R & E Grant Application 17-19 Biennium

Project #: 17-052

Equipment for John Day Invasive Fish Management

Project Information

Requested Cycle:	17-5
R&E Project Request:	$21,686
Other Funding:	$0
Total Project:	$21,686
Spending Start Date:	6/1/2019
Spending End Date:	6/30/2025
Project Start Date:	6/1/2019
Project End Date:	6/30/2025
Organization:	ODFW - John Day Field Office

Technical Contact

Name:	Kirk Handley
Address:	PO Box 8 Hines, OR 97738
Telephone:	541-573-6582
Telephone 2:	541-589-5372
Fax:	541-573-5306
Email:	Kirk.a.handley@odfw.oregon.gov

Applicant Information

Name:	Brent Smith
Address:	PO Box 9 John Day, OR 97845
Telephone:	503-575-1167
Email:	brentton.a.smith@state.or.us

Past Recommended or Completed Projects

This applicant has no previous projects that match criteria.

Authorized Agent

Name:	Kirk Handley
Address:	PO Box 8 Hines, OR 97738
Telephone:	541-573-6582

Telephone 2: 541-589-5372
Fax: 541-573-5306
Email: Kirk.a.handley@odfw.oregon.gov

Location Information

Where is it?

The project will not occur on any property

Project Summary

Project Summary

Please provide a couple sentence summary of the proposal.

This grant will fund the acquisition of electrofishing equipment that will be used to manage and collect information on distribution and abundance of native and invasive fish in lotic environments throughout ODFW's East Region.

Overall Project Goals

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

To collect information on the distribution and abundance of invasive fish species and gain an understanding of where their range overlaps with native salmonids.

Inform future management activities to deal with invasive fish in the John Day Basin and throughout the state.

Enhance and promote fisheries for native salmonids including westslope cutthroat trout, redband trout, bull trout, summer steelhead, and spring Chinook salmon.

Use mark recapture and removal techniques to estimate abundance while collecting eDNA samples throughout treatment reaches to develop eDNA and biomass relationships for future monitoring work, (Pending funding for eDNA processing from other sources).

Primary objectives of R&E funding

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

Acquire the necessary tools to sample wadeable streams that are too small to float and too large to effectively sample using backpack electrofishing.

Current Situation/Justification

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

Anecdotal information supports the hypothesis that a population of brook trout is establishing itself in the Upper Mainstem John Day River (Logan Breshears ODFW personal communication). This area is critical habitat for native bull trout, westslope cutthroat trout, summer steelhead, and spring Chinook salmon (ODFW 2005). Brook trout pose a threat to bull trout through genetic introgression and competition (Kanda et al. 2002). Brook trout have also been shown to displace native salmonids such as cutthroat trout where these species overlap (McGrath, Lewis 2007). In the North Fork John Day River Basin brook trout pose a similar threat to native fish but a population of brook trout has been established in this watershed for some time and will require more extensive efforts to understand the extent of their current distribution and abundance (ODFW 2005). Research has shown the distribution of smallmouth bass in the Middle Fork John Day River and North Fork John Day River continues to expand upstream and

may require management actions to reduce impacts to native salmonids (Lawrence et al. 2012, Rubenson, Olden 2017).

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.

The John Day River is unique because there are no hatcheries in the basin and all anadromous and resident fish in streams are naturally produced. Consequently, increases in production can only be made through enhancing the productivity of these streams through restoration work or other means such as this. In Oregon, Westslope cutthroat trout are only native to the John Day Basin and this project would help us manage this isolated population. In the John Day Basin, brook trout are now present in two of the three subwatershed occupied by bull trout (ODFW 2005). This tool would allow us to improve management for bull trout in these locations which could offer a recreational opportunity in the future. We hypothesize managing smallmouth bass in areas that their distribution coincides with the summer range of salmonids will benefit local fisheries for resident trout as well as recreational fisheries for anadromous fish throughout the migration corridor.

