R & E Grant Application 17-19 Biennium

Project #: 17-046

Long Creek Reservoir Spillway Replacement

Project Information

Requested Cycle:	17-5
R&E Project Request:	$19,165
Other Funding:	$9,080
Total Project:	$28,245
Spending Start Date:	8/15/2018
Spending End Date:	6/30/2019
Project Start Date:	8/15/2018
Project End Date:	6/30/2019
Organization:	Oregon Department of Fish and Wildlife

Applicant Information

Name:	Kyle Bratcher
Address:	65495 Alderslope Rd. Enterprise, OR 97828
Telephone:	(541) 426-3279
Email:	kyle.w.bratcher@odfw.oregon.gov

Past Recommended or Completed Projects

This applicant has no previous projects that match criteria.

Authorized Agent

Name:	Kyle Bratcher
Address:	65495 Alderslope Rd. Enterprise, OR 97828
Telephone:	(541) 426-3279
Email:	kyle.w.bratcher@odfw.oregon.gov

Location Information

Where is it?

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

Landowner Information

Name:	United States Forest Service
Address:	1550 Dewey Ave. Baker City, Oregon, 97814
Phone:	541-523-6391

Site Description

Street Address, nearest intersection, or other descriptive location.

Long Creek Reservoir (Baker Co.) 5.5 mi SSE of Unity, OR

Directions to the site from the nearest highway junction.

From Highway 26 near east of the town of Unity, follow Long Creek Rd south for approximately 10 miles.

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.

ODFW owns the water rights for Long Creek Reservoir (Cert: 51712, Cert:51314 RR). The permit for the dam is

Dominant Land Use Type:

Forest
Range/pasture

Project Location

General Project Location.

County:	Baker
Town/City:	Unity
ODFW Dist:	La Grande
Stream/Lake/Estuary Name:	Long Creek Reservoir
Sub-basin:	Burnt River
Tributary of:	Snake River

Specific Project Location.

Latitude	Longitude
44.35817	-118.15991

Project Summary

Project Summary

Please provide a couple sentence summary of the proposal.

This project aims to replace the emergency spillway at Long Creek Reservoir with a steel structure that will require minimal maintenance. A properly maintained reservoir facility will ensure continuation of the recreational fishery, and protect downstream interests.

Overall Project Goals

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

Prevent erosion of the earthen dam at Long Creek Reservoir by replacing the emergency spillway (which is currently in disrepair) with a more durable structure providing a long term solution. Should the dam fail, potential liability for downstream damage could fall upon ODFW.

Continue to provide a recreational fishery at Long Creek Reservoir by properly maintaining the reservoir facility.

Primary objectives of R&E funding

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

R&E funding will be used to fund staff time for fabrication and installation of a steel spillway. R&E funding will also be used for transportation costs of materials and equipment.

Current Situation/Justification

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

ODFW has managed Long Creek Reservoir to provide a recreational fishery for stocked rainbow trout since at least the mid 1960's. The reservoir is located on lands administered by the USFS. ODFW operates the facility of for the purpose of providing a recreational fishery by a Special Use Permit granted by the National Forest. The SUP requires ODFW to maintain the facility.

The dam at Long Creek Reservoir has a wooden spillway that is currently in disrepair. During spring flow events, when the reservoir is full, this serves as an overflow channel. The deteriorating state of the spillway is not currently functioning at full capacity and could fail further causing dam erosion or failure of the dam. While the dam is currently in good condition and inspected by OWRD, ODFW would likely be liable for any damage caused to private residences or farm ground downstream should a failure occur.

A properly operating spillway is essential for long term dam maintenance and continued use of the reservoir for anglers. Since acquisition of the dam and water rights, Long Creek Reservoir has been operated with the single purpose of providing a recreational angling opportunity in a unique and remote setting

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.

Long Creek Reservoir is stocked annually with fingerling rainbow trout to provide a recreational sport fishery. While we have no quantitative data to document usage of the facility (visits, angler effort, etc.) contact with anglers either at the reservoir or by phone conversation indicate that the

fishery is significantly utilized and that anglers travel long distances (50-100 miles) to enjoy fishing at this unique site. The route to the reservoir is well signed from Hwy. 26 (approx. 10 miles) and access is reasonably simple for most vehicle types. Long Creek Reservoir offers a unique setting for anglers seeking more remote and secluded opportunities. Similar opportunities in Union and Wallowa counties are well used and have proven popular with anglers.

Percent benefit split between Commercial and Recreational anglers:

0 % Commercial
100 % Recreational

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

The single purpose of Long Creek Reservoir is to provide a stocked trout fishery in a rural secluded setting. The reservoir is stocked annually by the La Grande District. There are no commercial interests associated with Long Creek Reservoir.

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.

This project is identified as a priority by the watershed manager. ODFW is obligated to maintain the dam to prevent private property damage or face possible liability from dam failure.

