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	Beaver Creek Low Tech Restoration Project
Sponsor	Yakama Nation
Primary Contact	Ben Woodworth
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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.

The Beaver Creek Low-Tech Restoration Project aims to restore habitat complexity and floodplain connectivity along nearly one mile of Beaver Creek. The project builds on the Beaver Creek Reach 5 Restoration Project which increased wood loading, side channel connection, and floodplain hydration.

Beaver Creek is currently impacted by channel incision, floodplain disconnection, and reduced habitat complexity, primarily due to human activities such as road and bridge construction, timber harvesting, cattle grazing, and recreational use. These disturbances have simplified the stream channel, leading to downcutting, decreased water retention, and a diminished riparian corridor.

To address these challenges, the proposed project will implement low-tech, process-based restoration techniques, including:

- Strategic Placement of Large Wood – Utilizing nearly 200 rootwad logs from the Reach 5 Project to increase flow obstruction, encourage lateral migration, and promote habitat complexity.
- Installation of Beaver Dam Analogs (BDAs) and Post-Assisted Log Structures (PALS) – These structures will mimic natural beaver dams, slowing water flow, increasing sediment retention, and reconnecting floodplain habitats. These will also provide structural stability.
- Riparian Vegetation Enhancement – Planting willow stakes, rooted water birch, and aspen in targeted

locations to improve habitat for aquatic, upland, and avian species.
- Encouragement of Beaver Colonization – Creating suitable conditions for beaver activity, allowing them to naturally sustain and expand restored habitats over time.

Project Goals & Desired Future Condition
The primary goal of this project is to address the root causes of habitat degradation by restoring natural stream processes and floodplain interactions. Specifically, the project aims to:
1. Increase Floodplain Connectivity – Improve the frequency, depth, and duration of floodplain inundation, raising the water table and enhancing riparian plant growth.
2. Enhance In-Stream Habitat Complexity – Increase pool depth and quantity, improve substrate variation, and create diverse hydraulic conditions to support fish and other aquatic species.
3. Promote Sustainable Ecosystem Function – Establish conditions that encourage long-term beaver occupation, leveraging their natural engineering to maintain and expand habitat improvements.
4. Improve Riparian Vegetation & Wildlife Habitat – Support native plant communities that provide critical habitat for aquatic, terrestrial, and avian species.
The desired future condition is a resilient, self-sustaining ecosystem where Beaver Creek maintains natural hydrologic and geomorphic processes, supports healthy riparian vegetation, and provides diverse habitat for fish, wildlife, and beaver populations. This will ensure long-term ecological benefits while reducing the need for ongoing human intervention.

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].

To achieve the goals of the Beaver Creek Low-Tech Restoration Project, the following SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) objectives have been identified:

1. Increase Floodplain Connectivity
- Objective: Install a minimum of 75 structures consisting of both Beaver Dam Analogs (BDAs) and Post-Assisted Log Structures (PALS) at strategic locations in 2026 to enhance floodplain connectivity.
- Measurement: Monitor persistence of structures installed and visually assess water retention and floodplain interaction.
- Relevance: Reconnecting historical floodplains will increase habitat availability and water quantity for riparian vegetation and fish species.

2. Enhance In-Stream Habitat Complexity
- Objective: Utilize large wood (logs with root wads) within the project reach to create deeper pools, increase hydraulic variability, increase lateral migration, and enhance fish habitat.
- Measurement: Assess changes in pool depth, frequency, and streambed complexity through visual surveys and monitoring reporting.
- Relevance: Increased structural complexity supports fish spawning, rearing, and refuge areas.

3. Promote Beaver Colonization and Long-Term Habitat Maintenance
- Objective: Establish suitable conditions to attract beavers to the project area within three years by providing stable dam-building materials and floodplain connectivity.
- Measurement: Track signs of beaver activity (e.g., dam construction, lodges, chewed wood) through monitoring efforts.
- Relevance: Beavers play a critical role in maintaining and expanding habitat restoration efforts, reducing the need for human intervention.

4. Improve Riparian Vegetation and Wildlife Habitat
- Objective: Plant at least 5000 native riparian trees and shrubs (willow stakes, rooted water birch, and aspen) in 2026 to increase shade, bank stability, and habitat diversity.
- Measurement: Conduct vegetation survival and growth surveys annually for five years.