Percent benefit split between Commercial and Recreational anglers:

5 % Commercial
95 % Recreational

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

Commercial harvest in the ocean and Columbia River of John Day River anadromous fish is likely less than 5% of commercial harvest at any location with a commercial fishery these fish occupy throughout their lifecycle. From a local perspective, recreational fishing for native anadromous and resident fish would stand to benefit from this project. Currently there are very few anglers that target brook trout in these locations. Improving cutthroat and redband trout fishing in these areas may spark interest from anglers seeking a unique opportunity to catch native fish in Oregon that the John Day River could offer. Removing smallmouth bass in areas that their distribution coincides with resident redband, rearing steelhead and Chinook will benefit local fisheries for resident trout as well as recreational fisheries for anadromous fish throughout the migration corridor hence the 95% recreational benefit.

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 Mid C Bull Trout Recovery Plan is avalable here:
https://www.fws.gov/pacific/bulltrout/pdf/Final_Mid_Columbia_RUIP_092915.pdf

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

No

This project is intended to benefit the following species:

Spring Chinook Salmon
Summer Steelhead
Cutthroat Trout
Rainbow Trout

This project will benefit anglers or fishery by providing:

Angling Opportunity
Monitoring/Research

Angling Opportunity

This project will:

Enhance natural production of fish stocks to levels that allow for recreational fishing opportunities

Monitoring/Research

This project will be used to evaluate:

Population composition (i.e age, species, survival, size, or genetics)
Distribution (i.e. presence, abscence, abundance)

Has this project been reviewed or developed by an individual with appropriate qualifications (i.e ODFW biometrician, research professor)?

No
This application refers only to acquisition of gear to be used on a project. The methods for data collection and analysis will be reviewed by an ODFW biometrician to help with study design.

Is this study critical to fishery management decisions?

Yes
We need to determine the distribution and abundance of invasive non-native fish and how this relates to native salmonid abundance and distribution in priority reaches of the Mainstem John Day River, North Fork John Day River and tributaries.
Yes
Collection of abundance information as this project progresses will allow us to adapt our management strategy as we move forward and will inform when, where, and if we stock YY male brook trout which are currently the best option for complete eradication of brook trout in these watersheds. This initial learning phase will also inform what management actions will be most effective in reducing the range of smallmouth bass.

Is there a plan to repeat this monitoring or research in the future?

Yes
Future information on the distribution and or presence of invasive fish will need to be collected to verify the success of this project and stay ahead of any unintended or illegal introductions of invasive fish.

Will the data be reported or published?

Yes
Information from this work will be reported on and we hope to publish results from density information and eDNA concentration relationships that we develop from this project pending a

funding source for eDNA processing.

Project Description

Schedule

Activity	Date	RE Funding
Complete assessment of distribution and abundance of brook trout in Upper Mainstem John Day River	7/2019	No
Complete first pass smallmouth bass three pass removal abundance estimates in Middle Fork John Day River	7/2019	No

Permits

Permit	Secured?	Date Expected
USFWS sampling permit for bull trout and NOAA sampling permit for steelhead	Yes	pending renual and modification

Project Design and Description

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

The design of this project incorporates both a management and research component which will increase future monitoring efficiency and project effectiveness. We plan to determine the downstream extent of brook trout distribution using multiple pass snorkeling (two snorkelers moving through a reach of stream one after the other) and an occupancy model. Upon determining the lower limit of distribution, we will electrofish in an upstream direction until the upstream distribution limit of non-native fish is reached. As we move upstream we plan to weigh and measure each captured target fish (all salmonids and bass). In order to quantify fish densities we will conduct abundance estimates every kilometer to represent each reach of stream sampled. Abundance information will be used for multiple objectives:

1. Determine biomass and abundance of native and invasive fish species.
2. Determine the proper management action to improve conditions for native fish species.

We will continue sampling efforts and abundance estimates in each stream until we sample a kilometer without capturing a single brook trout or bass.
Future management decisions will be made from information collected from this project focused on reducing threats to native fish from invasive species.

Engineering

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

No

Project Management and Maintenance

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

This equipment could last more than 20 years depending on how much it is used. The equipment could be used anywhere else in the region or state when this project is complete. When completed the information and improved management of the fishery could last for generations.

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

ODFW will maintain and repair the gear as needed.

Will the project require ongoing maintenance?