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

No

This project is intended to benefit the following species:

Rainbow Trout

This project will benefit anglers or fishery by providing:

Angler Access
Angling Opportunity

Angler Access

This project will:

Maintain/restore current angler access

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

This is maintenance of and existing fishery. Without a properly operating spillway, there is potential for damage to the dam through erosion. Should the dam become unsafe, the costs of repair, replacement, or removal would far exceed the cost of replacing the existing spillway.

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

Yes

Murray Reservoir lies approximately 3 miles to the east of Long Creek Reservoir. While located within 10 miles, is about 17 miles by gravel road and highway. Murray Reservoir is located directly on a highway and provides easy access yet few developments.

Long Creek Reservoir is a more remote setting with nearby primitive camping and otherwise few developments. The primary road is well off the banks of the reservoir. Long Creek offers a quiet, secluded setting compared to Murray.

This project aims to maintain the reservoir which provides a unique setting.

Angling Opportunity

This project will:

This project proposes maintenence of ODFW owned facilities to continue to provide quality trout fisheries. This project will ensure persistence of a fishery and prevent failure of a dam that could leave ODFW liable for damages to residence and farmland downstream.

Project Description

Schedule

Activity	Date	RE Funding
Complete Design for spillway	Complete	No
Complete Survey of site	Complete	No
Determine compliance with SHPO	Pending	No
Obtain fish passage approval (see correspondence w/G. Apke)	Complete	No
Transfer construction materials from EE Wilson to John Day Screen Shop	Aug 18	No
Construct steel spillway structure	Sept 18	No
Remove old spillway structure and install new steel structure	Sept-Oct 18	No

Permits

Permit	Secured?	Date Expected
NEPA-Streamlined process applies. USFS	No	Sept-Oct 18
No DSL permit needed (<50 CY fill/removal in non-ESH)	No	
No ACOE permit needed (See correspondence w/B. Johnson)	No	
No OWRD permit needed (See correspondence w/T. Janicek)	No	

Project Design and Description

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

NEPA will be required since the project is occuring on USFS property. This process has begun and communications with USFS staff has indicated this process will not hinder the project and a streamlined process applies. Outside of NEPA permitting will not be necessary and has been confirmed via email with the required agencies. ODFW fish passage staff has also confirmed this will not trigger fish passage rules.

Leftover steel from a previous project is available at EE Wilson Wildlife area that will be shipped to the ODFW screen shop in John Day. Using left over steel will incur shipping costs but overall reduces the cost of the project. The steel structure will be constructed by the ODFW John Day screen shop per the designs provided by ODFW engineers.

Screen shop staff will transport the structure and needed equipment to the site and stage near the work site. A backhoe will be used to remove the old structure and dig a channel to place the new spillway. Rock will be hauled in to line the channel leading to and from the spillway to

prevent erosion around the spillway. The spillway will be placed and secured with a combination of earth and rock fill. A walkway with handrails will be installed over the spillway to provide foot access across the dam.

Engineering

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

Yes

On ODFW land or managed by ODFW staff

Project Management and Maintenance

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

This spillway will be constructed of steel and no replacement or major repairs are foreseen within 30 years. The district has no plans to discontinue stocking of the site as it provides a unique fishery for the area.

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

Minor maintenance may be necessary that will be performed on watershed funds by the La Grande District. This dam is inspected on a 6 year cycle by OWRD. The site is visited annually by ODFW staff and the spillway can be inspected/maintained during these visits. The dam is currently in good condition with no major maintenance costs expected.

Will the project require ongoing maintenance?

Yes

The steel structure will be largely maintenance free. Thus only minor maintenance may be required however on a very small scale that can be accomplished by watershed staff. Expected maintenance may be: removing debris from the spillway, repairing any burrowing animal holes that may cause erosion, brush removal, and filling repairing rock approach/exit as needed. OWRD has maintenance criteria which acts as a guide for ODFW staff and issues may be identified by OWRD inspectors when necessary.

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

No

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 NRS-2","type":"In-

Kind","secured":"Secured","dollarValue":2880,"comments":""},{"source":"Steel spillway construction materials","type":"In-Kind","secured":"Secured","dollarValue":5000,"comments":""},{"source":"ODFW engineer","type":"In-Kind","secured":"Pending","dollarValue":1200,"comments":""}]

Other Funding Source	Type	Secured	Dollar Value	Comments
ODFW NRS-2	In-Kind	Secured	2880	
Steel spillway construction materials	In-Kind	Secured	5000	
ODFW engineer	In-Kind	Pending	1200	
		Total	9080	

