



# R & E Grant Application 23-25 Biennium

Project #: 23-003

## *High Lakes Angler Use and Fish Survival Evaluation*

### ***Project Information***

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**Requested Cycle:** 23-1  
**R&E Project Request:** \$49,300  
**Other Funding:** \$15,521  
**Total Project:** \$64,821  
**Spending Start Date:** 7/1/2023  
**Spending End Date:** 6/30/2025  
**Project Start Date:** 7/1/2023  
**Project End Date:** 6/30/2025  
**Organization:** Oregon Department of Fish and Wildlife

### ***Applicant Information***

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**Name:** Jeremy Romer  
**Address:** 3150 E MAIN ST  
SPRINGFIELD, OR 97478  
**Telephone:** 541-726-3515 x34  
**Email:** jeremy.d.romer@odfw.oregon.gov

### ***Past Recommended or Completed Projects***

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This applicant has no previous projects that match criteria.

### ***Authorized Agent***

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**Name:** Jeff Ziller  
**Address:** 3150 Main Street  
Springfield, OR 97478  
**Telephone:** 541-686-7861  
**Telephone 2:** 541-954-0796  
**Email:** Jeffrey.S.Ziller@odfw.oregon.gov

### ***Authorized Agent***

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**Name:** Elise Kelley  
**Address:** 7118 NE Vandenberg Ave  
Adair Village, OR 97330  
**Telephone:** 541-757-5249  
**Telephone 2:** 541-243-3052

**Fax:** 541-757-4252  
**Email:** Elise.X.Kelley@odfw.oregon.gov

***Authorized Agent***

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**Name:** Michelle Jones  
**Address:** 4043 Fairview Industrial Dr SE  
Salem, OR 97302  
**Telephone:** 5039476252  
**Telephone 2:** 9476252  
**Email:** Michelle.K.Jones@odfw.oregon.gov

## **Location Information**

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### Where is it?

The project will occur Statewide

## **Project Summary**

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### Project Summary

*Please provide a couple sentence summary of the proposal.*

This project will: 1) inform ODFW which high lake fisheries are currently being used and 2) collect biological information (size, species, survival) that will aid managers in selecting fish stocks and waterbodies that optimize angler opportunity and success. In addition, it provides information needed for renegotiation of the airstocking contract in 2025

### Overall Project Goals

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

Assess the public use of airstocked fish and re-evaluate whether the high lakes air-stocking program is relevant and worthwhile after the financial cost, risk, and time invested are accounted for as we enter contract negotiation /renewal in 2025.

Determine the feasibility (i.e., statistical validity and public reaction/participation) of using online angler self-reporting to provide more information to the department at a reduced cost.

Compare in-person creel data collected by sampling crew to the online, self reported creel to identify differences between methods and determine which method is most useful.

Improve high lake fisheries by investigating which stocks have the best overwinter survival rates, which in turn will provide greater angling opportunity in years when lakes aren't stocked.

### Primary objectives of R&E funding

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

Determine if anglers are utilizing the fish stocked during airstocking.

Prioritize stocking of lakes that get the most use and have highest success (catch rates).

Use data from this study to inform renegotiation of the 2025 helicopter contract.

Assess overwinter survival of fish among lakes, or compare survival between two groups of experimental fish (released in 2023) in the same lake to determine which fish to stock.

Validate the informative value of self-reported angler experiences at high lakes by comparing creel data collected by sampling crew to the online, self reported creel.

### Current Situation/Justification

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

Despite stocking high lakes for decades, opportunities to evaluate these fisheries have been minimal due to their locations across large geographical areas and remote locations. Stock comparisons and angler usage studies have been limited, leading the agency to manage these

fisheries on past precedent. This study provides the department with the opportunity to engage the angling community to collect much needed data, while also assessing some of the biological information associated with stock types that could help improve angling opportunity. The timing of this project is poignant because air stocking occurs only in odd years, and the 10 year air stocking contract will be renegotiated in 2025.

