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
E-Mail Address	woob@yakamafish-nsn.gov

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)

Contact Information

2025 Upper Columbia Regional Project Pre-Application

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*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	Fulton Ditch Irrigation Efficiency Project Phase 2
Sponsor	Trout Unlimited
Primary Contact	Brent Paul
E-Mail Address	brent.paul@tu.org

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.

Trout Unlimited is partnering with the Fulton Ditch Company to upgrade its open-air irrigation system to a more efficient piped alternative. The current diversion withdraws about 15 CFS from the Chewuch River to supply 9 CFS to shareholders, sometimes diverting up to 22 CFS. During low-flow periods, this accounts for nearly half of the river's flow, which exacerbates the already warming river and can cause a thermal fish barrier.

The recommended alternative moves the diversion four miles downstream to the Methow river, and pumping the water to the shareholders. This will move 15 CFS of water 4 miles downstream and permanently add 6 CFS of instream flow.

By implementing the proposed piping and pump station system, the Fulton Ditch will operate with minimal environmental impact, delivering the required water to shareholders while significantly enhancing streamflow in the Chewuch and Methow Rivers. This project will contribute to regional salmon recovery efforts, support sustainable irrigation practices, and create a more resilient water management system for the Methow Valley.

We are currently seeking funding to get us through 60% design and permitting.

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].

The project seeks to address low instream flow as a limiting factor for juvenile and adult salmonid rearing and migration by relocating the Fulton Ditch diversion from the Chewuch River to the Methow River and installing a piped irrigation system with a pump station. This action will move 15 CFS of water 4 miles downstream and permanently restore 6 CFS of flow to the Chewuch and Methow River, improving aquatic habitat for ESA-listed salmonids while maintaining reliable water delivery to shareholders.

Budget Request

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

Anticipated Request - SRFB (standard round)	225000
Anticipated Request - SRFB Riparian Funding	0
Anticipated Request - Monitoring Grant Funding	0
Tributary Committee - Anticipated or Actual	225000
Anticipated TOTAL Budget	600000

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

Actual, received $237,417 from SRFB in 2023
Actual, received $25,000 from the Colville Tribe
Anticipated $200,000 funding from the Columbia basin water transaction program

Project Location

Briefly describe the location of the project	This project will occur in the Chewuch and Methow River
Latitude (decimal degrees)	48.4836
Longitude (decimal degrees)	-120.1832
Project subbasin	Methow
Methow Assessment Unit(s)	Chewuch River-Pearrygin Creek
Does the proposed project span multiple assessment units?	Yes
List the additional assessment units directly impacted by this proposal.	Methow River-Thompson Creek

Reach(es) Name

Chewuch River Pearrygin 01, Methow River Thompson 07, Methow River Thompson 06, Methow River Thompson 05

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/.

Multiple reaches (provide details below)

Please detail the reach-ranking of the reaches below

Chewuch River Pearrygin 01 - Rank 3
Methow River Thompson 07 - Rank 2
Methow River Thompson 06 - Rank 1
Methow River Thompson 05 - Rank 2

Project Information

1. What species will the project benefit?

Spring Chinook | Steelhead | Bull Trout | Summer Chinook | Lamprey

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

Design, Monitoring or Assessment | Instream Flow

Instream Flow: Reporting Code

Miles of stream 'Protected' for adequate flow

Cfs (Cubic feet per second) of water conserved per year

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 proposal is a different phase of the project. The previous submission was to get us to 30% design, which we are about to achieve in a month or two. This current submission is to get us through 60% design and permitting

6. What category is the project?

Design

If applicable, what is the secondary project category?

Restoration

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)?

