R & E Grant Application 17-19 Biennium

Project #: 17-003

WF Millicoma River Fish Passage Improvements 2017

Project Information

Requested Cycle:	17-1
R&E Project Request:	$21,811
Other Funding:	$266,565
Total Project:	$288,376
Spending Start Date:	7/1/2017
Spending End Date:	10/31/2017
Project Start Date:	2/1/2017
Project End Date:	10/31/2017
Organization:	Coos Watershed Association (Tax ID #: 93-1146207)

Fiscal Officer

Name:	Amrha Wimer
Address:	P.O. Box 388 Coos Bay, OR 97420
Telephone:	541-888-5922
Fax:	541-808-9501
Email:	cooswa@cooswatershed.org

Applicant Information

Name:	Allison Tarbox
Address:	P.O. Box 388 Coos Bay, OR 97420
Telephone:	541-888-5922
Email:	atarbox@cooswatershed.org

Past Recommended or Completed Projects

This applicant has no previous projects that match criteria.

Authorized Agent

Name:	Allison Tarbox
Address:	P.O. Box 388 Coos Bay, OR 97420
Telephone:	541-888-5922
Email:	atarbox@cooswatershed.org

Location Information

Where is it?

The project will occur on public land owned or managed by another party
The project will occur on private land owned or managed by another party

Landowner Information

Name:	Coos County Road Department (C/O John Rowe)
Address:	1281 W. Central Blvd
	Coquille, OR, 97423
Phone:	541-396-7660
Email:	jrowe@co.coos.or.us

Site Description

Street Address, nearest intersection, or other descriptive location.

Allegany, Oregon. On the West Fork Millicoma Road (WF Millicoma Road), 3 miles past the junction with the Elliott State Forest 2000 Road and the end of the blacktop. Schumacher Creek is located at river mile 8.4 on the West Fork Millicoma River (WFMR) (Attachment A).

Directions to the site from the nearest highway junction.

From the town of Allegany, proceed approximately 6.5 miles on the WF Millicoma Road from the junction with East Fork Millicoma Road toward the ODFW Millicoma Interpretive Center/STEP Hatchery.

Following project completion, public anglers will be allowed the following level of access to the project site:

Full access

Please describe what leases, easements, agreements are in place to ensure angler access to the project site, and what is the length of each agreement.

WFMR is able to be floated for angler access below the creeks. There are a number of landowners that allow access although not formal agreements. Fish produced from these streams will be present in reaches of the WFMR up to and above the hatchery, where property is Elliott State Forest.

Dominant Land Use Type:

Rural residential

Project Location

General Project Location.

County:	COOS
ODFW Dist:	Umpqua
Stream/Lake/Estuary Name:	Schumacher Creek
Sub-basin:	17100304
Tributary of:	West Fork Millicoma River

Specific Project Location.

Latitude	Longitude

43.48035	-124.03936

Project Summary

Project Summary

Please provide a couple sentence summary of the proposal.

We propose to replace two undersized, perched culverts on the WF Millicoma Road with bridges. The current crossings block access to habitat and have a high-risk of failure. The new bridge crossings will improve fish production and watershed function by improving fish passage and flow conveyance within the WFMR basin.

Overall Project Goals

Describe the primary goals or outcomes of the entire project, including elements not requesting funding from R&E.

This project is designed to improve the passage of Schumacher Creek for winter steelhead, coho and fall chinook by allowing adult and juvenile access at the stream crossing on the West Fork Millicoma Road that has been a barrier since 1996.

This project is designed to improve the passage of Hatchery Creek, unnamed tributary to WFMR that runs to the ODFW Millicoma Interpretive Center, for winter steelhead by allowing adult and some juvenile access at the stream crossing on the West Fork Millicoma Road.

This project is also designed to reduce crossing failure risk and improve water quality and flood conveyance by converting the undersized culverts at Schumacher Creek and the Hatchery Creek into bridges on the West Fork Millicoma Road.

Primary objectives of R&E funding

Please describe the measurable objectives for the R&E portion of the funding request.

Improve fish passage on Schumacher Creek by upgrading an undersized culvert that has potential to plug and blocks fish passage to a bridge that will be passable for all juvenile and adult salmonids and steelhead.

Effectively pass a 100-yr flow event by calculating post-project flow capacities once the undersized culvert is upgraded to a bridge on Schumacher Creek.