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.*

Currently, ODFW has little information on how many anglers participate in high lake fisheries, which lakes are the most popular, and the overwinter survival of stocked fish. This is critical information, and we have not yet been able to identify a method that is useful for collecting high lake creel information.

*Percent benefit split between Commercial and Recreational anglers:*

0 % Commercial  
100 % Recreational

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

N/A

*This project has been identified as an ODFW priority for:*

Statewide

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

No

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

Identified as a priority in 2015. Airstocking on odd years, ODFW has attempted creel surveys in high lakes for a decade. Development of new technology and availability (iPhones, PC's) online reporting makes sense. Sampling crew evaluates fish survival and validates the online reporting.

*Identify any plan or other document that identifies this priority.*

This project complies with USDA Wilderness Management Handbook 1991\_Wilderness lake stocking Section 23.1-10 Wildlife and Fish - includes aerial stocking and monitoring/research.

This project complies with the USFWS Intra-Service Consultation Biological Opinion 2019 - includes statewide trout stocking, hatchery operations and maintenance, and warmwater fish program.

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

No

*This project is intended to benefit the following species:*

Other Fish Species  
triploid brook trout, triploid rainbow trout

*This project will benefit anglers or fishery by providing:*

Angling Opportunity  
Monitoring/Research

### Angling Opportunity

*This project will:*

Improve the opportunity for anglers to catch fish (better stocked fish, trapping)

### Monitoring/Research

*This project will be used to evaluate:*

Hatchery releases and/or stray rates

Fishery contribution

Angler satisfaction/harvest (Creel)

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

Yes

This project was developed with input from representatives from recreational fisheries (Gauvin), biometrician (Jones), and district biologists who participate in airstocking (Ziller, Kelley, Ramirez, Walczak)

*Is this study critical to fishery management decisions?*

Yes

Are airstocked fish being utilized and is the high lakes air-stocking program relevant/worthwhile after factoring in the financial cost, risk, and time invested?

Yes

This study provides two concrete actionable items for fisheries managers, including a way to prioritize which lakes get air-stocked and what stock to use in order to provide the best angler experience. Angler usage will provide managers with a clear picture on which lakes should take priority during air stocking, while overwinter survivability will provide which stocks and sizes of release promote the best fisheries in years when no stocking occurs.

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

Yes

Once the self-reporting system is developed it will continue to collect the information with minimal manual effort. Subsequent reports will be easy to compile and analyze on an annual basis (if needed) with no additional funding required.

*Will the data be reported or published?*

Yes

Following the end of the biennium (two seasons of online creel collection) the data will be summarized and reported on, then used to help renegotiate the helicopter stocking contract. IF reductions need to be made in the number of lakes stocked, we will know which lakes get the most use. Survival information will be used by the District Fish Bios to maximize fisheries contributions in stocked lakes.

## **Project Description**

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### Schedule

| Activity   | Date             | RE Funding |
|--|------------------|------------|
| Development of online self-reported creel system   | June - July 2023 | No         |
| Airstocking high lakes - release experimental fish | July 2023        | No         |

|  |                  |     |
|--|------------------|-----|
| In-person creel and fish survival data collection (field crew) | July - Sept 2024 | Yes |
| Data assimilation, summary, analysis, reporting                | Oct - Dec 2024   | No  |

Permits

| Permit | Secured? | Date Expected |
|--------|----------|---------------|
|        | No       |               |

Project Design and Description

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

In the first component of our study, we will assess angler effort. To assess angler effort, an online reporting system will be developed and implemented using the WUFOO platform similar to the statewide ODFW Tag Rewards reporting process (2017). Posters and media releases will be used to inform the angling public of an ongoing survey encouraging them to report on their fishing experiences while using the high lakes. In addition, posters will be placed at trail heads that lead to currently stocked high lakes. Media releases and the reporting system will be in place prior to the 2023 air stocking. The sampling creel will be used to validate the reporting system by taking note of anglers they intercept while doing biological sampling.