Within completed reach assessment

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

Flow - Summer Base Flow

Temperature - Adult Holding

Temperature - Adult Spawning

Temperature - Rearing

10. Which life stages will the proposed project address?

Adult Migration

Adult Non-Spawning (Bull Trout)

Natal Rearing (Bull Trout)

Subadult Rearing (Bull Trout)

Fry

Holding and Maturation

Smolt Outmigration

Spawning and Incubation

Summer Rearing

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

Increased flow will increase habitat quality and quantity and improve water temperatures during low flow high temperature events increasing survival of juvenile fish. This project addresses an instream structure intended to divert water into the current diversion and help proactively address thermal barriers caused by climate change and warming streams. This is a flow limited reach of the Methow, so restoring stream flows will directly address that limiting factor.

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?

affects of this project are permanent and should be achieved in less than a year. Restoring instream flow is going to result in in improved watershed processes by restoring streamflow necessary for geomorphic process.

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?

The pumphouse will eventually need to be maintained but that is the responsibility of the ditch company

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

add 15 CFS of cold water for 4 miles of stream and permanently add 6 CFS of instream flow

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

The ditch board has accepted this project and would like to move forward with the design.

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

There are no requirements for this 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)?

There is a possibility that there are member of the community that might be against removing the open air ditch. The ditch board however would like to move forward with the project and there has been landowner participation.

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

Once implemented the system would be the Ditch Companies responsibility to maintain and operate.

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 not much risk in this phase of the project. It is possible that the ditch company changes their mind and does not wish to continue moving forward with this project, however they have worked closely with us throughout this alternative assessment design phase and we have support to move forward with this project.

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

The Ditch company, shareholders, and landowners have been engaged throughout this process and will continue to be engaged throughout the process. The stakeholders of this project has had support with this project not only upgrading and improving their irrigation system but also improving fish habitat and quality.

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

This project bring money into the community through construction, contracting, and jobs. This project presents the opportunity to restore 15 CFS of flow for four miles of river in perpetuity, making this a significant and permanent benefit for the dollars invested.

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

The Ditch company has been an engaged partner and forthcoming with sharing information and helping us gather the information we need to help with our assessments and design and we expect this continued support.

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? Yes

Supporting Documents

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SRFB Manual 18 (2025)

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Contact Information

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*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	Upper Methow reassessment and design
Sponsor	Cascade Fisheries
Primary Contact	Kristen Kirkby
E-Mail Address	kristen@ccfeg.org

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 assessment and design project will fill a regional Tier 1 data gap to resurvey habitat in the Upper Methow, which includes the Methow River miles 61-80, and use existing and new data, including an updated 2D hydraulic model, to inform the development of one or more restoration concepts. Habitat data for the Upper Methow was last surveyed in 2015 and is due for resurvey to maintain the accuracy and utility of UCSRB's Prioritization model and inform new restoration design. The goal of this project is to ensure high-quality data is available to the region and sponsors, and to use these data to develop a conceptual design for restoration in a high-priority reach to improve conditions for all three ESA-listed salmonids.

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].

Cascade Fisheries (CF) will complete USFS Level 2 habitat surveys, work with UCSRB to update Reach-based Ecosystem Indicators, and develop an updated 2D hydraulic model from existing green LiDAR (2022) of the channel and LiDAR (2015) of the floodplain. Updated data and model will inform the development of conceptual restoration actions in up to two reaches within the Upper Methow, focused on Methow River Rattlesnake 04, which has a restoration rank of Tier 1, with additional reach focus guided by assessment findings. Concepts will address limiting factors including cover, off-channel and side-channel habitat, and pool quantity and quality, though these may be updated by new habitat data. Survey work will take place in 2026, modeling will begin as soon as funding is in hand, and restoration concept development will begin in summer 2026 and be completed and available for regional review and feedback in early 2027.

