Eagle Creek Lowest Four Barrier Corrections

Chelan County Natural Resource Department

Bryan Maloney

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411 Washington St, Suite 201, Wenatchee, WA, 98801

PRISM # 23-1278

Anticipated SRFB Request: $213,859

Anticipated Trib Comm Request: $0

Other Match: $1,211,865

Anticipated TOTAL Project Budget: $1,425,724

2023 Upper Columbia Regional Project Pre-Application

* Pre-applications due March 10, 2023 (COB)
*Complete applications due in PRISM April 20, 2023 (COB)
*Revised proposals due in PRISM May 19, 2023 (COB)
*Final revised applications due in PRISM June 26, 2023 (noon)

Project Title
Eagle Creek Lowest Four Barrier Corrections

Contact Information

Sponsor
Chelan County Natural Resource Department

Primary Contact
Bryan Maloney

E-Mail Address
bryan.maloney@co.chelan.wa.us

Budget Request

Anticipated Request - SRFB (standard round)
213859

Anticipated Other Funding
1211865

Anticipated TOTAL Budget
1425724

Other Funding Source(s)
Fish Barrier Removal Board

Project Location

Briefly describe the location of the project
The project will occur at four culverts on Eagle Creek from RM 0.4 to RM 0.65

Latitude (decimal degrees)

47.626684

Longitude (decimal degrees)

-120.636988

Project subbasin

Wenatchee

Wenatchee Assessment Unit(s)

Eagle Creek (Wenatchee)

Reach(es) Name

Eagle Creek Wenatchee 01

Identify the reach(es) priority/ reach ranking. Note: If the project involves work in multiple reaches, select "Multiple" and include details in the text box that will appear below. Please reference the Prioritization Web Map: https://prioritization.ucsrb.org/.

Unranked (not a priority or missing data)

Project Information

1. What are the project objectives? Objectives support and refine biological goals, breaking them down into small steps. Objectives are specific, quantifiable actions the project will complete to achieve the stated goal. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound). Note: This exact question is included in the PRISM application. Example format: The project seeks to address [specify limiting factor(s)] for [limiting life stage(s)] by [specific actions proposed] to create an estimated [include specific target metrics, as described below] upon implementation in [estimated year].

We are proposing replacement of the four lowest fish passage barriers in Eagle Creek, as part of a greater effort to restore full passage to all of Eagle Creek, an important tributary in the Chumstick Creek watershed. The Eagle Creek drainage contains a total of 14.0 river miles of intrinsic potential habitat for steelhead and 5.7 river miles of intrinsic potential habitat for Chinook salmon. The project seeks to replace four passage barriers in important steelhead and Chinook salmon habitat, opening full fish passage up to RM 0.65 of Eagle Creek after project implementation in 2024. This project proposes replacement of 3 of the 11 highest priority barriers in the Wenatchee watershed (three tier-2 barrier corrections in a basin that only contains two tier-1 barriers and nine tier-2 barriers).

2. What species will the project benefit?

Spring Chinook | Steelhead | Bull Trout | Coho

3. Select the project's objectives and the associated tracking metrics

Fish Passage

Fish Passage: Reporting Code

Miles of stream made accessible

Number of fish passage blockages / impediments / barriers impeding passage

Number of road-crossings

4. Does this project already exist in Salmon Recovery Portal or PRISM?

Yes

5. Has this project been submitted previously for funding through the SRFB and/or other process(es)?

Yes

Please explain which process(es) and how this proposal differs from the previous submission (e.g., different phase, modified scope, etc.)

The project was designed through Fish Barrier Removal Board funding (20-1740). We applied for implementation funding through Fish Barrier Removal Board (22-1412) and this proposal.

6. What category is the project?

Restoration

Design and Restoration Proposals

7. What project phase(s) are proposed for completion?

Construction

9. Which limiting factors does the project propose to address?

Fish Passage Barriers

10. Which life stages will the proposed project address?

Adult Migration | Fry | Holding and Maturation | Smolt Outmigration | Spawning and Incubation | Summer Rearing | Winter Rearing

11. Freshwater Benefits - Describe how will your project improve survival, capacity and/or distribution for target species at the reach scale?

As habitat accessibility is a major limiting factor within Eagle Creek, replacement of these barriers would immediately improve fish migration and accessibility to over 0.6 river miles of quality instream

habitat. Further, this package of four culverts is a pivotal component to opening full access to the lowest 2.1 river miles of Eagle Creek. Eight barriers exist in this 2.1-mile reach of Eagle Creek. Aside from the four culverts included in this proposal, two culverts are being corrected through FFFPP in 2023 and 2024. We anticipate pursuing funding to replace the additional two culverts through FBRB in the next biennium. Therefore, funding this proposal is crucial to opening full access to the lower 2.1 miles of Eagle Creek.

12. Temporal Effect - Briefly describe how and to what extent the project would promote natural stream/watershed process consistent with the geomorphology of the stream?

The project would immediately restore natural stream processes, such as organism passage upstream and downstream, as well as transport of sediment and organic material downstream.

13. Temporal Effect - How long will it take for the project to achieve its intended response?

Less than or equal to 1 year

14. Temporal Effect - How long will the restoration action and its benefits persist?

50+ years

15. Temporal Effect - What level and/or interval of maintenance is anticipated? What is the plan for any anticipated maintenance?

No maintenance will be necessary for this project, as the culvert replacements are designed to convey 100-year streamflows.

16. Methods - Briefly describe the potential (for design) or proposed restoration methods and how they will achieve project objectives.

The project includes hiring a contractor to install the four culvert replacement structures. This includes purchasing, transporting, staging, excavating, and installing the replacement structures. A construction manager will be on-site to ensure design specs and permits are followed.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership?

private

2. Have you secured landowner participation in or acceptance for this project?

Yes

Please explain

We have worked with the landowners throughout the design process to ensure their support of the

project.

3. Describe any land owner requirements (e.g., design elements, right-of-ways, access agreements, liability waivers, etc.) and if/how they could affect the project

Landowners contributed comments that we incorporated into the design process. For instance, landowners did not want excessive driveway raising, nor did they want us to include log installation for bank stabilization.

4. Will the project raise potential concerns for interest groups (e.g., recreational users) or the community at large (including upstream/ downstream/ adjacent landowners)?

No, the project will restore fish passage under private driveway stream crossings.

5. Who will have the responsibility to manage and maintain the project? What is the responsibility of current or future landowners?

Chelan County Natural Resource Department will manage project implementation. Current or future landowners will be required to not alter the new crossing structures for a set period of time.

6. Are other projects being proposed immediately upstream or downstream of worksite?

Yes

7. Please describe the risk of failure associated with this project.

The risk of failure is low, as culvert replacement projects are straightforward. Robust design plans and specs ensure that project implementation will be successful.

8. Is there any public outreach planned during and/or after implementation? Does the project build community support for salmon recovery efforts?

Public outreach is incorporated through working with private landowners to replace fish passage barriers.

9. Does the project represent an opportunity for economic benefit? How much benefit does the project create for the dollars invested?

Yes, the project improves local infrastructure and would be completed by a contractor.

10. Describe any partnerships, their experience, and types of contributions supporting the project.

Chelan County Natural Resource Department has worked with other agencies (e.g., Washington Department of Fish and Wildlife; Chelan County Public Works Department) to incorporate their expertise into the design process. The Fish Barrier Removal Board and U.S. Forest Service both contributed funding to project designs. The Bureau of Reclamation assisted with project surveys.

Optional Section - Preparation for PRISM

Do you want to review and/or pre-populate PRISM questions?

No

Supporting Documents

Upper Columbia Process Guide 2022 (updates anticipated January 2023)

SRFB Manual 18 (2023)

RCO Application Resources (2023)

Does the proposed project span multiple assessment units?

No

PROJECT: 23-1278 REST, EAGLE CREEK LOWEST FOUR BARRIER CORRECTIONS

Sponsor: Chelan Co Natural Resource Program: Salmon State Projects Status: Board Alternate

Parties to the Agreement

PRIMARY SPONSOR

Chelan County Natural Resources Department
Address 411 Washington St Ste 201
City Wenatchee **State** WA **Zip** 98801
Org Type County-Open Space/Nat Resources
Vendor # SWV0001231-12
UBI
Date Org created
Org Notes

link to Organization profile
☐ Org data updated

SECONDARY SPONSORS

No records to display

MANAGING AGENCY

Recreation and Conservation Office

LEAD ENTITY

Upper Columbia Salmon Rcy Bd L

QUESTIONS

#1: List project partners and their role and contribution to the project.