Budget

Item	Unit Number	Unit Cost	In-kind or non-cash contributions	Funding from other sources	R&E Funds	Total Costs
PROJECT MANAGEMENT						
ODFW Asst. Fish Biologist NRS-2	80	36.00	2880	0	0	2880
ODFW Engineer	30	40.00	1200	0	0	1200
Od	0	0.00	0	0	0	0
		SUBTOTAL	4080	0	0	4080
IN-HOUSE PERSONNEL						
John Day Screen Shop Technician	170	36.00	0	0	6120	6120
John Day Screen Shop Technician	170	36.00	0	0	6120	6120
Painter	50	40.00	0	0	2000	2000
		SUBTOTAL	0	0	14240	14240
CONTRACTED SERVICES						
			0	0	0	0
		SUBTOTAL	0	0	0	0
TRAVEL						
			0	0	0	0
		SUBTOTAL	0	0	0	0
SUPPLIES/MATERIALS						
Steel Construction Materials	1	5000.00	5000	0	0	5000
Rock fill	20	50.00	0	0	1000	1000
Hand Rails	2	400.00	0	0	800	800
Walkway	1	700.00	0	0	700	700
Fuel	100	3.25	0	0	325	325
Misc metal/supplies	1	500.00	0	0	500	500
Paint	10	60.00	0	0	600	600
Backhoe Costs	20	50.00	0	0	1000	1000
		SUBTOTAL	5000	0	4925	9925
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	9080	0	19165	28245

Internal Review Results

Review Score: 1.1 out of 3

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

Summary of Review Team Comments

This project was previously funded but not able to be completed as actual costs exceeded the award amount once engineered. The review team was generally supportive but thought that the applicant needed to better explain the benefit to the angler and need for the project. Review team scores included two 0s, three 1s, and three 2s.

Specific Review Team Comments

Please better explain the context of this reservoir. Include items like an explanation of fishery and amount of angler use and how this structure connects to the angler (maintaining the opportunity).

Not sure R&E is the right source since this is driven by liability concerns rather than angler benefit, even thought his will at least indirectly maintain a fishery. What about OWRD dam safety funding or any district contribution?

This provides protection of a dam/reservoir that ODFW holds the water right on, for recreational opportunity.

Please better explain the estimates for staff time to build, paint, and install the structure. It is understood that screen shop staff do not have any funding to put toward this, however the current time requirements seem very large (equivalent of 1 person for over 10 weeks). As this is a "not to exceed" budget please at least what the anticipated cost is, if all goes smoothly.

Specific Review Team Questions

What is the condition of the existing dam and spillway (beyond this structure)? How often does this spillway activate, what are the downstream properties/infrastructure that could be damaged, are any parts of dam degraded, and what other alternatives were considered/eliminated?

As stated in the application, the OWRD inspects this dam on a 6 year cycle. The most recent inspection being in June 2015 and given a good bill of health. The next inspection is expected in 2021. While the dam is currently in good condition the condition of the spillway causes concern and threatens this good bill of health. The spillway activates during the spring high flows for 2-3 months. Downstream properties include farm land, residences, and a state highway.

Alternatives to maintenance includes (1) rebuilding the structure with wood, (2)breaching the dam, and (3)doing nothing. Alternative (1) results in having to repair or replace the structure more frequently. With limited staff in the watershed long term solutions become more necessary with only three fish biologists covering Baker, Union, and Wallowa counties. A wooden replacement simply leads us back to the current situation within 10 to 15 years. Alternative (2) (Breaching the dam) becomes much more expensive than the current proposal and results in the loss of a fishery. Alternative (3) leads to eventual damage to the dam by over-topping or erosion around the current structure resulting in damage that will require repairs or removal of the dam resulting in much higher costs than the proposed project.

What is being done to ensure that the earthen channel it is being placed into will not scour under, or around on either end? What maintains the stability of the earthen channel outside of this structure?

20 CY of rock is proposed in the budget that will be used to line the channel outside the

structure and to hold the structure in place. Rock will be large enough to avoid transportation by local flows.

Additional Files

Budget Information

Breakdown of Personnel Services	*Breakdown of Tech hours and cost.*

Maps

Photos

Long Creek Reservoir	*Photo of Reservoir*
Long Creek Reservoir Aerial	*Aerial w/dam (red) and spillway (green)*
Long Creek Reservoir Spillway #1	*Photo of current spillway #1*
Long Creek Reservoir Spillway #2	*Photo of current spillway #2*
Spillway & Reservoir	*Photo of reservoir with spillway*

Design Information

Long Creek Dam-Survey	*Drawings of Dam Survey*
Spillway Design	*Engineered Design of Steel Spillway*

Management Plans and Supporting Documents

Permits and Reviews

ACOE no need for permit	*B. Johnson Email*
Long Creek Water Right App	*Original App*
Long Creek Water Right Transfer	*Transfer of Water Right to ODFW*
ODFW fish passage approval	*G. Apke Email*
OWRD Engineer Corrispondence	*Janicek Email*

Partnerships

Public Comment

Administrative Documents

Signature Authorization

Completion Report

A completion report has not been submitted for this project.