



R & E Grant Application 17-19 Biennium

Project #: 17-033

Brownell Dam Removal Project

Project Information

Requested Cycle: 17-4
R&E Project Request: \$68,785
Other Funding: \$68,099
Total Project: \$136,884
Spending Start Date: 7/1/2017
Spending End Date: 6/30/2019
Project Start Date: 7/1/2017
Project End Date: 6/30/2019
Organization: Oregon Department of Fish and Wildlife

Applicant Information

Name: Michael Jensen
Address: PO Box 515
357 Patterson Bridge Rd.
John Day, OR 97845
Telephone: 541-575-0561
Fax: 541-575-0868
Email: mike.j.jensen@odfw.oregon.gov

Past Recommended or Completed Projects

This applicant has no previous projects that match criteria.

Authorized Agent

Name: Alan Ritchey
Address: 4034 Fairview Industrial Dr SE
Salem, OR 97302
Telephone: 503-947-6229
Email: alan.d.ritchey@state.or.us

Authorized Agent

Name: Bill Duke
Address: 73471 Mytinger lane
Pendleton, OR 97801
Telephone: 541-276-2344 x321

Fax: 541-276-4414
Email: william.b.duke@odfw.oregon.gov

Location Information

Where is it?

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

Landowner Information

Name: Rob Tooley
Affiliation: Terminal Ditch Company president
Umatilla, OR, 97882
Phone: 541-701-9271
Email: rob@tobe911.com

Name: Lon Wadekamper
Affiliation: property owner
Address: 29899 Country Lane
Hermiston, OR, 97838
Phone: 541-567-3876

Site Description

Street Address, nearest intersection, or other descriptive location.

29569 Booney Lane, Umatilla, OR, 97882 is the closest physical street address.

Directions to the site from the nearest highway junction.

Going West on Highway 730, towards Irrigon, OR, turn left on County Road 1275 and go South.
The site is approximately 1.1 miles from the intersection of highway 730 and county RD 1275.
The dam is approximately 2 miles upstream from the confluence between the Umatilla River and the Columbia River.

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.

The access point is located on public property, owned by the county, and anglers can access the site throughout the year to pursue angling opportunities for summer steelhead, fall and spring chinook salmon, and coho salmon.

Dominant Land Use Type:

Project Location

General Project Location.

County: Umatilla
Town/City: Umatilla
ODFW Dist: Umatilla
Stream/Lake/Estuary Name: Umatilla

Sub-basin: Umatilla River
Tributary of: Columbia River

Specific Project Location.

Latitude	Longitude
45.904507	-119.326991

Project Summary

Project Summary

Please provide a couple sentence summary of the proposal.

The Brownell Dam removal project goal is to remove the furthest downstream fish passage impediment on the Umatilla River. Brownell has been shown to be a major passage delay and a section of the dam has also been breached, possibly injuring fish. Removal is necessary to increase passage.

Overall Project Goals

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

The primary goal is to remove the first fish passage impediment from the Umatilla River. This structure has been identified as a fish passage delay for anadromous fishes and has fallen into disrepair, with a portion being breached.

By removing the dam, fish will be able make a faster upstream migration without delay, therefore allowing fish to move further upstream so that anglers throughout the system have an opportunity to catch them as well as they will reach their spawning grounds in better overall condition.

This project is a high priority for fish passage within the state, number 22 on the list, and is also a high priority within the Umatilla Basin, number 3 on the list. Numerous studies show major passage delays in the system and removing these major delays are a high priority.

The removal of Brownell would benefit not only adult anadromous fish, decreasing passage delays and possible injury, but also create safer passage for juveniles on the downstream migration since majority of the flow is now being funneled through the breached portion of the dam and not the fish passage notch.

The project would remove the oldest dam on the river, with a fish passage channel that was blasted into the bedrock in the early 1980's. The structure is full river spanning and only has one small fish passage notch, located center river, with a portion that is breached.

