraphrased these stakeholders' comments from correspondence and from letters of support and listed specific projects where this project was used.

Much of the information in the "benefit to watershed planning and project implementation" question crossed over to discussing how it would inform future restoration. This should have been cross-referenced for clarity.

From the "Benefit to watershed planning and project implementation…" question:

- Pg. 19 – Paragraph 3 describes the specific projects and parameters for which PUR is using the Umpqua Flow and Temperature data and how it is being used.
- Pg. 19 – Paragraph 4 describes how PUR, USFS, three BLM districts, ODFW, and PacifiCorp have stated that they are using and continue to use the annual Reference Temperature report for corroboration of their own data and for project comparison.
- Pg. 19 – Paragraph 5 & 6 lists 14 specific projects where the BLM and USFS have used the Reference Temperature and flow data from this project for comparison to their own shorter-term data as well as future projects.
- Pg. 20 – Provides paraphrased statements from stakeholders on how they are using this project's data and analysis for planning, project implementation, as well as to help inform future actions.

Monitoring Team Evaluation – Monitoring Team Concerns

The application did not describe how the applicant will determine if and how variations in stream temperature are related to land use/anthropogenic factors.

This will be described better in future applications. In short, for these five reference stream temperature sites, streamside vegetation at the site and upstream is consistent throughout the course of this study. Also, some of these streams are quite large, and the riparian vegetation is not as strong of an influence as it is in smaller stream. Metadata on the riparian vegetation and shading is collected in the event there ever is a catastrophic event that would alter the vegetation significantly. We work with property owners and land managers at these sites to maintain the riparian vegetation and stream characteristics and while it wasn't described thoroughly in the application, it is in the forefront of the project design. Site characteristics are very stable and unlikely to change under the current ownerships and management objectives.

The application did not describe how the data can be used by PUR to target restoration or management actions.

In addition to the response above, in the "inform future actions" question it states that "The stream flow and temperature data can aid in the PUR strategic planning process by identifying and prioritizing potential project areas. Specifically, stream flow data can inform PUR staff where the capturing of stream gravels and the development of deep substrate pools, especially in bedrock dominated systems, could be most beneficial. Additionally, temperature data can inform restoration staff on where specific restoration techniques can improve gravel retention and therefore improve sub- surface hyporheic flows; promoting a reduction in water temperatures. Finally, temperature data can also be used to compare and calibrate PUR temperature data

throughout the basin. Overall, this data enables PUR staff to implement specific restoration practices appropriately across the landscape to achieve the maximum ecological benefit."

More detail can be found in the response above.

The OPMT discussed the limitations of discrete flow measurements, as these data will not document the lowest flows from year to year.

We agree that discrete flow measurements may not document the lowest flows, however, they can document flows that are below the instream water right, so water can be put back into the streams from diversions. In an ideal world, stream gages would be affordable to install and maintain as a stream gage is preferred. Nonetheless, they are costly. As discussed in the application, we are working with other agencies in the area to maintain the existing, highest priority stream gages. Discrete flow measurements meet the objectives of the project while keeping the project at a lower cost.

The application was unclear if the grantee's contractor would be performing the water temperature trend analysis in consultation with DEQ or if DEQ is doing the analysis.

In Objective #2 it states that "The Hydrologist will prepare the data and accuracy check information for the DEQ to run the seasonal Kendall trend analysis and work with them on the trend analysis (see attached letter of support from DEQ)". Specifically, the Hydrologist will work with the DEQ if there are any questions about the data or metadata after it is submitted to them to run the trend analysis.

The uploaded letter of support from Nick Haxton-Evans, DEQ, states that "I am writing to commit the support of DEQ water monitoring staff for the trend analysis of long term water temperature data in the Umpqua Basin. In addition to the normal data processing completed by the DEQ's volunteer monitoring program to verify partner data and load it into our new data system, DEQ WQ staff will analyze the new data on sites previously reported and expand the analysis to include new sites from the North Umpqua drainage… The output from the trend analysis will be Mann-Kendall seasonal (July and August) trend…"

Checking some other references in the document it states that the Hydrologist will prepare the data for the DEQ and collaborate with the DEQ to run the trend analysis. In the future, we will make it clearer throughout the document rather than just in Objective #2.