External Systems

SPONSOR ASSIGNED INFO

Sponsor-Assigned Project Number

Sponsor-Assigned Regions

EXTERNAL SYSTEM REFERENCE

Source	Project Number	Submitter
HWS	23-1278	DHecker

Project Contacts

Contact Name Primary Org	Project Role	Work Phone	Work Email
Amee Bahr Rec. and Conserv. Office	Project Manager	(360) 867-8585	Amee.Bahr@rco.wa.gov
Doran Lower Rec. and Conserv. Office	MAgy Fiscal Contact	(360) 902-3007	doran.lower@rco.wa.gov
Bryan Maloney Chelan Co Natural Resource	Project Contact	(509) 670-1772	bryan.maloney@co.chelan.wa.us
David Hecker	Lead Entity Contact	(208) 869-9446	dave.hecker@ucsrb.org
Sofia Bjorklund Chelan Co Natural Resource	Billing	(509) 667-6324	sofia.bjorklund@co.chelan.wa.us

Worksites & Properties

#	Worksite Name
#1	Barrier 603922

Restoration	Property Name
✓	Downs (lower)

#	Worksite Name
#2	Barrier 603923

Restoration	Property Name
✓	Downs (upper)

#	Worksite Name
#3	Barrier 603924

Restoration	Property Name
✓	Loreth / Chizmar

#	Worksite Name
#4	Barrier 600306

Restoration	Property Name
✓	Morton

Worksite Map & Description

Worksite #1: Barrier 603922

WORKSITE ADDRESS

Street Address 11375 Eagle Creek Road
City, State, Zip Leavenworth WA 98826

Worksite #2: Barrier 603923

WORKSITE ADDRESS

Street Address 11203 Eagle Creek Road
City, State, Zip Leavenworth WA 98826

Worksite #3: Barrier 603924

WORKSITE ADDRESS

Street Address 11275 Eagle Creek Road
City, State, Zip Leavenworth WA 98826

Worksite #4: Barrier 600306

WORKSITE ADDRESS

Street Address 11255 Eagle Creek Road
City, State, Zip Leavenworth WA 98826

Worksite Details

Worksite #1: Barrier 603922

SITE ACCESS DIRECTIONS

From Leavenworth, follow the Chumstick Highway north approximately 2 miles and then turn right on Eagle Creek Road. This worksite is at mile 0.45 up Eagle Creek Road.

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Steelhead-Upper Columbia River, Wenatchee River, Threatened		✓	✓	
Chinook-Upper Columbia River Spring, Wenatchee River, Endangered		✓	✓	

Reference or source used

CCNRD PIT tag data (2018-2019)

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Unknown	Coho salmon were also detected in Eagle Creek from CCNRD PIT tag data in 2018-2019.

Questions

#1: Give street address or road name and mile post for this worksite if available.

11375 Eagle Creek Road, Leavenworth, WA, 98826

Worksite #2: Barrier 603923

SITE ACCESS DIRECTIONS

From Leavenworth, follow the Chumstick Highway north approximately 2 miles and then turn right on Eagle Creek Road. This worksite is at mile 0.5 up Eagle Creek Road.

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Steelhead-Upper Columbia River, Wenatchee River, Threatened		✓	✓	
Chinook-Upper Columbia River Spring, Wenatchee River, Endangered		✓	✓	

Reference or source used

CCNRD PIT tag data (2018-2019)

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Unknown	Coho salmon were also detected in Eagle Creek from CCNRD PIT tag data in 2018-2019.

Questions

#1: Give street address or road name and mile post for this worksite if available.

11203 Eagle Creek Road, Leavenworth, WA, 98826

Worksite #3: Barrier 603924

SITE ACCESS DIRECTIONS

From Leavenworth, follow the Chumstick Highway north approximately 2 miles and then turn right on Eagle Creek Road. This worksite is at mile 0.55 up Eagle Creek Road.

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Steelhead-Upper Columbia River, Wenatchee River, Threatened		✓	✓	
Chinook-Upper Columbia River Spring, Wenatchee River, Endangered		✓	✓	

Reference or source used

CCNRD PIT tag data (2018-2019)

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Unknown	Coho salmon were also detected in Eagle Creek from CCNRD PIT tag data in 2018-2019.

Questions

#1: Give street address or road name and mile post for this worksite if available.

11275 Eagle Creek Road, Leavenworth, WA, 98826

Worksite #4: Barrier 600306

SITE ACCESS DIRECTIONS

From Leavenworth, follow the Chumstick Highway north approximately 2 miles and then turn right on Eagle Creek Road. This worksite is at mile 0.6 up Eagle Creek Road.

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Steelhead-Upper Columbia River, Wenatchee River, Threatened		✓	✓	
Chinook-Upper Columbia River Spring, Wenatchee River, Endangered		✓	✓	

Reference or source used

CCNRD PIT tag data (2018-2019)

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Unknown	Coho salmon were also detected in Eagle Creek from CCNRD PIT tag data in 2018-2019.

Questions

#1: Give street address or road name and mile post for this worksite if available.

11255 Eagle Creek Road, Leavenworth, WA, 98826

Project Location

RELATED PROJECTS

Projects in PRISM

PRISM Number	Project Name	Program Name	Current Status	Relationship Type	Notes
21-1412 R	Eagle Creek Four Barrier Corrections	BA Fish Barrier Removal Board	Active	Matching Grant	This is the FBRB grant funding 85% of implementation costs.
20-1740 P	Eagle Creek Barrier Replacement Designs	BA Fish Barrier Removal Board	Closed Completed	Earlier Phase	This is the FBRB grant funding project designs and permitting. Completed deliverables include final designs.

Related Project Notes

Questions

#1: Project location. Describe the geographic location, water bodies or habitat types, and the location of the project in the watershed, i.e. nearshore, tributary, main-stem, off-channel, etc.

The project is located on Eagle Creek at four barriers, approximately 0.4 – 0.65 miles upstream from the confluence with Chumstick Creek.

#2: How does this project fit within your regional recovery plan and/or local lead entity's strategy to restore or protect salmonid habitat? Cite section and page number.

This proposal contributes to an approved recovery plan through addressing four fish passage barriers on Eagle Creek, an important tributary in the Chumstick Creek watershed.

Lead Entity's Planned Project Forecast List:
The proposed project is included in the Upper Columbia Salmon Recovery Board (lead entity) Planned Project Forecast List (PPFL). In the PPFL, this project is listed under Project ID # 1132 and named "CCNRD Eagle Creek Barrier Removals # 603923, 603924, 600306, 603922".

Non-ESA salmon recovery related plan:
This project follows guidance from the Wenatchee Watershed Detailed Implementation Plan, which includes "Restore passage with culvert improvements or upgrades at North Road and numerous upstream locations" in the Implementation Strategy for the Chumstick Creek watershed (WWPU, 2008).

Project location in watershed where fish passage is an identified priority in Lead Entity approved plan:
The Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan lists obstructions to fish passage as a primary limiting factor for the Chumstick Creek Assessment Unit (UCSRB, 2007). To increase connectivity in the Chumstick Creek watershed, the recovery plan prescribes the specific restoration action to "Remove, modify, or replace dams, culverts, and diversions that prevent or restrict access to salmon or trout habitat and/or cause loss of habitat connectivity".

#3: Is this project part of a larger overall project?

Yes

#3a: How does this project fit into the sequencing of the larger project?

This proposal is part of a greater effort to restore full passage to all of Eagle Creek, an important tributary in the Chumstick Creek watershed.
No barriers exist downstream, meaning this project would open full access to over 0.6 miles of Eagle Creek (see attachment titled "Eagle Crk Overview Map" for overview). Only four fish passage barriers exist upstream between River Mile (RM) 0.65 and 2.1. However, CCNRD is replacing one of these barriers (603900) in 2023 with FFFPP funding. Two of the other barriers are high on the FFFPP list (601643 & 601646), and we anticipate they will be funded for replacement in the next biennium (2023-2025). We are applying for separate FBRB funding to replace the fourth barrier (601620). Therefore, funding these four culverts for replacement is pivotal to opening full fish passage up to RM 2.1 of Eagle Creek.

#4: Is the project on State Owned Aquatic Lands? Please contact the Washington State Department of Natural Resources to make a determination. **Aquatic Districts and Managers**

No

Property Details

Property: Downs (lower) (Worksite #1: Barrier 603922)

✓ **Restoration**

LANDOWNER

Name	Downs, Tim
Address	11375 Eagle Creek Road
City	Leavenworth
State	WA Zip 98826
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	10/31/2034
Note	

Property: Downs (upper) (Worksite #2: Barrier 603923)

✓ **Restoration**

LANDOWNER

Name	Downs, Tim
Address	11375 Eagle Creek Road
City	Leavenworth
State	WA Zip 98826
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	10/31/2034
Note	

Property: Loreth / Chizmar (Worksite #3: Barrier 603924)

✓ **Restoration**

LANDOWNER

Name	Loreth, Todd
Address	11275 Eagle Creek Road
City	Leavenworth
State	WA Zip 98826
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	10/31/2034
Note	

Property: Morton (Worksite #4: Barrier 600306)

✓ **Restoration**

LANDOWNER

Name	Morton, Steve
Address	11255 Eagle Creek Road
City	Leavenworth
State	WA Zip 98826
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	10/31/2034
Note	

Project Proposal

Project Description

This restoration proposal is for replacement of the lowest four fish passage barriers in Eagle Creek, as part of a greater effort to restore full passage to all of Eagle Creek, an important tributary in the Chumstick Creek watershed. Primary species supported are steelhead and spring Chinook. This project includes construction and implementation of four new crossings on private driveways (at WDFW barrier sites 603922, 603923, 603924, and 600306). Three of the four barriers are ranked tier-2 priority in the Wenatchee watershed. For comparison, only 10 tier-1 and tier-2 barriers exist in the Wenatchee watershed; therefore, this project addresses 3 of the top-10 priorities within the Wenatchee watershed. Four fish passage barriers exist upstream of this proposal between River Mile (RM) 0.65 and 2.1. However, CCNRD is replacing one of these barriers (603900) in 2023 with FFFPP funding. Two of the other barriers are high on the FFFPP list (601643 & 601646), and we anticipate they will be funded for replacement in the next biennium (2023-2025). We are applying for separate FBRB funding to replace the fourth barrier (601620). Therefore, funding these four culverts for replacement is pivotal to opening full fish passage up to RM 2.1 of Eagle Creek.