Remove a fish curb installed in the river to concentrate water over shallow bedrock so that smolts would not get trapped. Flows are now substantially higher during summer due to instream water rights, so the curb no serves no purpose and only provides opportunity for avian predators on smolts.

Removal of the structure will decrease passage delays, therefore allowing fish to move upstream faster and arrive at spawning grounds in better condition for spawning activities. This ultimately will help to increase the number of fish produced from spawning events, out-migrates, and return number of fish.

Primary objectives of R&E funding

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

The primary objective of R&E funding is to remove the Brownell Diversion Dam by September 30th, 2018.

The secondary objective of R&E funding is to remove a fish curb located downstream of Brownell Dam by September 30th, 2018.

Current Situation/Justification

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

The Umatilla River has historically been diverted for agricultural purposes. The Columbia Basin exchange program now allows water users to have their water pumped from the Columbia, so some Diversion dams are now obsolete and are in turn fish passage issues identified in 2013 ODFW Statewide Fish Passage Barrier Inventory list. The Brownell diversion dam is one of the oldest dams on the river and is the first fish passage impediment fish encounter on their upstream migration. The dam has not been used for diversion purposes in over 20 years, the operator of the dam is obtaining their water from the Columbia Basin Exchange program, and it has fallen into disrepair with one side being breached. This breach has caused majority of the water to flow through the breach, and not through the fish notch. A study conducted by CTUIR, 2017, showed that of 60 fish radio tagged only 18 fish passed the dam. It also showed that 16, of the 18 fish, passed through the breached section of the dam where the is exposed rebar and cable, while none used the fish passage notch and two moved through the west portion where there is no passage.

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.

There is a significant amount of fishing on the Umatilla River for Spring and Fall Chinook, Coho, and Steelhead in which during the 2015-2016 combined season anglers fished a total of 15,692 hours with an average catch rate of .399 fish/hour. In 2016, spring Chinook fishing effort was estimated to be 5,570 hours with a catch of 777 fish and a catch rate of .139 fish/hour. During the 2015-2016 steelhead season it is estimated that anglers caught 1,346 steelhead and harvested 158 hatchery steelhead with a total of 10,060 total hours of effort and a catch rate of .151 fish/hour. In 2015, the Fall Chinook and Coho angling effort was 4,843 hours and with an annual harvest of 151 fish. By reducing the number of passage delays, and barriers, on the river it will allow fish to save their reserves for spawning. This should help a higher number of fish reach the spawning tributaries faster, therefore creating a higher chance at fecundity. This should then create a higher number of juvenile outmigration, allowing for larger returns of anadromous fishes in the years to come for both recreational and commercial fisheries.

Percent benefit split between Commercial and Recreational anglers:

20 % Commercial
80 % Recreational

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

By removing the first fish passage impediment on the Umatilla fish will be able to reach their spawning grounds in better condition due to one less passage delay. This will then decrease

pre-spawn mortality due to passage delays and allow fish to increase their fecundity with higher number of fish reaching the headwaters to spawn. With an increase in numbers of fish spawning, this will provide more out-migrates that will reach the ocean. This in turn provides commercial anglers more fish to catch and provides recreational anglers more opportunity once the fish return back to the Umatilla.

This will provide a higher fish for commercial anglers in the ocean and also increase the number of fish that return back to the Umatilla River so that recreational anglers have an increase opportunity to catch .

This project has been identified as an ODFW priority for:

Local/watershed
Basin/regional
Statewide

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.

ODFW 2010 Mid-C Steelhead Recovery Plan
ODFW 2013 Statewide Fish Passage Priority Barrier Inventory
NMFS 2009 Conservation and Recovery Plan for Mid-C Steelhead

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
Spring Chinook Salmon
Coho Salmon
Lamprey
Summer Steelhead

This project will benefit anglers or fishery by providing:
Fish Passage

Fish Passage

This fish passage project will:

Remove a barrier that does not have an existing fishway/passage structure

We have contacted or have been working with:

