

Lewis River Hydroelectric Projects

FERC Project Nos. 935, 2071, 2111, 2213

2022 Annual Report

Lewis River Aquatic Fund Projects



April 2022

Introduction

This 2022 Annual Report prepared by PacifiCorp and the Public Utility District No. 1 of Cowlitz County, Washington (“Cowlitz PUD”) (collectively the “Utilities”) is provided to the Lewis River Settlement Agreement Parties to fulfill the reporting requirement in Article 7.5.3.2 (5) of the Lewis River Settlement Agreement (SA). This report identifies the actions and selection of Aquatic Resource Projects (Resource Projects) to be funded from the Lewis River Aquatic Fund established under terms of the SA (Article 7.5, see **Appendix A**). Although the funding process was managed by the Utilities, the Aquatic Coordination Committee (ACC) provided final approval of funded projects. This report includes only Resource Projects selected from the 2021/2022 funding process, additional projects are expected to be selected and funded annually following the process established by the ACC.

This 2022 report is available to the Public on PacifiCorp’s website at:

- <https://www.pacificorp.com/energy/hydro/lewis-river/aquatic-fund-applications.html> - Lewis River aquatic fund annual reports

Copies of this report are available from PacifiCorp upon request.

Background

PacifiCorp owns the Merwin, Yale, and Swift No. 1 hydroelectric projects on the Lewis River in southwest Washington. Cowlitz PUD owns the Swift No. 2 hydroelectric project, also located on the Lewis River. These projects are operated as a coordinated system by PacifiCorp. On November 30, 2004, the Lewis River Settlement Agreement established the Lewis River Aquatics Fund (Fund). The purpose of the Fund is to support resource protection measures through funding aquatic related projects in the Lewis River basin.

As identified in the SA:

“Resource Projects may include, without limitation, projects that enhance and improve wetlands, riparian, and riverine habitats; projects that enhance and improve riparian and aquatic species connectivity that may be affected by the continued operation of the hydroelectric projects; and projects that increase the probability for a successful reintroduction program upstream of Merwin Dam. Species that are targeted to benefit from Resource Projects include Chinook, steelhead, coho, bull trout, chum, and sea-run cutthroat.”

Under the direction of the SA, the Utilities in Consultation with the ACC developed the “Aquatics Fund -- Strategic Plan and Administrative Procedures” (September 2005 – Revised January 2009, September 2013, August 2016 and August 2017). This strategic plan provides: (a) a guide to Resource Project development, solicitation, and review; and (b) provides administrative procedures to guide implementation of the Aquatics Fund.

The strategic plan is available to the Public on PacifiCorp’s website at: https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/hydro/lewis-river/license-implementation/acc/08252017_LR_FINAL_Rev_AQ_Process_Doc.pdf

On July 4, 2021, PacifiCorp announced the availability of calendar year (CY) 2021/2022 funds for aquatic related projects in the Lewis River Basin (Letter to interested parties from T. Olson, PacifiCorp, see **Appendix B**). The letter requested that individuals or parties interested in obtaining project funding submit a Full Proposal to PacifiCorp. Full Proposals were due by October 25, 2021.

All application materials and process timeline were provided electronically via the Lewis River Aquatic Fund website at the following link:

<https://www.pacificorp.com/energy/hydro/lewis-river/aquatic-fund-applications.html>

2021/2022 Lewis River Aquatic Fund Process Timeline

Activity	Target Milestone Date
Request for proposals distributed along with landowner acknowledgement form	July 5
Draft Full Proposals due to ACC	October 25
Conduct Proposed Project Information Meeting (<i>applicant presentations</i>)	November 16 ACC Meeting
ACC members submit written request for clarification of project information if questions not answered in previous meeting/presentation.	December 3
Final Full Proposals due (ACC requests for clarification need to be included as an Appendix)	December 31
Final Full Proposals submitted to ACC for 30-day review and evaluation	January 4
ACC scoring template due to Utilities	February 1
Distribute combined master scoring template to ACC	February 3
*Conduct Project Selection Meeting	February 10 ACC meeting
Provide add'l 7-day review period for absentee ACC participants, if needed	February 17
Submit Project Selection Report to FERC	By April 15th

*Project applicants not permitted to attend this meeting.

In response to the announcement letter, two entities provided the following two (2) project Full Proposals.

Applicant	Project Title
USDA Forest Service	Swift Campground Creek Culvert Replacement
Kelley Jorgensen, Matt Harding	Northwoods Cold-water Refuge Habitat Restoration Project

On October 28, 2021, PacifiCorp emailed the two draft proposals received to the ACC to provide review time prior to applicant presentations scheduled for November 16, 2021 (**Appendix C**).

At the November 16, 2021 ACC meeting, each applicant conducted a PowerPoint presentation for ACC review and opportunity to comment and ask additional questions.

The Utilities submitted the final proposals and scoring template to the ACC via email on January 4, 2022 for a 30-day review and comment period (**Appendix D**).

The ACC met February 10, 2022, for an Aquatic Fund Project Proposal Decision Meeting and review of the master scoring template for each project. To accommodate those ACC representatives not in attendance, the Utilities provided an additional 7-day review and comment period until close of business February 18, 2022.

Consensus was reached on a final Resource Project list as follows and ACC comments and decisions were captured in the **Attachment A**:

Applicant	Project Title	Funding Requested	ACC Decision	Proposal Location
USDA Forest Service	Swift Campground Creek Culvert Replacement	\$74,390	Approved	Appendix E
Kelley Jorgensen, Matt Harding	Northwoods Cold-water Refuge Habitat Restoration Project	\$657,758	Not Approved	Appendix F

Projects Selected for Funding

The following is a summary description of the individual Resource Projects selected to be funded by the Aquatics Fund. The selected Projects are expected to promote the recovery of anadromous fish post re-introduction upstream of the Lewis River dams, and the federally listed bull trout which spend a portion of their life history in the Lewis River hydroelectric project reservoirs. Included for the selected projects is an overview of the original proposals, any ACC modifications to the projects, and identification of Resource Project nexus to the hydroelectric projects. Final Resource Project Plans are provided as an appendix to this document.

1. Swift Campground Creek Culvert Replacement – USFS

ACC representatives agreed to fund this project as proposed and granted funding of \$74,390. The final Resource Project Plan is provided in **Appendix E** and will be completed in accordance with the schedule below:

Spring 2022 – Consult with USFS botanist, wildlife biologist, and archeologist for potential resources that may be affected by culvert removal for aquatic Environmental Analysis.

Spring 2022 – Site survey

June 2022 - Contractor hydraulic modeling, geotechnical investigation (if needed, section 106 permit will be acquired by USFS staff), fieldwork and flood analysis will be completed to help determine proper sizing and details of the structures and stream/habitat design work.

July 2022 – Complete alternatives assessment and preliminary design report, and cost estimate comparisons Deliverable: 30% designs and preferred structure alternative selected.

September 2022 - Complete 90% design of preferred alternative. Deliverable: 90% drawings, technical specifications package, and estimate of project costs.

October 2022 - Final design report, final drawings for contracting, technical specifications, construction quantities and costs.

Spring/ Summer - 2022 - Delineation of off channel and floodplain connectivity features

Summer/Fall 2022 - Discussion and decision on implementation strategy effectiveness and cost efficiency. Wood placement by excavator, helicopter, and/or both.

Winter 2022 – Spring 2023 - Engineered Large Wood Structure placement (Concept, Preliminary, and Final design)

Winter 2022-Spring 2023 - Access routes needed for construction implementation; pieces of wood needed based on what the Forest Service has available and other identified sources

Winter 2022 – Spring 2023 - Cost estimates for implementation

Summer/Fall 2023 - Project close-out site visit (with PacifiCorp, Cowlitz PUD, and ACC representatives)

Fall 2023 - Final Design Results

Conclusion

According to SA article 7.5.3.2 (5), any ACC member may initiate the Alternative Dispute Resolution Procedures to resolve disputes relating to Resource Projects 30 days after receiving this final report. If no disputes are identified, PacifiCorp and Cowlitz PUD will provide funds to the identified project owners to implement Resource Projects per SA article 7.8.

APPENDIX A
LEWIS RIVER SETTLEMENT AGREEMENT ARTICLE 7.5

7.5 Aquatics Fund. PacifiCorp Energy and Cowlitz PUD shall establish the Lewis River Aquatics Fund (“Aquatics Fund”) to support resource protection measures (“Resource Projects”). Resource Projects may include, without limitation, projects that enhance and improve wetlands, riparian, and riverine habitats; projects that enhance and improve riparian and aquatic species connectivity that may be affected by the continued operation of the Projects; and projects that increase the probability for a successful reintroduction program. The Aquatics Fund shall be a Tracking Account maintained by the Licensees with all accrued interest being credited to the Aquatics Fund. PacifiCorp Energy shall provide \$5.2 million, in addition to those funds set forth in Section 7.1.1, to enhance, protect, and restore aquatic habitat in the Lewis River Basin as provided below. Cowlitz PUD shall provide or cause to be provided \$520,000 to enhance, protect, and restore aquatic habitat in the Lewis River Basin as provided below; provided that Cowlitz PUD’s funds may only be used for Resource Projects upstream of Swift No. 2, including without limitation the Bypass Reach. The Licensees shall provide such funds according to the schedules set forth below.

7.5.1 PacifiCorp’s Contributions.

a. PacifiCorp shall make funds available as follows: on each April 30 commencing in 2005, \$300,000 per year until 2009 (a total of \$1.5 million).

b. For each of the Merwin, Yale, and Swift No. 1 Projects, PacifiCorp shall make one-third of the following funds available as follows after the Issuance of the New License for that Project: on each April 30 commencing in 2010, \$300,000 per year through 2014 (a total of \$1.5 million); on each April 30 commencing in 2015, \$100,000 per year through 2018 (a total of \$400,000); and on each April 30 commencing in 2019, \$200,000 per year through 2027 (a total of \$1.8 million); provided that, for any New License that has not been Issued by April 30, 2009, the funding obligation for that Project shall be contributed annually in the same amounts but commencing on April 30 following the first anniversary of Issuance of the New License for that Project.

c. PacifiCorp shall contribute \$10,000 annually to the Aquatics Fund as set forth in Section 7.1.1.

7.5.2 Cowlitz PUD’s Contributions. Cowlitz PUD shall make or cause to be made funds available as follows: \$25,000 per year on each April 30 following the first anniversary of the Issuance of the New License for the Swift No. 2 Project through the April 30 following the 20th anniversary of the Issuance of the New License for the Swift No. 2 Project (a total of \$500,000); and a single amount of \$20,000 on the April 30 following the 21st anniversary of the Issuance of the New License for the Swift No. 2 Project.

7.5.3 Use of Funds. Decisions on how to spend the Aquatics Fund, including any accrued interest, shall be made as provided in Section 7.5.3.2 below; provided that (1) at least \$600,000 of such monies shall be designated for projects designed to benefit bull trout according to the following schedule: as of April 30, 2005, \$150,000; as of April 30,

2006, \$100,000; as of April 30, 2007, \$150,000; as of April 30, 2008, \$100,000; and on or before the April 30 following the fifth anniversary of the Issuance of all New Licenses, \$100,000; and such projects shall be consistent with bull trout recovery objectives as determined by USFWS; (2) fund expenditures for the maintenance of the Constructed Channel (Section 4.1.3) shall not exceed \$20,000 per year on average; (3) if studies indicate that inadequate “Reservoir Survival,” defined as the percentage of actively migrating juvenile anadromous fish of each of the species designated in Section 4.1.7 that survive in the reservoir (from reservoir entry points, including tributary mouths to collection points) and are available to be collected, is hindering attainment of the Overall Downstream Survival standard as set forth in Section 3, then at least \$400,000 of such monies shall be used for Resource Projects specifically designed to address reservoir mortality; and (4) \$10,000 annually shall be used for lower river projects as set forth in Section 7.1.1. Projects shall be designed to further the objectives and according to the priorities set forth below in Section 7.5.3.1.

7.5.3.1 Guidance for Resource Project Approval and Aquatics Fund Expenditures.

- a. Resource Projects must be consistent with applicable Federal, State, and local laws and, to the extent feasible, shall be consistent with policies and comprehensive plans in effect at the time the project is proposed. These may include, but are not limited to, Washington’s Wild Salmonid Policy, the Lower Columbia River Bull Trout Recovery Plan, and the Lower Columbia River Anadromous Fish Recovery Plan.
- b. The Aquatics Fund shall not be used to fund Resource Projects that any entity is otherwise required by law to perform (not including obligations under this Agreement or the New Licenses for use of the Aquatics Fund), unless by agreement of the ACC.
- c. The Licensees shall evaluate Resource Projects using the following objectives:
 - (1) benefit fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species;
 - (2) support the reintroduction of anadromous fish throughout the Basin; and
 - (3) enhance fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River.

For the purposes of this Section 7.5, the North Fork Lewis River refers to the portion of the Lewis River from its confluence with the Columbia River upstream to the headwaters, including tributaries except the East Fork of the Lewis River.

The Licensees shall also consider the following factors to reflect the feasibility of projects and give priority to Resource Projects that are more practical to

implement:

- (i) Whether the activity may be planned and initiated within one year,
- (ii) Whether the activity will provide long-term benefits,
- (iii) Whether the activity will be cost-shared with other funding sources,
- (iv) Probability of success, and
- (v) Anticipated benefits relative to cost.

7.5.3.2 Resource Project Proposal, Review, and Selection.

(1) By the first anniversary of the Effective Date, the Licensees shall develop, in Consultation with the ACC, (a) a strategic plan consistent with the guidance in Section 7.5.3.1 above to guide Resource Project development, solicitation, and review; and (b) administrative procedures to guide implementation of the Aquatics Fund. Both may be modified periodically with the approval of the ACC.

(2) Any person or entity, including the Licensees, may propose a Resource Project. In addition, the Licensees may solicit Resource Projects proposals from any person or entity.

(3) The Licensees shall review all Resource Project proposals, applying the guidance set forth in Section 7.5.3.1. The Licensees shall provide an annual report describing proposed Resource Project recommendations to the ACC. The date for submitting such report shall be determined in the strategic plan defined in subsection 7.5.3.2(1) above. The report will include a description of all proposed Resource Projects, an evaluation of each Resource Project, and the basis for recommending or not recommending a project for funding.

(4) The Licensees shall convene a meeting of the ACC on an annual basis, no sooner than 30 days and no later than 60 days after distribution of the report set forth in Section 7.5.3.2(2), for Consultation regarding Resource Projects described in the report.