Budget Request

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

Anticipated Request - SRFB (standard round)	77000
Tributary Committee - Anticipated or Actual	77000
Anticipated TOTAL Budget	154000

Project Location

Briefly describe the location of the project	Upper Methow, RM 69-80
Latitude (decimal degrees)	48.65702
Longitude (decimal degrees)	-120.53075
Project subbasin	Methow
Methow Assessment Unit(s)	Methow River-Rattlesnake Creek
Does the proposed project span multiple assessment units?	Yes
List the additional assessment units directly impacted by this proposal.	Methow River-Fawn
Reach(es) Name	Methow River- Fawn 06-11; Methow River - Rattlesnake 01-04
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	Multiple reaches (provide details below)

reference the Prioritization Web Map: https://prioritization.ucsrb.org/.

Please detail the reach-ranking of the reaches below

Tier 1 – Methow River Rattlesnake 03, 04; Methow River Fawn 06, 09-11
Tier 2 – Methow River Rattlesnake 02; Methow River Fawn 07, 08
Tier 3 – Methow River Rattlesnake 01

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

Design, Monitoring or Assessment

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?

Assessment

If applicable, what is the secondary project category?

Design

Is the project eligible for Riparian Funding?

No

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)?

Upper Methow Reach Assessment

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

Cover - Wood | Off-Channel - Side-Channels | Pool Quantity & Quality

10. Which life stages will the proposed project address?

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

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

Habitat surveys and modeling will provide data to update limiting factors, REI, and Prioritization, and enable appropriate restoration actions in Upper Methow reaches, which would benefit nearly all freshwater lifestages of chinook and steelhead and subadult and adult bull trout. The conceptual restoration design included in this project will aim to improve limiting factors previously identified and updated with habitat surveys. These are likely to include cover in the form of wood, connectivity to side-channel and off-channel habitat, and the quality and quantity of pools. Implementation of a restoration design aimed at addressing those limiting factors would improve conditions for adult and juvenile chinook and steelhead, and subadult and adult bull trout.

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?

This project will update and refine our understanding of the factors currently limiting the production of our ESA-listed fishes in reaches in the Upper Methow, a critical step to informing effective restoration and protection actions. Conceptual design aimed to address these factors in at least one high-priority reach will improve existing conditions in the near term (e.g. through the placement of wood jams for cover and the removal of push-up levees for floodplain access) and enable natural habitat forming processes to continue to increase complexity over the longer term (e.g. through increased lateral channel migration, pool development, and floodplain connectivity from wood jams). Jams would be designed to catch wood moving through the system, sustaining and increasing benefits over time.

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

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

Not applicable. Maintenance and adaptive management would come into play after implementation of a project from a design. Habitat surveys will need to be redone in another decade.

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

The restoration design concepts will be informed by several layers of relevant data, including the existing Upper Columbia Reach Assessment Project Opportunities, updated habitat data and Reach-Based Ecosystem Indicators, the Methow Thermal Refugia Restoration Assessment, and landowner willingness outreach. Concepts will address identified habitat limiting factors and attempt to address these through restoration of natural process where possible. This may include areas of push-up levee removal; placement of wood jams to create immediate cover and encourage near-term and long-term channel complexity, pool development, channel migration, floodplain engagement, and wood sourcing; and riparian planting where appropriate.

Assessment Proposals

7. What type of assessment are you proposing?

Habitat assessment of instream habitat in the Upper Methow

8. Is the assessment identified on the MaDMC monitoring and data gaps list?

Yes

9. Describe how the assessment fills a regional priority and where that priority is identified.

This data gap was identified by the Upper Columbia Monitoring and Data Management Committee and approved by the Regional Technical Team. The data gap is: Reach Assessment for Methow River Fawn 06-11, Methow River Rattlesnake 01-06 (Tier 1). The RTT provided additional feedback on this data gap to qualify that only an updated habitat survey and updated hydraulic model (rather than a complete reach assessment) may be appropriate if they capture any major geomorphic changes in the reach, which we believe is the case.