Project Questions

#1: Problem statement. What are the problems your project seeks to address? Include the source and scale of each problem. Describe the site, reach, and watershed conditions. Describe how those conditions impact salmon populations. Include current and historic factors important to understand the problems.

This project seeks to address three of the highest priority barriers within the Wenatchee watershed. Three of the four barriers in this proposal are ranked tier-2 priority in the Wenatchee watershed. For comparison, only 10 tier-1 and tier-2 barriers exist in the Wenatchee watershed; therefore, this project addresses 3 of the top-10 priorities within the Wenatchee watershed.

This project seeks to address the problem of impaired fish passage in the Chumstick watershed. The Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan lists obstructions to fish passage as a primary limiting factor for the Chumstick Creek Assessment Unit (Appendix G, Page 9). To increase connectivity in the Chumstick Creek watershed, the recovery plan prescribes the specific restoration action to "Remove, modify, or replace dams, culverts, and diversions that prevent or restrict access to salmon or trout habitat and/or cause loss of habitat connectivity". Eagle Creek is a major tributary to Chumstick Creek with many culverts used to access private properties.

CCNRD operated PIT-tag arrays in lower Eagle Creek from 2018-2019. The PIT-tag array documented adult steelhead, juvenile Chinook, and juvenile coho accessing Eagle Creek.

This project intends to address limited access to Eagle Creek habitat. The Eagle Creek drainage provides a total 14.0 river miles of intrinsic potential habitat for steelhead and 5.7 river miles of intrinsic potential habitat for Chinook salmon. Eagle Creek runs through a narrow valley bottom (~150-250 meters width) that is divided amongst many private parcels. Although many houses are located within the valley bottom, a narrow band of riparian vegetation exists (~10-50 meter buffer) along the creek. In this riparian buffer, dense cover of shrubs and trees provides visual and thermal cover above Eagle Creek. Eagle Creek provides good cool water habitat relative to the nearby mainstem Wenatchee River. WDFW temperature logger data from the Wenatchee River at the Dryden Dam show temperatures reached above 23°C in August 2018, which exceeds thermal tolerances of ESA-listed salmonids. CCNRD temperature loggers from the same time period show temperatures in Eagle Creek near RM 2.0 peaked at 17.4 °C. These data suggest Eagle Creek likely has a strong groundwater influence and can serve as critical thermal refuge when water temperatures exceed thermal limits of ESA-listed salmonids in the mainstem Wenatchee River. Upstream of RM 4.8, most of the Eagle Creek drainage is within Okanogan-Wenatchee National Forest. This land management provides complex habitat on public land with minimal land use, protected from future degradation.

#2: Describe the limiting factors, and/or ecological concerns, and limiting life stages (by fish species) that your project expects to address.

This project seeks to address the limiting factor of impaired fish passage in the Chumstick watershed. The Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan lists obstructions to fish passage as a primary limiting factor for the Chumstick Creek Assessment Unit (Appendix G, Page 9). To increase connectivity in the Chumstick Creek watershed, the recovery plan prescribes the specific restoration action to "Remove, modify, or replace dams, culverts, and diversions that prevent or restrict access to salmon or trout habitat and/or cause loss of habitat connectivity". Eagle Creek is a major tributary to Chumstick Creek with many culverts used to access private properties.
This project expects to address impaired passage of adult and juvenile steelhead, juvenile Chinook salmon, and juvenile coho salmon. CCNRD operated PIT-tag arrays in lower Eagle Creek from 2018-2019. The PIT-tag array documented adult steelhead, juvenile Chinook, and juvenile coho accessing Eagle Creek.

#3: What are the project goals? The goal of the project should be to solve identified problems by addressing the root causes. Then clearly state the desired future condition. Include which species and life stages will benefit from the outcome, and the time of year the benefits will be realized. **Example Goals and Objectives**

The project goals are to restore fish passage in Eagle Creek for all species, life stages, and streamflows. The desired future condition is full fish passage through the project reach. Intended species to benefit are juvenile and adult steelhead, as well as juvenile Chinook salmon and coho salmon. The project will have benefits immediately following implementation, with the greatest benefit to fish during October-June.

#4: What are the project objectives? Objectives support and refine biological goals, breaking them down into smaller steps. Objectives are specific, quantifiable actions the project will complete to achieve the stated goal. Each objective should be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound). **Example Goals and Objectives**

The project objectives are to replace the four lowest fish passage barriers in Eagle Creek. Removal of existing barrier culverts and replacement with appropriately sized three-sided culverts will restore full fish passage up to river mile 0.65 of Eagle Creek. Project implementation is anticipated in 2024.

#5: Scope of work and deliverables. Provide a detailed description of each project task/element. With each task/element, identify who will be responsible for each, what the deliverables will be, and the schedule for completion.

The scope of work includes project management, utility relocation, construction, and revegetation.
Project management will be ongoing through the entire project. CCNRD staff will be responsible for project management tasks, including construction contracting, project accounting, coordination with stakeholders (landowners, funding agencies, and permitting agencies), and permit compliance.
Utility relocation will be completed by Chelan County PUD. This will occur before other construction activities. Utilities will be permanently relocated so they do not need to be revisited after construction activities.
The construction contract will include site preparation, excavation, structure installation, and site rehabilitation. A contractor will be responsible for all activities in this construction contract. Site preparation includes erecting a high-visibility fence, cutting pavement, isolating and dewatering the construction area, and constructing any necessary temporary access routes. Excavation will include removal of the existing culvert and all associated road fill. Installation of the structure will involve creation of a rock ballast for support, installation of spread footings, installation of the three-sided box culverts, placement of streambed material and habitat boulders, and regrading the driveways. Site rehabilitation includes dispersing floodplain seed mix and straw throughout disturbed areas. The contractor will also install biodegradable erosion control measures on exposed streambanks.
Revegetation will be completed by CCNRD staff. Exposed streambanks will be planted with potted plants adapted to local growing conditions.

#6: What are the assumptions and physical constraints that could impact whether you achieve your objectives? Assumptions and constrains are external conditions that are not under the direct control of the project, but directly impact the outcome of the project. These may include ecological and geomorphic factors, land use constraints, public acceptance of the project, delays, or other factors. How will you address these issues if they arise?

There are only a few assumptions and physical constraints that could impact whether we achieve our objectives. For instance, we completed a geotechnical assessment at each culvert location, which confirmed the feasibility of construction. Results of the geotechnical assessment demonstrate that soil conditions on site are conducive to excavation and installation of new crossing structures. Another assumption is landowner acceptance. As we've coordinated with all landowners throughout the design process, landowner acceptance should not be an issue during implementation.

#7: How have lessons learned from completed projects or monitoring studies informed this project?

CCNRD has completed over 35 similar barrier replacement projects within the Wenatchee Watershed, three of which were barriers located on Eagle Creek. Lessons learned from these other projects illustrates that CCNRD has the qualified staff necessary to successfully complete this project. The project benefits from a plethora of successful barrier correction projects completed by CCNRD. Through all previous barrier correction projects, CCNRD has refined the approach to contracting, implementation, construction oversight, site rehabilitation, landowner coordination, permit compliance, etc.

#8: Describe the alternatives considered and why the preferred was chosen.

The barrier correction analysis included alternatives for a metal arch-plate culvert, precast concrete box culvert, and prefabricated steel-girder bridge. The metal arch-plate culvert was not selected due to the required increase to driveway elevations. The prefabricated steel-girder bridge was not selected due to the construction impacts and increased driveway elevations. The precast concrete (three-sided) box culvert was the selected alternative because the minimal construction impacts and least amount of driveway elevation raising.

#9: How were stakeholders consulted in the development of this project? Identify the stakeholders, their concerns or feedback, and how those concerns were addressed.

Stakeholders were consulted throughout the design process for this project. All impacted landowners have been consulted at the conceptual, preliminary, and final design stages. WDFW staff were consulted at the conceptual, preliminary, and final design stages. Additionally, CCNRD staff visited the project sites with WDFW staff to measure bankfull channel width during the conceptual design stage. Chelan County Public Works Department was consulted at the preliminary and final design stages.
Concerns from stakeholders were incorporated into project designs, including the desire for smaller streambed sediment, deeper streambed sediment, use of habitat boulders instead of large woody material, reduction of stream channel grading, and minimization of driveway raising.