The second component of the project will address how experimental fish groups released by District Biologists (e.g., stock:rainbow stock127 vs rainbow stock72, species:brook vs rainbow, size:small vs large) survive over the winter (airstocked in 2023 and sampled in 2024). This is critical information because stocking only occurs every other year, meaning fishing opportunity is completely reliant on fish survival between stocking events. To assess survival, a sampling crew will visit each lake one time, and sample a minimum of 3 lakes in each district where experimental fish are present one year after the initial stocking. Fish will be sampled using 2, 100' gill nets in each lake for a 24 hr period (standardized survival protocol) and hook and line (to help determine catchability; metric measured = fish per hour). Survival rates between the two groups will be compared using capture information to determine the best fish to stock to promote fishing opportunity in the future.

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?*

N/A

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

N/A

*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

ODFW already has a limited amount of baseline data from previous attempts at creel surveys in the high lakes. Examples of previous survival studies and creel surveys are included in

attachments for clarification.

**Project Funding**

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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?*

No

| Other Funding Source                   | Type    | Secured | Dollar Value | Comments   |
|--|---------|---------|--------------|--|
| ODFW Information and Education Program | In-Kind | Secured | 2669         | Bob Swingle - development of online creel reporting system |
| ODFW Biometrician                      | In-Kind | Secured | 5460         | Michelle Jones - Data summary, analysis, and reporting     |
| ODFW District Fish Biologists          | In-Kind | Secured | 7392         | Hiring, training crew                                      |
|  |         | Total   | 15521        |  |

## Budget

| Item   | Unit Number | Unit Cost           | In-kind or non-cash contributions | Funding from other sources | R&E Funds    | Total Costs  |
|--|-------------|---------------------|-----------------------------------|----------------------------|--------------|--------------|
| <b>PROJECT MANAGEMENT</b>                                  |             |                     |                                   |                            |              |              |
| ODFW Biometrician - Michelle Jones                         | 80          | 68.25               | 5460                              | 0                          | 0            | 5460         |
| ODFW Information and Education - Bob Swingle               | 40          | 66.73               | 2669                              | 0                          | 0            | 2669         |
| ODFW Asst. District Fish Biologist                         | 120         | 61.60               | 7392                              | 0                          | 0            | 7392         |
|  |             | <b>SUBTOTAL</b>     | <b>15521</b>                      | <b>0</b>                   | <b>0</b>     | <b>15521</b> |
| <b>IN-HOUSE PERSONNEL</b>                                  |             |                     |                                   |                            |              |              |
| ODFW BSA-1   | 480         | 33.00               | 0                                 | 0                          | 15846        | 15846        |
| ODFW BSA-2   | 480         | 33.00               | 0                                 | 0                          | 15846        | 15846        |
|  |             | <b>SUBTOTAL</b>     | <b>0</b>                          | <b>0</b>                   | <b>31692</b> | <b>31692</b> |
| <b>CONTRACTED SERVICES</b>                                 |             |                     |                                   |                            |              |              |
|  |             |                     | 0                                 | 0                          | 0            | 0            |
|  |             | <b>SUBTOTAL</b>     | <b>0</b>                          | <b>0</b>                   | <b>0</b>     | <b>0</b>     |
| <b>TRAVEL</b>  |             |                     |                                   |                            |              |              |
| Truck  | 0           | 0.00                | 0                                 | 0                          | 1200         | 1200         |
| Meals  | 0           | 0.00                | 0                                 | 0                          | 9408         | 9408         |
| Camping per diem   | 0           | 0.00                | 0                                 | 0                          | 1800         | 1800         |
| Gas  | 0           | 0.00                | 0                                 | 0                          | 2500         | 2500         |
|  |             | <b>SUBTOTAL</b>     | <b>0</b>                          | <b>0</b>                   | <b>14908</b> | <b>14908</b> |
| <b>SUPPLIES/MATERIALS</b>                                  |             |                     |                                   |                            |              |              |
| Waders (x2) breathable                                     | 0           | 0.00                | 0                                 | 0                          | 400          | 400          |
|  |             | <b>SUBTOTAL</b>     | <b>0</b>                          | <b>0</b>                   | <b>400</b>   | <b>400</b>   |
| <b>EDUCATION/OUTREACH</b>                                  |             |                     |                                   |                            |              |              |
| Posters  | 200         | 2.50                | 0                                 | 0                          | 500          | 500          |
|  |             | <b>SUBTOTAL</b>     | <b>0</b>                          | <b>0</b>                   | <b>500</b>   | <b>500</b>   |
| <b>EQUIPMENT</b>   |             |                     |                                   |                            |              |              |
| Sampling Gear (x2) - Float tube, pump, flippers, life vest | 0           | 0.00                | 0                                 | 0                          | 1600         | 1600         |
| Nets   | 0           | 0.00                | 0                                 | 0                          | 200          | 200          |
|  |             | <b>SUBTOTAL</b>     | <b>0</b>                          | <b>0</b>                   | <b>1800</b>  | <b>1800</b>  |
| <b>FISCAL ADMINISTRATION</b>                               |             |                     |                                   |                            |              |              |
|  |             |                     | 0                                 | 0                          | 0            | 0            |
|  |             | <b>SUBTOTAL</b>     | <b>0</b>                          | <b>0</b>                   | <b>0</b>     | <b>0</b>     |
|  |             | <b>BUDGET TOTAL</b> | <b>15521</b>                      | <b>0</b>                   | <b>49300</b> | <b>64821</b> |