(5) Licensees shall modify the report on proposed Resource Projects, based on the above Consultation, and submit the final report to the ACC within 45 days after the above Consultation. Any ACC member may, within 30 days after receiving the final report, initiate the ADR Procedures to resolve disputes relating to Resource Projects. If the ADR Procedures are commenced, the Licensees shall defer submission of the

final report on Resource Projects to the Commission, if necessary, until after the ADR Procedures are completed. If the ADR Procedures fail to resolve all disputes, the Licensees shall provide the comments of the ACC to the Commission. If no ACC member initiates the ADR Procedures, the Licensees shall submit the final report to the Commission, if necessary, within 45 days after submission of the final report to the ACC.

APPENDIX B

MEMORANDUM DATED JULY 5, 2021

LETTER TO INTERESTED PARTIES FROM T. OLSON, PACIFICORP
AVAILABILITY OF FUNDS FOR AQUATIC RELATED PROJECTS



Pacific Power |
Rocky Mountain Power
825 NE Multnomah, Suite 1800
Portland, Oregon 97232

July 5, 2021

Subject: Availability of Funds for Aquatic Related Projects in the Lewis River Basin

Dear Interested Party:

PacifiCorp owns the Merwin, Yale, and Swift No. 1 hydroelectric projects on the Lewis River in southwest Washington. Public Utility District No. 1 of Cowlitz County, Washington (Cowlitz PUD) owns the Swift No. 2 hydroelectric project, also located on the Lewis River. These projects are operated as a coordinated system. On November 30, 2004, the Lewis River Settlement Agreement (SA) established the Lewis River Aquatic Fund (Fund). On June 26, 2008, the Federal Energy Regulatory Commission acknowledged this fund as a stipulation of project operating licenses. The purpose of the Fund is to support resource protection measures via aquatic related projects (Projects) in the Lewis River basin. To be considered for funding, the Projects must meet each of the following priority objectives as specified in the project operating licenses and the SA:

- (1) *Benefit to fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species;*
- (2) *Support of the reintroduction of anadromous fish throughout the Basin; and*
- (3) *Enhancement to fish habitat in the Lewis River Basin, with priority given to the North Fork Lewis River.*

This letter is to provide you the opportunity to submit proposals for Resource Project funding. The total Fund amount available this year is limited to \$2,929,051.66 for Resource Projects and \$651,012.53 for Bull Trout Projects. Design-only projects will be considered during this 2021/2022 funding cycle and will be evaluated for biological merit. If you know of other entities that may have an interest in seeking funding, please forward this opportunity to them. All Lewis River Aquatic Fund documents and process timeline can be located at the following link:
<https://www.pacificorp.com/energy/hydro/lewis-river/aquatic-fund-applications.html>

The Aquatic Fund Subgroup to the Aquatic Coordination Committee (ACC) completed a **Lewis River Aquatic Fund Priority Reaches** document which provides priority rankings for stream reaches within the Lewis River watershed. The Priority Reaches document is aligned with the Lower Columbia Fish Recovery Board (LCFRB) Interactive map which is found on their website at www.lowercolumbiasalmonrecovery.org/mappage. The interactive maps provide a wealth of information that should help project proponents in selecting areas to focus their habitat improvement efforts. For consideration of funding the proponent must demonstrate that they have reviewed both the Priority Reaches and the LCFRB Interactive map and selected appropriate projects/reaches from those two tools. Additionally, proponent must show how proposed project is consistent with fund objectives and priorities. Projects proposed in reaches other than those identified in the Priority Reaches document or high priority reaches in the LCFRB habitat strategy

(Tier 1 and Tier 2) need a clear explanation of why they still support Lewis River Aquatic Fund goals.

To be consistent with certain comprehensive plans such as the *Lower Columbia Salmon Recovery Plan and the Washington Department of Fish & Wildlife Subbasin Plan (LCFRB 2010)* relating to Lewis River reintroduction efforts and the recovery of ESA listed threatened salmon and steelhead species, higher priority will be given to Resource Projects that provide benefits to Recovery Plan priority fish species and stocks reintroduced to or originating from upstream of Merwin Dam, with emphasis on spring Chinook. Resource Projects must have specific objectives and expected outcome(s) that help attain the objectives of the Aquatic Fund.

Bull Trout Project funding is available this year and we invite you to review the December 2017 Bull Trout project identification assessment. Proposals will be evaluated according to alignment with the assessment.

https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/hydro/lewis-river/license-implementation/acc/LR_BT_Hab_Restor_FinalReport.pdf

To be considered, applicants must submit a completed draft **Full Proposal Form** by close of business **October 25, 2021** and obtain acknowledgement from all owners of land needed to access the proposed Resource Project. Landowner(s) must sign a **Landowner Acknowledgement Form** indicating they are aware that the project is being proposed on their property.

Each applicant will have an opportunity for a project presentation to the ACC on **November 16, 2021** with final full proposals due by **December 31, 2021**. Full proposals will be evaluated and scored based on four primary categories: (1) benefits to fish, (2) scientific validity, (3) feasibility and (4) cost effectiveness. The Utilities and representatives of the Lewis River ACC will finalize a list of selected Resource Projects on **February 10, 2022** and notify applicants shortly thereafter. The Utilities will submit the final list to the Federal Energy Regulatory Commission by the submittal deadline of April 15, 2022.

Please give attention to this excellent opportunity. If you have any questions please contact Mr. Erik Lesko, PacifiCorp (503) 813-6624.

We look forward to your response in October.

Sincerely,

Todd Olson

Todd Olson (Jun 29, 2021 12:09 PDT)

Todd Olson
Director, Licensing and Compliance
PacifiCorp - Renewable Resources

APPENDIX C
EMAIL DATED October 28, 2021
EMAIL TO ACC FROM E. LESKO – PACIFICORP
2021/2022 LEWIS RIVER AQUATIC FUND PROPOSALS

From: [Lesko, Erik \(PacifiCorp\)](#)
To: [Bendickson, Beth \(PacifiCorp\)](#); [Alex Masloy](#); [Amanda Froberg](#); [Amelia Johnson](#); [Asher, Eli](#); [Bill Sharp](#); [Bridget Moran](#); [Bryce Glaser](#); [Carol Serdar](#); [David Howe](#); [Day, Kate](#); [Denise Smee](#); [Doyle, Jeremiah \(PacifiCorp\)](#); [Ferraiolo, Mark \(PacifiCorp\)](#); [Gary Loomis](#); [Greg Robertson](#); [Hudson, Michael](#); [James Byrne](#); [Janae Brock](#); [Jeffrey Garnett](#); [Jonathan Stumpf](#); [Joshua Jones](#); [Josua Holowitz](#); [Kale Bentley](#); [Karchesky, Chris \(PacifiCorp\)](#); [Katie Pruit](#); [Kelley Jorgensen](#); [Logan Negherbon](#); [Mariah Stoll-Smith Reese](#); [Matt Harding](#); [Morgan, David](#); [Olson, Todd \(PacifiCorp\)](#); [Peggy Miller](#); [Pienovi, Levi \(PacifiCorp\)](#); [Rhidian Morgan](#); [Roberts, Aaron](#); [Rudy Salakory](#); [Sam Gibbons](#); [Samuel Kolb](#); [Scott Anderson](#); [Steve Manlow](#); [Steve West](#); [Tim Romanski](#); [Tom Sinclair](#); [Weatherly, Briana \(PacifiCorp\)](#); [Wendy McDermott](#); [Whitesel, Timothy](#); [Sarah Montgomery](#)
Cc: [Thompson, Phillip - FS](#)
Subject: 2021/2022 Lewis River Aquatic Fund Proposals
Date: Thursday, October 28, 2021 3:11:00 PM
Attachments: [Swift Campground Creek Full Proposal Draft 10_25_2021.pdf](#)
[Appendix A - Forest Camp Creek Habitat Assessment_03-30-2020.pdf](#)
[Northwoods Restoration 2021 Draft ACC Proposal.pdf](#)
[Appendix A - Swift Reservoir Rescue 08052021compressed.pdf](#)
[image003.jpg](#)

Attn: ACC Representatives

PacifiCorp is pleased to receive and distribute two (2) Lewis River aquatics fund proposals as part of our 2021/2022 funding cycle. Please take some time to review these proposals (and included attachments) and be prepared to ask questions during the project applicant presentations scheduled for our November 16 meeting. I have provided a list of the proposals and timeline below for your reference. I will post these proposals to our Aquatic Fund website soon.

Please feel free to contact me if you should have any questions before our next meeting.

Thank you,

Erik

Proposals Received

Project Managers	Project Title	Requested Funding
Kelley Jorgensen Matt Harding	Northwoods Cold-water Refuge Habitat Restoration Project	\$ 657,758
Phill Thompson Greg Robertson	Swift Campground Creek Culvert Replacement	\$ 74,390

Erik Lesko
 Aquatics Program Lead
 825 NE Multnomah, 1800 LCT | Portland, OR, 97232
 503-813-6624 | Cell : 503-412-8401

APPENDIX D

EMAIL DATED JANUARY 4, 2022

EMAIL TO ACC FROM E. LESKO – FINAL AQUATIC PROPOSALS AND REQUEST
FOR EVALUATION

From: Lesko, Erik (PacifiCorp) <Erik.Lesko@pacificorp.com>

Sent: Tuesday, January 4, 2022 5:21 PM

To: Sarah Montgomery <smontgomery@anchorqea.com>; beth.bendickson@pacificorp.com; Alex Maslov <alex.maslov@northforkcomposites.com>; Amanda Froberg <afroberg@cowlitzpud.org>; Amelia Johnson <ajohnson@lcfrib.gen.wa.us>; Asher, Eli <easher@cowlitz.org>; Bill Sharp <shab@yakamafish-nsn.gov>; Bridget Moran <bmoran@americanrivers.org>; Bryce Glaser <glasebgg@dfw.wa.gov>; Carol Serdar <carol.serdar@ecy.wa.gov>; David Howe <David.Howe@dfw.wa.gov>; Day, Kate -FS <kate.day@usda.gov>; Denise Smee <dsmee@lcfrib.gen.wa.us>; JEREMIAH.DOYLE@PACIFICORP.COM; Ferraiolo, Mark (PacifiCorp) <Mark.Ferraiolo@pacificorp.com>; Gary Loomis <gary.loomis@edgerods.com>; Greg Robertson <Greg.Robertson@usda.gov>; Hudson, Michael <michael_hudson@fws.gov>; James Byrne <byrnejim7@gmail.com>; Janae Brock <janae@edgerods.com>; Jeffrey Garnett <jeffrey_garnett@fws.gov>; Jonathan Stumpf <Jonathan.Stumpf@tu.org>; Jones, Joshua -FS <joshua.d.jones@usda.gov>; Holowatz, Josua A (DFW) <Josua.Holowatz@dfw.wa.gov>; Kale Bentley <kale.bentley@dfw.wa.gov>; Karchesky, Chris (PacifiCorp) <Chris.Karchesky@pacificorp.com>; Katie Pruitt <Katie.pruitt@rco.wa.gov>; Kelley Jorgensen <jorgensenkelley@gmail.com>; Logan Negherbon <logan.negherbon@noaa.gov>; Mariah Stoll-Smith Reese <mariah@lelooska.org>; Matt Harding <vmattharding@gmail.com>; Morgan, David <dmorgan@pnfarm.com>; todd.olson@pacificorp.com; Peggy Miller <peggy.miller@dfw.wa.gov>; Pienovi, Levi (PacifiCorp) <Levi.Pienovi@pacificorp.com>; Rhidian Morgan <rmmorgan@pnfarm.com>; Roberts, Aaron <Aaron.roberts@dfw.wa.gov>; Rudy Salakory <Rsalakory@cowlitz.org>; Gibbons, Sam (DFW) <sam.gibbons@dfw.wa.gov>; Samuel Kolb <samuel.kolb@dfw.wa.gov>; Scott Anderson <scott.anderson@noaa.gov>; Steve Manlow <smanlow@lcfrib.gen.wa.us>; Steve West <swest@lcfrib.gen.wa.us>; Tim Romanski <tim_romanski@fws.gov>; Tom Sinclair <thomas_sinclair@fws.gov>; Elaine Harvey <hare@yakamafish-nsn.gov>; Weatherly, Briana (PacifiCorp) <Briana.Weatherly@pacificorp.com>; Wendy McDermott <wmcdermott@americanrivers.org>; Whitesel, Timothy <Timothy_Whitesel@fws.gov>

Subject: [External Email]Final Aquatic Fund Proposals - 2022

Importance: High



Hello ACC,

I am pleased to submit two final aquatic fund proposals for your review and evaluation (scoring). At our next ACC meeting (Jan 13), we will review the scoring template to aid in your evaluation of these two proposals. We will conduct our selection meeting on February 10. For reference, I have provided the aquatic fund schedule below. Please note - completed scoring templates are due February 1 to the Utilities. Please send your completed templates to both me and Sarah. We will then distribute a master template that consolidates all templates received by February 3 in preparation for our selection meeting.

We will go over all of this at our meeting. However, if you have questions before then, please feel free to give me a call or email.

Thanks,
Erik

Activity	Target Milestone Date
Request for proposals distributed along with landowner acknowledgement form	July 5
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Provide add'l 7-day review period for absentee ACC participants, if needed	February 17
Submit Project Selection Report to FERC	By April 15th

*Project applicants not permitted to attend this meeting.

APPENDIX E
FINAL PROPOSAL FORM
SWIFT CAMPGROUND CREEK CULVERT REPLACEMENT

FULL PROPOSAL FORM

Lewis River Aquatic Fund

Form Intent:

To provide a venue for an applicant to clearly indicate the technical basis and support for proposed project. Specifically the project's consistency with recovery plans, Settlement Agreement Fund objectives and priorities, technical studies and assessments which support the proposed action and approach.

Full Proposal format:

Please complete the following form for your Full Proposal. Maps, design drawings and other supporting materials may be attached.

The deadline for a Full Proposal Form submission is **October 25th, 2021**. Please submit materials to:

Erik Lesko
PacifiCorp
825 NE Multnomah Street, Suite 1800
Portland, OR 97232
Erik.lesko@pacificorp.com

1. Project Title

Swift Campground Creek Culvert Replacement

2. Requested Funding Amount \$74,390

3. Project Manager (name, address, telephone, email)

Phill Thompson, phillip.thompson@usda.gov
Greg Robertson, greg.robertson2@usda.gov, (509) 395-3366

4. Identification of problem or opportunity to be addressed

Problem:

The crossing of Forest Road 90 (FR-90) at Swift Campground Creek, is an undersized culvert that is a barrier to anadromous salmonids migrating upstream. In 2019, Coho spawning surveys conducted by Meridian Environmental in the approximately 900ft reach below the FS-90 culvert revealed 30 live and dead Coho, along with 10 redds. The reach above the FR-90 culvert yielded no observations of Coho or redds during these same surveys. This indicates the Coho are limited to only the 900ft reach of accessible habitat below FR-90. The reach below the FR 90 crossing contains some spawning gravels however, it is nearly absent of large wood. The reach is considered to be of low complexity compared to the substantially longer, and more complex spawning and rearing habitat upstream of the FR-90 crossing.