- Relevance: A robust riparian buffer enhances water quality, stabilizes streambanks, and supports diverse wildlife.

These objectives break down the broader project goals into specific, quantifiable steps, ensuring that restoration efforts are measurable, achievable, and time-bound. By implementing these actions, the project will create a self-sustaining ecosystem that supports healthy hydrologic function, robust riparian vegetation, and diverse wildlife populations in Beaver Creek.

Budget Request

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

Anticipated Request - SRFB (standard round)	0
Anticipated Request - SRFB Riparian Funding	100,000
Anticipated Request - Monitoring Grant Funding	0
Tributary Committee - Anticipated or Actual	0
Anticipated or Actual Other Funding	0
Anticipated TOTAL Budget	100,000

Project Location

Briefly describe the location of the project	Beaver Creek starting at RM 7 and ending at RM 8
Latitude (decimal degrees)	48.418357
Longitude (decimal degrees)	-120.040334
Project subbasin	Methow
Methow Assessment Unit(s)	Lower Beaver Creek
Does the proposed project span multiple assessment units?	No
Reach(es) Name	Beaver Creek Lower 08 and Beaver Creek Lower 09
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 Multiple reaches (provide details below)

Please detail the reach-ranking of the reaches below

Beaver Creek Lower 08 - Rank 3
Beaver Creek Lower 09 - Rank 3

Project Information

1. What species will the project benefit?

Steelhead
Bull Trout

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

Instream Habitat (Includes Floodplain & Off-Channel Reconnection)
Riparian Habitat

Instream Habitat: Reporting Code

Total miles of instream habitat treated
Acres of channel/off-channel connected or added
Number of structures placed in channel

Riparian Habitat: Reporting Code

Total riparian miles streambank treated

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

No

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

No

6. What category is the project?

Restoration

Is the project eligible for Riparian Funding?

Yes

Design and Restoration Proposals

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

Conceptual 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)?

Beaver Creek Reach Assessment, Tetra Tech 2017b.

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

Cover - Wood | Off-Channel - Floodplain | Riparian - Canopy Cover | Riparian - Disturbance | Riparian - Structure

10. Which life stages will the proposed project address?

Fry | 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?

The Beaver Creek Low-Tech Restoration Project will build on efforts by the Yakama Nation and WDFW to enhance habitat complexity and quantity along nearly one mile of Beaver Creek.

In 2017, the Yakama Nation completed the Beaver Creek Reach Assessment, which used stream habitat surveys to quantify current habitat conditions and evaluate local factors affecting fish productivity. The assessment identified deficiencies in pool quality and quantity, large wood, side-channel habitat, and floodplain connectivity.

In 2019, the Yakama Nation partnered with WDFW to implement the Beaver Creek Reach 5 Project, which addressed these issues by removing anthropogenic barriers—such as a historic bridge approach that had blocked a large side channel—and constructing habitat features to improve mainstem, side-channel, and floodplain complexity.

Building on this work, the proposed project will utilize some of the nearly 200 rootwad logs placed during the Reach 5 Project to enhance flow obstruction and encourage lateral migration, thereby increasing substrate variation, pool depth, and pool quantity. Additionally, we will install Beaver Dam Analogs (BDAs) to create perennial habitat in pools and improve floodplain connectivity.

These efforts will significantly enhance the effectiveness of the previous project and maximize biological uplift within the project area.

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?

Beaver Creek is bounded by large glacial terraces and alluvial deposits to the east and west. It has established inset floodplains of varying sizes near the current stream margins; however, these floodplains are generally narrow and support a riparian corridor less than 200 feet wide.

Human activities, such as road and bridge construction, timber harvesting, cattle grazing, and recreational campgrounds, have significantly reduced the frequency and duration of floodplain interactions with Beaver Creek. These impacts have led to increased channel simplification, which, in turn, has caused downcutting due to higher stream energy. The proposed project aims to reconnect historical floodplain habitat that has been lost due to channel incision.

Following the completion of the Beaver Creek Reach 5 Project, beavers used several large wood placements as anchor points for dams. These dams persisted for a couple of years and provided invaluable floodplain habitat. By strategically installing Beaver Dam Analogs (BDAs) and Post-Assisted Log Structures (PALS), we aim to attract beaver colonies and families to help sustain these features over the long term.