## ***Internal Review Results***

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**Review Score:** 2.2 out of 3

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

### ***Summary of Review Team Comments***

Internal Review Team was supportive of this project.

### ***Specific Review Team Comments***

Application could be strengthened with a Study Plan, providing more detail on what will be done as opposed to just one paragraph on page 6. The need for evaluation and information to improve/justify fisheries is apparent and supported.

Would be some useful information that will help guide future stocking decisions.

Specify the amount of months needed to conduct the assessments.

Well written proposal and the cost would be a great expenditure to get what is needed and then make any management decisions as a result. These fisheries provide a great opportunity for folks and it appears that they are gaining in popularity as folks are utilizing the high lakes fisheries more and more. This info would also help to establish the online reporting system that could potentially be funded under another program and be used every year from here on out. This could be a one or two year expenditure that could provide benefits for a lot of years to come.

### ***Specific Review Team Questions***

*What is the length of time the BSA's will be working? Is this just for one season of work? Will this research be on going?*

BSA's will be working 3 months - lake sampling and creeling for one season (July-Sept) 2024. The online, self-reporting creel will be ongoing if it is useful, and we are collecting enough data to make it worthwhile. If anglers don't engage then we would likely discontinue the project. The high lakes sampling effort would only occur in 2024 to evaluate specific lakes where experimental fish are airstocked in 2023.

*Budget seems to primarily show items needed for physical creel and lake sampling, but not on-line self-reporting. What is the incentive for anglers to self-report? Reward tags?*

Budget - Yes, that is true. The two 'prongs' of the project are intertwined. The online creel portion was adopted by ODFW Fish Administration and shows that they are supportive of the project by providing the online reporting internally as in-kind match. The fish sampling/in-person creel will add additional valuable information to validate the online effort.

Incentive - There is no added incentive, which is why the sampling crew is needed to help establish an angler reporting rate. The fish stocked are too small to provide for a reward tag system (150 fish per pound). Historically, incentives such as raffled prizes for participation, etc. have not appreciably increased participation for similar programs, such as self-reporting of paper harvest cards used in salmonid fisheries. Reward tags would be an added cost for the project, could bias the results (effort specifically if we told them which lakes tags were planted), and could be a waste of resources if nobody recovers tags (ex. we stock 66 lakes in our district alone, that's a lot of lakes).

## ***Additional Files***

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Budget Information

Maps

Photos

Design Information

Management Plans and Supporting Documents

[Examples\\_How Information is Used for Management](#)

*Previous survival studies and creel information*

[Full responses to ODFW internal review comments](#)

*Response to ODFW internal review*

Permits and Reviews

Partnerships

Public Comment

Administrative Documents

[ODFW Signature Authorization](#)

*Signature Authorization Page*

***Completion Report***

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A completion report has not been submitted for this project.