R & E Grant Application 17-19 Biennium

Project #: 17-045

B-Bar-K Cascade Ranch - Lost Cr Fish Screen

Project Information

Requested Cycle:	17-5
R&E Project Request:	$25,060
Other Funding:	$35,547
Total Project:	$60,607
Spending Start Date:	9/1/2018
Spending End Date:	6/30/2019
Project Start Date:	9/1/2018
Project End Date:	6/30/2019
Organization:	Central Point Screen Shop

Applicant Information

Name:	Rich Kilbane
Address:	1495 East Gregory Rd Central Point, OR 97502
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Past Recommended or Completed Projects

Number	Name	Status
17-034	Walcott Fish Passage Improvement Project	Approved

Location Information

Where is it?

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

Landowner Information

Name: BLM
Address: 3040 Biddle Rd.
Medford, OR, 97504
Phone: 541 618-2200

Site Description

Street Address, nearest intersection, or other descriptive location.

The site is on Lost Creek approximately 4 miles SSE of the town of Lakecreek, in Jackson County.

Directions to the site from the nearest highway junction.

From the town of Lakecreek, approximately 3.5 miles east on South Fork Little Butte Creek Rd to Lost Cr Rd., continue approximately 0.5 miles to ranch access rd on right, south on ranch access rd approximately 1.5 miles to secondary access rd, through field, across the creek, through field (upstream) approximately 0.25 miles to site.

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

No 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.

NA

Dominant Land Use Type:

Forest
Range/pasture

Project Location

General Project Location.

County: JACKSON
ODFW Dist: Rogue
Stream/Lake/Estuary Name: Lost Creek
Sub-basin: 17100307
Tributary of: South Fork Little Butte Creek

Specific Project Location.

Latitude	Longitude
42.3652	-122.58318

Project Summary

Project Summary

Please provide a couple sentence summary of the proposal.

Project will provide water regulation, downstream passage and protection to juvenile salmonids and other native fish through the construction of a fish screen, bypass, and headgate at an unscreened ditch. The current situation allows for streamflow losses, and out-migrating salmonids and other fish to be lost during the irrigation season.

Overall Project Goals

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

Eliminate fish entrainment: construction of a fish screen will prevent fish from being lost down an open irrigation ditch, providing an immediate benefit to resident fish and the increased number of anadromous fish that will be using Lost Creek once the recently funded Walcott fish passage project is complete.

Provide downstream passage for out-migrating fish: the screen's bypass system will provide out-migrating fish a route around the pushup dam if flows in the creek become too low to allow for passage over the dam.

Water conservation: construction of a headgate will allow for better water regulation during the irrigation season, resulting in more water being left for fish in Lost Creek and the Little Butte Creek system.

Primary objectives of R&E funding

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

Using R&E funds, purchase materials and services necessary for the fabrication of the fish screen and headgate components, and concrete forms … steel, rebar, motor and gearbox, bearings, solar controls and panels, lumber and plywood, powder coating, etc.

Using R&E funds, purchase materials and services necessary for the on-site construction and installation of the screen and headgate … bedding material, concrete, concrete pumping, equipment fuel, etc.

Current Situation/Justification

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

Water is diverted into an unscreened irrigation ditch by means of a push-up dam. As flows fluctuate, the lack of a headgate allows more than the actual water right amount to enter the ditch, leaving less water in the creek for fish. More importantly, as the streamflow decreases and an increasingly larger proportion of water goes down the ditch, more and more out-migrating anadromous fish, whose numbers here will increase with the construction of the Walcott fish ladder, follow that flow and are lost. A headgate would allow for the proper regulation of water. A fish screen and bypass would prevent the loss of fish, and provide safe downstream passage.

It's desirable to see owners contribute to a project, but after spending substantial amounts of money over the last several years on projects benefitting fish and wildlife on their property, the ranch has closed the door on funding additional projects. They have agreed to operate and maintain the fish screen (as well as a ladder at the Walcott diversion), which is a financial commitment that should be taken into account, especially since they are under no obligation to screen their ditch.

Recreation and Commercial Benefit

This project will provide benefits to:

Recreational fisheries

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

ODFW believes that a large portion of the juvenile steelhead and coho produced in Lost Creek are lost down the ditch. This project will keep juvenile steelhead and coho out of the ditch and provide them safe passage downstream. The project will allow more juveniles to survive the summer, allow more smolts to survive the migration downstream, and result in more adults coming back to benefit Rogue anglers.

The biggest beneficiary will be Rogue steelhead. Approximately 2.5 miles of high value instrinsically productive habitat for steelhead exists upstream of this diversion. ODFW redd counts between 2003 and 2011 on Lost Creek averaged 11.3 Summer Steelhead redds per mile. In 2009, 6.8 Winter Steelhead redds per mile were observed.