10. Methods - What methods will you use in your assessment and how will they achieve your stated objective(s)?

Cascade Fisheries will use USFS level 2 habitat surveys, which have been widely used in the region by CF and other entities. Data from these surveys will inform Reach-based Ecosystem Indicators to use to update the regional Prioritization model and to update habitat limiting factors. A 2D hydraulic model will also be developed from existing LiDAR data from 2022 (green LiDAR in the channel) and 2015 (floodplain), an update from the 2006 LiDAR data used in the original Reach Assessment. Finally, at least one restoration concept will be developed from updated data. CF is interested in exploring this in Methow River - Rattlesnake 04, but updated data will drive the location of concept development.

11. Will a design result from the project? Yes

12. If yes, what level of design (e.g. conceptual, preliminary, final)? What proportion of your budget will support design? Conceptual

13. Briefly describe why SRFB funds are necessary, rather than other sources of funding.

SRFB funding is appropriate for this project as it meets an identified regional data gap and allows for two years of funding in support of both an assessment and a design. Cascade Fisheries is requesting 50% of the funding from a second source, either the Tributary Committees or the Priest Rapids Coordinating Committee.

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership? USFS and private

2. Have you secured landowner participation in or acceptance for this project? No

Please explain

CF has been working with the USFS and has that agency's support for habitat surveys and the development of restoration design. Private landowner access permission will not be required for habitat surveys, but landowner outreach would occur during the project if a project area with private landowners is selected for conceptual design for restoration.

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

None known. This may change with the selection of a project area.

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

A conceptual design developed on private land will necessitate outreach to and collaboration with upstream and downstream landowners, a good opportunity for education, outreach, and engagement.

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

None with this phase of the project. Implementation would be a later step.

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

Don't know

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

None with this phase of the project, CF has extensive experience completing habitat surveys and working with contractors to develop hydraulic models and conceptual designs.

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

Landowner outreach would occur during the project if a project area with private landowners is selected for conceptual design for restoration. CF will also send out informational flyers prior to surveys to explain our methods and goals and elicit landowner engagement.

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

This project will require and support habitat survey technicians and contractors, and, if a design is moved forward to implementation, there will be substantial economic benefit to local contractors and suppliers.

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

USFS and USBR are both supportive of this project and would like to provide assistance when more certainty makes that a possibility. CF will be working with Rio Applied Science and Engineering on hydraulic modeling and restoration concept development, and this shop has substantial experience working on design to restore natural processes and improve habitat conditions in the Upper Methow, including two SRFB-funded designs and one SRFB-funded construction 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?

Yes

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 historical factors important to understand the problems.

Valley-floor timber harvest and log drives in the upper Methow have left a legacy of diminished flood moderation, shade, temperature moderation, sources of large wood material, and high flow refuge. These effects were further amplified by removal of large wood jams and channel substrate, as well as channel straightening after the 1948 and 1972 floods. Floodplain development led to the construction of levees

(riprap and pushup), which have reduced frequency and extent of floodplain connectivity, channel migration, and the number of off-channel features, and led to channel simplification and reduced riparian vegetation (USBR 2008, YN 2015. Floodplain disconnection is not just a historical issue, as modifications to levee and riprap structures have continued to impair this reach in recent years (J. Sunderland, personal communication).

The Upper Methow provides spawning, rearing, and overwintering habitat for spring chinook and summer steelhead and feeding migrating and overwintering habitat for bull trout. The 2017 Biological Strategy identifies the Upper Methow assessment unit as the highest priority for both restoration and protection in the Methow subbasin.

Habitat surveys were conducted in 2015 and are now due for a resurvey to ensure that restoration practitioners, including Cascade Fisheries, have up-to-date data, REIs, and limiting factors from which to design effective restoration projects in this reach. Habitat surveys will update regional prioritization metrics and, along with an updated 2D hydraulic model based on 2022 and 2015 LiDAR, will inform the development of at least one conceptual design in the Upper Methow. Later phases to complete and implement the design will improve habitat conditions for all three ESA-listed fish species.

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

This assessment would cover two assessment units, Methow River – Rattlesnake Creek (RM 67-80) and Methow River – Fawn Creek (RM61-67).

