



## Contact Information

# 2024 Upper Columbia Regional Project Pre-Application

\* Pre-applications due March 11, 2024 (COB)

\*Complete applications due in PRISM April 19, 2024 (COB)

\*Revised proposals due in PRISM May 24, 2024 (COB)

\*Final revised applications due in PRISM June 24, 2024 (noon)

<b>Project Title</b>	Wilson Side Channel Adaptive Management Project
<b>Sponsor</b>	Chelan County Natural Resources Department
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## Budget Request

Values MAY be duplicative and do not have to equal TOTAL anticipated budget in pre-application.

**Anticipated Request - SRFB (standard round)** \$145,252

**Anticipated Request - Tributary Committee** \$30,000

**Anticipated TOTAL Budget** \$175,252

## Project Location

**Briefly describe the location of the project** This project occurs in the Entiat River starting at approximate RM 6.

**Latitude (decimal degrees)** 47.69727

**Longitude (decimal degrees)** -120.3214

**Project subbasin**

Entiat Assessment Unit(s)

Entiat River-Mills Creek

Does the proposed project span multiple assessment units?

No

Reach(es) Name

Entiat River Mills 06

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/>.

Rank 3

## 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].**

This project seeks to address the critical low flows in the side channel leading to stranding and high juvenile salmonid mortality rates during low mainstem flow periods by analyzing the culvert inlet to the side channel and evaluating natural inlet options to provide for higher periodic flows and/or sustained perennial flow.

This project seeks to address poor flood plain and side channel connectivity for spring/summer rearing by evaluating the possibility of replacing the triple barrel culvert under Roaring creek road with a bottomless or box culvert design.

This project will also look to address high summer water temperature in the side channel, metric suspected of leading to high mortality. High side channel water temperature will very likely be corrected with the creation of a natural inlet at the head of the channel providing for increased seasonal flow or sustained perennial flow through the channel.

Complete water column freezing, another factor contributing to mortality rates will also be evaluated and likely addressed through the increased seasonal flow allow the channel to properly dewater during low flow months and provide proper escape to fish species utilizing the side channel.

**2. What species will the project benefit?**

Spring Chinook

Steelhead

Bull Trout

Summer Chinook

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

Design, Monitoring or Assessment

**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.)**

This project was previously submitted for SRFB funding during the 2023 application year. It was later presented to and fully funded by the Tributary Committee for Conceptual design development.

**6. What category is the project?** Design

**If applicable, what is the secondary project category?** N/A

**Is the project eligible for Riparian Funding?** No

## Design and Restoration Proposals

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

**8. Is your project within a completed (or soon-to-be completed) Reach Assessment or other type of assessment (e.g., Rapid Site Assessment, other)?** U.S. Bureau of Reclamation -- Lower Entiat Reach Assessment

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

- Entrainment/Stranding
- Icing
- Off-Channel - Floodplain
- Off-Channel - Side-Channels
- Pool Quantity & Quality
- Temperature - Rearing

**10. Which life stages will the proposed project address?**

- Adult Non-Spawning (Bull Trout)
- Fry
- Holding and Maturation
- Smolt Outmigration
- Spawning and Incubation
- Summer Rearing
- Winter Rearing

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

Wilson Side Channel has experienced instances of complete freezing of ponded water and unacceptable low levels of dissolved oxygen, resulting in mortality of fish stranded in the side channel during periods of low mainstem flow.

To accomplish increased and perennial flows the existing inlet culvert will need to be removed and replaced with an armored inlet. Additionally, selective spot excavation to correct grade issues and selective debris removal will be required to ensure constant and continual flow through the channel. Perennial flow through the channel with a modified inlet will aid in prevention of sedimentation of the channel. The increased flow rates and times will improve water quality within the side channel. The project is in the Entiat River-Mills Creek Assessment Unit (AU). The Identified species within this reach are Spring chinook, Steelhead, and Bulltrout. Winter rearing for both Spring and summer chinook and Steelhead are listed as high priority restoration actions of the reach. Additionally, summer

rearing habitat for Steelhead is listed as high priority.

Floodplain connectivity and off-channel habitat -side channels are known "At Risk" limiting factors for the Entiat River -- Mills Creek AU. Given the agricultural development within the Entiat River valley, there are limited locations to provide for an increased floodplain connection. This project will increase flows to the floodplain that currently exists adjacent to Roaring Creek Road. The eventual implementation of designs drafted during this project, will provide for the enhancement of ecological function of one the few active side channels in the lower Entiat basin.