Improve water quality by reducing sediment loads in Schumacher Creek and WFMR through post-implementation observations of the substrate in the stream channel.

Current Situation/Justification

Please describe the current situation and explain why this funding is needed.

Two stream crossing culverts on tributaries to the WFMR are perched >4 ft above the stream grade on the outfalls, obstructing passage to upstream habitat (Attachment B). They are also considerably undersized for the active channel width (ACW) and effectively passing a 50-yr flow event. The Schumacher Creek culvert is on the WF Millicoma Road, 3 miles past the blacktop. The stream crossing currently has a 36" plastic pipe that is undersized for a 50-yr flow event and too small for the ACW (13.2 ft). In the 1996 flood, the Schumacher culvert blew out and the replacement culvert was improperly imbedded to the current perched position, blocking access for adults and juveniles to 2.5 miles of good-to-fair coho and steelhead spawning and rearing habitat. The inability for this culvert to pass high flows creates a risk of catastrophic fine

sediment delivery to WFMR.

The Hatchery Creek culvert on WF Millicoma Road also has a perched 36" plastic pipe that is considerably smaller than the ACW (11.35 ft). While this tributary provides 0.25 miles of good-to-fair steelhead habitat, the culvert blocks the transportation of approximately 270 cubic yards of gravel to the WFMR that will provide high quality spawning habitat.

Recreation and Commercial Benefit

This project will provide benefits to:

Recreational fisheries
Commercial fisheries

Explain how this project will contribute to current (and/or potential) fishing opportunities, access, or fisheries management.

These two crossings on the WF Millicoma Road provide frequent problems throughout the winter and during fishing season when there are heavy rain events and elevated water levels. With undersized culverts, the WF Millicoma Road washes out during high winter flows and landowners, STEP hatchery staff, and fishermen are unable to reach their destination up the road. The WF Millicoma Road provides the only access to the ODFW Millicoma Interpretive Center/STEP Hatchery and private property along this road. It also is the only access for anglers to reach the six miles upstream of the Schumacher Creek confluence that are considered excellent steelhead fishing waters on the WFMR.

Percent benefit split between Commercial and Recreational anglers:

15 % Commercial
85 % Recreational

Please explain, or justify, how the percentage split was determined:

Improving fish passage at Schumacher Creek and Hatchery Creek will result in increased production of primarily winter steelhead and coho salmon. In the ocean, commercial fisherman are able to harvest coho and/or allowed greater access to coho due to reduced ESA restrictions when wild/natural coho abundance is greater, thus there will be commercial benefits from the project. However, steelhead are not harvested commercially from the Coos stocks (although some by tribal fishers in the Columbia), thus the benefits from increased coho and steelhead production resulting from restored fish passage will be largely for recreational anglers in the bay and WFMR.

This project has been identified as an ODFW priority for:

Local/watershed
Basin/regional

Does this project directly support implementation of the ODFW Strategic Plan and/or current Fish Division priorities?

Please briefly explain when this was identified as a priority and what process or workgroup was used to identified this as an ODFW priority.

Identify any plan or other document that identifies this priority.

The Coos Watershed Association Action Plan (1995) identifies improving adult salmon migration to headwater spawning gravel as one on its Action Plans (page 31).

OWEB's Summary of Watershed Health Indicators for the Oregon Coast Coho ESU (2007)

identifies fish passage barriers as one of the limiting factors for coho in the Millicoma watershed.

CoosWA's Bonneville Environmental Foundations Model Watershed Program proposal compliments this project by determining the cumulative effects of watershed restoration on critical indicators of watershed health.

These actions to replace two culverts that block fish passage are directly in alignment with the Oregon Plan for Salmon and Watersheds.

Is this project part of an approved Salmon-Trout Enhancement Program (STEP) activity?

No

This project is intended to benefit the following species:

Fall Chinook Salmon
Coho Salmon
Winter Steelhead
Cutthroat Trout

This project will benefit anglers or fishery by providing:

Angler Access
Fish Passage

Angler Access

This project will:

Maintain/restore current angler access
Improve access to existing angling opportunities

Choose the following that best describes the angling access provided by the project:

Bank
Road

Do similar access sites, facilities, or fisheries exist within 10 miles of the project site?

