Contact Information

2025 Upper Columbia Regional Project Pre-Application

* Pre-applications (SRFB & Monitoring) due March 12, 2025 (COB)

*Complete SRFB applications due in PRISM April 18, 2025 (COB)

*Complete Monitoring applications due in PRISM May 1, 2025 (COB)

*Revised SRFB proposals due in PRISM May 27, 2025 (COB)

*Final revised SRFB & Monitoring applications due in PRISM June 23, 2025 (noon)

Project Title	Lower Chiwawa Area D, Final Design
Sponsor	Chelan County Natural Resource Department
Primary Contact	Scott Bailey
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Project Summary

Please provide a description or summary of the proposed project, including 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.

This project addresses identified habitat limiting factors for high- and medium-priority spring Chinook and steelhead life stages (i.e., holding, summer and winter rearing, and fry colonization) in Reach 4 of the Lower Chiwawa River AU including Floodplain Connectivity, Off channel Side-channels, Riparian Canopy Cover, Instream Cover (wood), Deep Pools, and Temperature (rearing). This phase of the project will prepare construction-ready designs, finalize and complete environmental compliance tasks (i.e., continue consultation with regulatory agencies and finalize and submit permit applications), and prepare bid documents to improve conditions along ~1.25 miles of mainstem channel; create up to 0.25 miles of side channel habitat; enhance two cold water tributary confluences; and consolidate/reduce dispersed camping, decommission ~1,000 lf of forest roads and reduce potential for future impacts and enhance vegetation within ~15 streamside acres.

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].

Objectives of the proposed project are to:
1. Develop a construction-ready design package within 12 months of funding that identifies restoration actions to:

(a) add large wood structures and other habitat features along ~1.25 miles of mainstem channel (and at two cold water tributary confluences) to redirect flows and increase inundation of river left floodplain surface, increase wood loading to greater than 70 pieces of wood per mile, improve cover and increase pool quantity and quality and improve habitat quality and access at tributary confluences.

(b) add up to 0.25 miles of side channel habitat to increase side channel area in project reach to greater than 5% of total channel area.

(c) decommission approximately 1,000 lf of forest roads, consolidate camp sites/control access, and plant native trees and shrubs to improve conditions within ~15 acres of riparian habitat.

2. Finalize and submit HPA and JARPA applications within 15 months of funding.

3. Prepare and release bid documents for project implementation within 18 months of funding.

Budget Request

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

Anticipated Request - SRFB (standard round)	$64,258
Anticipated or Actual Other Funding	125,000
Anticipated TOTAL Budget	$189,258

Other Funding Source(s), please note if funding is anticipated or actual.

A 2024 BOR WaterSMART Aquatic Ecosystem Restoration Projects grant includes up to $125,000 for work on this phase of the Area D project. We have been notified that we were selected for this funding and are currently working with BOR staff to secure the agreement.

Project Location

Briefly describe the location of the project	The project site is located along the lower Chiwawa River from the Goose Creek confluence upstream to the Alder Creek confluence, approximately RM 6.0-7.25
Latitude (decimal degrees)	47.8396
Longitude (decimal degrees)	-120.6638
Project subbasin	Wenatchee

Wenatchee Assessment Unit(s)	Lower Chiwawa River
Does the proposed project span multiple assessment units?	No
Reach(es) Name	Reach 04
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 2

Project Information

1. What species will the project benefit?	Spring Chinook Steelhead Bull Trout
2. Select the project's objectives and the associated tracking metrics	Instream Habitat (Includes Floodplain & Off-Channel Reconnection) Riparian Habitat Upland Habitat
Instream Habitat: Reporting Code	Total miles of instream habitat treated Miles of off-channel stream created or connected Acres of channel/off-channel connected or added Number of structures placed in channel Pools created through channel structure placement
Riparian Habitat: Reporting Code	Total riparian acres treated
Upland Habitat: Reporting Code	Acres of upland habitat treated Number of erosion/ Sediment control installations Miles of road abandoned
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.)

A related project on the lower Chiwawa River was submitted for funding in 2020. It did not receive SRFB funding because the application was pulled and the project revised. The revised effort (an assessment of the entire Lower Chiwawa AU) was funded by Tributary Committee and Bureau of Reclamation (BOR). That project identified and completed concept development for seven project sites in the AU. This Area D project was identified during that prior effort.

An earlier design phase for the Area D project was proposed for SRFB funding during the 2022 grant round. That proposal was funded, and preliminary designs and other products are being developed under that agreement (the design documents and other work products are being uploaded to PRISM). That RCO agreement is set to end September 2025. BOR also provided financial support for this earlier design phase. BOR contracted directly with the design firm, that is designing the in-stream restoration treatments.

In addition, CCNRD requested funding for this final design effort in a BOR WaterSMART Aquatic Ecosystems Restoration Projects (WaterSMART AERP) funding request. That proposal was selected for funding, and we are currently working with BOR staff to secure the award. This 2025 SRFB request serves as the required 35% non-federal match for the WaterSMART AERP funding.