**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?**

currently the side channel is experiencing periods of ponding and entrainment during periods of low mainstem flow. The side channel experiences instances of complete freezing of ponded water and unacceptable levels of dissolved oxygen. These two issues are contributing to juvenile salmonid mortality within the side channel. This project aside from addressing the juvenile mortality concerns, will also investigate the potential for increased flows through the side channel and possibly perennial flow. Opportunities for off-mainstem habitat are rare in the lower Entiat basin. this project would promote natural stream processes by increasing activation of one of the few lower basin side channels and allowing increased connectivity to floodplains.

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

1-10 years

**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?**

Monitoring and stewardship plans will be developed as part of the design project and to meet the requirements of the WDFW Restoration Pathway. The original design of the side channel was to be self maintaining. Currently, through the Conceptual design process, engineers with NSD are keeping that self-sustaining idea in the adaptive management designs. Anticipated maintenance is also subject to how the triple barrel culverts are treated as part of the project. if left in place, minimal maintenance of clearing any racked material would be expected. If the culverts are replaced, style of the new crossing would dictate what level of maintenance will be required.

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

To accomplish increased and perennial flows the existing inlet culvert will need to be removed and replaced with an armored inlet. Additionally, selective spot excavation to correct grade issues and selective debris removal will be required to ensure constant and continual flow through the channel. Perennial flow through the channel with a modified inlet will aid in prevention of sedimentation of the channel. The increased flow rates and times will improve water quality within the side channel.

## Assessment Proposals

## Protection Proposals

## Monitoring Proposals

## Project Risk and Economic Benefits

**1. What is the landownership?**

Public -- Washington Department of Fish and Wildlife; Chelan County Public Work ROW

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

Yes

**Please explain**

WDFW is an active partner in this project. Not only as the landowner that has provided all required landowner acknowledgement, but also as a partner aiding in working through permitting and the WDFW Restoration Pathways Process.

**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**

Restoration on WDFW lands by project sponsors requires adherence to the Restoration Pathways Process, working closely with the area habitat biologist and WDFW Real Estate office for access permits. Chelan County Public Works does have ROW on the Parcel as Roaring Creek road crosses the parcel. CCPW is also responsible for the triple barrel culvert passing under Roaring Creek Rd.

Access to the parcel for project activities does require obtaining a permit from WDFW, which given proper lead time is not burdensome to acquire. WDFW and CCPW will review and provide comments to all designs and design alternatives.

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

This project has not raised any major concerns from interested parties or the Entiat Community as a whole. Upon development of the project there was a concern about opening the inlet to the side channel and providing an opportunity for the mainstem to avulse into Wilson Side Channel and creating a non-favorable set of conditions for the Roaring Creek Rd. prism. This concern has been noted by the design engineers and designs are being developed accordingly.

WDFW Restoration Pathways process also requires the development of a community outreach plan, this plan will be used to resolve any concerns that may arise through the continuation of this project.

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

This project will be managed by CCNRD while working cooperatively with WDFW through the Restoration Pathways Process. Current landowner responsibilities of the property are not expected to change.

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

No

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

Risk of failure of this project is anticipated to be low. Given this is a Preliminary Design project no alteration of side channel will occur, leaving the landscape of the parcel as is. Several major risk factors such as a possible avulsion and damage to Roaring Cr. Rd. have already been identified and will be highly considered during this Preliminary Design development process.

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

Yes, CCNRD has always participated in public/community outreach of its past projects. Additionally, the Restoration Pathways Process has a required public/stakeholder outreach component. CCNRD will work closely with WDFW in this process to develop an encompassing public/stakeholder outreach plan for this project. This project does aid in building community support for salmon recovery efforts. Given this is an adaptive management project on publicly owned land, this project will help bolster confidence in the watershed that salmon recovery agencies and project sponsors do actively monitor past projects and seek to address issues that arise after initial project completion.

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

This project will provide economic benefit. The ultimate economic benefit will be realized once this project is ready for construction. This will allow local construction contractors an opportunity to see economic gain through the construction of the future design package.

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

CCNRD has partnered with WDFW and Chelan County Public Works on this project. WDFW has supplied technical expertise in their Restoration Pathways Process through local Habitat Biologists and Regional Staff. Bureau of Reclamation has also provided funding to be supplied as match for this project through a grant specific to the Lower Entiat Watershed project development. Chelan County Public Works has provided their support of the project and will provide review of all designs and alternatives.

**Optional Section - Preparation for PRISM**

The following questions are identical to the questions RCO requires in the PRISM application. If desired, sponsors can complete associated questions early and copy responses into PRISM during the "Complete Application" phase due on April 19, 2024.

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

No

## Supporting Documents

[Upper Columbia Process Guide 2024](#)

[SRFB Manual 18 \(2024\)](#)

[RCO Application Resources \(2024\)](#)