If this project is effective it should have enduring benefits to the geomorphology, riparian vegetation, and hydrology.

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?

10-50 years | 50+ years

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

The Yakama Nation will monitor the project for 5-years post construction and plan adaptive management and maintenance actions in accordance with MOU and consultation with WDFW. There is no regular maintenance planned. In many scenarios similar to this, beavers quickly recolonize stream reaches and work to maintain constructed features.

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

The Beaver Creek Low-Tech Restoration Project will be implemented by using hand crews to install posts to stabilize logs with rootwads to construct Post Assisted Log Structures and by weaving slash into posts to create Beaver Dam Analogs. Hand crews will utilize pneumatic or hydraulic post pounders and imported green slash. The benefit to using manual labor is that there will be minimal disturbance to vegetation, soils and the water.

Reconnecting Historical Floodplain Habitat – By addressing channel incision and increasing habitat complexity, the project will restore access to previously disconnected floodplains.

Encouraging Beaver Colonization – By providing stable habitat features, the project aims to attract and support beaver colonies, which will naturally maintain and enhance restoration efforts over time.

These efforts will build upon past restoration work to maximize biological uplift, improve habitat quality, and promote long-term ecosystem resilience in Beaver Creek.

17. If the project is eligible and applying for Riparian Funding, does the project have in-stream components? If so, briefly describe those components, how they support riparian plant survival and/or natural regeneration, and why they are necessary for the success of the riparian habitat elements of the project.

The project will provide significant benefits to both in-stream and riparian habitats. Its goals include enhancing in-stream hydraulic and geomorphic complexity and increasing floodplain connectivity.

Improved floodplain connectivity—through increased duration, depth, and area of inundation—will help raise the water table, creating better growing conditions for riparian plants. Additionally, we plan to install willow stakes, rooted water birch, and aspen in strategic locations. These tree species will support a diverse range of aquatic, upland, and avian species.

Furthermore, the project will encourage natural beaver activity by strategically placing Beaver Dam Analogs (BDAs) and Post-Assisted Log Structures (PALS). These structures will promote long-term habitat stability by allowing beavers to maintain and enhance the restored floodplain.

To ensure the success of these efforts, monitoring and likely adaptive management will be implemented to track project outcomes, assess habitat improvements, and make adjustments as needed to maximize ecological benefits.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership? Washington State Department of Fish and Wildlife

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

Please explain

Washington State Department of Fish and Wildlife and the Yakama Nation have established a Memorandum of Understanding for partnering on restoration actions on lands managed by WDFW. We have initiated the MOU process, hosted a site tour with WDFW staff and have verbal support. It is anticipated that written support for the project will be obtained prior to the application deadline.

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

In accordance with the terms of the Memorandum of Understanding, the Yakama Nation will acquire a Right of Entry Permit and Temporary Use Permit for construction.

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 is located a significant distance from private property and this is an uncommonly used recreation location. Therefore we do not anticipate concerns from interest groups.

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

The Confederated Tribes and Bands of the Yakama Nation will be managing the project through their Upper Columbia Habitat Restoration Program. The Yakama Nation will conduct monitoring and adaptive management (as determined necessary by WDFW and the Yakama Nation) for 5 years post implementation.

6. Are other projects being proposed immediately upstream or downstream of worksite? No

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

In this context, failure would probably be considered either; damage to property or life, or catastrophic structure failure. Due to the nature of this project, with imported slash, pilings and repositioning of local large wood, there is very little risk of failure. If beavers re-colonize the project area and maintain or create dams they will likely fortify the structures and reduce the long term risk of failure.

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

There is no public outreach planned for this project, however this will be a collaborative effort between Yakama Nation, Methow Beaver Project, and Methow Natives, which will build community organizational collaboration and relationships.

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

This project has a large 'bang for the buck' potential. This low-tech restoration project is anticipated to employ 10 people for a month to complete manual installation of wood features and BDA's. By implementing the project in this fashion, very little disturbance to the vegetation or soils will occur. We will also address the primary limiting factor for this reach by improving the floodplain and off-channel habitat connectivity for threatened Steelhead and Bull Trout.

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

The Yakama Nation anticipates hiring the Methow Beaver Project and Methow Natives as contractors on this Project. These entities have worked together before on BDA projects throughout the region and we are looking forward to harnessing their expertise to guide this project.

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)