6. What category is the project?

Design

If applicable, what is the secondary project category?

N/A

Is the project eligible for Riparian Funding?

Yes

Design and Restoration Proposals

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

Final 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)?

Lower Chiwawa River Assessment, InterFluve 2023

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

Cover - Wood
Off-Channel - Floodplain
Off-Channel - Side-Channels
Pool Quantity & Quality
Pools - Deep Pools
Riparian - Canopy Cover
Temperature - Adult Holding
Temperature - Rearing

10. Which life stages will the proposed project address?

Fry
Holding and Maturation
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?

Currently, floodplain connectivity, side-channels, cover wood, riparian canopy cover, and temperature are classified as Unacceptable, and deep pools are classified as At-risk, for Reach 4 of the lower Chiwawa River (UCRTT 2020). Based on the Upper Wenatchee Pilot Project: Aquatic Habitat Assessment and Restoration Strategy Report (Cramer Fish Sciences, 2019), streambed substrate is dominated by cobbles and boulder and LWD is rare in this reach. Overall pool frequency was rated Adequate, but the reach was rated At-risk for pools due to a limited number of deep pools. Riparian road densities were rated Moderately High and this resulted in a riparian condition rating of At-risk. Channel dynamics were rated Poor in this reach due to a high bankfull width to depth ratios, low entrenchment ratio, and low side channel percentages compared to predicted meandering and braided channel forms.

This project is intended to improve habitat quality for target species life stages including holding, fry, summer rearing, and winter rearing. Upon implementation the proposed project will improve habitat quality at two tributary confluences; increase the length of side channel habitats, the number of deep pools and amount of LWD present along ~1.25 miles of mainstem channel; and treat historical and ongoing recreational impacts to riparian vegetation and water quality (and minimize potential for future impacts) along the project reach. Based on the above, this project will enhance the quantity and quality of habitats along the project reach, and we expect that this will increase capacity for holding, incubation, fry and summer and winter rearing life stages, which we expect to improve survival, reproduction and fitness for target species.

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 lower Chiwawa River has been impacted by historical land use practices, particularly timber harvest practices that used the stream corridor to transport logs. This has resulted in a simplified, plane bed channel that is wide and shallow and disconnected from its historical floodplain. As a result, the streambed is well-armored and large cobbles and small boulders dominate the bed substrate. Pools and persistent LWD structures are rare. In addition, dispersed camping in the area has adversely affected riparian and upland vegetation, resulted in a web of social roads and trails and a proliferation of garbage and unauthorized latrines. These impact water quality and stream and forest health (and creates management issues for USFS).

The project proposes to continue an ongoing effort to assess an ~1.25 mile reach of the river and ~15 acres of adjacent riparian habitat and identify actions that can be implemented to restore habitat values, promote natural processes, minimize future recreational impacts, and facilitate USFS management of the area. The proposed design process is supported by extensive data collection and modeling. It will anticipate projected effects of global climate change and be consistent with reach-scale geomorphology and USFS planning and management efforts. The project will also be consistent with guidance provided by the UCRTT in its recent restoration prioritization update which promulgates the following recommendations for the project reach: Improve cover wood, Improve off-channel side channels, Improve off-channel floodplain, and Improve temperatures.

Designs are intended to promote natural processes by adding structure to enhance the mainstem channel and tributary confluences, connect floodplain and side-channel habitats, create new side channel habitats and facilitate recruitment of naturally occurring LWD and streambed materials. The design process also is developing treatments for past anthropogenic impacts to streamside habitats that are also intended to minimize potential effects of continued recreational use of the area. These treatments are collectively expected to improve conditions for adult holding, fry, summer rearing, and winter rearing life stages in the near-term and provide long-term benefits to aquatic habitats.

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

Less than or equal to 1 year | 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?

This phase of the project is for preparation of construction-ready designs, so there will be no associated maintenance at this time. However, it is our intent that the project will be self-maintaining and require little or no further human intervention once construction is completed. That said, we anticipate involvement with the project during and after implementation and will work with USFS to monitor the project post-construction and complete maintenance as needed to ensure the project continues to function as designed.

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

A variety of methods will be used over the course of this final design effort. Our goal is to design a project that improves conditions along the mainstem channel, creates additional side channel habitat and better connects floodplain surfaces, enhances two tributary confluences, addresses dispersed camping and roads, identifies site management and planting strategies to improve riparian/upland habitats, and facilitates long-term management of the area for the landowner.

New data was gathered and analyzed during two previous design and assessment phases including high resolution aerial imagery and LiDAR topo-bathymetric data and development of an AU-wide existing conditions hydraulic model. The current preliminary design phase is utilizing these and other data sets and model outputs to build upon initial concepts.