The Upper Columbia Salmon Recovery Board's Prioritization model designates Methow River – Rattlesnake Creek as a medium priority for spring chinook summer and winter rearing, and steelhead spawning, fry colonization, and summer and winter rearing. This reach is a low priority for spring chinook adult migration, holding, spawning, fry colonization, and smolt emigration; and steelhead adult migration. This AU is tier 1 for restoration for spring chinook and tier 2 for restoration for steelhead and bull trout.

Methow River – Fawn Creek is designated medium priority for spring chinook spawning, fry colonization, summer and winter rearing; steelhead fry colonization, summer and winter rearing; and bull trout adult non-spawning. It's a low priority for spring chinook adult migration, holding, smolt emigration; steelhead adult migration, spawning, smolt emigration; and bull trout adult migration, subadult rearing. This AU is tier 1 for restoration for spring chinook and steelhead, and tier 2 for restoration for bull trout.

The 2017 Biological Strategy identifies the Upper Methow assessment unit as the highest priority for both restoration and protection in the Methow subbasin. Ecological Concerns include (top 5):
1. Water Quantity (Decreased Water Quantity)
2. Channel Structure and Form (Bed and Channel Form)
3. Peripheral and Transitional Habitats (Side channel and Wetland Habitat Conditions)
4. Channel Structure and Form (Instream Structural Complexity)
5. Riparian Condition (Riparian Condition)

Limiting factors vary across reaches within the project area, but nearly all reaches consistently have limiting factors of cover – wood, floodplain connectivity, off-channel and side-channel habitat, and riparian-related limiting factors. Most reaches also have a limiting factor of pool quantity and quality.

Habitat surveys will update Reach-based Ecosystem Indicators to either support or modify these limiting factors and so inform effective restoration projects. Cascade Fisheries will look at developing a restoration concept in Rattlesnake 04, a tier-1 restoration reach, to address limiting factors including cover-wood, pool quantity and quality, off-channel and side-channel habitat, and various riparian factors. Other reaches will also be considered after habitat surveys are complete and a new hydraulic model is developed.

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 and future condition. Include which species and life stages will benefit from the outcome, and the time of year the benefits will be realized.

This assessment and design project will fill a regional Tier 1 data gap to resurvey habitat data in the Upper Methow, which includes Methow River miles 61-80, and use existing and new data to inform the development of one or more restoration concepts. Habitat data for the Upper Methow was last surveyed in 2015 and is due for resurvey to maintain the accuracy and utility of UCSRB's Prioritization model and inform new restoration design. The goal of this project is to ensure high-quality data is available to the region and use these data, along with an updated 2D hydraulic model, to develop a conceptual design for restoration in a high-priority reach to improve conditions for all three ESA-listed salmonids.

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).

Cascade Fisheries will complete USFS Level 2 habitat surveys, work with UCSRB to update Reach-based Ecosystem Indicators, and develop an updated 2D hydraulic model from existing LiDAR data. Updated data and model will inform the development of conceptual restoration actions in up to two reaches within the Upper Methow, focused on Methow River Rattlesnake 04, which has a restoration rank of Tier 1. Concepts will address limiting factors including cover, off-channel and side-channel habitat, and pool quantity and quality, though these may be updated by new habitat data. Survey work will take place in 2026, modeling will begin as soon as funding is in hand, and restoration concept development will begin in summer 2026 and be completed and available for regional review and feedback in early 2027.

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.

1. Resurvey in-channel habitat. CF will complete USFS level 2 surveys to capture habitat conditions and develop applicable Reach-based Ecosystem Indicators from data. These data will be shared with UCSRB to update the Prioritization model and available to any sponsors or other entities. Surveys will take place in 2026.

2. Develop 2D hydraulic model for the Upper Methow. Rio Applied Science and Engineering (Rio ASE) will stitch together 2022 green LiDAR and 2015 LiDAR (wider floodplain coverage than the green LiDAR) and develop a 2D hydraulic model for the reach. The Upper Methow Reach Assessment (UMRA) used data from 2006. This will be completed in 2026.