Yes

There is access to steelhead fishing waters downstream of Schumacher Creek, however it is very limited because it is a highly rural residential area. The majority of the bank access is privately owned, limiting the areas that anglers can access by foot. Of the 8 miles downstream of the Schumacher Creek confluence, only approximately 10% can be accessed by anglers on foot. Upstream of the confluence, there is approximately 6 miles of steelhead fishing water with the majority of it (75%) being public lands.

Fish Passage

This fish passage project will:

Remove a barrier that does not have an existing fishway/passage structure
Purchase/installation of culvert or bridge

We have contacted or have been working with:

Local ODFW staff
ODFW has been contacted
The project has received approval

Project Description

Schedule

Activity	Date	RE Funding
Permit Applications	2/2017 - 4/2017	No
Materials Acquisition	4/2017-8/2017	Yes
Bridge Construction	8/2017-10/2017	No
Project Inspection	8/2017-10/2017	No
Post Implementation Review	12/2017-12/2019	No
Project Maintenance	As Needed	No

Permits

Permit	Secured?	Date Expected
USACE/DSL Joint Permit	No	April 2017
ODF Forest Practices Notification	No	June 2017

Project Design and Description

Please describe in detail the methods or approach that will be used to achieve the project objectives.

These fish passage bridges were designed by Don Porior, P.E., (Porior Engineering), with project development assistance by Allison Tarbox (CoosWA Project Manager), Chris Claire (ODFW Assistant District Fisheries Biologist), Gary Gangewer (Coos County Road Department Bridge Inspector) and John Rowe (Coos County Road Department Roadmaster and Public Works Director). Don Porior is a retired BLM and registered professional engineer with over 30 years of experience in designing infrastructure to be compatible with fish passage requirements. Allison Tarbox has a Master's in Geography with emphasis in fluvial geomorphology and has 5 years of experience with river systems and one year of experience (two work seasons) with watershed restoration specifically dealing with wood placements and fish passage issues. Chris Claire has provided fish habitat restoration project oversight in southwestern Oregon for six years. Gary Gangewer has over 30 years of experience with the county road department and a bridge inspector since 1993, managing consulting engineers for all the bridge replacements and repair projects. John Rowe has been involved in road construction since 1983, working for the Oregon Highway Department, Bracelin-Yeager, Knife River/LTM, and Coos County.

The Schumacher Creek crossing will be upgraded to a bridge that was designed to optimize fish passage and reduce the risk of crossing failure (see attached designs: Attachment C). The channel gradient through the project site is moderate at approximately 9%. This fish passage site was designed to have an opening with a width that was wider than the bankfull width measured in the field and a height that yielded a cross-sectional area that could pass at least a 100-yr flood event.

An upgraded culvert was considered, which would need to be at least 19.7 ft in diameter based on NOAA fish passage criteria and the active channel width. Upgrading the crossing to a bridge would meet criteria and provide the best passage for fish as well as drainage and decrease the potential to plug.

Engineering

Does the project involve capital improvement, engineering, site grading or other construction?

Yes

Not associated with ODFW

Project Management and Maintenance

What is the life expectancy of R&E funded construction, structures, equipment, supplies, data or

fishery?

These bridge crossings are meant to be permanent structures that will have an estimated 50 year lifespan.

Who is responsible for long term management, maintenance, and oversight of the project beyond what is funded by R&E.

CoosWA will conduct annual inspections of the site for 3 years after project completion to assess fish passage parameters and assess the revegetation of disturbed soils at the site. The County Road Department will perform all bridge structural and integrity inspections following major flood flow events and maintain annual inspections at a minimum. Coos County Road Department will be assume responsibility for any maintenance or repairs that are needed, and CoosWA will assist if needed to make sure it is accomplished.

Will the project require ongoing maintenance?

No

Is there a plan to collect baseline data and to conduct monitoring efforts to measure the effectiveness of the project?

Yes

Monitoring during migratory seasons and high flows will be conducted at the bridge sites to make sure the bridges are working as designed.

Project Funding

Funding

Have you applied for OWEB funding for this project?

Yes

Awaiting a decision from the panel.

CoosWA will submit an application for funding for the October 2017 cycle of OWEB funding. The application is due November 1, 2017 and will be awaiting their decision until early spring 2018.

Has this proposal, or similar proposal for this project location, previously been denied by OWEB or other funding source?