#10: Does your project address or accommodate the anticipated effects of climate change?

Yes

#10a: How will your project be climate resilient given future conditions?

The project addresses the anticipated effects of climate change by replacing four fish passage barriers. The replacement structures will be sized appropriately to accommodate future conditions and open blocked habitat. Climate change is projected to impact hydrology in Chelan County through increased 100-year streamflows and decreased baseflows (Hamlet et al., 2013). The barrier replacement structures will accommodate 100-year streamflows to maintain structural integrity and stream functioning through time.

#10b: How will your project increase habitat and species adaptability?

This project will allow passage of all aquatic organisms at all stream flows through installing structures that do not alter the streams' natural grade or substrate. Restoring passage at all streamflows will allow access to quality habitat for all aquatic species. The Eagle Creek watershed contains 14.0 miles of intrinsic potential habitat for steelhead and 5.7 miles of intrinsic potential habitat for Chinook salmon. Replacing these culverts within the lower mile of Eagle Creek will restore access to more Eagle Creek habitat and increase species adaptability. As regional climate change projections include increased wildfire severity and area (Rogers et al., 2011), access to habitat across a wide geographic range will be imperative to ensure all aquatic species have access to some suitable habitat.

#11: Describe the sponsor's experience managing this type of project. Describe other projects where the sponsor has successfully used a similar approach.

Chelan County Natural Resource Department (CCNRD) staff has successfully managed the replacement of 28 fish passage barriers in the Chumstick Creek watershed, opening up over 10 miles of steelhead habitat. Most of these barriers were corrected on private property and required similar landowner engagement as this project. The sponsor is adept at developing and implementing comprehensive strategies for multi-phased watershed-scale barrier replacement projects. CCNRD staff are competent managing landowner relations, required permitting, design engineering coordination, and construction oversight required for barrier corrections.
Many of these barrier corrections in the Chumstick watershed occurred in 2009, when CCNRD led the effort to remove 17 fish passage barriers, with funds from Bonneville Power Administration, Yakama Nation, and US Bureau of Reclamation.

#12: Will veterans (including the veterans conservation corps) be involved in the project? If yes, please describe.

No

Restoration Supplemental

#1: What level of design (per Appendix D) have you completed? Please attach.
Final

#2: Will (or did) a licensed professional engineer design the project?
Yes

#3: Does the project include measures to stabilize an eroding stream bank?
No

#4: Is the primary activity of the project invasive species removal?
No

#5: Is the primary activity of the project riparian planting?
No

#6: Describe the steps you will take to minimize the introduction of invasive species during construction and restoration. Consider how you will use un-infested materials and clean equipment entering and leaving the project area.

Construction activities will follow all required permits. The Hydraulic Project Approval from WDFW includes a provision for Invasive Species Control. Contractors will thoroughly remove visible dirt and debris from all equipment and gear before arriving and leaving the job site, to prevent the transport and introduction of invasive species. Contractors will also properly dispose of any water and chemicals used to clean gear and equipment.

#7: Describe the long-term stewardship and maintenance obligations for the project.

The landowners are obligated for the long-term stewardship and maintenance of the project.

Restoration Metrics

Project Application Report - 23-1278

Worksite: Barrier 603922 (#1)

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.01
Project Identified In a Plan or Watershed Assessment (C.0.c)	Upper Columbia Salmon Recovery Board, August 2007, Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan, https://www.ucsrb.org/science-resources/reports-plans/recovery-plan/
Priority in Recovery Plan	The Chinook Salmon and Steelhead Recovery Plan lists obstructions to fish passage as a primary limiting factor for the Chumstick AU (Appendix G, Page 9). To increase connectivity in the Chumstick watershed, the recovery plan prescribes the specific restoration action to "...replace dams, culverts, and diversions that prevent or restrict access to salmon or trout habitat and/or cause loss of habitat connectivity".
Type Of Monitoring (C.0.d.1)	Implementation Monitoring
Monitoring Location (C.0.d.2)	Onsite

FISH PASSAGE IMPROVEMENT

Miles Of Stream Made Accessible (SRFB) (C.2.b.1)	0.07
Habitat made accessible (2489)	Replacing this culvert makes an additional ~0.07 miles of stream available to anadromous salmonids. The next barrier upstream is WDFW site ID 603923, which is included in this proposal as worksite #2.
Additional barriers (2490)	There are four partial fish passage barriers within ~ 0.25 miles upstream of this culvert. Each of these culverts is 33% passable. The first three are included in this proposal. We are applying for another FBRB grant for funding to design and replace the fourth culvert upstream.
Type Of Barrier (C.2.b.3)	Culvert
Number of blockages / impediments / barriers impeding passage (C.2.b.4)	1
Describe the current barrier (2486)	Barrier 603922 is a round corrugated steel culvert. The culvert dimensions are ~2.2 m diameter and 11.7 m length. Road fill depth is 2.5 m.
Passage problem (2487)	Velocity
Passability (2488)	67% (Partial)

Culvert installed or improved (C.2.f.1)

Total cost for Culvert installed or improved	$348,743
Number of culverts (C.2.f.2)	1
Miles of stream made accessible by culvert installation/repair (C.2.f.3)	1.70 **Note:** These four barriers are located on Eagle Creek approximately 0.4 – 0.65 miles upstream from the confluence with Chumstick Creek. No fish passage barriers exists downstream, meaning this project would open full access to over 0.6 miles of Eagle Creek (see attachment titled "Eagle Crk Overview Map" for overview). Four fish passage barriers exist between River Mile (RM) 0.65 and 2.1. However, CCNRD is replacing one of these barriers (603900) in 2023 with FFFPP funding. Two of the other barriers are high on the FFFPP list (601643 & 601646), and we anticipate they will be funded for replacement in the next biennium (2023-2025). We are applying for separate FBRB funding to replace the fourth barrier (601620). Therefore, funding these four culverts for replacement is pivotal to opening full fish passage up to RM 2.1 of Eagle Creek.
Correction option (2491)	Stream simulation

Project Application Report - 23-1278

ARCHITECTURAL & ENGINEERING

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	$5,321

AGENCY INDIRECT COSTS

Agency Indirect

Total cost for Agency Indirect **Note:** 20.6% of staff salaries	$2,367

Worksite: Barrier 603923 (#2)

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.01
Project Identified In a Plan or Watershed Assessment (C.0.c)	Upper Columbia Salmon Recovery Board, August 2007, Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan, https://www.ucsrb.org/science-resources/reports-plans/recovery-plan/ Regional Technical Team. 2020. Fish Passage Barrier Removal Prioritization. https://prioritization.ucsrb.org/
Priority in Recovery Plan	The Chinook Salmon and Steelhead Recovery Plan lists obstructions to fish passage as a primary limiting factor for the Chumstick AU (Appendix G, Page 9). To increase connectivity in the Chumstick watershed, the recovery plan prescribes the specific restoration action to "...replace dams, culverts, and diversions that prevent or restrict access to salmon or trout habitat and/or cause loss of habitat connectivity". RTT lists this barrier as a top-10 priority within the Wenatchee watershed.
Type Of Monitoring (C.0.d.1)	Implementation Monitoring None
Monitoring Location (C.0.d.2)	No monitoring completed Downstream Onsite Upslope Upstream

ESTUARINE / NEARSHORE PROJECT

FISH PASSAGE IMPROVEMENT

Miles Of Stream Made Accessible (SRFB) (C.2.b.1)	0.03
Habitat made accessible (2489)	Replacing this culvert makes an additional ~0.03 miles of stream available to anadromous salmonids. The next barrier upstream is WDFW site ID 603924, which is included in this proposal as worksite #3.
Additional barriers (2490)	There are three partial fish passage barriers within ~ 0.2 miles upstream of this culvert. Each of these culverts is 33% passable. The first two are included in this proposal. We are applying for another FBRB grant for funding to design and replace the third culvert upstream.
Type Of Barrier (C.2.b.3)	Boulders or rock barriers Bridge Culvert Debris Diversion Dam Ford Landslide Logs Push-Up Dam Weir Wood Or Concrete Dam None
Number of blockages / impediments / barriers impeding passage (C.2.b.4)	1
Describe the current barrier (2486)	Barrier 603923 is a round smooth steel culvert. The culvert dimensions are ~1.16 m diameter and 7.2 m length. The culvert has accumulated some sediment on its bottom and lies under a gabion of ~4ft height.
Passage problem (2487)	Water surface drop Depth

Velocity
Slope
Debris
Other

Passability (2488)	0% (Complete) 33% (Partial) 67% (Partial) Unknown passability

Bridge installed or improved (C.2.g.1)

Culvert installed or improved (C.2.f.1)