Figure 1. Culvert outlet (inlet bottom right) on FR-90. Note the high velocity, small size, perch, and lack of a jump pool.

USFS personnel have also identified a partial barrier culvert on Gates Drive in the reach below FS-90 that is also a migration issue (Figure 2). While Coho were observed above this culvert, it is undersized and poses a barrier to at least some life stages and species of fish.



Figure 2. Culvert inlet on Gates Drive.

Opportunity:

The FR-90 culvert is currently the last known man-made barrier blocking appreciable habitat to anadromous species on USFS lands in the Lewis River drainage above the reservoirs. To restore historic anadromous salmonid spawning and rearing habitat upstream of FR-90 to the headwaters, The Gifford Pinchot National Forest proposes to replace the FR-90 culvert and the Gates Drive culvert with an Aquatic Organism Passage (AOP) approved design. The project will create and sustain diverse habitats by restoring nearly 5,300 lineal feet of stream channel above FR-90 and allow the full migration of aquatic organisms including Coho and steelhead while at the same time reduce the risk of crossing failure and stream diversion causing increased sedimentation.

This newly available habitat, over a mile long, is of high quality and will provide more refugia during winter flows for juvenile salmonids, rearing opportunities for juvenile salmonids during summer months and increased spawning opportunities for adult salmonids. The Gifford Pinchot National Forest completed a climate change vulnerability assessment in 2019 (Hudec et al.). With respect to watershed stewardship, this analysis focused on potential thermal impacts to anadromous fish species, emphasizing the need to build aquatic habitat resiliency and connectivity. In alignment with USFS goals, this project will improve climate resiliency of habitat and infrastructure to the increased frequency and magnitude of flood events, lower summer low flows, and increased thermal pressure. The project will improve water storage and hyporheic exchange, lower stream temperatures, and increase habitat diversity and complexity.

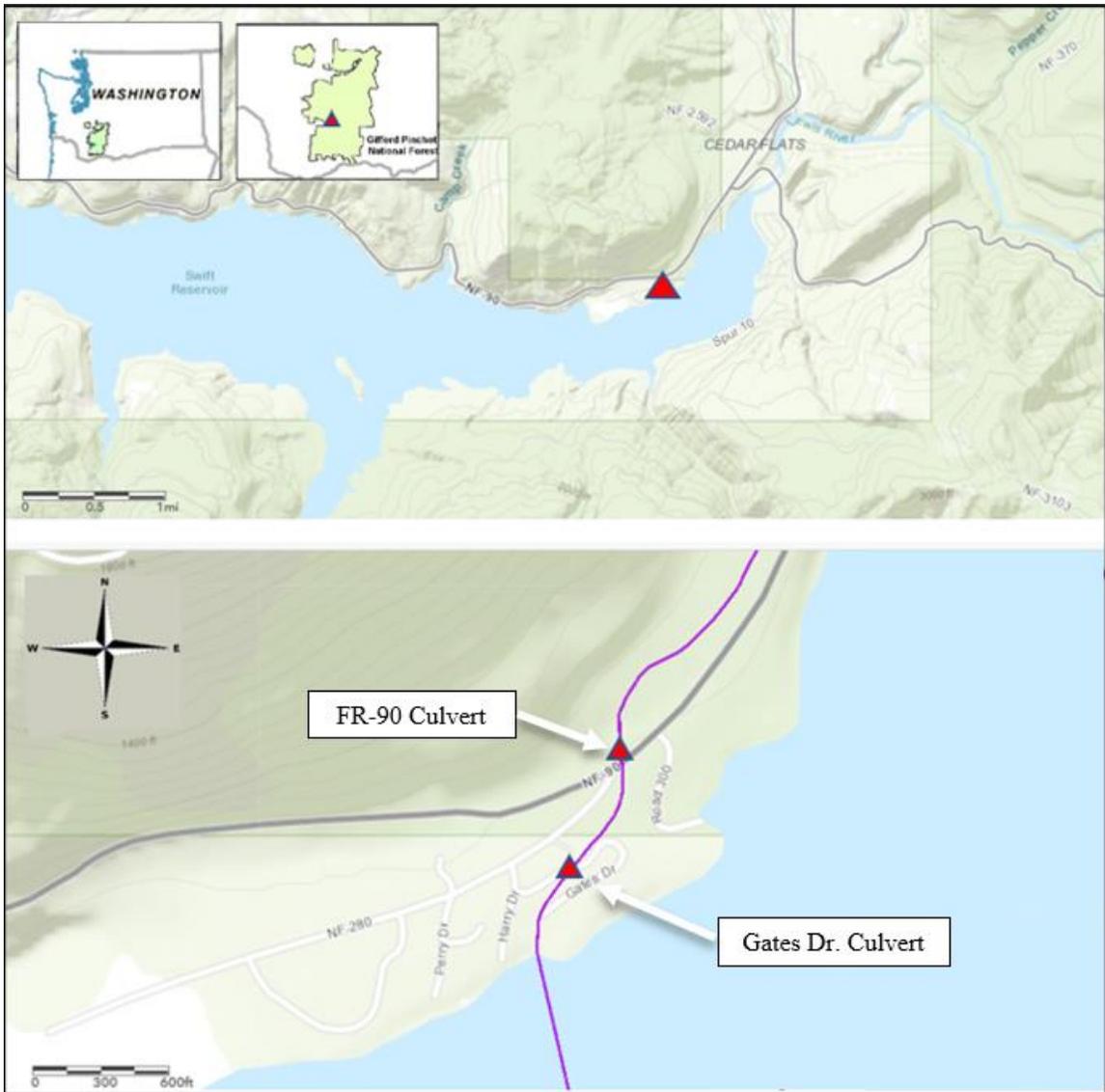


Figure 3. Swift Campground Creek Culvert Replacement project location.

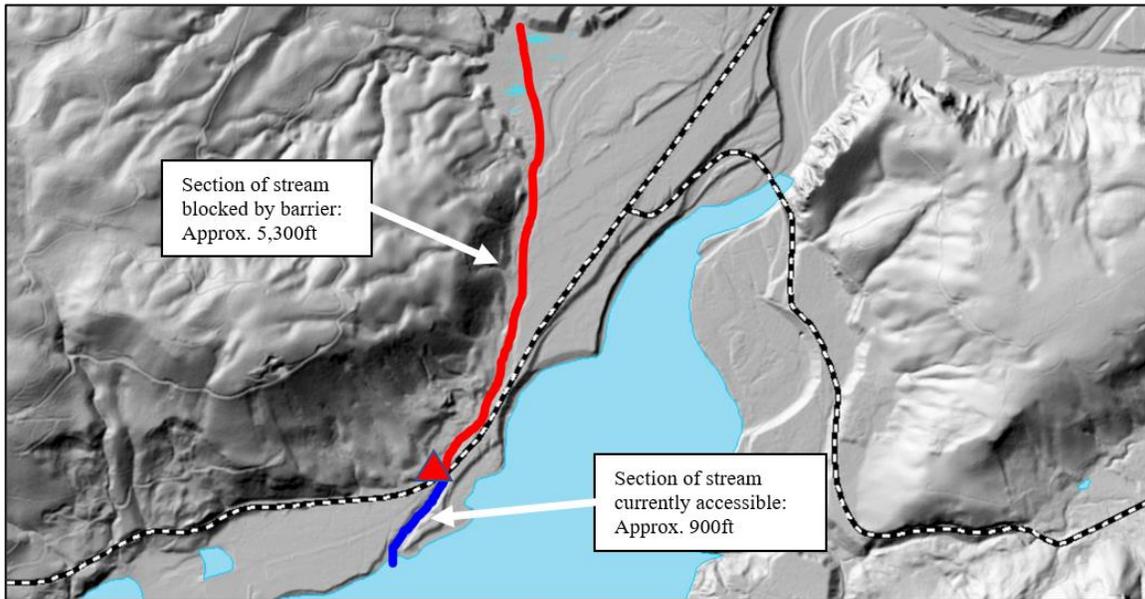


Figure 4. Map representing difference in lengths of accessible habitat.

5. Background

Swift Campground Creek is above the Lewis River hydropower system, which had blocked all upstream adult migration for about 75 years. As part of the most recent FERC license, PacifiCorp and Cowlitz PUD are implementing salmon and steelhead reintroduction in the upper basin. Adult Coho, steelhead, and spring Chinook are transported and released to the upper basin to spawn naturally. Coho are currently using the site below the FR-90 culvert, and we anticipate greater numbers of upstream-bound adults over time after replacement of the culverts. This project is in alignment with Lewis River recovery goals by restoring access to blocked spawning and rearing habitat in the Lewis River Basin that will help support the reintroduction of anadromous fish throughout the basin.

Swift Campground Creek is ranked as a Tier 3 reach by the Lower Columbia Fish Recovery Board (LCFRB) with Contributing designation for Coho and winter steelhead, Primary designation for spring Chinook, and Stabilizing designation for summer steelhead.

The current LCFRB SalmonPort GIS layer shows the Tier 3 available habitat available for 6,335ft with the majority above the culvert barrier (Figure 5). The lower gradient habitat above the FR-90 culvert barrier possesses more desirable habitat conditions (Table 1).

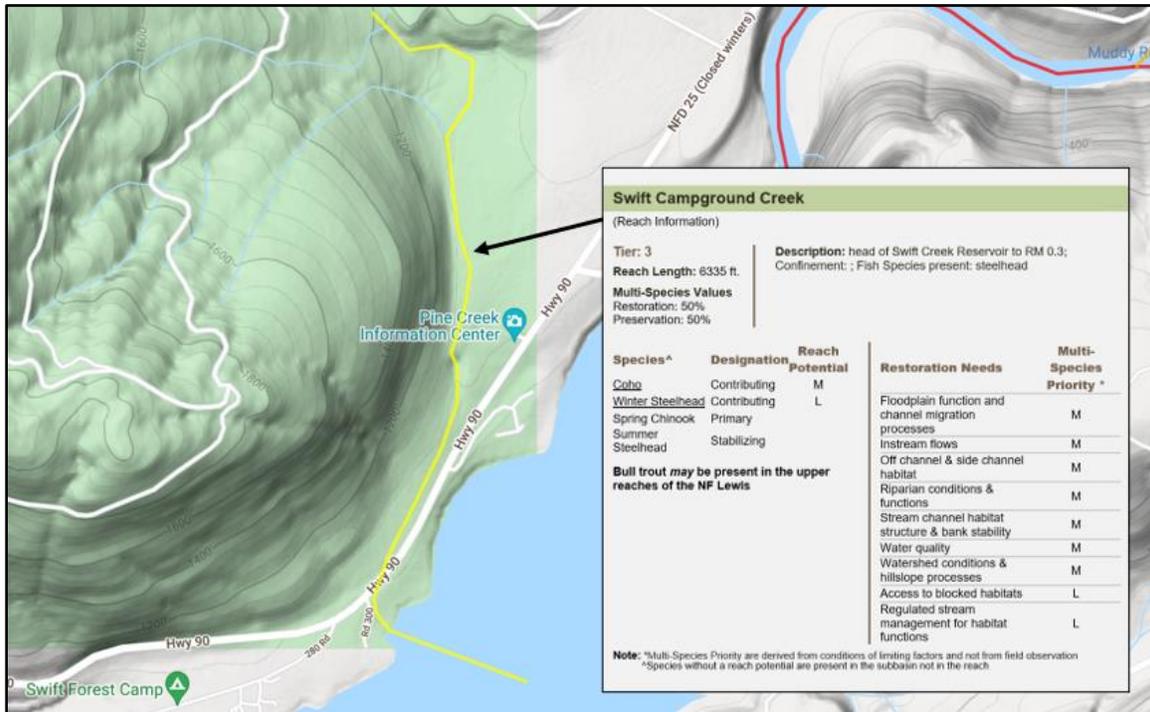


Figure 5. LCFRB map showing the Tier 3 habitat of Swift Campground Creek.

Table 1. Habitat assessment of Swift Campground Creek, surveyed on March 26, 2020. Courtesy of Meridian Environmental.

Attribute	Reach 1	Reach 2	Reach 3	Reach 4	Reach 5	Reach 6
Currently accessible to anadromous fish	yes	yes	no	no	no	no
Photo numbers	1, 2	3, 4, 5, 6	7, 8	9, 10	11, 12, 13, 14, 15	16, 17, 18
Station start (feet from edge of reservoir full pool)	-300	0	975	1,875	2,675	6,275
Station end (feet from edge of reservoir full pool)	0	900	1,875	2,675	6,275	---
Total reach length (feet)	300	900	900	800	3,600	>1,000 feet of small channels in wetland
Average gradient (% slope)	3.5%	2.5%	1.5%	0.5%	1.5%	0.5%
Channel form	single thread	single thread	single thread	single thread	single thread	multiple channels
Valley form	constrained by low terrace	hillslope constrained	constrained by low terrace	unconstrained	constrained by low terrace	unconstrained
Average wetted width (feet)	10	5	6	5	7	2
Average depth (feet)	0.3	0.8	0.7	1.3	0.7	0.5
Average pool maximum depth (feet)	1.0	1.3	1.5	2.0	2.0	1.3
Average active channel width (feet)	12	6.5	7	5.5	9	4
Average flood prone width (feet)	na	7	20	75	30	>100
Dominant habitat type	riffle	riffle	riffle	glide/riffle	riffle	glide/riffle
Subdominant habitat type	rapid	pool	pool	pool	pool	pool
Pool frequency	low	low	low	common	common	low to common
Large wood frequency	scarce	scarce	scarce	low	low	low to common
Dominant substrate	cobble	cobble	gravel	sand	gravel	sand/silt
Subdominant substrate	boulder	gravel	cobble	gravel	sand	gravel
Anadromous fish spawning gravel patch frequency	scarce	low	low to common	common	abundant	low
Undercut bank frequency	none	low	low	common	common	common
Riparian composition	unvegetated	forested through area of cabins	mature forested	wet meadow/ scattered trees	mature forested	wet meadow/ scattered trees
Side/off-channel frequency	none	none	none	none	none	several small channels through wetland

Note. Table values are approximate and based on visual estimates from survey on March 26, 2020.
Note. FR-90 culvert downstream end is at approx. station 900 feet and the upstream end is at station 975 feet from the edge of the reservoir full pool (i.e., culvert is 75 feet long).