3. Restoration concept development. CF will work with Rio ASE to look at existing project ideas from UMRA along with updated habitat data, REIs, 2D hydraulic modeling, the Methow Thermal Refugia Restoration Assessment, and other relevant sources to develop at least one restoration concept for a reach within the Upper Methow. CF will focus on Methow River Rattlesnake 04 (RM75-77) but will also look downstream to reaches such as Methow River – Rattlesnake 01 (RM 69-7) and/or other reaches that rise to the top with updated data. This work will take place in late 2026 into 2027.

4. Landowner willingness assessment. CF will undertake outreach to private landowners for any concept areas including private lands. This will occur in 2026 and 2027.

6. What are the assumptions and physical constraints that could impact whether you achieve your objectives? Assumptions and constraints 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?

Concepts cannot be developed until data and modeling are updated. If these actions were delayed, so too would be design. Only unforeseen events such as fire closures or other similar issues would limit this work. Landowner outreach will provide information on project feasibility for subsequent phases of design, and may limit project elements. One project area is USFS-owned, which has already stated general support

for restoration design development, and CF has extensive experience working with private landowners to enable projects.

7. How have lessons learned from completed projects or monitoring studies informed this projects?

CF has a solid background of experience working on a diversity of projects from assessment and design through construction, including relevant project types such as extensive habitat surveys, side channel connection and enhancement, large wood installation, and riparian plantings. The YN reach assessment and other related documents will provide a foundation for the project, and CF's data collection will ensure appropriate design elements. Rio ASE also has worked extensively in the Upper Methow with both modeling and design.

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

CF met with the Regional Technical Team to ensure an appropriate approach for this data gap and heard support for our intent to complete Level 2 surveys with additional hydraulic modeling and data review. If additional substantive changes are observed on the landscape that are not captured by habitat surveys or modeling, CF will work to appropriately document these changes. The UMRA provides a solid foundation for this project to update habitat data and use these to develop restoration concepts.

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

CF met with project partners including the USFS, the USBR, and the RTT during the development of this project. Federal partners stated support for the project and promised technical and other support when they're able to provide these resources. The RTT provided feedback on the approach and supported level 2 habitat surveys and updated hydraulic modeling with the condition that CF looks to identify any substantive changes to the reach that would not be captured by these methods and address these.

10. Does your project address or accommodate the anticipated effects of climate change? How will your project be climate resilient given future conditions? How will your project increase species and habitat adaptability?

NorWeST models suggest that the Upper Methow will continue to be a stronghold for cold water in the Upper Columbia in the coming decades. Mean August stream temperatures are projected to maintain under 16deg C for all of the reaches in the Upper Methow. Beechie and others (2013) found that restoring floodplain connectivity was one of the activities most likely to increase habitat diversity and population resilience to climate change. Re-establishing lateral connectivity can store flood waters, provide thermal and velocity refugia, and may increase the length of hyporheic flow paths, cooling downstream temperatures. Conceptual design will look at project elements such as these, as well as reviewing the Methow Thermal Refugia Restoration Assessment and considering methods to protect and enhance existing cold water patches.

This project does not include implementation but is a necessary step on the way to implementation of restoration. Project design that focuses on increasing instream, riparian, and floodplain habitat diversity will enable future work to provide a broader range of conditions for multiple life stages of salmonids in support of increased resiliency as waters warm and patterns in the hydrograph shift. Project elements such as wood structures would provide immediate benefits through cover and will support the development of habitat heterogeneity over time. Levee removal would also restore some of the natural physical processes that can create habitat diversity over time.

Beechie T, H Imaki, J Greene, A Wade, H Wu, G Pess, P Roni, J Kimball, J Stanford, P Kiffney, and N Mantua. Restoring Salmon Habitat for a Changing Climate. 2013. River Research and Applications 29:8.