Total cost for Culvert installed or improved	$348,743
Number of culverts (C.2.f.2)	1
Miles of stream made accessible by culvert installation/repair (C.2.f.3)	1.63 **Note:** These four barriers are located on Eagle Creek approximately 0.4 – 0.65 miles upstream from the confluence with Chumstick Creek. No fish passage barriers exists downstream, meaning this project would open full access to over 0.6 miles of Eagle Creek (see attachment titled "Eagle Crk Overview Map" for overview). Four fish passage barriers exist between River Mile (RM) 0.65 and 2.1. However, CCNRD is replacing one of these barriers (603900) in 2023 with FFFPP funding. Two of the other barriers are high on the FFFPP list (601643 & 601646), and we anticipate they will be funded for replacement in the next biennium (2023-2025). We are applying for separate FBRB funding to replace the fourth barrier (601620). Therefore, funding these four culverts for replacement is pivotal to opening full fish passage up to RM 2.1 of Eagle Creek.
Correction option (2491)	Stream simulation No slope hydraulic Unknown Other

Fish ladder installed / improved (C.2.e.1)

Fish passage blockages removed or altered (C.2.c.1)

Fishway chutes or pools installed (C.2.d.1)

Road-crossing removal (C.2.i.1)

Rocked ford - road stream crossing (C.2.h.1)

Unspecified or other fish passage project (C.2.j.1)

FISH SCREENING PROJECT

INSTREAM FLOW PROJECT

INSTREAM HABITAT PROJECT

PRE-RESTORATION ACQUISITIONS AND NURSERY OPERATIONS PROJECT

RIPARIAN HABITAT PROJECT

SITE STEWARDSHIP PROJECT

UPLAND HABITAT AND SEDIMENT PROJECT

WATER QUALITY PROJECT

WETLAND PROJECT

CULTURAL RESOURCES

PERMITS

ARCHITECTURAL & ENGINEERING

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	$5,321

AGENCY INDIRECT COSTS

Agency Indirect

Total cost for Agency Indirect	$2,367
Note: 20.6% of staff salaries	

Project Application Report - 23-1278

Worksite: Barrier 603924 (#3)

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.01
Project Identified In a Plan or Watershed Assessment (C.0.c)	Upper Columbia Salmon Recovery Board, August 2007, Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan, https://www.ucsrb.org/science-resources/reports-plans/recovery-plan/ Regional Technical Team. 2020. Fish Passage Barrier Removal Prioritization. https://prioritization.ucsrb.org/
Priority in Recovery Plan	The Chinook Salmon and Steelhead Recovery Plan lists obstructions to fish passage as a primary limiting factor for the Chumstick AU (Appendix G, Page 9). To increase connectivity in the Chumstick watershed, the recovery plan prescribes the specific restoration action to "...replace dams, culverts, and diversions that prevent or restrict access to salmon or trout habitat and/or cause loss of habitat connectivity". RTT lists this barrier as a top-10 priority within the Wenatchee watershed.
Type Of Monitoring (C.0.d.1)	Implementation Monitoring None
Monitoring Location (C.0.d.2)	No monitoring completed Downstream Onsite Upslope Upstream

ESTUARINE / NEARSHORE PROJECT

FISH PASSAGE IMPROVEMENT

Miles Of Stream Made Accessible (SRFB) (C.2.b.1)	0.03
Habitat made accessible (2489)	Replacing this culvert makes an additional ~0.03 miles of stream available to anadromous salmonids. The next barrier upstream is WDFW site ID 600306, which is included in this proposal as worksite #4.
Additional barriers (2490)	There are two partial fish passage barriers within ~ 0.15 miles upstream of this culvert. Each of these culverts is 33% passable. The first one is included in this proposal. We are applying for another FBRB grant for funding to design and replace the second culvert upstream.
Type Of Barrier (C.2.b.3)	Boulders or rock barriers Bridge Culvert Debris Diversion Dam Ford Landslide Logs Push-Up Dam Weir Wood Or Concrete Dam None
Number of blockages / impediments / barriers impeding passage (C.2.b.4)	1
Describe the current barrier (2486)	Barrier 603924 is a round precast concrete culvert, with dimensions of 0.91 m diameter and 4.9 m length. The culvert is broken into four sections such that no seams are connected. There are small water surface drops in interior of culvert.
Passage problem (2487)	Water surface drop Depth

Depth
Velocity
Slope
Debris
Other

Passability (2488)	0% (Complete) 33% (Partial) 67% (Partial) Unknown passability

Bridge installed or improved (C.2.g.1)

Culvert installed or improved (C.2.f.1)

Total cost for Culvert installed or improved	$348,743
Number of culverts (C.2.f.2)	1
Miles of stream made accessible by culvert installation/repair (C.2.f.3)	1.60 **Note:** These four barriers are located on Eagle Creek approximately 0.4 – 0.65 miles upstream from the confluence with Chumstick Creek. No fish passage barriers exists downstream, meaning this project would open full access to over 0.6 miles of Eagle Creek (see attachment titled "Eagle Crk Overview Map" for overview). Four fish passage barriers exist between River Mile (RM) 0.65 and 2.1. However, CCNRD is replacing one of these barriers (603900) in 2023 with FFFPP funding. Two of the other barriers are high on the FFFPP list (601643 & 601646), and we anticipate they will be funded for replacement in the next biennium (2023-2025). We are applying for separate FBRB funding to replace the fourth barrier (601620). Therefore, funding these four culverts for replacement is pivotal to opening full fish passage up to RM 2.1 of Eagle Creek.
Correction option (2491)	Stream simulation No slope hydraulic Unknown Other

Fish ladder installed / improved (C.2.e.1)

Fish passage blockages removed or altered (C.2.c.1)

Fishway chutes or pools installed (C.2.d.1)

Road-crossing removal (C.2.i.1)

Rocked ford - road stream crossing (C.2.h.1)

Unspecified or other fish passage project (C.2.j.1)

FISH SCREENING PROJECT

INSTREAM FLOW PROJECT

INSTREAM HABITAT PROJECT

PRE-RESTORATION ACQUISITIONS AND NURSERY OPERATIONS PROJECT

RIPARIAN HABITAT PROJECT

SITE STEWARDSHIP PROJECT

UPLAND HABITAT AND SEDIMENT PROJECT

WATER QUALITY PROJECT

WETLAND PROJECT

CULTURAL RESOURCES

PERMITS

ARCHITECTURAL & ENGINEERING

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	$5,321

AGENCY INDIRECT COSTS

Agency Indirect

Total cost for Agency Indirect	**Note:** 20.6% of staff salaries	$2,367

Overall Project Metrics

COMPLETION DATE	
Projected date of completion	11/30/2024

Restoration Cost Estimates

Worksite #1: Barrier 603922

Category	Work Type	Estimated Cost	Note
Agency Indirect Costs	Agency Indirect	$2,367	20.6% of staff salaries
Fish Passage Improvement	Culvert installed or improved (C.2.f.1)	$348,743	
	Subtotal:	$351,110	
Admin, Architecture, and Engineering		$5,321	
	Total Estimate For Worksite:	$356,431	

Worksite #2: Barrier 603923

Category	Work Type	Estimated Cost	Note
Agency Indirect Costs	Agency Indirect	$2,367	20.6% of staff salaries
Fish Passage Improvement	Culvert installed or improved (C.2.f.1)	$348,743	
	Subtotal:	$351,110	
Admin, Architecture, and Engineering		$5,321	
	Total Estimate For Worksite:	$356,431	

Worksite #3: Barrier 603924

Category	Work Type	Estimated Cost	Note
Agency Indirect Costs	Agency Indirect	$2,367	20.6% of staff salaries
Fish Passage Improvement	Culvert installed or improved (C.2.f.1)	$348,743	
	Subtotal:	$351,110	
Admin, Architecture, and Engineering		$5,321	
	Total Estimate For Worksite:	$356,431	

Worksite #4: Barrier 600306

Category	Work Type	Estimated Cost	Note
Agency Indirect Costs	Agency Indirect	$2,367	20.6% of staff salaries
Fish Passage Improvement	Culvert installed or improved (C.2.f.1)	$348,743	
	Subtotal:	$351,110	
Admin, Architecture, and Engineering		$5,321	
	Total Estimate For Worksite:	$356,431	

Summary

Total Estimated Costs Without AA&E:	$1,404,440
Total Estimated AA&E:	$21,284
Total Estimated Restoration Costs:	$1,425,724

Cost Summary

	Estimated Cost	Project %	Admin/AA&E %
Restoration Costs			
Restoration	$1,404,440		
Admin, Architecture, and Engineering	$21,284		1.53 %
SUBTOTAL	$1,425,724	100.00 %	
Total Cost Estimate	$1,425,724	100.00 %	

Funding Request and Match

FUNDING PROGRAM

FUNDING PROGRAM		
Salmon State Projects	$213,859	15.000028 %

SPONSOR MATCH

STATE FUNDING	GRANT - RCO FBRB
Amount	$1,211,865.00
Funding Organization	Recreation and Conservation Office (RCO)

Match Total:	$1,211,86584.999972 %
Total Funding Request (Funding + Match):	$1,425,724100.000000

Questions

#1: Explain how you determined the cost estimates

Cost estimates are from the final design engineer's estimate and CCNRD staff projections.