6. Project Objective(s)

The objective of this project proposal is to remove and replace two anadromous fish barriers on Swift Campground Creek to facilitate the unobstructed passage of migrating salmonids. Removal and replacement of these culverts will open over a mile of stream channel, restoring connectivity to salmonid spawning and rearing habitat. This proposal is for the design portion of the projects. Individual objectives include:

- Provide full fish passage in Swift Campground Creek by replacing two man-made barriers with crossings to accommodate aquatic organism passage for all life stages and all flows.
- Provide channel continuity through the new crossing through stream simulation principles. Improve hydraulic capacity to mitigate infrastructure failure risk at the crossings.
- Provide access to habitat with preferable spawning substrate upstream of the FR-90 crossing.
- Provide access to cooler average rearing temperatures upstream of the FR-90 road crossing.

Other project objectives that coincide with the culvert replacement is to add large wood to the channel and floodplain in the creek above FR-90 and perform stream simulation in small areas where necessary. This would accelerate floodplain development and would provide an opportunity for sediment retention. Retaining sediment behind the large wood would provide an increase in adult spawning potential through gravel retention and juvenile rearing by creating forced pools, side channels, retention of nutrients, cover, and habitat complexity. The USFS has a stockpile of large wood near the project site at the Pine Creek Work Center that could potentially be used for these purposes.



Figure 6. Typical habitat upstream of the FR-90 culvert.

This project addresses the following Aquatic Fund priorities:

Priority 1: Benefit fish recovery throughout the North Fork Lewis River, with priority to federal ESA-listed species.

Lower Columbia ESU Chinook, Coho, and steelhead are listed as a threatened species under the ESA. This project will contribute to the recovery of these species by increasing the amount and quality of spawning and rearing habitat.

Priority 2: Support the reintroduction of anadromous fish throughout the basin.

This proposal will complete the design for access to over a mile of rearing and refugia habitat for juvenile anadromous salmonids that is currently blocked. Once implemented, the project will improve the habitat characteristics that will promote survival and promotion of reintroduced anadromous fish.

Priority 3: Enhance fish habitat in the Lewis River Basin-, with priority given to the North Fork Lewis River.

This project is located in the North Fork Lewis River basin and will restore and enhance habitat in Swift Campground Creek, which is a tributary to the North fork Lewis River. This project will improve aquatic function and increase instream habitat diversity and is expected to contribute toward increasing fish production in the North Fork Lewis River.

7. Tasks

The tasks of work to be completed focus on the final designs of the culvert replacements. Prior to the USFS issuing a request for proposals for design work, the following tasks will be completed:

- Task: Consult with USFS botanist, wildlife biologist, and archeologist for potential resources that may be affected by culvert removal for aquatic Environmental Analysis. Deliverable: USFS approval. March 2022.
- Task: Contract Preparation and award. Deliverable: Design contract awarded. April-May 2022.

Work completed by the selected professional architect and engineering (A&E) firm will include the following:

- Task 1: Site survey
- Task 2: Contractor hydraulic modeling, geotechnical investigation (if needed, section 106 permit will be acquired by USFS staff), fieldwork and flood analysis will be completed to help determine proper sizing and details of the structures and stream/habitat design work. Deliverable: June 2022
- Task 3: Regular meetings with consultant to track project progress. Deliverable: Meeting notes and deliverables from the consultant. May 2022 and on.
- Task 4: Complete alternatives assessment and preliminary design report, and cost estimate comparisons Deliverable: 30% designs and preferred structure alternative selected. June – July 2022.
- Task 5: Complete 90% design of preferred alternative. Deliverable: 90% drawings, technical specifications package, and estimate of project costs. September 2022.
- Task 6: Final design. Deliverable: Final design report, final drawings for contracting, technical specifications, construction quantities and costs. October 2022. *

* It is the USFS's goal to have a completed design in hand in time to apply for Aquatics Funds in October 2022 to partially fund implementation with USFS match in 2023.

The USFS has completed hundreds of aquatic organism passage improvement projects and instream wood projects using the principles of natural channel design. The USFS has detailed protocols, procedures and specifications that incorporate decades of lessons learned through the planning and implementation of aquatic organism passage projects. The USFS has a trusted pool of A&E consultants familiar with natural channel design principles, and a streamlined contracting and process to hire experienced consultants with a proven record of designing successful AOP projects.

8. Methods

The stream channel at the culvert replacement sites will be designed using the stream simulation process per USFS AOP direction. This work consists installing logs, trees, root wads and specified fill to simulate natural stream profile, and streambed through culverts, bridge structures, and existing stream channels. Typical examples of this work include developing materials, hauling materials, dewatering, sediment control, placing bedding and backfill to construct stream simulation channels inside and outside of the structures placing, keying, sealing, and compacting designed streambed fill, constructing instream structures, reconstructing existing channels, and all other streambed work to complete the project.

Designs will include bankfull width, plan view drawing overlaid with proposed actions of specific dimensions, and project profile and cross sections at the replacement locations showing substrate gradations and water surface elevations relevant to the design including design flows. Project alternatives will be included at the 30% conceptual design phase and will evaluate the most effective and cost-efficient structures that meet the hydraulic and ecological project objectives (i.e., bridge vs open-bottom arch, etc.)

Examples of the typical engineering plans used at these types of sites are shown below (Figures 7-10.).

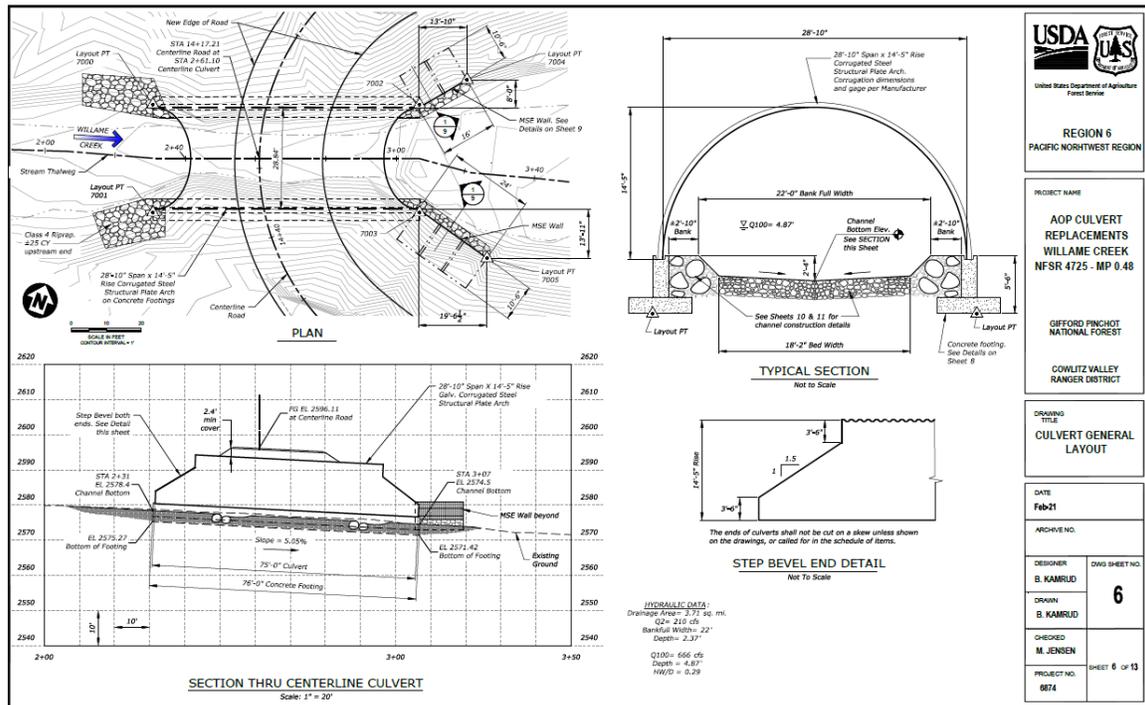


Figure 7. Design example of a typical open-bottomed arch structure with pre-cast concrete footings to provide AOP at all flows and life stages.

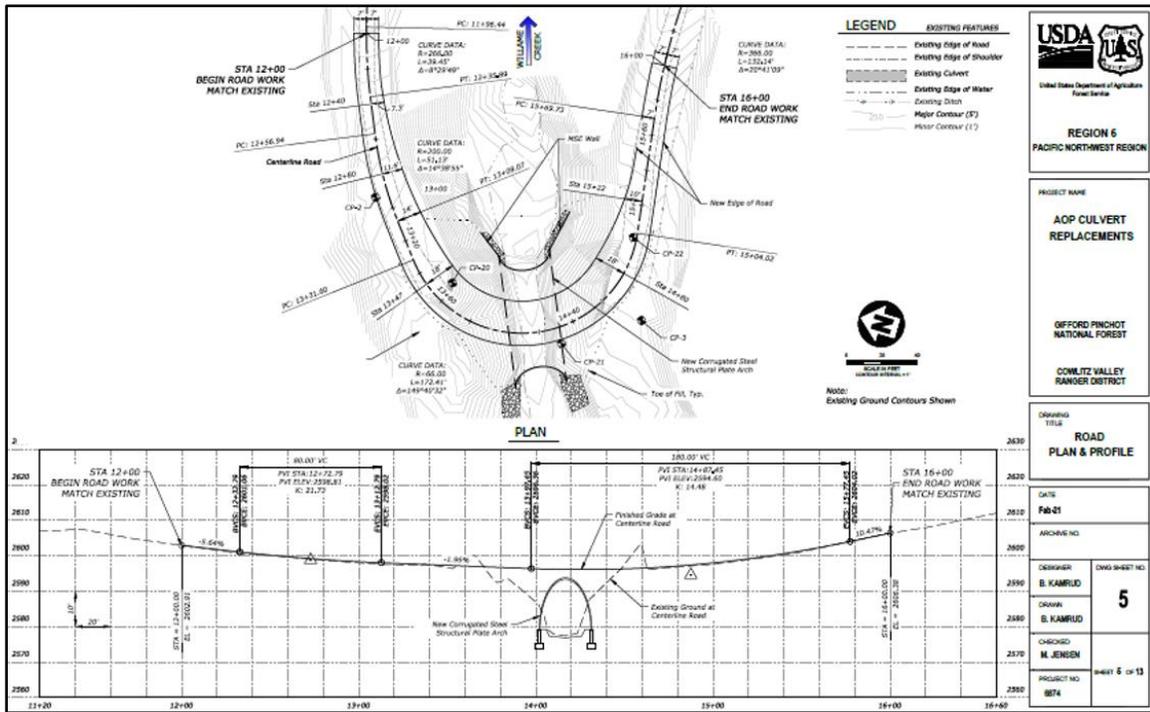


Figure 8. Road plan and profile of a typical open-bottomed arch structure with pre-cast concrete footings to provide AOP at all flows and life stages.

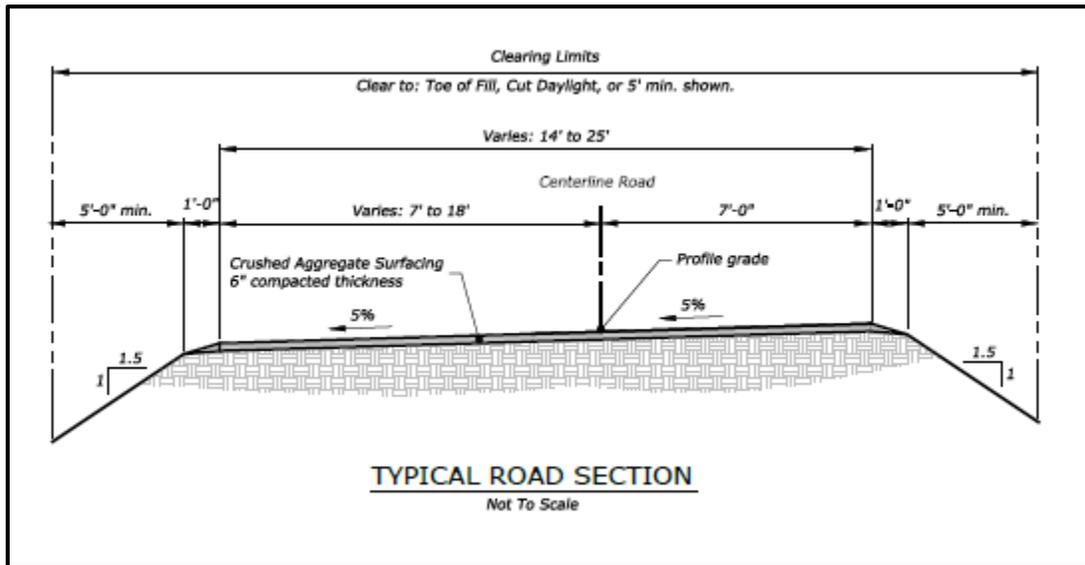


Figure 9. Design example of a typical road section.

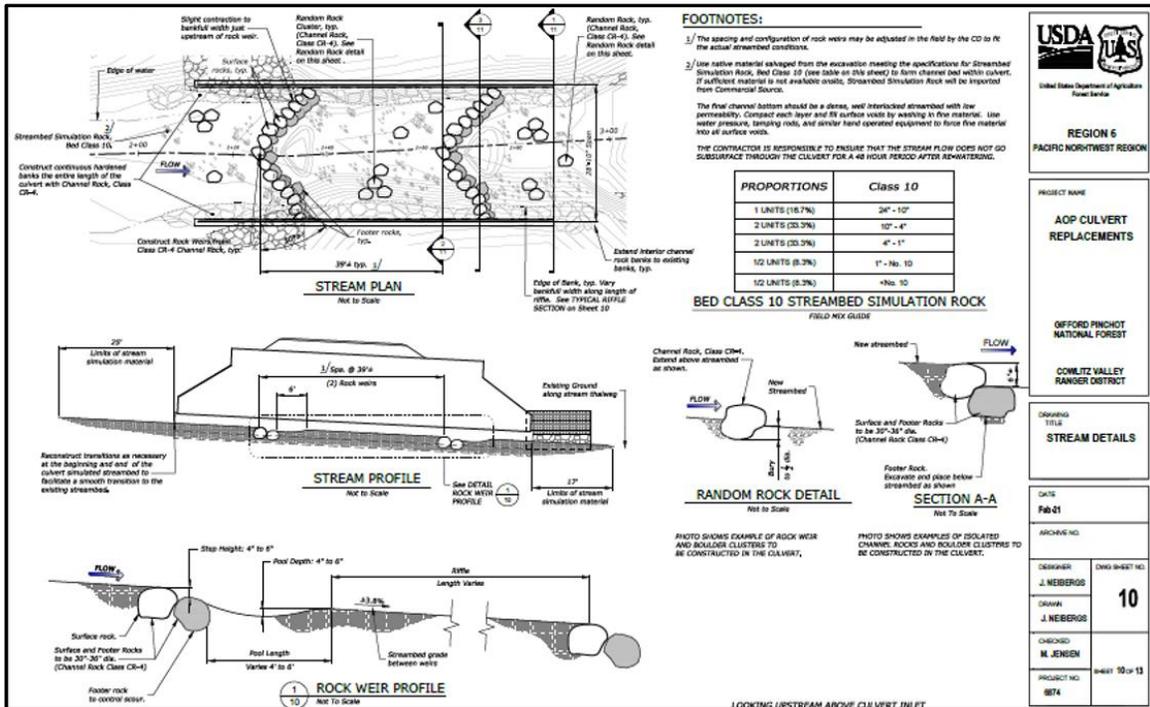


Figure 10. Design example of stream channel simulation performed in an AOP.