Steelhead produced in Lost Creek will contribute to catch and release angling opportunity as half pounders on the lower and middle Rogue River. These 12-14 inch fish provide a very popular fishery in summer and fall.

Steehead produced in Lost Creek will also contribute to the river fishery as adults. This is mostly a catch and release fishery, but Rogue angling regulations allow a limited opportunity to harvest wild Winter Steelhead seasonally, one per day and up to five per year.

Percent benefit split between Commercial and Recreational anglers:

0 % Commercial
100 % Recreational

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

Rogue steelhead and Coho salmon do not contribute to the commercial fishery.

This project has been identified as an ODFW priority for:

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.

Document: Rogue District's Steelhead Limiting Factors Analysis

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

No

This project is intended to benefit the following species:

Coho Salmon
Winter Steelhead
Summer Steelhead

This project will benefit anglers or fishery by providing:

Fish Screening

Fish Screening

This fish screening project will:

Install screens at a new location

We have contacted or have been working with:

ODFW fish screening staff

The project is being reviewed

Project Description

Schedule

Activity	Date	RE Funding
Purchase materials necessary for the fabrication of screen and headgate components, and the construction of concrete forms.	Sept, 2018	Yes
Shopwork - fabricate screen and headgate components and have powder coated; construct concrete forms for screenbox and headgate.	Nov, 2018	Yes
Fieldwork - perform on-site construction of concrete screenbox and headgate, and install all components. (timing is weather dependent)	Apr, 2019	No

Permits

Permit	Secured?	Date Expected
NA	No	

Project Design and Description

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

The design of the fish screen, its integral bypass system, and the headgate is complete, and is similar to other solar-powered rotary drum screens and headgates recently designed and constructed by ODFW. Standard construction methods and equipment will be used to first fabricate components, then when site conditions allow, de-water and excavate the site, construct forms and pour concrete, backfill and grade the area, and install the components. The project is on BLM land and qualifies for a NEPA Categorical Exclusion. All work will be done in compliance with standards outlined by BLM. The water users will be responsible for minor maintenance of the new fish screen, with ODFW being responsible for major maintenance (ORS 498.306).

Engineering

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

Yes

Part of an ODFW program like STEP

Project Management and Maintenance

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

Based on similar systems currently in service, the mechanical components will require periodic replacement every 7 to 10 years (timer, motor, batteries, bearings, seals, etc), and steel components are expected to last at least 25 years. The concrete structure itself is expected to

last at least 50 years.

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

Under ODFW's Fish Screen Cost Share Program, the water user will operate and perform the minor maintenance of the fish screen (cleaning debris, greasing bearings, etc.), and ODFW will periodically inspect the screen, and perform the major maintenance for the life of the diversion (repairs, replacement of failed parts, etc.). (ORS 498.306)

Will the project require ongoing maintenance?

Yes

Sediments in the screenbox, and debris that collects on the trashrack and at the fish return pipe will periodically need to be removed. The fish screen will have electronic controls and moving parts that are subject to failure or wear.

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

Yes

As part of its maintenance responsibility, the screen shop routinely inspects the screens it maintains and performs adjustments and repairs as needed in order to ensure that fish are never at risk of entrainment.

Project Funding

Funding

Have you applied for OWEB funding for this project?

No

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

[{"source":"ODFW Fish Screening Program","type":"In-Kind","secured":"Secured","dollarValue":35547,"comments":""}]

Other Funding Source	Type	Secured	Dollar Value	Comments
ODFW Fish Screening Program	In-Kind	Secured	35547	
		Total	35547	