Cultural Resources

Cultural Resource Areas

Worksite #1: Barrier 603922

Area: Barrier 603922 APE

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

An existing culvert will be removed and replaced with a new crossing structure. Road fill will be added or removed, and the road will be regraded, to match the new crossing structure.

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

The existing road prism at the site of the crossing will be excavated using a large excavator, for a total road length of ~30 ft. The existing culvert will be removed. The streambanks in the area of the current crossing will be matched to existing upstream and downstream conditions, with total stream length of ~ 60 ft. Footings will be placed to allow for installation of the new crossing structure. Once the new crossing is installed, the road will be graded to match its elevation.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

None

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The project area is currently a paved driveway accessing a private residence. The current road fill depth (including existing culvert) is 2.5 m.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

Yes

#5a: List the agency that will be issuing the permit and the date you anticipate applying for and receiving the permit. Will the federal permit cover ALL proposed ground disturbing activities included in the project?

We applied to the Army Corps of Engineers for a Nationwide Permit under Section 404 (CWA) in March of 2023. The Army Corps is also lead agency for Section 7 (ESA) and Section 106 (NHPA) consultation. The federal permit will cover all ground disturbing activities included in the project.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Unknown

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

RCO completed cultural resource review for this project under grant 20-1740.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

No

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Worksite #2: Barrier 603923

Area: Barrier 603923 APE

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

An existing culvert will be removed and replaced with a new crossing structure. Road fill will be added or removed, and the road will be regraded, to match the new crossing structure.

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

The existing road prism at the site of the crossing will be excavated using a large excavator, for a total road length of ~40 ft. The existing culvert will be removed. The streambanks in the area of the current crossing will be matched to existing upstream and downstream conditions, with total stream length of ~ 30ft. Footings will be placed to allow for installation of the new crossing structure. Once the new crossing is installed, the road will be graded to match its elevation.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

None

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The project area is currently a driveway accessing a private residence. The current road fill depth (including existing culvert) is 2.5 m.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

Yes

#5a: List the agency that will be issuing the permit and the date you anticipate applying for and receiving the permit. Will the federal permit cover ALL proposed ground disturbing activities included in the project?

We applied to the Army Corps of Engineers for a Nationwide Permit under Section 404 (CWA) in March of 2023. The Army Corps is also lead agency for Section 7 (ESA) and Section 106 (NHPA) consultation. The federal permit will cover all ground disturbing activities included in the project.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Unknown

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

RCO completed cultural resource review for this project under grant 20-1740.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

No

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Worksite #3: Barrier 603924

Area: Barrier 603924 APE

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

An existing culvert will be removed and replaced with a new crossing structure. Road fill will be added or removed, and the road will be regraded, to match the new crossing structure.

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

The existing road prism at the site of the crossing will be excavated using a large excavator, for a total road length of ~30 ft. The existing culvert will be removed. The streambanks in the area of the current crossing will be matched to existing upstream and downstream conditions, with total stream length of ~ 30ft. Footings will be placed to allow for installation of the new crossing structure. Once the new crossing is installed, the road will be graded to match its elevation.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

None

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The project area is currently a driveway accessing a private residence. The current road fill depth (including existing culvert) is 2.5 m.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

Yes

#5a: List the agency that will be issuing the permit and the date you anticipate applying for and receiving the permit. Will the federal permit cover ALL proposed ground disturbing activities included in the project?

We applied to the Army Corps of Engineers for a Nationwide Permit under Section 404 (CWA) in March of 2023. The Army Corps is also lead agency for Section 7 (ESA) and Section 106 (NHPA) consultation. The federal permit will cover all ground disturbing activities included in the project.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Unknown

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

RCO completed cultural resource review for this project under grant 20-1740.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

No

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Worksite #4: Barrier 600306

Area: Barrier 600306 APE

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

An existing culvert will be removed and replaced with a new crossing structure. Road fill will be added or removed, and the road will be regraded, to match the new crossing structure.

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

The existing road prism at the site of the crossing will be excavated using a large excavator, for a total road length of ~30 ft. The existing culvert will be removed. The streambanks in the area of the current crossing will be matched to existing upstream and downstream conditions, with total stream length of ~ 100ft. Footings will be placed to allow for installation of the new crossing structure. Once the new crossing is installed, the road will be graded to match its elevation.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

None

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The project area is currently a paved driveway accessing a private residence. The current road fill depth (including existing culvert) is 2.0 m.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

Yes

#5a: List the agency that will be issuing the permit and the date you anticipate applying for and receiving the permit. Will the federal permit cover ALL proposed ground disturbing activities included in the project?

We applied to the Army Corps of Engineers for a Nationwide Permit under Section 404 (CWA) in March of 2023. The Army Corps is also lead agency for Section 7 (ESA) and Section 106 (NHPA) consultation. The federal permit will cover all ground disturbing activities included in the project.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Unknown

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

RCO completed cultural resource review for this project under grant 20-1740.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

No

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Project Permits

Permits and Reviews	Issuing Organization	Applied Date	Received Date	Expiration Date	Permit #
Cultural Assessment [Section 106]	DAHP	03/31/2023			
Dredge/Fill Permit [Section 10/404 or 404]	Army Corps of Eng.	03/31/2023			
Endangered Species Act Compliance [ESA]	US Fish & Wildlife	03/31/2023			
Hydraulics Project Approval [HPA]	Dept of Fish & Wildlife	03/31/2023			
Water Quality Certification [Section 401]	County/Dept of Ecy.	03/31/2023			

Permit Questions

#1: Are you planning on using the federal permit streamlining process? **Limit 8**

Yes

Attachments

Required Attachments	6 out of 6 done
Applicant Resolution/Authorizations	✓
Cost Estimate	✓
Landowner acknowledgement form	✓
Map: Restoration Worksite	✓
Photo	✓
RCO Fiscal Data Collection Sheet	✓

PHOTOS (JPG, GIF)

Photos (JPG, GIF)


558642 Primary


559116 Secondary


558643


558644


558645

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

Project Application Report - 23-1278

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared

Project Application Report - 23-1278

	01/16/2024	Map: Area of Potential Effect (APE)	Project APE Report (01/16/24 08:54:37)	MarkJ	Project APE Report - 23-1278 (01-16-2024_08-54-37).pdf, 592641	✓
	01/16/2024	Cultural Resource Screening Report	Project Cultural Resource Screening Report (01/16/24 08:54:3	MarkJ	Project Cultural Resource Screening Report - 23-1278 (01-16-2024_08-54-35).pdf, 592640	✓
	01/16/2024	Project Application Report	Project Application Report, 23-1278R (sub 01/16/24 08:54:34)	MarkJ	Project Application Report - 23-1278 (submitted 01-16-2024_08-54-34).pdf, 592639	✓
	01/16/2024	Project Review Comments	Proj Review Comments Final, 23-1278R(compl 01/16/24 08:54)	MarkJ	Project Review Comments Report - 23-1278 (compl 01-16-2024_08-54-05).pdf, 592638	✓
	01/16/2024	Project Review Comments	Proj Review Comments LE, 23-1278R(compl 01/16/24 08:53)	MarkJ	Project Review Comments Report - 23-1278 (compl 01-16-2024_08-53-47).pdf, 592637	✓
	01/16/2024	Project Review Comments	Proj Review Comments Initial, 23-1278R(compl 01/16/24 08:53)	MarkJ	Project Review Comments Report - 23-1278 (compl 01-16-2024_08-53-34).pdf, 592636	✓
	07/17/2023	Application Review Report	Grant Manager Comments, 23-1278R(compl 07/17/23 11:08)	AmeeB	Grant Manager Comments Report - 23-1278 (compl 07-17-2023_11-08-46).pdf, 571308	✓
	07/17/2023	RCO Fiscal Data Collection Sheet	2023 SRFBFiscalDataCollectionSheet_CCNRD_	BryanM	2023 SRFBFiscalDataCollectionSheet_CCN… 571293	
	07/12/2023	Applicant Resolution/Authorizations	2023 RCO applicant resolution-authorization_SRFB_CCNRD.pdf	BryanM	2023 RCO applicant resolution-authorization_SRFB_CCNRD.pdf, 570345	✓
	06/22/2023	Project Application Report	Project Application Report, 23-1278R (sub 06/22/23 11:06:28)	BryanM	Project Application Report - 23-1278 (submitted 06-22-2023_11-06-28).pdf, 567292	✓
	06/22/2023	Design document	Eagle lowest 4 barriers Planting Plan.pdf	BryanM	Eagle lowest 4 barriers Planting Plan.pdf, 567272	✓
	06/22/2023	Plans and Bid Specifications	Eagle Cree 4 Fish Barriers General Special Provisions.pdf	BryanM	Eagle Creek_Remove 4 Fish Barriers_General Special Provisions_2023_04_05.pdf, 567271	✓
	06/06/2023	Visuals	Eagle_Creek_4barrier_construction_RTT_	BryanM	Eagle_Creek_4barrier_construction_… 564834	✓
	05/30/2023	Visuals	EagleCreek_Master_PIT_tag_array_data.x	BryanM	EagleCreek_Master_PIT_tag_array_d… 564000	✓
	05/23/2023	Application Review Report	Grant Manager Comments, 23-1278R(rtnd 05/23/23 16:02)	AmeeB	Grant Manager Comments Report - 23-1278 (rtnd 05-23-2023_16-02-26).pdf, 563648	✓
	05/18/2023	Visuals	23-1278_SRFB_JotForm_w_coverpage.pdf	BryanM	23-1278_SRFB_JotForm_w_coverpage.pdf, 563318	✓
	04/21/2023	Project Application Report	Project Application Report, 23-1278R (sub 04/21/23 13:01:39)	BryanM	Project Application Report - 23-1278 (submitted 04-21-2023_13-01-39).pdf, 559136	✓
	04/21/2023	Map: Multi-site and geographic envelope	Eagle Crk Overview (lower).jpg	BryanM	Eagle_Creek_SRFB_overview_lower.jpg, 559117	✓
	04/21/2023	Map: Multi-site and geographic envelope	Eagle Crk Overview Map.jpg	BryanM	Eagle_Creek_SRFB_overview.jpg, 559116	✓
	04/19/2023	RCO Fiscal Data Collection Sheet	2023 SRFBFiscalDataCollectionSheet_CCNRD_	BryanM	2023 SRFBFiscalDataCollectionSheet_CCN… 558652	
	04/19/2023	Applicant Resolution/Authorizations	2023 ApplicantAuthorizationResolution_CCNRD	BryanM	2023 ApplicantAuthorizationResolution_CC… 558651	✓
	04/19/2023	Photo	603922_outlet.jpg	BryanM	603922_outlet.jpg, 558645	✓
	04/20/2023	Photo	603923_inlet.jpg	BryanM	603923_inlet.jpg, 558644	✓
	04/19/2023	Photo	603924_inlet.jpg	BryanM	603924_inlet.jpg, 558643	✓
	04/19/2023	Photo	600306_outlet.jpg	BryanM	600306_outlet.jpg, 558642	✓
	04/19/2023	Cost Estimate	23-1278_SAL-CostEstimate2.xlsx	BryanM	23-1278_SAL-CostEstimate2.xlsx, 558641	✓
	04/17/2023	Design document	Eagle Creek Final Design Report_without_plans.pdf	BryanM	Eagle Creek Final Design Report_w_o_plans.pdf, 558318	✓
	04/17/2023	Correction Analysis Form	Eagle_4culverts_CorrectionAnalysisForm.p	BryanM	Eagle_4culverts_CorrectionAnalysisF… 558317	✓
	04/17/2023	Final design	Eagle Creek_Final	BryanM	Eagle Creek_Final	✓