Yes

Gear and the project will require attention for at least ten years but this will be supported through other funding grants and district personnel.

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

Yes

The collection of abundance and distribution information collected initially will be the baseline data.

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":"","type":"Cash","secured":"Pending","dollarValue":0,"comments":""}]

Other Funding Source	Type	Secured	Dollar Value	Comments
		Total	0	

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						
			0	0	0	0
		SUBTOTAL	0	0	0	0
CONTRACTED SERVICES						
			0	0	0	0
		SUBTOTAL	0	0	0	0
TRAVEL						
			0	0	0	0
		SUBTOTAL	0	0	0	0
SUPPLIES/MATERIALS						
			0	0	0	0
		SUBTOTAL	0	0	0	0
EDUCATION/OUTREACH						
			0	0	0	0
		SUBTOTAL	0	0	0	0
EQUIPMENT						
Cuttroat II Cataraft	1	2700.00	0	0	2700	2700
Type VI-A electrofisher from smith root	1	0.00	0	0	10945	10945
EG5000 watt generator from Honda	1	1860.00	0	0	1860	1860
RCB-6B Junction Box Type VI-A from Smith Root	1	1001.00	0	0	1001	1001
6' one piece anode pole 4 pin plug	3	510.00	0	0	1530	1530
fasteners/straps/cords	1	200.00	0	0	200	200
custom parts for cathode and raft frame	1	200.00	0	0	200	200
anode rings	3	150.00	0	0	450	450
trailer to haul cataraft or raft	1	2800.00	0	0	2800	2800
		SUBTOTAL	0	0	21686	21686
FISCAL ADMINISTRATION						
			0	0	0	0
		SUBTOTAL	0	0	0	0
		BUDGET TOTAL	0	0	21686	21686

Internal Review Results

Review Score: 1.4 out of 3

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

Summary of Review Team Comments

While the concept of this project was supported by the review team, the team felt that it may be more prudent to borrow existing equipment to initiate this project and determine the scope and scale of the situation before determining what will be needed to manage it. Once that has been determined a similar request could be fully supported. Review team scores included one 0, three 1s, and four 2s.

Specific Review Team Comments

If this information is truly valuable to the agency, it seems like the agency would put forth at least some of the resources to purchase this equipment. you should describe why no district resources are being used for any of this, or what in kind contributions will be made to use the equipment.

With the job rotations and under fills in the John Day district it seems that there should be some funding available to help offset this request if not fund large portions of it.

The goal of invasive management is good, but the proposal lacks a lot of detail relevant to considering whether this equipment is the right equipment for the job. The proposal touches on portions of projects the equipment would be used for, but it is somewhat short on details about exactly how the information gained will be used for management.

The grant application is for purchase of equipment. Yet most of the application talks about sampling that would be done with the equipment. In fact, the only place the equipment is shown is line items in the budget table. Please update your description to better describe the equipment to be purchased, justify the need, and explain how each item would be used.

Please describe using the equipment in streams "too small to float", yet you have a Cataraft, which floats, in the Budget. Also, you describe electrofishing in an upstream direction, yet you are proposing to use a raft to float.

There is support for getting these items for districts when warranted, This application needs to be more clear about what they want and why they need it.

Please explain what aspects of this project are short-term vs. long-term and the how long this equipment would be actively used.

Specific Review Team Questions

Could this project be funded later in the biennium and still realize success? This might give an opportunity to borrow equipment for this field season and further refine the proposal before purchase in spring 2019.

There are current resources within ODFW that can be utilized to make these assessments. Partnering with a neighboring district or borrowing equipment maybe a better solution to gather this and other information. Please explain what options for equipment sharing have been investigated (sharing this or borrowing others) and why they are not being pursued.

Perhaps describe how the equipment might be used throughout East Region, rather than just the description of John Day Basin. What are examples of projects that other Districts would use it for?

Additional Files

Budget Information

Maps

Photos

Design Information

Management Plans and Supporting Documents

References	*References for works cited in application*

Permits and Reviews

Partnerships

Public Comment

Administrative Documents

Signature page	*Signature page*

Completion Report

A completion report has not been submitted for this project.