Budget

Item	Unit Number	Unit Cost	In-kind or non-cash contributions	Funding from other sources	R&E Funds	Total Costs
PROJECT MANAGEMENT						
			0	0	0	0
		SUBTOTAL	0	0	0	0
IN-HOUSE PERSONNEL						
ODFW labor-component fabrication & concrete forms	400	41.00	16400	0	0	16400
ODFW labor-site excavation, set forms, pour concrete	240	41.00	9840	0	0	9840
ODFW labor-backfill, install bypass & components	200	41.00	8200	0	0	8200
		SUBTOTAL	34440	0	0	34440
CONTRACTED SERVICES						
Plywood, lumber, misc materials and supplies	1	2500.00	0	0	2500	2500
Rebar for screen and headgate	3500	0.80	0	0	2800	2800
Bedding material	20	25.00	0	0	500	500
Concrete for screen and headgate	30	140.00	0	0	4200	4200
PVC bypass pipe and fittings	1	1000.00	0	0	1000	1000
Screen and headgate components	1	4500.00	0	0	4500	4500
Solar components	1	2500.00	0	0	2500	2500
Steel, aluminum, and walkway material	1	3060.00	0	0	3060	3060
Powder coating of steel components	1	2000.00	0	0	2000	2000
Misc machining, fabrication, etc	1	1000.00	0	0	1000	1000
Concrete pumping	1	1000.00	0	0	1000	1000
		SUBTOTAL	0	0	25060	25060
TRAVEL						
ODFW mileage for fabrication and construction	2050	0.54	1107	0	0	1107
		SUBTOTAL	1107	0	0	1107
SUPPLIES/MATERIALS						
			0	0	0	0
		SUBTOTAL	0	0	0	0
EDUCATION/OUTREACH						
			0	0	0	0
		SUBTOTAL	0	0	0	0
EQUIPMENT						
			0	0	0	0
		SUBTOTAL	0	0	0	0
FISCAL ADMINISTRATION						
			0	0	0	0
		SUBTOTAL	0	0	0	0
		BUDGET TOTAL	35547	0	25060	60607

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

The review team felt this project did have an environmental benefit and likely would have direct benefit to local fish populations but the team was unclear on how much benefit this would have for anglers. The applicant needs to work with Fish District to better describe how this stream and project fits into the bigger picture.
Review scores included one 0, four 1s, and three 2s.

Specific Review Team Comments

Project, while very beneficial for steelhead, needs to have some financial investments on behalf of the applicant to make this a more competitive project. It was not well explained why the land owner will not help fund the project, a blanket statement is not very good justification. Please provide better explanation on why the landowner or water user will not provide funds or in-kind match for this project.

Definitely a need to get this situation rectified and keep fish in the stream. Hard to demonstrate future benefit to the angler, although there will be some.

The need for this screen is triggered by the pending construction of the Walcott Fish Ladder (funded). Looks like this could save a lot of juvenile steelhead, and be complementary to all the other work that's been done downstream.

Headgate would allow for proper regulation of water withdrawal (water user responsibility).

Specific Review Team Questions

The project justification is weak and needs to be strengthened for this proposal to be competitive. Including items like:
- What is the overall value of this project and how much of a priority is this in the Lost Creek Basin, the Rogue, and statewide?
- How do the numbers of fish/redds provided compare with the larger watershed? - How does this tie into the ESU and population viability? How much lift to fish populations will this project provide?

Little Butte Creek is in the top 5 subbasins for restoration prioritization on the Rogue, and the project site is in the top five for screening in the Rogue District. Summer steelhead are listed on Oregon's Sensitive Species List, and Coho Salmon are federally listed as Threatened under the Endangered Species Act. Production of both is signficant in Little Butte Creek, which was generally the biggest producer of steelhead smolts, and was by far the biggest Coho smolt producer during an interagency smolt trapping project done on select Rogue tributaries.