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
			Design_Plans_03.21.2022.pdf		Design_Plans_03.21.2022.pdf, 558315	
	04/17/2023	Map: Restoration Worksite	Eagle SRFB Worksite Overview.pdf	BryanM	Eagle SRFB Worksite Overview.pdf, 558312	✓
	04/17/2023	WDFW barrier & screening forms	600306_Report.pdf	BryanM	600306_Report.pdf, 558308	✓
	04/17/2023	WDFW barrier & screening forms	603924_Report.pdf	BryanM	603924_Report.pdf, 558307	✓
	04/17/2023	WDFW barrier & screening forms	603923_Report.pdf	BryanM	603923_Report.pdf, 558306	✓
	04/17/2023	WDFW barrier & screening forms	603922_Report.pdf	BryanM	603922_Report.pdf, 558305	✓
	04/17/2023	Landowner acknowledgement form	LandownerAcknowledgement_EagleCrkBa	BryanM	21-1412_LandownerAcknowledgement_E… 558304	

Application Status

Application Due Date: null

Status Name	Status Date	Submitted By	Submission Notes
Application Complete	07/17/2023	Amee Bahr	Thanks for addressing the comments. Your application is clear for funding in September. Please let me know if you have any further questions.
Application Resubmitted	06/22/2023	Bryan Maloney	
Application Returned	05/23/2023	Amee Bahr	Thanks for submitting the application. It looks like we need a little more information. Please look over the Review Panel and Grant Manager comments and provide responses. Please resubmit the application when you finish. Let me know if you have any questions.
Application Submitted	04/21/2023	Bryan Maloney	
Preapplication	04/06/2023		

I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected by RCO. I understand that I may be required to submit additional documents before evaluation or approval of this project and I agree to provide them. (Bryan Maloney, 06/22/2023)

Date of last change: 01/16/2024

RESTORATION

				OVERALL PROJECT	GRANT REQUEST	MATCH			
				Budget must account for all costs to complete the project	*Enter only the amount of the grant request*	*The Grant Request and Match should equal the total project cost and Budget Check cell should be 0. Sponsors must account for all sources and types of match need to complete the project.*			
				Amount	Grant Amount	Match in PRISM	Funding not reported in PRISM	Source (Grant, Cash, Materials, Labor, Volunteers, etc)	Match Type (federal, state, local)
Construction									
Category (choose one)	**Task Description**	**Qty**	**Rate**						
Mobilization	*mobilization and demobilization*	1.00	$ 55,743.91	$ 55,744	$ 8,362	$ 47,382	$ -		
Surveys	*construction surveying*	1.00	$ 29,735.20	$ 29,735	$ 4,460	$ 25,275	$ -		
Demolition and site prep	*clearing, temporary access & staging, stream diversion, high-visibility fencing, protect/relocate existing infrastructure*	1.00	$ 66,984.53	$ 66,985	$ 10,048	$ 56,936	$ -		
Materials	*crossing structure (installed), guardrails, streambed sediment, boulders, road fill, asphalt, erosion control fabric, plants, seed, mulch*	1.00	$ 864,119.30	$ 864,119	$ 129,618	$ 734,501	$ -		
Construction	*excavation, channel work, foundation, installation, backfill, minor change*	1.00	$ 155,720.13	$ 155,720	$ 23,358	$ 132,362	$ -		
Other	*utility relocation by PUD*	1.00	$ 52,756.00	$ 52,756	$ 7,913	$ 44,843			
Other	*construction sales tax @ 8.3%*	1.00	$ 101,679.90	$ 101,680	$ 15,252	$ 86,428	$ -		
Construction supervision	*consultant construction oversight (16 days)*	1.00	$ 18,416.64	$ 18,417	$ 2,762	$ 15,654			
Other	*CCNRD staff time for construction contracting, construction oversight, fish exclusion, planting (includes salary, fringe benefits and indirect (20.5% of salary))*	1.00	$ 49,816.00	$ 49,816	$ 7,472	$ 42,344	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 1,394,972**	**$ 209,246**	**$ 1,185,726**	**$ -**		

Administrative, Architechtural & Engineering				Amount	Grant amount	Match in PRISM	Funding not reported in PRISM	Match Source	Match Type (federal, state, local)
Category	**Task Description**	**Qty**	**Rate**						
Administrative	*Project management, financia*	1.00	$ 20,885.50	$ 20,885.50	$ 3,133	$ 17,753	$ -		
Other	*Travel to project site*	1.00	$ 400.00	$ 400.00	$ 60	$ 340	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 21,286**	**$ 3,193**	**$ 18,093**	**$ -**		

Indirect Costs				Amount	Grant amount	Match in PRISM	Funding not reported in PRISM	Match Source	Match Type (federal, state, local)
	Description	**Approved Rate**	**Total Project Base**						
	Indirect	20.600%	$ 45,955.98	$ 9,467	$ 1,420	$ 8,047	$ -		
	Indirect	0.000%	$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 9,467**	**$ 1,420**	**$ 8,047**	**$ -**		

AA&E Budget Check	
A&E maximum allowed in PRISM $	*418,491.48*
A&E validation	397,206