9. Specific Work Products

See Project Duration

10. Project Duration

Table 2. Deliverables listed by date.

Deliverables	Completion Date
Contract between PacifiCorp and FS (modification to existing collection agreement)	February, 2022
NEPA compliance and programmatic permit consistency review completion	March, 2022
Preparation and award of contract	April, 2022
Contract solicitation and award	May, 2022
Completed alternatives assessment	June, 2022
Completed preliminary design of preferred alternative	September, 2022
Final Design	October, 2022

Note: Status updates will be provided to ACC as project invoices are processed.

11. Permits and Authorizations

Permitting of this project will occur through consultation and inter-agency agreements between federal and state entities. NEPA completion under the USFS Region 6 Environmental Assessment for Aquatic Restoration Projects is anticipated in March 2022, although NEPA compliance is not required to proceed with the design process. USFS Best Management Practices standards will be incorporated into the implementation of the project to ensure environmental compliance is met through the USFS programmatic consultations and Memorandum of Understandings with regulatory agencies that govern aquatic and terrestrial projects on USFS lands. Project activities are designed to restore natural channel and floodplain function and reduce potential threat to Forest and private infrastructure.

The FR-90 culvert and all points upstream are located on National Forest System Lands, while the Gates Drive culvert is located on private land within the Swift Creek Estates. The USFS is currently in contact and working with the HOA and Board of Directors of Swift Creek Estates to facilitate the potential signing of a Release Agreement for the Gates Drive culvert. The USFS has the authority to design and implement projects off National Forest System Lands through cooperative agreements with willing participants for protection, restoration and enhancement of fish and wildlife habitat under the Wyden Authority.

The project is in an area where floodways have not been mapped by FEMA. However, FEMA preliminary reports indicate that the Gates Drive culvert is within the floodplain of Swift Reservoir.

12. Matching Funds and In-kind Contributions

The USFS will provide project design oversight and provide resources necessary to the consultant in addition to a \$10,000 match for contracting costs (Table 3.).

Table 3. USFS matching contributions and in-kind items.

USFS Matching Contributions		
Swift Campground Creek Culvert Replacement In-kind Items	Quantity	Rate
Contract Administration	<i>25 days @ \$400 a day</i>	\$10,000.00
Large Wood	<i>Stockpile, many pieces</i>	\$2,400.00
Vehicle Mileage	<i>3,200mi @ \$.58 per mile</i>	\$1,856.00
Contracting Cost	<i>USFS \$ contribution</i>	\$10,000.00
Total Matching Cost		\$24,256.00

13. Peer Review of Proposed Project

The proposed project has been reviewed by USFS employees.

14. Budget

Table 4. Design cost estimates.

Design Costs		
Category	Task Description	Rate
Data collection	<i>Contractor: site surveys, mapping, data preparation, data processing, topo map and design surface creation, quality control checks</i>	\$8,214.00
Assessments (geologic, hydraulic, etc.)	<i>Geotechnical Investigation</i>	\$36,280.00
Conceptual design	<i>30% Conceptual Design Alternatives</i>	\$9,950.00
Preliminary design	<i>90% Construction Design</i>	\$12,432.00
Final design	<i>Final Construction Design</i>	\$5,653.00
Other	<i>Contractor: Mileage, Per Diem, lodging, materials</i>	\$1,861.00
Total Cost		\$74,390.00

15. Photo Documentation (*Per National Marine Fisheries Service’s Biological Opinion for Relicensing of the Lewis River Hydroelectric Projects – August 27, 2007*):

Final designs with photos will be provided to the ACC in October 2022.

16. Insurance. **All qualifying applicants shall comply with PacifiCorp’s insurance requirements set forth in Appendix A.** The policy limits are deemed sufficient by PacifiCorp for project activities involving significant risk, including placement of large woody debris in navigable waterways, and are presumed to be sufficient for all activities likely to be funded under this Full Proposal Form. Should applicant’s insurance program not meet these requirements, bid pricing should include any additional costs applicant would incur to comply with these requirements.

Appendix A
Insurance Requirements
(Risk Mgmt to evaluate risk by project and report needed insurance
limits to Lewis River Project Coordinator)

1. INSURANCE

Without limiting any liabilities or any other obligations of [CONTRACTOR], [CONTRACTOR] shall, prior to commencing the Project, secure and continuously carry with insurers having an A.M. Best Insurance Reports rating of A-:VII or better the following insurance coverage:

1.1 Workers' Compensation. [CONTRACTOR] shall comply with all applicable Workers' Compensation Laws and shall furnish proof thereof satisfactory to PacifiCorp prior to commencing the Project.

All Workers' Compensation policies shall contain provisions that the insurance companies will have no right of recovery or subrogation against PacifiCorp, its parent, divisions, affiliates, subsidiary companies, co-lessees, or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the parties that the insurance as effected shall protect all parties.

1.2 Employers' Liability. Insurance with a minimum single limit of \$1,000,000 each accident, \$1,000,000 disease each employee, and \$1,000,000 disease policy limit.

1.3 Commercial General Liability. The most recently approved ISO policy, or its equivalent, written on an occurrence basis, with limits not less than \$1,000,000 per occurrence/ \$2,000,000 general aggregate (on a per location and/or per job basis) bodily injury (with no exclusions applicable to injuries sustained by volunteers working or participating in the Project) and property damage, including the following coverages:

- a. Premises and operations coverage
- b. Independent contractor's coverage
- c. Contractual liability
- d. Products and completed operations coverage
- e. Coverage for explosion, collapse, and underground property damage
- f. Broad form property damage liability
- g. Personal and advertising injury liability, with the contractual exclusion removed
- h. Sudden and accidental pollution liability, if appropriate
- i. Watercraft liability, either included or insured under a separate policy

1.4 Business Automobile Liability. The most recently approved ISO policy, or its equivalent, with a minimum single limit of \$1,000,000 each accident for bodily injury and property damage including sudden and accidental pollution liability, with respect to

[CONTRACTOR]'s vehicles whether owned, hired or non-owned, assigned to or used in the performance of the Project.

1.5 Umbrella Liability. Insurance with a minimum limit of \$4,000,000 each occurrence/aggregate where applicable to be provided on a following form basis in excess of the coverages and limits required in Employers' Liability insurance, Commercial General Liability insurance and Business Automobile Liability insurance above. [CONTRACTOR] shall notify PacifiCorp, if at any time their minimum umbrella limit is not available during the term of this Agreement, and will purchase additional limits, if requested by PacifiCorp.

In addition to the requirements stated above any and all parties providing underground locate, engineering, design, or soil sample testing services including [CONTRACTOR], subcontractor and all other independent contractors shall be required to provide the followings insurance:

Professional Liability: [CONTRACTOR] (or its contractors) shall maintain Professional Liability insurance covering damages arising out of negligent acts, errors or omissions committed by [CONTRACTOR] (or its contractors) in the performance of this Agreement, with a liability limit of not less than \$1,000,000 each claim. [CONTRACTOR] (or its subcontractors of any tier) shall maintain this policy for a minimum of two (2) years after completion of the work or shall arrange for a two (2) year extended discovery (tail) provision if the policy is not renewed. The intent of this policy is to provide coverage for claims arising out of the performance of work or services contracted or permitted under this Agreement and caused by any error, omission for which the [CONTRACTOR] its subcontractor or other independent contractor is held liable.

Except for Workers' Compensation insurance, the policies required herein shall include provisions or endorsements naming PacifiCorp, its affiliates, officers, directors, agents, and employees as additional insureds.

To the extent of [CONTRACTOR]'s negligent acts or omission, all policies required by this Agreement shall include provisions that such insurance is primary insurance with respect to the interests of PacifiCorp and that any other insurance maintained by PacifiCorp is excess and not contributory insurance with the insurance required hereunder, provisions that the policy contain a cross liability or severability of interest clause or endorsement, and that [CONTRACTOR] shall notify PacifiCorp immediately upon receipt of notice of cancellation, and shall provide proof of replacement insurance prior to the effective date of cancellation. No required insurance policies, except Workers' Compensation, shall contain any provisions prohibiting waivers of subrogation. Unless prohibited by applicable law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against PacifiCorp, its parent, affiliates, subsidiary companies, co-lessees, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all parties.

A certificate in a form satisfactory to PacifiCorp certifying to the issuance of such insurance shall be furnished to PacifiCorp prior to commencement of the Project by [CONTRACTOR] or its volunteers or contractors. If requested, [CONTRACTOR] shall

provide a copy of each insurance policy, certified as a true copy by an authorized representative of the issuing insurance company, to PacifiCorp.

[CONTRACTOR] shall require subcontractors who perform work at the Project to carry liability insurance (auto, commercial general liability and excess) workers' compensation/employers' or stop gap liability and professional liability (as required) insurance commensurate with their respective scopes of work. [CONTRACTOR] shall remain responsible for any claims, lawsuits, losses and expenses including defense costs that exceed any of its subcontractors' insurance limits or for uninsured claims or losses.

PacifiCorp does not represent that the insurance coverage's specified herein (whether in scope of coverage or amounts of coverage) are adequate to protect the obligations [CONTRACTOR], and [CONTRACTOR] shall be solely responsible for any deficiencies thereof.

Appendix B

Response to ACC Requests for Clarification

Attachment A – Forest Camp Creek Rapid Habitat Assessment of Potentially Accessible Anadromous Fish Habitat

The purpose of the information present below is to describe currently accessible habitat within Forest Camp Creek downstream of the FR-90 culvert and the habitat upstream of the FR-90 culvert, which could be accessible to anadromous fish for spawning and rearing if the FR-90 culvert was made passable. During the 2019 Coho spawning surveys, a total of 10 redds and 30 Coho (live and dead) were observed throughout the 900-foot-long accessible reach downstream of the FR-90 culvert, yet no Coho or redds were observed upstream of the culvert during the same survey days. The FR-90 culvert is approximately 75 feet in length with a slope of 5 to 6 percent. The FR-90 road culvert appears to be an upstream migration barrier that limits the length of accessible habitat to about 900 lineal feet of stream channel for anadromous fish migrating upstream from Swift Reservoir.

Forest Camp Creek habitat was characterized by Jason Shappart (Senior Fisheries Scientist, Meridian Environmental) by walking the length of potentially accessible habitat and rapidly assessing general habitat conditions on March 26, 2020. Note that stream flow during the habitat assessment appeared about the same as when many Coho redds and live Coho spawners were observed on December 30, 2019. Though March 26 is within the potential steelhead spawning period, no adult steelhead were observed in the accessible reach downstream of the FR-90 culvert during the habitat survey. Six distinct geomorphic reaches were identified including: 1. draw-down zone of Swift Reservoir; 2. reservoir full pool to FR-90 culvert; 3. upstream of FR-90 culvert through forested area along FR-90; 4. open wet meadow area along FR-90; 5. forested area to the west of Pine Creek station to headwater wetland; and 6. multiple channels through headwater wetland. General habitat conditions for each of these reaches is summarized in Table 1. Reach and photo locations are depicted in Figure 1.

In general, the current accessible habitat from the edge of the reservoir full pool to the FR-90 culvert (approximately 900 feet in length) is of generally low complexity and primarily comprised of riffle habit, though scattered pools are present. Anadromous fish spawning gravel patches are also scattered through the reach. Large wood is nearly absent in the reach.

Upstream of the FR-90 culvert, Forest Camp Creek flows out of a large wetland, which is located to the northwest of the Pine Creek station, then flows southerly in fairly close proximity to the FR-90 road alignment before reaching the FR-90 culvert. The stream channel upstream of the FR-90 culvert is single thread and generally of low gradient (<1.5%). Potential anadromous fish spawning gravel patches are common to abundant. Habitat is substantially more complex than downstream of the FR-90 culvert; pools are much more common with many meanders and undercut banks. However, large wood is scattered. Within the headwater wetland, the stream disperses into many channels. The primary wetland channel flows southerly along the western edge of the wetland. This channel enters the wetland from a steep forested ravine. The wetland channels are relatively small and could potentially be used for anadromous fish rearing. In total, there is approximately 5,300 lineal feet of stream channel from the wetland outlet to the FR-90 culvert that could potentially be used for anadromous fish spawning and rearing if the FR-90 culvert was made passable.

Table 1. Forest Camp Creek rapid habitat assessment results (surveyed on March 26, 2020).

Attribute	Reach 1	Reach 2	Reach 3	Reach 4	Reach 5	Reach 6
Currently accessible to anadromous fish	yes	yes	no	no	no	no
Photo numbers	1, 2	3, 4, 5, 6	7, 8	9, 10	11, 12, 13, 14, 15	16, 17, 18
Station start (feet from edge of reservoir full pool)	-300	0	975	1,875	2,675	6,275
Station end (feet from edge of reservoir full pool)	0	900	1,875	2,675	6,275	---
Total reach length (feet)	300	900	900	800	3,600	>1,000 feet of small channels in wetland
Average gradient (% slope)	3.5%	2.5%	1.5%	0.5%	1.5%	0.5%
Channel form	single thread	single thread	single thread	single thread	single thread	multiple channels
Valley form	constrained by low terrace	hillslope constrained	constrained by low terrace	unconstrained	constrained by low terrace	unconstrained
Average wetted width (feet)	10	5	6	5	7	2
Average depth (feet)	0.3	0.8	0.7	1.3	0.7	0.5
Average pool maximum depth (feet)	1.0	1.3	1.5	2.0	2.0	1.3
Average active channel width (feet)	12	6.5	7	5.5	9	4
Average flood prone width (feet)	na	7	20	75	30	>100
Dominant habitat type	riffle	riffle	riffle	glide/riffle	riffle	glide/riffle
Subdominant habitat type	rapid	pool	pool	pool	pool	pool
Pool frequency	low	low	low	common	common	low to common
Large wood frequency	scarce	scarce	scarce	low	low	low to common
Dominant substrate	cobble	cobble	gravel	sand	gravel	sand/silt
Subdominant substrate	boulder	gravel	cobble	gravel	sand	gravel
Anadromous fish spawning gravel patch frequency	scarce	low	low to common	common	abundant	low
Undercut bank frequency	none	low	low	common	common	common
Riparian composition	unvegetated	forested through area of cabins	mature forested	wet meadow/ scattered trees	mature forested	wet meadow/ scattered trees
Side/off-channel frequency	none	none	none	none	none	several small channels through wetland

Note. Table values are approximate and based on visual estimates from survey on March 26, 2020.