[{"source":"OWEB","type":"Cash","secured":"Pending","dollarValue":110201,"comments":"Project management, site prep and bridge installation, bridge materials"},{"source":"Coos County Road Department","type":"Cash","secured":"Secured","dollarValue":155420,"comments":"Bridge materials, engineered designs"},{"source":"Oregon Department of Fish and Wildlife","type":"In-Kind","secured":"Secured","dollarValue":768,"comments":"Staff time for technical assistance and implementation monitoring"}]

Other Funding Source	Type	Secured	Dollar Value	Comments
OWEB	Cash	Pending	110201	Project management, site prep and bridge installation, bridge materials
Coos County Road Department	Cash	Secured	155420	Bridge materials, engineered designs
Oregon Department of Fish and Wildlife	In-Kind	Secured	768	Staff time for technical assistance and implementation monitoring
		Total	266389	

Budget

Item	Unit Number	Unit Cost	In-kind or non-cash contributions	Funding from other sources	R&E Funds	Total Costs
PROJECT MANAGEMENT						
CoosWA Project Manager (Permit Development and Implementation Monitoring))	100	32.90	0	3290	0	3290
ODFW Fisheries Biologist (Implementation Monitoring)	24	32.00	768	0	0	768
County Surveyor (Implementation Monitoring)	20	113.84	0	2277	0	2277
		SUBTOTAL	768	5567	0	6335
IN-HOUSE PERSONNEL						
CoosWA Project Manager (Post-implementation monitoring and reporting)	111	31.50	0	3498	0	3498
		SUBTOTAL	0	3498	0	3498
CONTRACTED SERVICES						
Labor costs (Schumacher Creek)	544	40.91	0	16697	5564	22261
Equipment costs (excavation, grading, trucking, mobilization) (Schumacher Creek)	517	57.40	0	22262	7414	29676
Labor costs (Hatchery Creek)	415	40.92	0	16982	0	16982
Equipment costs (excavation, grading, trucking, mobilization) (Hatchery Creek)	365	57.40	0	20951	0	20951
Erosion control (lump sum)	1	1200.00	0	1200	0	1200
Engineered designs and stamped drawings	2	5000.00	0	10000	0	10000
County sign off - land use & floodzone development	1	300.00	0	300	0	300
Floodplain certificate	1	500.00	0	500	0	500
		SUBTOTAL	0	88892	12978	101870
TRAVEL						
CoosWA Project Manager (50 miles RT)	200	0.54	0	108	0	108
		SUBTOTAL	0	108	0	108
SUPPLIES/MATERIALS						
Detour signage (each) (Schumacher Creek)	6	150.00	0	0	900	900
Detour signage (each) (Hatchery Creek)	2	150.00	0	300	0	300
Base rock (ton) (Schumacher Creek)	207	10.50	0	0	2173	2173
Base rock (ton) (Schumacher Creek)	92	15.66	0	0	1441	1441
Base rock (ton) (Hatchery Creek)	160	10.50	0	1681	0	1681
Structural backfill (ton) (Schumacher Creek)	150	10.50	0	0	1575	1575
Structural backfill (ton) (Hatchery Creek)	150	10.50	0	1575	0	1575
Stream bed mixture (ton) (Schumacher Creek)	130	16.00	0	0	2080	2080
Stream bed mixture (ton) (Hatchery Creek)	60	16.00	0	960	0	960
18" ADS culvert for waterline (length foot) (Schumacher Creek)	50	11.37	0	0	568	568
18" ADS culvert for waterline (length foot) (Hatchery Creek)	50	11.37	0	569	0	569
Geotextile fabric (square yards) (Schumacher Creek)	80	1.20	0	0	96	96
Geotextile fabric (square yards) (Hatchery Creek)	60	1.20	0	72	0	72
Bridge Package (lump sum) (Schumacher Creek)	1	70500.00	0	70500	0	70500
Bridge Package (lump sum) (Hatchery Creek)	1	60180.00	0	60180	0	60180
Guardrail terminals (each) (Schumacher Creek)	4	3000.00	0	12000	0	12000
Bridge deck rail (length foot) (Schumacher Creek)	125	20.00	0	2500	0	2500
Object markers (each) (Hatchery Creek)	4	60.00	0	240	0	240

		SUBTOTAL	0	150577	8833	159410
EDUCATION/OUTREACH						
			0	0	0	0
		SUBTOTAL	0	0	0	0
EQUIPMENT						
			0	0	0	0
		SUBTOTAL	0	0	0	0
FISCAL ADMINISTRATION						
CoosWA Grant Administration (19.15% Fed Indirect Cost Rate)	1	0.19	0	17155	0	17155
		SUBTOTAL	0	17155	0	17155
		BUDGET TOTAL	768	265797	21811	288376

Internal Review Results

Review Score: 1.2 out of 3

(0 = Do Not Fund, 1 = Strengthen Proposal, 2 = Recommend, 3 = Strongly Recommend)

Summary of Review Team Comments

As proposed the review team did not support RE funding for this project. There is minimal, if any, connection to angler benefits. Scores include one 0, five 1's, and three 2s.