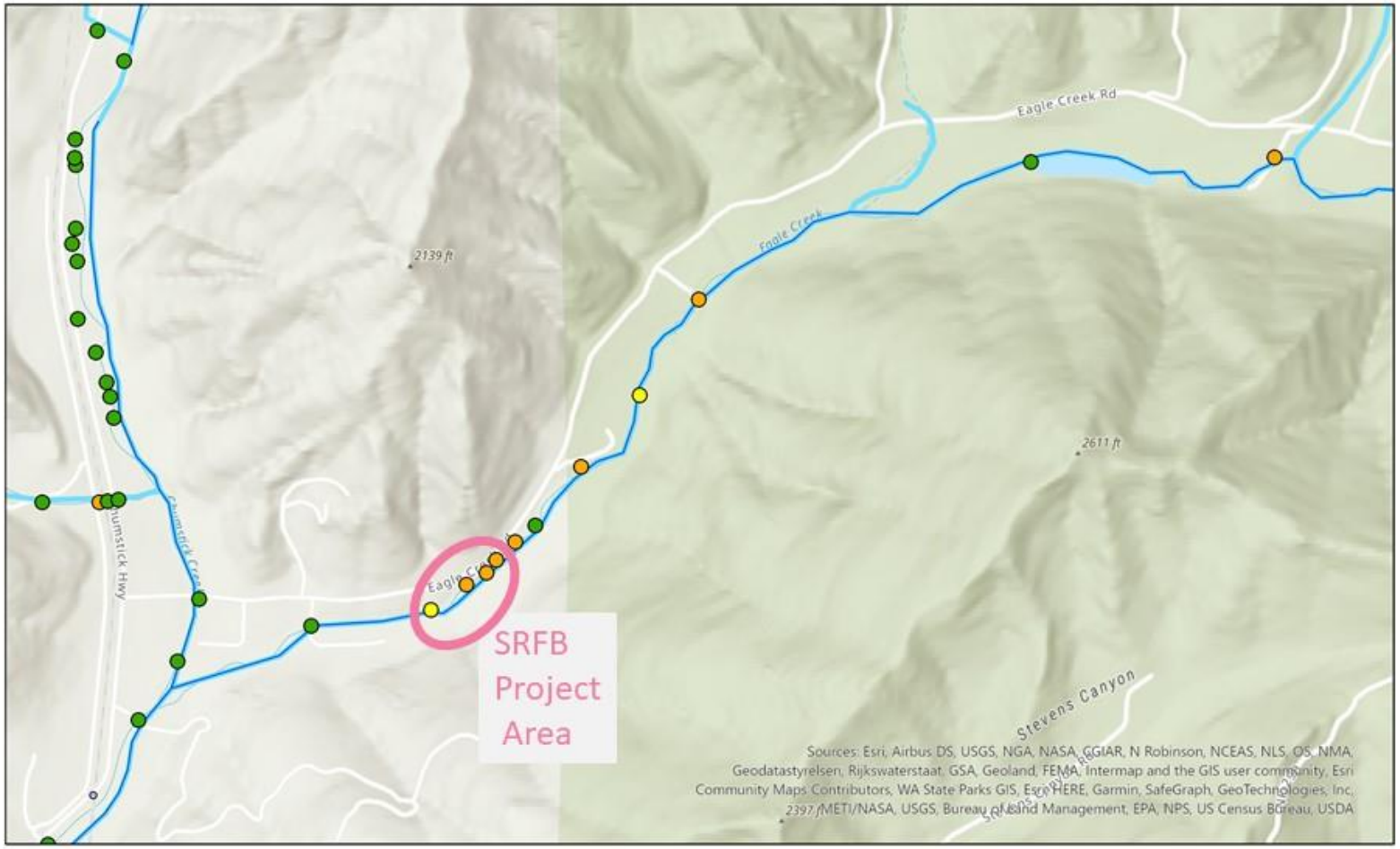
Totals	**$ 1,425,724**	**$ 213,859**	**$ 1,211,865**	**$ -**
		PRISM Project Total	$ 1,425,724	
		RCO Percentage	**Match Percentage**	
		15.000011%	**84.999989%**	

CUMULATIVE TOTALS

This sheet contains automatic calculations

Project Name	Eagle Creek Four Lowest Barrier Corrections
SRFB #	23-1278
Sponsor	Chelan County Natural Resource Department

	OVERALL PROJECT Cost	GRANT REQUEST Amount	PRISM MATCH Amount	MATCH NOT IN PRISM Amount	*Budget Check*
Sheet #1 Acquisition					
Property Costs	$ -	$ -	$ -	$ -	0
Incidental Costs	$ -	$ -	$ -	$ -	0
Administrative Costs	$ -	$ -	$ -	$ -	0
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ -	$ -	$ -	$ -	0
Sheet #2 Design					
Design Costs	$ -	$ -	$ -	$ -	
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ -	$ -	$ -	$ -	0
Sheet #3 Restoration					
Construction Costs	$ 1,394,972	$ 209,246	$ 1,185,726	$ -	(0)
AA&E	$ 21,286	$ 3,193	$ 18,093	$ -	0
Indirect Costs	$ 9,467	$ 1,420	$ 8,047	$ -	
STotal	$ 1,425,724	$ 213,859	$ 1,211,865	$ -	(0)
Totals	$ 1,425,724	$ 213,859	$ 1,211,865	$ -	(0)



Lower Eagle Creek Fish Passage

Barrier Passability (%)

- 33
- 67
- 100

N

0.35

Miles

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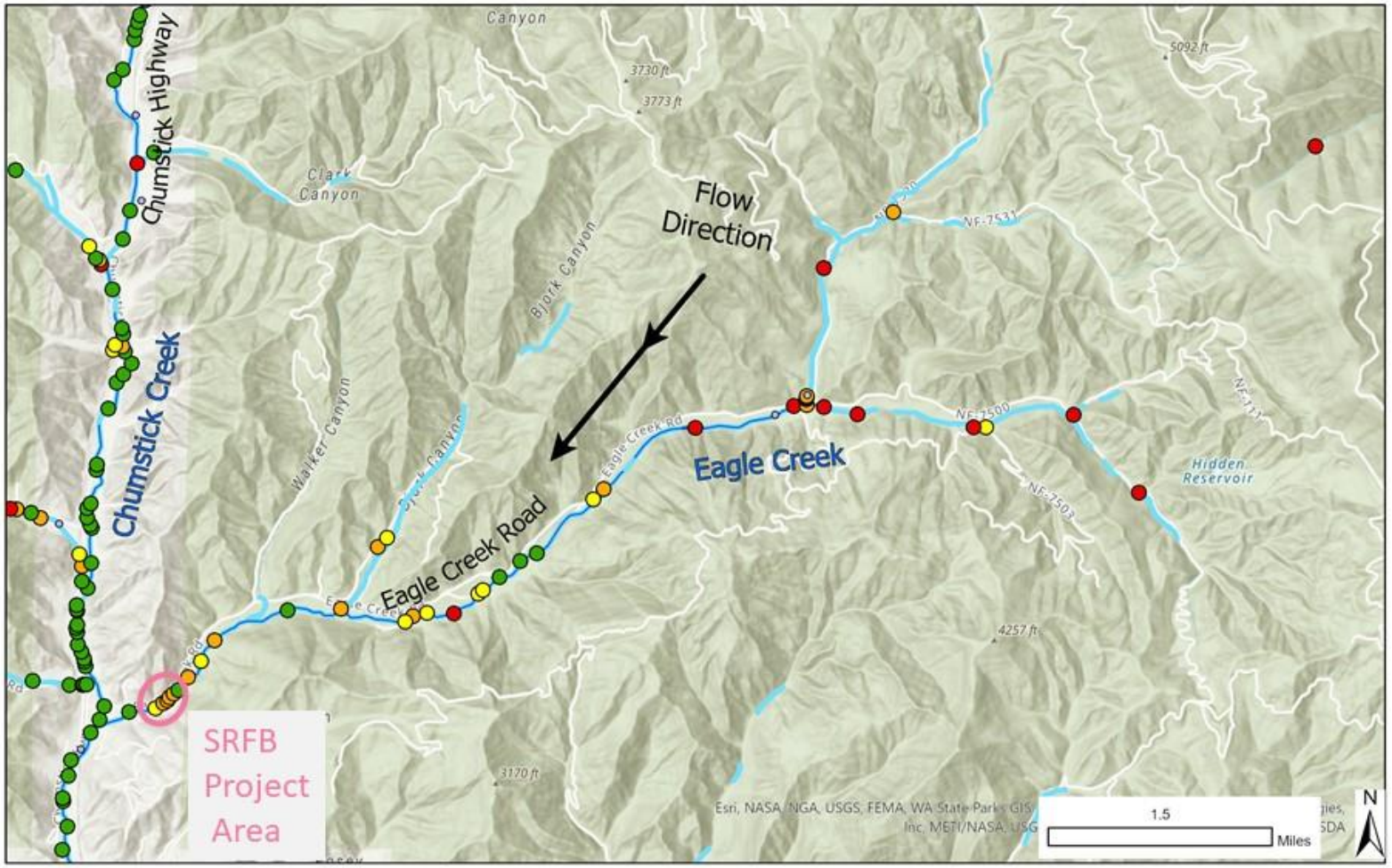

Eagle Creek Fish Passage

- Chinook Intrinsic Potential Habitat
- Steelhead Intrinsic Potential Habitat

Barrier Passability (%)

- 0
- 33
- 67
- 100
- Unknown

Chelan Co Natural Resource; Eagle Creek Lowest Four Barrier Corrections (#23-1278)

Attachment #558642, 600306_outlet.jpg

Chelan Co Natural Resource; Eagle Creek Lowest Four Barrier Corrections (#23-1278)

Attachment #558643, 603924_inlet.jpg

Chelan Co Natural Resource; Eagle Creek Lowest Four Barrier Corrections (#23-1278)

Attachment #558644, 603923_inlet.jpg

Chelan Co Natural Resource; Eagle Creek Lowest Four Barrier Corrections (#23-1278)

Attachment #558645, 603922_outlet.jpg

Eagle Creek SFRB Worksite Overview

Area of Potential Effect

0.05
Miles

N

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