Note. FR-90 culvert downstream end is at approx. station 900 feet and the upstream end is at station 975 feet from the edge of the reservoir full pool (i.e., culvert is 75 feet long).

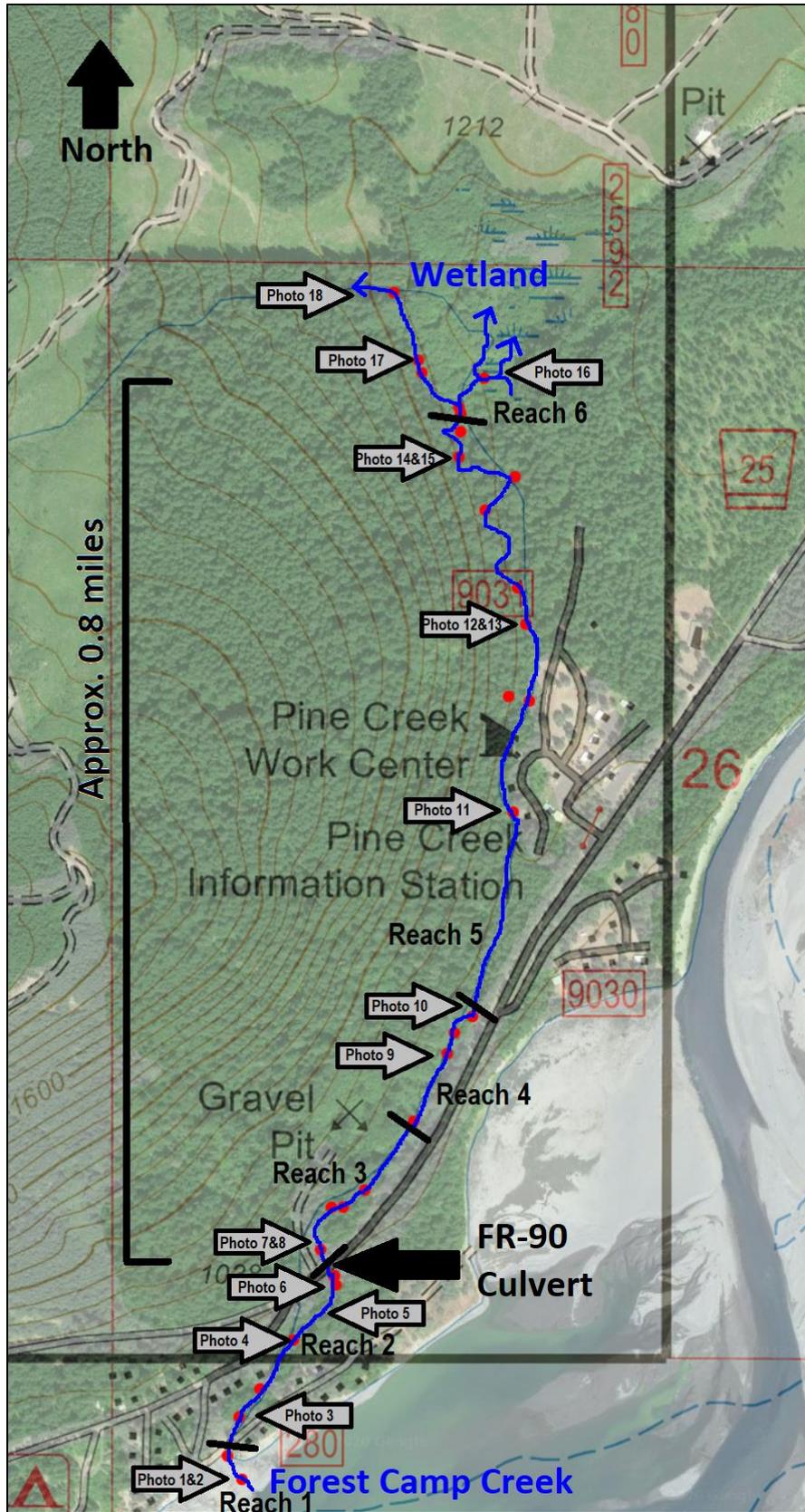


Figure 1. Forest Camp Creek reach and habitat survey photo index.



Photo 1. Drawdown zone.



Photo 2. Drawdown zone.



Photo 3. Upstream of drawdown zone.



Photo 4. Typical spawning habitat.



Photo 5. Typical spawning habitat



Photo 6. Downstream FR-90 culvert.



Photo 7. Upstream FR-90 Culvert.



Photo 8. Typical upstream FR-90.



Photo 9. Potential spawning habitat.



Photo 10. Potential spawning habitat.



Photo 11. Potential spawning habitat.



Photo 12. Potential spawning habitat.



Photo 13. Potential rearing habitat.



Photo 14. Potential rearing habitat.



Photo 15. Potential spawning habitat.



Photo 16. Wetland channels to east.



Photo 17. Western Fork typical habitat.



Photo 18. Western Fork ravine.

APPENDIX F
FINAL PROPOSAL FORM
NORTHWOODS COLD-WATER REFUGE HABITAT RESTORATION PROJECT

FULL PROPOSAL FORM

Lewis River Aquatic Fund

Form Intent:

To provide a venue for an applicant to clearly indicate the technical basis and support for proposed project. Specifically, the project's consistency with recovery plans, Settlement Agreement Fund objectives and priorities, technical studies and assessments which support the proposed action and approach.

Full Proposal format:

Please complete the following form for your Full Proposal. Maps, design drawings and other supporting materials may be attached.

The deadline for a Draft Full Proposal Form submission is **October 25, 2021**. Please submit materials to:

Erik Lesko
PacifiCorp
825 NE Multnomah Street, Suite 1800
Portland, OR 97232
Erik.lesko@pacificorp.com

1. Project Title

Northwoods Cold-water Refuge Habitat Restoration Project

2. Requested Funding Amount

\$657,757.50

3. Project Co-Managers (name, address, telephone, email)

*Kelley Jorgensen, jorgensenkelley@gmail.com, 971-285-6874
Matt Harding, vmattharding@gmail.com, 503-246-4322*

4. Identification of problem or opportunity to be addressed

Problem: When Swift Reservoir is lowered during dry summer conditions, native, anadromous and Endangered Species Act (ESA)-listed fish get trapped and stranded in isolated pools and channel fragments that form in the uneven lakebed as the surface water levels draw down. As these isolated pools dry up, the fish are subject to mortality from dewatering, high water temperature, low Dissolved Oxygen and predation. Surveys of the isolated pools conducted by PacifiCorp in 2020 and 2021 documented hundreds of native fishes including ESA-listed species that were repeatedly trapped in a particular area along the Northwoods lakefront cabins where the natural Lewis River channel previously flowed. This area is fed by cold-water

hyporheic, spring and groundwater inputs and was recorded at a suitable temperature for salmonids despite high air and lake temperatures.

Opportunity: This proposal is for a habitat restoration feasibility investigation, alternatives analysis and selection, and 60% design of the chosen alternative (permit ready designs) to be documented in a Basis of Design Report. Goals include reducing mortality from fish stranding, improving juvenile rearing conditions in the reach and creating cold-water refuge habitat during the lowest water, warmest months of the year.

5. Background

Please refer to the attached Swift Reservoir Fish Rescue presentation from August 5, 2021 prepared by Kelley Jorgensen, Karen Adams and Hannah Mortensen for information about the stranding location, fish species and quantities of stranded fish that were documented in 2020 and 2021.

This project supports greater watershed objectives by reducing mortality of ESA-listed and reintroduced anadromous fish species with juveniles that rear in the North Fork Lewis River watershed above Swift Dam, and creates cold-water refuge, off-channel and complex rearing habitat in the vulnerable, late-summer juvenile rearing season in the upper Swift reservoir/North Fork Lewis River transition reach for these same species.

6. Project Objective(s)

Quantified “S.M.A.R.T.¹” objectives will be developed as part of the design process. The goals of the habitat restoration design are to provide the following benefits for native, anadromous and ESA-listed fish species as well as other aquatic wildlife species:

- restore and reconnect the former Lewis River channel to provide flow during low water conditions through the current stranding-prone area so it does not trap, strand and kill fish,*
- provide cold-water refuge habitat when the reservoir water temperatures are elevated,*
- increase habitat diversity by creating off-channel refuge habitat with low-energy rearing habitats for juvenile fish species,*
- increase habitat complexity and provide cover from predators, flow refuge and improved food web functions with benefits to primary and secondary productivity by installing anchored large wood habitat elements in the flow-through channel,*
- increase habitat complexity by creating additional edge habitat and improve water quality by reducing thermal gain from the large, exposed sand plain of the bed of the reservoir in the stranding prone reach by creating vegetated and forested islands from excavated material, and*

¹ SMART Objectives: Specific, Measurable, Attainable, Relevant, and Time-based

- *improving habitat quality through increases in shade and organic detritus inputs by planting the newly created islands with native upland tree and shrub species.*
- *A side benefit and compatible use of restoring the historic flow-through channel that was connected on both ends as a flow-through cold-water refuge habitat restoration project is the re-watering of the Northwoods shoreline where channel avulsion some years ago created a much higher abandoned channel that dewatered and creates stagnant pools where fish are isolated and mosquitos breed.*
- *The placement of excavated material in the lakebed will also serve to reduce the costs of hauling excavated materials away from the construction area.*

More details to be provided with Final Proposal. The Northwoods shoreline area of Swift Reservoir has no EDT ratings (Amelia Johnson, LCFRB, pers. Comm) and the reach of the Lewis that flows into Swift Reservoir is a Tier 1 Reach. Species that have been identified during fish rescue/stranding surveys include bull trout, steelhead/rainbow trout, coho salmon, lamprey species, sculpin species and three-spined stickleback.

7. Tasks

- *Feasibility Investigation including field data collection:*
 - *High-resolution topography/bathymetry,*
 - *Hydraulic/hydrologic field monitoring and modeling build out*
 - *Fish surveys and Fish Rescue*
 - *Sediment analysis -*
 - *Wetland delineation*
 - *Cultural Resources Survey*
- *Identification of conceptual alternatives selection criteria*
- *Conceptual alternatives analysis and selection*
- *60% Design of chosen alternative*
- *Presentation of alternatives to sponsor (Northwoods cabin community)*
- *Presentation of alternatives to ACC*
- *Address all comments*
- *Prepare Draft Basis of Design Report*
- *Prepare Final Basis of Design Reports*
- *Apply for required Environmental approvals and permits:*
 - *NEPA/SEPA*
 - *US Army Corps of Engineers*
 - *Section 106*
 - *ESA consultation*
 - *WDFW Hydraulic Project Approval*
 - *DNR SOAL*
 - *Skamania County Shoreline, Grading and Site Plan Authorizations*

8. Methods

To Be Determined

9. Specific Work Products

- *Draft and Final Basis of Design Reports documenting:*
 - *Baseline Conditions/Field Reconnaissance,*
 - *Technical studies results,*
 - *Feasibility analysis,*
 - *Identification of conceptual alternatives selection criteria,*
 - *Conceptual alternatives analysis and selection,*
 - *60% Design Drawings,*
 - *Construction Cost Estimates,*
 - *Necessary permits or approvals.*

10. Project Duration

18 months.

Schedule to be provided with Final Proposal.

11. Permits and Authorizations

To Be Determined – some permits and authorizations identified above in #7 Tasks.

Landowner Permission Forms to be provided with Final Proposal.

12. Matching Funds and In-kind Contributions

To Be Determined for Final Proposal.

13. Peer Review of Proposed Project

Third party peer review to be provided with Final Proposal.

14. Budget

See draft design budget below.

Draft ACC Proposal Budget for the Northwoods Cold-water Refuge Habitat Restoration Project			
Phase 1: Feasibility and Design, Basis of Design Report (BOD)			
Northwoods Match/In-kind:	TBD		
Task	Subtask	Estimated Cost	Assumptions
Liability Insurance		\$ 2,500.00	
Feasibility Investigation & Field Data Collection			
High-resolution Topo/bathymetry for 2 miles of the N.F. Lewis River and the upper half of Swift Reservoir and aerial imagery	Green LiDAR	\$ 50,000.00	
Field Reconnaissance	Spot checks/ground truth with survey grade RTK GPS	\$ 14,000.00	If not done concurrent with sediment sampling and low-water field reconnaissance
Sediment analysis	Field Data Collection	\$14,362	
	Analysis		
	Methods & Results for BOD		
Hydraulic/Hydrologic Monitoring	Field Data Collection	\$ 28,255.00	
	Data Analysis		
	Data Mapping		
	Methods & Results for BOD		
Hydraulic/Hydrologic Modeling	DEM from LiDAR	\$ 28,320.00	
	Model envelope buildout		
	Data Mapping		
	Methods & Results for BOD		
Fish Rescue & Fish Surveys		\$ 31,975.00	visits/days for fish rescue and fish surveys
Wetland Delineation		\$ 25,000.00	lump sum
Cultural Resources Survey		\$ 25,000.00	lump sum
Develop Conceptual Alternatives and Analysis	Develop Ranked Project Goals and SMART Objectives	\$ 53,330.00	
	Develop Selection Criteria for Conceptual Alternatives		
	Alternatives Development and Selection		
	Alternatives DEM buildout in GIS with biological, hydrologic and geomorphic functions comparison		
Draft 60 % Design Drawings		\$ 60,790.00	
Design review	Peer review	\$ 25,370.00	
	Presentation to Northwoods Community		
	Presentation to ACC		
Final 60% Design Drawings	Address all comments	\$ 34,990.00	Assumes one round of edi
Draft Basis of Design Report		\$ 48,296.00	
Final Basis of Design Report		\$ 33,306.00	Assumes one round of edi
Environmental approvals and Permits		\$ 50,712.00	
Contingency 25%		1.25 \$ 131,551.50	
Total		\$ 657,757.50	

15. Photo Documentation (Per National Marine Fisheries Service's Biological Opinion for Relicensing of the Lewis River Hydroelectric Projects – August 27, 2007):

Schedule of photo documentation to be provided with final proposal. Baseline condition or "Before" photos will be included in the Basis of Design Report. During Construction photos would be provided within 60 days following construction, and "After" construction photos would be provided Quarterly for two years post-construction.