Local ODFW staff
The project has received approval

Project Description

Schedule

Activity	Date	RE Funding
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BPA RRT site visit for design and project outlook.	4/2017	No
BPA comment on RRT and HIP III in regards to fish passage design plan prepared by ODFW.	5/2017	No
Revised document sent to RRT team and HIP III.	10/2017	No
Cultural studies being preformed by BPA on-site.	10/2017	No
ODFW submits permits for project to DSL, USACE, DEQ, Umatilla County and BPA.	11/2017	No
All permits and review process have been completed.	4/2018	No
Construction starts Phase 1 of removal	7/2018	Yes
Construction starts Phase 2 of removal	7/2018	Yes
Construction ends and dam removal is complete	8/2018	Yes

Permits

Permit	Secured?	Date Expected
DSL permit for removal/fill	No	5/2018
USACE for in-water work permit	No	5/2018
DEQ for 401 certification	No	5/2018
Umatilla County Floodplain permit	No	4/2018
ODFW Fish Passage permit	No	5/2018

Project Design and Description

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

The project design was created by ODFW's engineer Joel Watts. The dam will be removed in a two phase process, with Phase 1 starting on the east bank of the Umatilla River. The site will be isolated using bulk bags and the water will be bypassed into the existing fish notch for fish passage during phase 1.

Once the site has been isolated, a fish salvage will occur to remove any fish within the site. After all fish have been removed, the two excavators will work to remove the concrete starting with the furthest point on the isolation and working back towards the bank. Once all concrete has been removed and any rebar has been cut flush to the bedrock, phase 2 of the removal will begin. Another isolation will be set for phase 2 and water will be bypassed through the removed portion of the dam. A road will be created so that equipment can access the phase 2 portion that will consist of 3 four foot diameter pipes that will allow for fish passage. Once the isolation has been completed, a fish salvage of the area will be conducted. After all fish have been removed from the work site, excavators will work towards removing the concrete starting at the west bank and working towards the end of the isolation. After all concrete has been removed and rebar has been cut flush with bedrock, the isolation will be removed and then the bypass road. All concrete and rebar will be disposed of at an off site location. The road into the river will be removed and any material removed. Design plans and BMP's will be followed during the removal process.

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?

The rental equipment for the project will be on rent for approximately one month to complete the dam removal. Once the dam has been removed there are no anticipated maintenance associated with the project.

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

Once the dam has been removed the site, it will be monitored, and replanted, by the Umatilla

Anadromous Fish Habitat. This monitoring will continue for approximately two years to determine the effects that the dam removal has on the area.

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?

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":"John Day Fish Passage and Screens Shop","type":"Cash","secured":"Secured","dollarValue":37399,"comments":"Will pay for P&S and per diem/lodging per BPA budget."},{ "source":"John Day Fish Passage and Screen Shop","type":"In-Kind","secured":"Secured","dollarValue":5500,"comments":"Contributing in-kind to construction activities per BPA budget."},{ "source":"Umatilla Anadromous Fish Habitat Project","type":"Cash","secured":"Secured","dollarValue":12000,"comments":"Will help to pay for permits, concrete disposal, safety measures, and other costs."},{ "source":"Umatilla Anadromous Fish Habitat Project","type":"In-Kind","secured":"Pending","dollarValue":8400,"comments":"Will be securing all permits, writing plans, directing activities, and coordinating removal. "}]

Other Funding Source	Type	Secured	Dollar Value	Comments
John Day Fish Passage and Screens Shop	Cash	Secured	37399	Will pay for P&S and per diem/lodging per BPA budget.
John Day Fish Passage and Screen Shop	In-Kind	Secured	5500	Contributing in-kind to construction activities per BPA budget.
Umatilla Anadromous Fish Habitat Project	Cash	Secured	12000	Will help to pay for permits, concrete disposal, safety measures, and other costs.
Umatilla Anadromous Fish Habitat Project	In-Kind	Pending	8400	Will be securing all permits, writing plans, directing activities, and coordinating removal.
		Total	63299	