The proposed project will gather additional data at the site, continue 2D hydraulic modeling, and employ other science and engineering methods to finalize location(s) and characteristics of restoration treatments (e.g., methods employed, size and type of materials, etc.) that will be used to meet project goals and to evaluate their influences. The engineering design process will continue to utilize best available science and follow regulatory design guidelines to finalize identified implementation techniques that meet project objectives including engineered log jams, log and boulder placement, selective grading, and vegetation management. We also will continue to develop treatments for past recreational impacts that limit future effects of recreational use. All actions will be consistent with USFS planning and management needs, and the design process will continue to be informed by internal and external review.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership?

USDA Forest Service

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

Yes

Please explain

We currently have a signed Landowner Acknowledgement Form for the Preliminary Design Phase of this project, and USFS is a partner in the ongoing design effort. We will obtain a signed Landowner Acknowledgement Form for this proposed Final Design Phase later on in this SRFB application 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

Project must avoid impacting nearby long-term lease cabins, Goose Creek Campground, and the Chiwawa River Road bridge that crosses the river just downstream of the Alder Creek confluence.

Dispersed camping consolidation/reduction and road decommissioning will follow USFS guidelines and standards, and in-stream restoration will be consistent with design criteria and conservation measures promulgated under ARBO II (Programmatic Conference and Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Aquatic Restoration Activities in the States of Oregon and Washington).

None of these requirements are expected to adversely affect the project because safety considerations and following established guidelines and standards is commonplace in stream restoration design.

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

Instream projects often raise concerns of recreational boaters, adjacent property owners, and other interested parties. Our designs will take boater safety and project risk to into account through the use of the Bureau of Reclamation's Large Woody Material - Risk Based Design Guidelines (which assesses risks to property and public safety).

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

This proposal supports preparation of construction-ready designs, so no on-the-ground management or maintenance activities are expected with work performed under it. However, management and maintenance of the project site may be needed following project implementation. CCNRD anticipates that the project site will be monitored post-construction and that USFS will ultimately be responsible for maintenance and management. However, CCNRD will work with USFS to provide for necessary management and maintenance during that time. Treatments in the dispersed camping areas are expected to facilitate USFS management of the area and reduce potential for future human impacts to streamside vegetation and water quality.

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

No

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

There is always risk associated with stream restoration projects, but with good data collection, careful design and modeling, and implementation that follows the designs and utilizes construction best management practices, potential for failure is low. For this design phase, we will work with a licensed engineer (and support staff) employed by a reputable company with extensive river restoration experience. The design effort to date is consistent with applicable design criteria and has included extensive review and revision. The project will be subject to further review and refinement during preparation of the proposed final designs. These steps assure a high factor of safety and minimize potential for failure.

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

We will work with USFS to continue and expand outreach that began during the current concept development phase of this project to assure that local resident and forest users are aware of the project and its potential effects and benefits. Outreach will be structured such that it meets USFS standards and needs and informs the public about the type of restoration actions being implemented, emphasizes the need for and benefits of stream restoration, and builds support for salmon recovery efforts.

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

Yes, this project represents an opportunity for economic benefit. The proposal supports the final design phase. As a result, it will employ design consultants and agency staff. The subsequent implementation

phase will employ design consultants, agency staff, construction contractors and material providers.

Kellon and Hesselgrave (2014) have reported that restoration efforts support 19-24 jobs for every $1-million invested (depending on labor intensity), money spent on restoration projects generates substantial additional spending and economic output (roughly double the amount of the original investment), and 80% of funds spent on restoration efforts stay in the county where the project is located (with 90% staying in state). While their study focused on restoration projects in Oregon, economic benefits of restoration are almost certainly similar for Washington state.

Cathy P. Kellon and Taylor Hesselgrave, “Oregon’s Restoration Economy: How investing in natural assets benefits communities and the regional economy”, S.A.P.I.EN.S [Online], 7.2 | 2014, URL: http://journals.openedition.org/sapiens/1599 (link confirmed March 3, 2025)

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

Chelan County NRD has extensive experience implementing design projects such as the one proposed. CCNRD has:

- worked with USFS on several past and ongoing restoration efforts.

- a long-standing partnership with the Bureau of Reclamation. BOR was a primary funder for the effort that identified this project site and has directly contracted with InterFluve, Inc. for the current preliminary design phase of this project. Further, BOR funds are expected to support this project phase.

- a working relationship with InterFluve. IFI is the design firm on the current preliminary design phase,

- working relationships with other design firms and construction firms with experience designing and implementing this type of project.

Given the above, CCNRD is well situated to complete the proposed final design effort on-time and on budget, move on to the subsequent implementation phase, and achieve the expected results.

Optional Section - Preparation for PRISM (SRFB applications only)

The following questions are identical to the questions RCO requires in the PRISM application for SRFB projects. If desired, sponsors can complete associated questions early and copy responses into PRISM during the "Complete Application" phase due on April 18, 2025.
*please note, this section is not applicable for Monitoring proposals

Do you want to review and/or pre-populate PRISM questions?	No

Supporting Documents

Upper Columbia Process Guide 2025

SRFB Manual 18 (2025)

RCO Application Resources (2025)