16. Insurance. **All qualifying applicants shall comply with PacifiCorp's insurance requirements set forth in Appendix A.** The policy limits are deemed sufficient by PacifiCorp for project activities involving significant risk, including placement of large woody debris in navigable waterways, and are presumed to be sufficient for all activities likely to be funded under this Full Proposal Form. Should applicant's insurance program not meet these requirements, bid pricing should include any additional costs applicant would incur to comply with these requirements.

Appendix A
Insurance Requirements
(Risk Mgmt to evaluate risk by project and report needed insurance
limits to Lewis River Project Coordinator)

1. INSURANCE

Without limiting any liabilities or any other obligations of [CONTRACTOR], [CONTRACTOR] shall, prior to commencing the Project, secure and continuously carry with insurers having an A.M. Best Insurance Reports rating of A-:VII or better the following insurance coverage:

1.1 Workers' Compensation. [CONTRACTOR] shall comply with all applicable Workers' Compensation Laws and shall furnish proof thereof satisfactory to PacifiCorp prior to commencing the Project.

All Workers' Compensation policies shall contain provisions that the insurance companies will have no right of recovery or subrogation against PacifiCorp, its parent, divisions, affiliates, subsidiary companies, co-lessees, or co-venturers, agents, directors, officers, employees, servants, and insurers, it being the intention of the parties that the insurance as effected shall protect all parties.

1.2 Employers' Liability. Insurance with a minimum single limit of \$1,000,000 each accident, \$1,000,000 disease each employee, and \$1,000,000 disease policy limit.

1.3 Commercial General Liability. The most recently approved ISO policy, or its equivalent, written on an occurrence basis, with limits not less than \$1,000,000 per occurrence/ \$2,000,000 general aggregate (on a per location and/or per job basis) bodily injury (with no exclusions applicable to injuries sustained by volunteers working or participating in the Project) and property damage, including the following coverages:

- a. Premises and operations coverage
- b. Independent contractor's coverage
- c. Contractual liability
- d. Products and completed operations coverage
- e. Coverage for explosion, collapse, and underground property damage
- f. Broad form property damage liability
- g. Personal and advertising injury liability, with the contractual exclusion removed
- h. Sudden and accidental pollution liability, if appropriate
- i. Watercraft liability, either included or insured under a separate policy

1.4 Business Automobile Liability. The most recently approved ISO policy, or its equivalent, with a minimum single limit of \$1,000,000 each accident for bodily injury

and property damage including sudden and accidental pollution liability, with respect to [CONTRACTOR]'s vehicles whether owned, hired or non-owned, assigned to or used in the performance of the Project.

1.5 Umbrella Liability. Insurance with a minimum limit of \$4,000,000 each occurrence/aggregate where applicable to be provided on a following form basis in excess of the coverages and limits required in Employers' Liability insurance, Commercial General Liability insurance and Business Automobile Liability insurance above. [CONTRACTOR] shall notify PacifiCorp, if at any time their minimum umbrella limit is not available during the term of this Agreement, and will purchase additional limits, if requested by PacifiCorp.

In addition to the requirements stated above any and all parties providing underground locate, engineering, design, or soil sample testing services including [CONTRACTOR], subcontractor and all other independent contractors shall be required to provide the followings insurance:

Professional Liability: [CONTRACTOR] (or its contractors) shall maintain Professional Liability insurance covering damages arising out of negligent acts, errors or omissions committed by [CONTRACTOR] (or its contractors) in the performance of this Agreement, with a liability limit of not less than \$1,000,000 each claim. [CONTRACTOR] (or its subcontractors of any tier) shall maintain this policy for a minimum of two (2) years after completion of the work or shall arrange for a two (2) year extended discovery (tail) provision if the policy is not renewed. The intent of this policy is to provide coverage for claims arising out of the performance of work or services contracted or permitted under this Agreement and caused by any error, omission for which the [CONTRACTOR] its subcontractor or other independent contractor is held liable.

Except for Workers' Compensation insurance, the policies required herein shall include provisions or endorsements naming PacifiCorp, its affiliates, officers, directors, agents, and employees as additional insureds.

To the extent of [CONTRACTOR]'s negligent acts or omission, all policies required by this Agreement shall include provisions that such insurance is primary insurance with respect to the interests of PacifiCorp and that any other insurance maintained by PacifiCorp is excess and not contributory insurance with the insurance required hereunder, provisions that the policy contain a cross liability or severability of interest clause or endorsement, and that [CONTRACTOR] shall notify PacifiCorp immediately upon receipt of notice of cancellation, and shall provide proof of replacement insurance prior to the effective date of cancellation. No required insurance policies, except Workers' Compensation, shall contain any provisions prohibiting waivers of subrogation. Unless prohibited by applicable law, all required insurance policies shall contain provisions that the insurer will have no right of recovery or subrogation against PacifiCorp, its parent, affiliates, subsidiary companies, co-lessees, agents, directors, officers, employees, servants, and insurers, it being the intention of the Parties that the insurance as effected shall protect all parties.

A certificate in a form satisfactory to PacifiCorp certifying to the issuance of such insurance shall be furnished to PacifiCorp prior to commencement of the Project by [CONTRACTOR] or its volunteers or contractors. If requested, [CONTRACTOR] shall provide a copy of each insurance policy, certified as a true copy by an authorized representative of the issuing insurance company, to PacifiCorp.

[CONTRACTOR] shall require subcontractors who perform work at the Project to carry liability insurance (auto, commercial general liability and excess) workers' compensation/employers' or stop gap liability and professional liability (as required) insurance commensurate with their respective scopes of work. [CONTRACTOR] shall remain responsible for any claims, lawsuits, losses and expenses including defense costs that exceed any of its subcontractors' insurance limits or for uninsured claims or losses.

PacifiCorp does not represent that the insurance coverage's specified herein (whether in scope of coverage or amounts of coverage) are adequate to protect the obligations [CONTRACTOR], and [CONTRACTOR] shall be solely responsible for any deficiencies thereof.



Swift Reservoir Fish Rescue | *August 5, 2021*

Prepared for Erik Lesko, Matt Harding and ACC

Prepared by Kelley Jorgensen, Karen Adams and Hannah Mortensen, Plas Newydd LLC



Isolated Channel - Stranding Location

- Date of survey 08/05/2021
- Water temperature in far end pool at start of survey: 64°F
- Pool length: ~550 feet
- Pool depth: ~2.5 feet at deepest point



Fish Rescued 08052021



Fish Species	Count	Fork Length (mm)
Bull Trout	9	110, 120 (x3), 125, 135, 140, 10, 180
Steelhead/Rainbow Trout	5	35-70
Coho Salmon	238	35-100
Lamprey sp.	0	110
Sculpin sp.	17	30-120
Three-spined stickleback	2	10-60



Bull trout and
coho salmon

 **photarium**
a product of Wild Fish Conservancy
for information: 425-788-1167
photarium@wildfishconservancy.org



Bull trout and
sculpin sp.



photarium
a product of Wild Fish Conservancy
for information: 425-788-1167
photarium@wildfishconservancy.org

Bull trout



photarium

a product of Wild Fish Conservancy
for information: 425-788-1167
photarium@wildfishconservancy.org

© Plas Newydd LLC 2021

Bull trout



Bull trout and
coho salmon



© Plas Newydd LLC 2021

photarium



Bull trout
Too large for
photarium at
~180mm

Coho salmon and
steelhead/rainbow
trout



photarium
a product of Wild Fish Company

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Coho salmon and
steelhead/rainbow
trout



Coho salmon and
steelhead/rainbow
trout

Lamprey





Isolated channel
with stranded fish.
Looking upstream
towards upper
Lewis River. Notice
wall of large wood
and river
cobble/sediment
blocking upstream
channel inlet.
8/5/2021



Isolated channel
with stranded fish
Looking
downstream
towards Swift Res.
Notice fragmented
pools and upland
vegetation
colonizing on lake
bed.
8/5/2021



UAV (drone) image
of stranding area
on 8/21/2020
Northwoods on
right, looking
upstream towards
upper Lewis River.



UAV (drone) image of stranding area on 8/5/2021. Northwoods on right, looking upstream towards upper Lewis River.



UAV (drone) image
of stranding area
on 8/21/2020.
Looking upstream,
Northwood docks
on right bank.



UAV (drone) image
of stranding area
on 8/5/2021
Looking upstream
Northwoods on
right



UAV (drone) image
of stranding area
on 8/5/2021.
Northwoods on
left, looking
downstream
towards Swift Res.

ATTACHMENT A
ACC COMMENT & DECISION TEMPLATE

COMBINED AQUATIC FUNDS PROJECT SCORING TEMPLATE - 2022

MEAN SCORES

Project Number	Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
		1	2	3	4	5	Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
							Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
2022-01	Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	8	10	9	10	9	9	8	9	9	7	8	9	8	8		124	89%	1
2022-02	Northwoods Cold-water Refuge Habitat Restoration Project	BOTH	BOTH	BOTH	BOTH	BOTH	5	5	5	6	5	4	5	5	8	5	2	4	3	4	X	68	49%	2

MEDIAN SCORES

Project Number	Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
		1	2	3	4	5	Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
							Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
2022-01	Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	9	10	10	10	9	10	8	9	10	8	8	9	9	9		131	93%	1
2022-02	Northwoods Cold-water Refuge Habitat Restoration Project	BOTH	BOTH	BOTH	BOTH	BOTH	3	3	3	7	5	3	6	4	8	4	2	2	3	3	X	56	40%	2

UTILITIES

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	10	10	8	10	9	9	7	10	10	4	8	8	10	8		124	89%	1
Northwoods Cold-water Refuge Habitat Restoration Project	GO	GO	GO	GO	GO	9	7	8	6	6	7	7	5	8	4	2	2	4	5	X	89	64%	2

LCFRB

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	9	9	8	9	9	10	9	10	10	7	10	9	8	10		126	90%	1
Northwoods Cold-water Refuge Habitat Restoration Project	NOGO	NOGO	NOGO	NOGO	NOGO	2	3	2	4	1	2	1	1	10	2	1	2	1	0	X	33	24%	2

COWLITZ TRIBE

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	6	8	10	10	10	10	7	9	7	7	6	9	9	9		120	85%	1
Northwoods Cold-water Refuge Habitat Restoration Project	GO	GO	GO	GO	GO	3	3	3	9	5	1	1	3	5	4	2	2	1	3	X	49	35%	2

US FOREST SERVICE

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	8	10	10	10	10	10	8	10	10	10	7	9	8	9		132	94%	1
Northwoods Cold-water Refuge Habitat Restoration Project	GO	GO	GO	GO	GO	6	8	8	8	5	5	8	4	10	8	3	5	3	3		89	64%	2

TROUT UNLIMITED

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	10	10	10	10	8	10	10	10	9	10	9	9	10	2		131	93%	1
Northwoods Cold-water Refuge Habitat Restoration Project	GO	GO	GO	GO	GO	10	10	10	7	9	10	10	8	8	10	3	10	10	5		125	89%	2

AMERICAN RIVERS

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	9	10	10	10	10	10	8	8	10	8	6	9	10	8		130	93%	1
Northwoods Cold-water Refuge Habitat Restoration Project	GO	GO	GO	GO	GO	2	2	1	5	4	1	1	4	7	4	0	2	1	2	X	36	26%	2

WASHINGTON DEPT OF FISH AND WILDLIFE

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	6	10	10	10	10	10	10	10	10	0	9	10	0	10		121	86%	1
Northwoods Cold-water Refuge Habitat Restoration Project	GO	GO	GO	GO	NOGO	3	3	3	8	5	5	8	5	5	0	0	3	0	10	X	59	42%	2

YAKAMA NATION

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	9	10	9	9	9	9	9	9	9	9	9	9	9	10		128	92%	1
Northwoods Cold-water Refuge Habitat Restoration Project	NOGO	NOGO	NOGO	NOGO	NOGO	3	3	3	3	2	3	3	3	10	3	3	2	3	1	X	44	31%	2

US FISH AND WILDLIFE SERVICE

Project Name	PRIORITY OBJECTIVES (GO - NOGO)					Scores (use only whole numbers, 1 - 10 with 10 being best)														* Project of Concern?	TOTAL PROJECT		
	PRIORITY OBJECTIVES (GO - NOGO)					Benefits to Fish (35%)			Scientific Validity (30%)			Feasibility (20%)				Cost Effectiveness (15%)					Score	% of max. Score	Rank
	1	2	3	4	5	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14				
Swift Campground Creek Culvert Replacement	GO	GO	GO	GO	GO	5	9	9	9	8	7	6	7	9	9	5	7	7	10		108	77%	1
Northwoods Cold-water Refuge Habitat Restoration Project	GO	GO	GO	GO	GO	5	7	6	8	8	3	6	8	5	6	2	7	5	10		86	61%	2