Specific Review Team Comments

ODFW has no record of the required fish passage approval for the design. Attachment C shows the bridge designs, and there are excess stream gradients underneath each of the two new bridges (~16% @ W FK Millicoma Hatchery Creek Bridge and 9% at Schumacher Creek). These post treatment stream gradients seem excessive and may result in unstable stream channels that may present long-term fish passage issues, particularly at lower stream flows. These excessive conditions may be due to the natural/or existing geomorphic conditions of the natural channel, but we have no reference to the natural channel's conditions. These site specific issues need to be resolved and the ODFW Fish Passage Approval needs to be acquired as the R & E Board may chose to Do Not Fund, without this fish passage permit(s) in hand.

Coordinate with ODFW's Fish Passage Program and seek state required fish passage approval(s) prior to this project final submittal application.

The proposal does not seem like a good use of RE funding.
- The RE funds are for road fill related to the Schumacher crossing. The real connection to RE from this proposal would be the benefits to the STEP hatchery (MIC) resulting from the improved waterline and reduced washout threat on Hatchery Creek, but none of the RE funding is being requested for Hatchery Creek.
- Minimal if any noticeable benefit to anglers or fisheries from this project.

Per page 7 of the application, OWEB funding will not be applied for until October of 2017. If this is correct then recommend postponing a decision on this until OWEB funds are at least applied for.

Minimal justification or context on value of either stream to overall production or fishery.

Water supply pipes for Millicoma Interpretive Center (MIC) fish production currently pass through the Hatchery Creek culvert (bad situation). Water supply pipes will be relocated through this bridge project, making for a much better situation for supplying water to the MIC.

This would likely not be a priority for the county without outside funding.

RE is being asked to pay almost $13,000 for equipment to place $9,000 in material.

Application mentions "some" juvenile passage at one crossing. Need to explain. Gradient of 9% doesn't sound like coho habitat.

Specific Review Team Questions

Please explain what would happen without award of this $22,000 from RE.

If this project is not awarded through RE, we will have to seek funding from elsewhere to ensure this project would be implement. Coos Watershed is trying to maintain a good partnership with the Coos County Road Department by working with them on fish passage projects to make sure they are done correctly and in a timely manner. This funding would help keep this project on

schedule for implementation in the summer of 2017.

Why are there mobilization costs for both sites? Won't they be done at the same time? This seems like an over estimation, please explain.

The two sites will not be done simultaneously, but instead one right after the other, so the equipment would have to move from one project site to the next. The two project sites are far enough away that mobilization is need for the equipment to get from Site 1 to Site 2. Also, the road between to the two sites is not an ideal road to walk the excavator and other equipment to the next site, therefore a lowboy will be need to transport equipment. There is also no place to store the lowboy on site so it will be coming from town, which increases mobilization costs.

Project Map


Schumacher Creek
Trail Butte Rd
W Fork Millicoma Rd
W Fork Millicoma Rd

Additional Files

Budget Information

Maps

Attachment A.	*Aerial location map*
Project Map	*Map image of project location*

Photos

Attachment B.	*Pre-Project Photos*

Design Information

Attachment C.	*Engineered designs for Schumacher and Hatchery Creek crossings*

Management Plans and Supporting Documents

Response to the Review Team Comments

Permits and Reviews

Partnerships

Coos County Match Letter	*Match and support letter from the Coos County Road Department*
ODFW Match Letter	*Match and support letter from the Oregon Department of Fish and Wildlife*

Public Comment

ODF Letter of Support	*Letter of support from Oregon Department of Forestry*

Administrative Documents

Racial and Ethnic Impact Statement	*Signed copy*
Signature Authorization Page	*Signed copy*

Completion Report

A completion report has not been submitted for this project.