The application would have benefitted from uploading examples of past data summaries to illustrate products from previous monitoring grants.

Will do.

Monitoring Team Evaluation – Monitoring Team Comments

Future applications should provide links to or upload examples of previous reports.

Will do.

While we stated in Objective #4 that the Reference Temperature reports and Comparison Site report will be available on the PUR website, it neglected to state that recent previous reports are currently available on PUR's website. We will correct that in future applications.

Stream temperature: https://www.umpquarivers.org/final-monitoring-reports

Objective #4 listed the website for the stream flow measurements:
https://apps.wrd.state.or.us/apps/sw/misc_measurements_view_only

Coordinate with DEQ to clarify what analysis that agency will do and what the grantee will need to do to complete this task as proposed in the application.

That has been completed prior to the application process. The uploaded DEQ letter of support in the application from Nick Haxton-Evans states that DEQ is conducting the trend analysis.

In Objective #2 it states that "The Hydrologist will prepare the data and accuracy check information for the DEQ to run the seasonal Kendall trend analysis and work with them on the trend analysis (see attached letter of support from DEQ)".

(see response above for more information)

June 10 & 11 2020 OWEB Board Meeting

Public Comment

Open Solicitation

MaxDepth Aquatics

DT: April 14, 2020
TO: Eric Hartstein, Oregon Watershed Enhancement Board
FM: Joseph Eilers, MaxDepth Aquatics, Inc.
RE: Comment on OWEB Review Process

I submitted an application this last fall through the non-profit Integrated Ecosystem Sciences to OWEB for a monitoring grant to provide technical information regarding water quality in Odell Lake. The lake is experiencing repeated and long-term cyanobacterial blooms that interfere with recreational use of the lake and potentially poses a human health concern. The proposed work involved collecting sufficient limnological data to identify the cause(s) and offer potential solutions to address the problem. One of two hypotheses that was to be tested with the data was the potential relationship between the fisheries and cyanobacteria production.

The application was denied. Some of the comments related to the lack of detail regarding support and coordination among resource management partners and some comments addressed technical concerns of the reviewers. I address each of these areas below.

Comments regarding cooperation of the management agencies related to letters of support that could have clarified the cooperation that I had received verbally from some organizations. For the most part, these issues can be addressed in the future. However, an omission considered critical to reviewers was a lack of coordination with the Oregon Department of Fish & Wildlife (ODFW). I tried several times to meet with staff from ODFW in the Bend office to discuss my proposed work under this grant, but they refused to discuss the draft proposal on the phone or in person. How am I supposed to work with management agencies that refuse to even discuss the issue? Essentially this gives ODFW a "pocket veto" over grant applications that they perceive stray into the area of fish management. In the case of Odell Lake, ODFW has introduced six species of non-indigenous fish in the lake. The one "successful" introduction was kokanee which is now incredibly numerous; management efforts by ODFW to reduce the population have been unsuccessful. ODFW staff apparently believe that conducting a rigorous scientific analysis of water quality in Odell Lake threatens their monopoly on how the lake is managed. It appears to me that there is a serious conflict-of-interest in having ODFW essentially thwart efforts to study the problem. I urge OWEB to reconsider the outsized role that ODFW exerts on the grant application process. The number of fish in a lake or stream is not the only metric of a healthy aquatic ecosystem.

My second area of concern that was revealed in the Odell Lake grant application relates to technical competence regarding review of grant applications for lakes. OWEB has funded stream-related work almost exclusively. I shouldn't have to remind OWEB that we have 6,000 lakes in the state. Citizens of Oregon recreate heavily on lakes. This is not to say one is more important than the other, but the total omission of lakes in the OWEB portfolio is a major oversight that needs to be corrected. Which brings me back

to the Odell Lake grant application. It was obvious based on the technical comments that none of the reviewers had a strong background in limnology. They misread processes and clearly did not understand (1) why there could be a link between fisheries and water quality, (2) the nature of sediment-nutrient interactions, and (3) why monitoring in lakes is inherently much different than monitoring water quality in streams. If OWEB is to develop a more balanced approach to improving aquatic resources in the state, they need to employ qualified limnologists in the program office and on the review teams.