Northwoods Cold-water Refuge Habitat Restoration

ACC REPRESENTATIVE	NOTES
Utilities	The merits of the projects are valid. The cold water flowing into that channel can support fish through the summer if allowed to flow continuously. Question long-term effectiveness of trying to remove sediment to reconnect channel in an area of high deposition. Could see this Project becoming more an annual maintenance task after every Spring run-off. The number of fish and species recovered in this area also places a higher level of importance on this project. However, the implementation costs may exceed the funding available under the Aquatic Funds. Therefore, a cost sharing or matching arrangement would likely improve the scores of this project. For example, some of the line items (for design portion) could be handled through in-kind work by the utilities or other ACC representatives.
LCFRB	<p>Of the five Priority Questions, it is difficult to assign a "Go" to any. This proposal suffers from a significant unknown of whether the Utilities are responsible for fish stranding, as a result of ongoing operations. Additionally, based on the presentation(s), it appears that the cold water refugia and primary fish enhancement opportunities occur in the area where there are existing overwater structures. These structures create at least some interruption and limitation on fish habitat enhancement; they also create piscivorous fish ambush habitat. In fact WAC 220-660-140 2(b) states, "Structures grounding on the bed can physically block migration and cause other impacts. The light/dark contrast of shading/no shading of over-water and in-water structures can affect migration behavior. Fish respond by moving into deeper water which increases the risk of predation. These structures may increase the exposure of juvenile salmon, steelhead, and other small fish to predators by providing predator habitat."</p> <p>The proposal targets designing a project in a highly dynamic and seasonally inundated river delta that will be subject to future sediment deposition and channel shifts. Any future enhancements would therefore likely result in the need for ongoing and perhaps significant maintenance, and commensurate commitment opportunities occur in the area where there are existing overwater structures. These structures create at least some interruption and limitation on fish habitat enhancement; they also create piscivorous fish ambush habitat. In fact WAC 220-660-140 2(b) states, "Structures grounding on the bed can physically block migration and cause other impacts. The light/dark contrast of shading/no shading of over-water and in-water structures can affect migration behavior. Fish respond by moving into deeper water which increases the risk of predation. These structures may increase the exposure of juvenile salmon, steelhead, and other small fish to predators by providing predator habitat."</p> <p>The proposal targets designing a project in a highly dynamic and seasonally inundated river delta that will be subject to future sediment deposition and channel shifts. Any future enhancements would therefore likely result in the need for ongoing and perhaps significant maintenance, and commensurate commitment opportunities occur in the area where there are existing overwater structures. These structures create at least some interruption and limitation on fish habitat enhancement; they also create piscivorous fish ambush habitat. In fact WAC 220-660-140 2(b) states, "Structures grounding on the bed can physically block migration and cause other impacts. The light/dark contrast of shading/no shading of over-water and in-water structures can affect migration behavior. Fish respond by moving into deeper water which increases the risk of predation. These structures may increase the exposure of juvenile salmon, steelhead, and other small fish to predators by providing predator habitat."</p> <p>Efforts should focus on ongoing utility-funded fish salvage efforts, and reductions in effective overwater cover to reduce potential predation impacts. ACC funds are limited, and should focus on projects with far more certain outcomes for improving fish population viability, including implementation of prior funded designs.</p>
COWLITZ TRIBE	The Northwoods Cold-water Refuge Habitat Restoration Project is hugely expensive (for feasibility- or preliminary-level deliverables, and presumably for construction) with a low likelihood of providing long-term benefits to priority species in the watershed. Additionally, the primary impetus for the project appears to be improving the recreational and aesthetic values of the Northwoods community; if the Northwoods community was not advocating for the project, it seems improbable that another project sponsor would identify or pursue a similar project in this location with salmon recovery as the sole criterion.
US Forest Service	<p>Q5: Project goals are articulated in the proposal, however the ability to achieve these goals, and the relative importance of this project to overarching recovery efforts are not clear. Are there other ways to meet project objectives of reducing mortality without a multi-million dollar effort? The proposal mentions several other areas in reservoirs where there are coldwater inputs and stranding occurring. Perhaps before potentially investing millions in this area, there should be further study to determine the scope of this issue and locations within the reservoirs that could best benefit from potential treatment.</p> <p>Q6: The proposal describes the processes that created the problem, but the analysis and proposed solution will not remediate the ultimate processes that have kept the sediment plug from the Mt. St. Helens eruption in place; Project operations. The proposal also mentions projected reduced snowpack under climate change, however, peak flows, and increased occurrence of rain on snow events under climate change are also modeled to increase. In an unregulated stream environment, these increased peak flows would encourage sediment to move through the area.</p> <p>Q8: Given ongoing Project operations, the probability of success seems low. The FS understands that funds are requested for feasibility, and that potential success can be better estimated once this analysis is complete, however, the chance of success seems relatively low given other factors in Swift Reservoir.</p> <p>Q11-Q14: Concern that project has a high cost with seemingly moderate benefits to fish recovery, and that given Project operations will not be self-sustaining. With the exception of the sediment influx from Mt. St. Helens, the processes causing the problem, including reduced snowpack and Project operations are not mitigated with this project. In addition, the Northwoods Community, who stands to benefit from this project is not providing any financial support. They may provide financial match in the future, but that is unclear in the proposal.</p>
American Rivers	The Northwoods Cold-water Refuge Habitat Restoration Project is a project of concern. Our primary concern is the selection of an alternative resulting from this feasibility study. An alternative should not be selected, nor permits secured, without approval from the ACC. It is not clear what the process will be for selecting and agreeing upon a preferred alternative. We are also concerned about the cost of implementing a preferred alternative, beyond the funding requested here, and where that funding will come from. Further, this reach is susceptible to dramatic geomorphological changes. We are therefore concerned about project work in this area and the potential maintenance required to manage those efforts post-treatment. Lastly, there are no matching funds from project sponsors. This application would benefit from additional project sponsors, ideally with no property ownership in/around the area, and some level of matching funds. The Aquatic Fund is a finite pool and should be used to maximize benefits to fish. We are concerned that the high cost and uncertain outcomes of this project do not justify exhausting this much of the Aquatic Fund.
Washington Department of Fish and Wildlife	High concerns: 1.) The Services have yet to amend their BiOps so it's unknown what PacifiCorp's responsibilities will be and what they will be required to address. The Services have indicated that a change in BiOps will not prevent the proposal from moving forward although Bonnie indicated during the January meeting (see meeting notes) that NOAA could request PacifiCorp take some kind of action. 2.) Cost is high for feasibility study that may not get implemented.
Washington Department of Fish and Wildlife	Concern/Consideration: The proposal indicates fish mortality is from high temperature and low dissolved Oxygen. This may be an exceedance of Water Quality Standards or the 401 Water Quality Standard Certification Administrative Order. This should be researched to determine if PacifiCorp will be required to address the issue under RCW Water Quality Standards or other water quality permits. Please note: EPA has delegated their water quality authority to Ecology.
Washington Department of Fish and Wildlife	Concern: Consistency between past and current proposals should be maintained. The applicant is seeking funding for tasks that in the past, the ACC has required other proponents to provide before submitting an application such as identifying landowners, third party review, etc. Proposal instructions indicate that landowner acknowledgement forms be included with the proposal. These actions should have been completed prior to submitting the proposal.
Washington Department of Fish and Wildlife	This proposal does not provide the extent for geographic scope for their investigations. The proposal does identify high-resolution Topo/bathymetry for 2 miles of the N.F. Lewis River and the upper half of Swift Reservoir and aerial imagery, but the proposal does not specify whether the investigations are for only the Northwoods area or if it includes other areas. the reference to the "upper half of Swift Reservoir" is open ended.
Washington Department of Fish and Wildlife	If funded, the eventual implementation would not likely address improving juvenile outmigration rates through the reservoir. How will habitat improvements at the head of the reservoir increase the speed a smolt travels through the reservoir? Other goals such as reducing mortality from fish stranding, improving juvenile rearing conditions in the reach, and creating cold-water refuge habitat would likely improve with habitat restoration. But these actions may create an environment where fish do not want to leave the area as the reservoir is drawn down, effectively creating an attractive nuisance for juvenile fish.
Washington Department of Fish and Wildlife	While it may be appropriate for a project proposal to have the goal of improving landowner relations through strategic partnership for habitat restoration, construction access, volunteer potential, and improved non-motorized recreational access. The question is whether these activities should be funded with Aquatic Funds? As stated above, some of the landowner outreach should have been done before the proposal was submitted.
Washington Department of Fish and Wildlife	Some of the listed tasks, was to research project area ownership, and request landowner permission upon confirmation of landowner(s). This should have been completed prior to submitting the proposal (e.g. permission to access property to complete feasibility investigations). Landowner acknowledgement forms need to be included with construction proposals and should have been included as part of the feasibility investigations. If the geographic scope is focused on the Northwood community shoreline and their board knows about this proposal, funding for this task may not be necessary.
Washington Department of Fish and Wildlife	<p>Costs seem high for individual tasks and in many cases questionable. For example, \$31,975 for Late Summer – Fall 2022 Fish surveys and Fish Rescue (if similar to 2021, were three surveys) this cost seems high. Without a well-defined geographic scope or survey design, it's hard to determine if the cost is appropriate. Is paying for peer review and presentations to the Northwoods community an appropriate cost? Would the results of these surveys be presented to the ACC? On what schedule or timeline?</p> <p>Third party review is a requirement for the proposal and have been conducted by other applicants so therefore this task should not be funded as a line item in the cost in the budget. Are High-resolution Topo/bathymetry (Green LIDAR) and aerial imagery publicly available? Aerial imagery should be available through the DNR GIS portal. Cost for preliminary and 60% design is included in the budget but conceptual investigation may show there are no feasible alternatives. If this proposal is funded, consider separating the project into phases: investigation and design.</p>
Washington Department of Fish and Wildlife	During the pre-submission phase, some responses may have been inserted into the text, the applicant did not provide an appendix with responses to WDFW questions. Estimated cost to construct habitat restoration at Northwoods was not addressed. Even the statement that it was too early to estimate cost of construction, but was omitted. Benefits to the Northwoods community is a goal of the proposal but these were not addressed adequately. They did not identify Wa. Dept of Ecology or list WQ as a permit to obtain. They did not verify if some of the suggested habitat improvements could be implemented and still meet WQ standards. They did not address if potential the proposed actions, projects or investigations would occur within the FERC boundary.
Washington Department of Fish and Wildlife	Will approval and implementation of this project be possible within the scope of the Aquatic Fund in the future (i.e. cost)? The applicant has said that the project may cost several million dollars. If not, should we be funding the feasibility study? A project of this fiscal magnitude, may affect the ability to fund other projects that may be a higher priority or have greater benefit.
Washington Department of Fish and Wildlife	Without clear direction from the Services as to the extent of the amended Bi-Op or the requirements for mitigation by the Utility, or timeline, it is difficult to support funding this proposal.
Yakama Nation	YN reviewer is unsure if this design project is appropriate for Aquatic Fund consideration at this time. Clearly hydrosystem development and operations caused this alluvium to deposit in the upper Swift Reservoir. Situations like this occur throughout the Pacific Northwest at the majority of rivers with dams/hydroelectric projects. Building manmade habitats that are designed to attract fish in this dynamic and altered environment need careful consideration, as this project proponent describes. A No Go was given due to cost and uncertainty of underlying responsibility. In addition, the uncertainty of sustaining desired habitats features at this location due to the dynamic nature of the river hydraulics entering an hydrosystem impoundment with fluctuating water levels seem doubtful for success and expensive to maintain overtime.

Swift Campground Creek Culvert Replacement

ACC REPRESENTATIVE	NOTES
Utilities	The culvert within Swift Creek Estates may still be an issue if the landowner has any obligation to replace that culvert on their lands. The AF is being used to upgrade a culvert on private lands. The stream is a new and previously undocumented stream that will allow access to high quality spawning habitat. Question: coho do pass this culvert, why does it need replacement also? This project will have direct benefits to coho and steelhead.
LCFRB	Design only for two culverts: one partial barrier, one complete barrier, which will open up approx. 1 mile of habitat for coho and winter steelhead. 2) Generally, design only projects for water xing structures (ie, culverts) are straightforward with clear outcomes. 3) Physical constraints do not appear significant. 4) landowner support seems likely. 5) Generally, culvert designs are dictated by the regulatory/ permitting agencies; as such, successful implementation seems highly likely. 6) Project would benefit from including feasibility study for instream LWM installation and riparian enhancement- application notes lack of LWM. 7) Overall cost is very low, and match is significant.
Cowlitz Tribe	The Tribe appreciates the Forest's recent approach to Aquatic Fund proposals that emphasizes project design prior to requesting construction funding. Fish passage remains the most certain of restoration/recovery actions in fresh water, and this proposal would reestablish access to valuable low-gradient habitat in the upper north fork Lewis, particularly for coho and steelhead. Designing replacements for both barriers concurrently appears to be an efficient approach, and the Tribe is confident that current design criteria will result in effective passage and improved sediment and wood transport at these road crossings.
Yakama Nation	Direct benefit to coho and steelhead adding ~1 mile of spawning and rearing habitats. Well formulated design proposal for priority culverts. Project leads, low cost, and future matching funds in place gives this reviewer high degree of confidence for a successful project outcome.

2022 Aquatic Funding Proposal Selection

APPROVED FOR FUNDING VOTE (Y/N/A)

Signatory organization	Voting Representative	Present	Swift Campground Creek Culvert Replacement	Northwoods Cold-water Refuge Habitat Restoration Project
American Rivers	Bridget Moran	X	Y	N
City of Woodland	Director, Public Works			
Clark County	Not Available			
Cowlitz County	Not Available			
Cowlitz Indian Tribe	Eli Asher	X	Y	N
Cowlitz-Skamania Fire District No. 7	Not Available			
Fish First	Alex Maslov, Janae Brock			
Lewis River Citizens at-large	Not Available			
Lewis River Community Council	Mariah Stoll-Smith Reese			
Lower Columbia River Fish Recovery Board	Steve Manlow	X	Y	N
National Marine Fisheries Service	Scott Anderson, Bonnie Shorin	X	Y	N
National Park Service	Not Available			
Native Fish Society	Bill Bakke			
North County Emergency Medical	Not Available			
PacifiCorp and Cowlitz County PUD No.1	Erik Lesko	X	Y	A
Rocky Mountain Elk Foundation	Not Available			
Skamania County	Not Available			
Trout Unlimited	Jim Byrne	X	Y	Y
US Bureau of Land Management	Not Available			
US Fish and Wildlife Service	Jeffery Garnett	X	Y	N
USDA Forest Service	Kate Day	X	Y	N
Washington Department of Fish and Wildlife	Bryce Glaser	X	Y	N
WA State Recreation and Conservation Office	Adam Cole			
Woodland Chamber of Commerce	Not Available			
Yakama Nation	Bill Sharp, Elaine Harvey	X	Y	N

Y = YES
 N = NO
 A = ABSTAIN

EVALUATION QUESTIONS

- Q1 Does the project provide direct benefit(s) to priority species and habitat reaches?
- Q2 Does the project lead to or provide tangible, on the ground benefits?
- Q3 Does the project address a limiting factor(s) to the target species without adversely impacting other species, life history stages, or habitat processes?
- Q4 Does the proposal apply appropriate and proven methods, designs and technologies?
- Q5 Are the project objectives identified appropriate and justified given the proposed scope and schedule?
- Q6 Does the project describe and consider long term benefits and influences (e.g., watershed processes, hydro operations, climate change, etc.)?
- Q7 To what extent do constraints or contingencies affect project implementation (e.g., permitting, legal, location, funding, etc.)?
- Q8 Is the probability of success high, medium or low?
- Q9 How qualified and experienced is the project team in successfully completing projects of similar scope, nature, and magnitude?
- Q10 To what extent would other habitat protection, assessments, or restoration actions in the watershed positively impact or compliment the project?
- Q11 To what extent do other funding sources support the project (e.g., matching contributions, in-kind participation, grants, etc.)?
- Q12 Are project costs reasonable by work effort and type (administration, permitting, goods and services, rentals, labor, contracts, etc.)?
- Q13 Are the total costs justified based on expected short and long term benefits to fish?
- Q14 To what extent is maintenance required after project completion?