Budget

Item	Unit Number	Unit Cost	In-kind or non-cash contributions	Funding from other sources	R&E Funds	Total Costs
PROJECT MANAGEMENT						
Biologist	200	42.00	8400	0	0	8400
John Day Fish Passage and Screen Shop Program Manager	100	55.00	5500	0	0	5500
		SUBTOTAL	13900	0	0	13900
IN-HOUSE PERSONNEL						
Senior Technician	200	41.00	0	7800	0	7800
Technician	200	39.00	0	7400	0	7400
Technician	200	39.00	0	7400	0	7400
Technician	200	39.00	0	7400	0	7400
Biologist	400	42.00	0	16800	0	16800
		SUBTOTAL	0	46800	0	46800
CONTRACTED SERVICES						
			0	0	0	0
		SUBTOTAL	0	0	0	0
TRAVEL						
Per Diem	49	51.00	0	2499	0	2499
Lodging	49	100.00	0	4900	0	4900
		SUBTOTAL	0	7399	0	7399
SUPPLIES/MATERIALS						
Excavator Rental	1	13000.00	0	0	13000	13000
Excavator Rental	1	8000.00	0	0	8000	8000
Concrete Pinchers	1	13000.00	0	0	13000	13000
Road Fill	100	25.00	0	0	2500	2500
Sand Bag Fill	135	30.00	0	0	4050	4050
Concrete Disposal	125	25.00	0	0	3125	3125
Security Fence Rental	720	2.50	0	0	1800	1800
By-Pass Pipe	80	13.25	0	0	1060	1060
Mobilization/Demobilization of Equipment	1	5000.00	0	0	5000	5000
Fuel - Rental Machines	2000	3.00	0	0	6000	6000
Fuel - Dump Trucks	2000	3.00	0	0	6000	6000
Motor Pool Lease	2	600.00	0	0	1200	1200
Hydraulic Concrete Saw	1	800.00	0	0	800	800
		SUBTOTAL	0	0	65535	65535
EDUCATION/OUTREACH						
			0	0	0	0
		SUBTOTAL	0	0	0	0
EQUIPMENT						
Eco Blocks	50	65.00	0	0	3250	3250
		SUBTOTAL	0	0	3250	3250
FISCAL ADMINISTRATION						
			0	0	0	0
		SUBTOTAL	0	0	0	0
		BUDGET TOTAL	13900	54199	68785	136884

Internal Review Results

Review Score: 2 out of 3

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

Summary of Review Team Comments

While the review team understands that this project is a high priority from an agency perspective (#22 on state list and #3 in Umatilla) the application was weak as it did not adequately describe why or justify this project for RE funding. The applicant needs to better justify how and why this is a priority and what is being proposed. The applicant should try and find some additional funding from local sources. Review scores included two 1s, six 2s, and two 3s.

Specific Review Team Comments

Please explain better the connection of this project to the benefits that anglers will see. As currently written the connection is very weak even though the project is listed as very important. It appears that benefits to various life stages of sport species may be greater than specified in the application.

Describe why this project is a state priority and the fact that it is on the 2013 ODFW Statewide Fish Passage Priority Barrier Inventory as a high priority. Where does this project fit in on this list statewide and locally?

The picture seems to show minimal barrier, please better explain the existing structure, how it is a barrier and what will be removed. Explain more about barrier and delay (how much of a barrier, duration of delay, life stage affected). Were other methods for removal considered?

The other funds need to be better explained and broken out as there is limited detail on other funding. Why is there no contribution from other funding sources such as the owner or irrigation district who are responsible for this? Why is OWEB funding not a part of this? The project shouldn't be 100% funded by ODFW.

Seems like a good project, but it would be good to discuss where the liability for this structure lies. If the owners let it fall into disrepair, shouldn't they be on the hook for at least some of the passage costs, especially since the breach seems to be contributing substantially to the problem?

Please provide more description of the downstream curb removal and why it is important from a fish passage perspective.

Specific Review Team Questions

Please explain why you are renting an excavator vs using existing equipment?