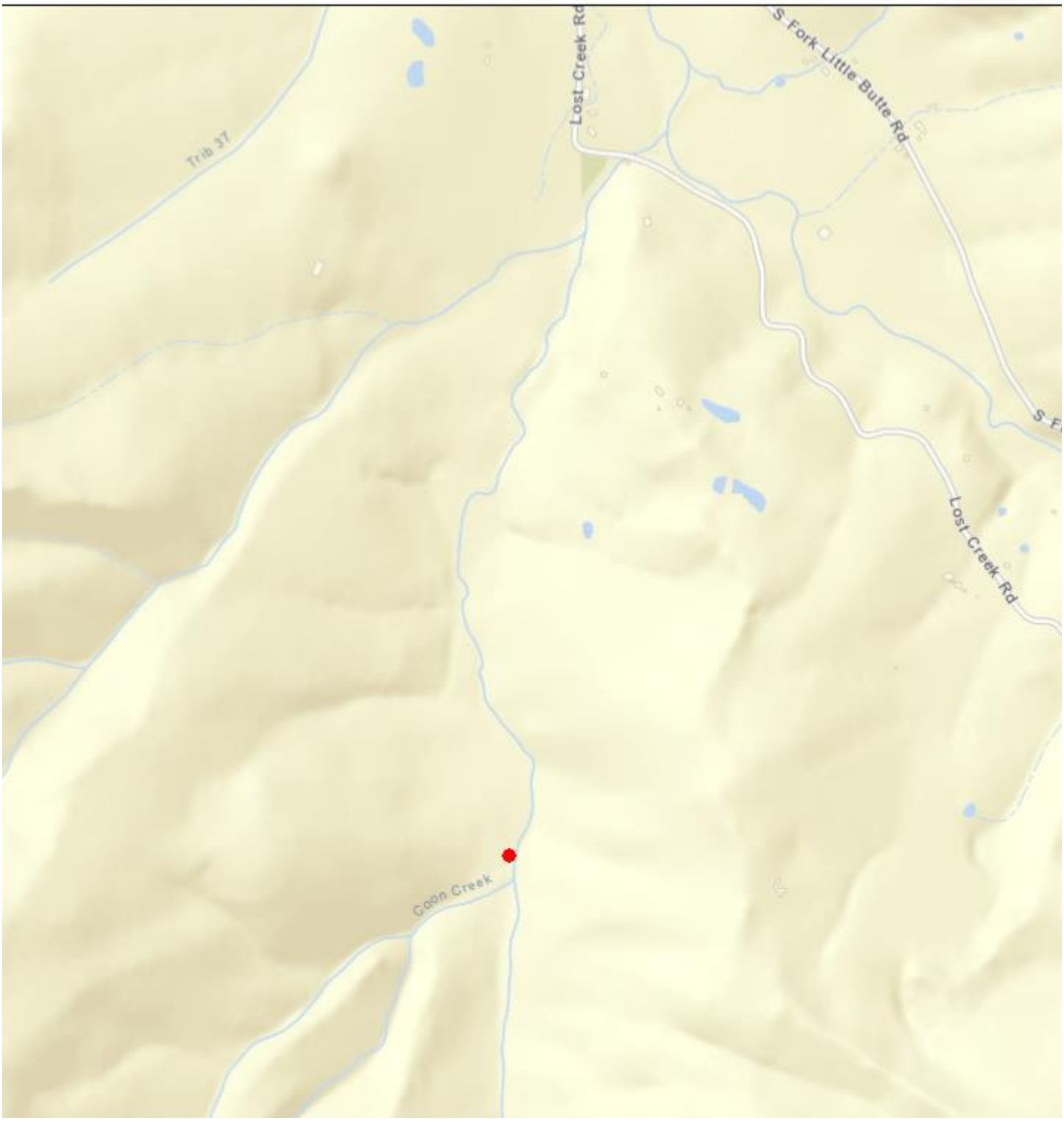
Lost Creek, an important tributary to Little Butte Creek, is both a steelhead and coho producer. Based on smolt trapping and redd count data, the number of summer steelhead redds found in Lost Creek were double the average, leading to the conclusion that the 3.8 miles (6.1 km) of high intrinsically productive (IP) habitat in Lost Creek may be producing 42,700 summer steelhead fry and 1,140 steelhead smolts per year. To bring the importance of this project into perspective, of the 3.8 miles of habitat available to steelhead in Lost Creek, 2.5 miles are above the project site.

More information is available as an additional attachment to this application.

It seems like dealing with the passage barrier should be part of this project. why is passage not being addressed? How much of an issue is passage and what is the duration/severity of passage issues.

Passage at this site is un-obstructed during the non-irrigation season, and once the pushup dam is installed, is adequate until the flows begin to drop. A new fish-friendly diversion structure would eliminate the need for the ranch to disturb the creek twice a year building and removing the dam, and it would provide better passage than a pushup dam to a degree, but it wouldn't eliminate the problem caused by reduced flow. Because water users are entitled to take their full water right regardless of how much water is in the creek, as the season progresses, the amount of water left in the creek becomes less and less in comparison to what's going down the ditch. Most downstream-moving fish will follow the main flow, which becomes the ditch flow way before the dam becomes impassable. And once impassable, all downstream fish will go down the ditch. A screen will prevent these fish from being lost down the ditch, and will instead return them safely to the creek below the diversion to continue their downstream movement.

Project Map


Lost Creek Rd
S Fork Little Butte Rd
Trib 37
Lost Creek Rd
Coon Creek

Additional Files

Budget Information

Maps

Project Map	*Map image of project location*

Photos

Ditch - looking from diversion	*Pre-project -ditch photo*
Lost Creek - looking upstream from below diversion	*Pre-project -diversion photo*

Design Information

B Bar K Ranch Screen Drawings	*Screen design drawings*

Management Plans and Supporting Documents

Lost Cr Add'l Info	*Biologist response to reviewers questions*

Permits and Reviews

Partnerships

Signed ODFW Screen Cost Share Application	*User construction and maintenance approval*

Public Comment

Lost Creek Screen BLM Letter of Support 1-23-18	*Landowner letter of support*
ODFW Support Letter - Lost Creek Screen	*Rogue District letter of support*

Administrative Documents

signature page

Completion Report

A completion report has not been submitted for this project.