The John Day Fish Passage and Screen Shop does not have a excavator that is big enough to conduct the deconstruction work, nor does it have the specialized concrete pinchers needed to remove the concrete that contains a 1 inch cable throughout the structure and rebar is anchoring it to the bedrock it was constructed upon.

Please better explain the ownership and public access provided on, or next to, the site.

The ownership at the dam site is private, but the owner lets the public fish in the area. The section downstream of the dam, approximately 2 miles, to the mouth is all public access and is where the majority of the fishing occurs on the Umatilla River throughout the year for anadromous fish. The majority of the river lies above Brownell and getting fish upstream so that all anglers have access to catch anadromous fish is a priority for both ODFW at the state level and also at the District level.

The letter from Bill Duke, District Fish Biologist, states that about 12,000 anadromous fish annually

migrate up the Umatilla River. It also mentions that telemetry data shows the dam to be a severe obstacle. Can we get more information on that? Is there data showing that fish actually do not pass the dam? Are they delayed but later pass? What is the period of delay? I am in favor of using R&E funds for dam removal but am curious about the data on this particular dam. Also, what data is there on angler use on the Umatilla River for anadromous fish?

A telemetry study was conducted by the Confederated Tribes of the Umatilla Indian Reservation in both 2015 and 2017, in which they radio tagged Coho and fall Chinook jacks to determine passage issues both above and below Three Mile Falls Dam. In the 2017, there were 60 fish radio tagged at three miles falls dam and then trucked downstream to the mouth and released. Of the 60 fish tagged, only 20 fish made it back to Brownell Dam and two died prior to passage of the dam. Of the 18 that made it passed the dam, 16 used the breached portion where there is jagged concrete, exposed rebar and cable. Two fish used the very west portion of the channel where there is no passage, but the sill of the dam is low enough that fish can pass during high flow events. There is a fish passage notch, and jump pool, that was designed to be where the fish were directed for passage, but no fish during the study passed here during the study. The average total detection time was 1 hour and 8 minutes. There were two fish that could not find passage and died below the base of the dam.

There is a significant amount of fishing on the Umatilla River for Spring and Fall Chinook, Coho, and Steelhead in which during the 2015-2016 combined season anglers fished a total of 15,692 hours with an average catch rate of .399 fish/hour. In 2016, spring Chinook fishing effort was estimated to be 5,570 hours with a catch of 777 fish and a catch rate of .139 fish/hour. During the 2015-2016 steelhead season it is estimated that anglers caught 1,346 steelhead and harvested 158 hatchery steelhead with a total of 10,060 total hours of effort and a catch rate of .151 fish/hour. The fall Chinook and Coho seasons coincide on the lower Umatilla River and therefore fishing effort is counted concurrently. In 2015, the Fall Chinook and Coho angling effort was 4,843 hours and with an annual harvest of 151 fish.

Will there be monitoring upstream of the barrier to document fish use/spawning following fish passage installation?

There will be another fish passage study conducted once the dam removal has been completed, showing if the removal of the dam had any effect on fish passage in the lower river between the mouth and Three Mile Falls Dam.

Additional Files

Budget Information

[Brownell Detailed Budget](#)

Brownell Detailed Budget

Maps

[Brownell Map](#)

Brownell Mao

[Brownell Map](#)

Brownell Mao

[Brownell Map](#)

Brownell Map

Photos

[Brownell Dam Ariel Photo](#)

Brownell Dam Removal Ariel Photo

[Brownell Dam Photo](#)

Brownell Dam Removal Photo

Design Information

[Brownell Engineering Plans](#)

Brownell Engineering Plans

[Brownell Fish Pasasge and Design Plan](#)

Brownell Fish Passage and Design Plan

Management Plans and Supporting Documents

Permits and Reviews

[Fish Passage Approval Letter](#)

Fish Passage Approval Letter

Partnerships

Public Comment

[District Letter of Support](#)

District Letter of Support

Administrative Documents

[Application Signature Page](#)

Application Signature Page

[Racial and Ethnic Impact Statement](#)

Racial and Ethnic Impact Statement

Completion Report

A completion report has not been submitted for this project.