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

Kristen Kirkby, project manager, has over a decade of experience in fisheries ecology and 9 years of experience managing small and large restoration and design projects including side channel and creek restoration and enhancement, habitat surveys, barrier assessments and replacements, and riparian restoration. Kristen is supported in all aspects of project management by CF's experienced team. Jason Lundgren, the Director of CF, has over a decade of project management experience in salmon recovery

including assessments, design, and construction projects. CF has implemented USFS level 2 surveys extensively throughout the Upper Columbia, effectively and efficiently sharing data with UCSRB to update Prioritization, and providing these data to interested partners, as well. CF and Rio ASE have also used worked with the UMRA and other existing data to develop a restoration project in the Upper Methow that's currently in the final phases of design and fully funded through the SRFB and Tributary Committees for implementation in 2026.

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

No

Supporting Documents

Upper Columbia Process Guide 2025

SRFB Manual 18 (2025)

RCO Application Resources (2025)

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)

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

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

Project Title	Upper Methow - Salmon Cassel Final Design and Implementation
Sponsor	Methow Salmon Recovery Foundation
Primary Contact	Brian Fisher
E-Mail Address	brian@methowsalmon.org

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 would complete final designs and implementation for the Upper Methow-Salmon Cassel project. The project will to create thermally and geomorphically stable pools and backwater habitats to provide refugia and cover in the Upper Methow-Fawn reach on two MSRF-owned parcels and adjacent private properties with willing landowners. This project builds on preliminary design developed under RCO 23-1276. The project will build 4-7 low-profile habitat structures to scour pools and provide complex cover adjacent to hyporheic cold groundwater, and create 2 perennial alcoves along seasonally connected floodplain channels. The project will produce final designs and implement habitat restoration actions that provide cover and complexity for ESA-listed Upper Columbia Spring Chinook Salmon, UCR Steelhead, and Bull Trout in and around these sources of cold- water.

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].

The project seeks to provide high quality rearing habitat adjacent to identified thermal refugia by constructing 4-7 instream habitat structures and 2 perennial alcoves at the lower end of seasonally connected side channels. The project will increase fish access to at least 2000 square feet of thermal refuge and provide at least 4000 square feet of complex cover upon implementation.

Budget Request

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

Anticipated Request - SRFB (standard round)	$600,000
Tributary Committee - Anticipated or Actual	$200,000
Anticipated TOTAL Budget	$800,000

Project Location

Briefly describe the location of the project	The project will occur in the Methow River between RM 61.75 and 62.7.
Latitude (decimal degrees)	48.5513
Longitude (decimal degrees)	-120.333
Project subbasin	Methow
Methow Assessment Unit(s)	Methow River-Fawn Creek
Does the proposed project span multiple assessment units?	No
Reach(es) Name	Methow River Fawn 6 & 7
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/.	Multiple reaches (provide details below)

Please detail the reach-ranking of the reaches below

Methow River Fawn 6 is Reach Rank 1

Methow River Fawn 7 is Reach 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

Design, Monitoring or Assessment

Instream Habitat (Includes Floodplain & Off-Channel Reconnection)

Water Quality

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

Water Quality: Reporting Code

Water quality limitation treated

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 seeks to finalize and implement designs developed under design project 23-1276 (Upper Methow Preliminary Design).

6. What category is the project?

Restoration

If applicable, what is the secondary project category?

Design

Is the project eligible for Riparian Funding?

No

Design and Restoration Proposals

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

Final Design | Construction

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)?

Upper Methow Reach Assessment - December 2015

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

Cover - Wood | Off-Channel - Side-Channels | Temperature - Rearing

10. Which life stages will the proposed project address?

Subadult Rearing (Bull Trout) | 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?

This project seeks to increase rearing capacity within the project reach by increasing the quantity of deep pools with complex cover and access to emerging groundwater.
In this reach of the Methow River, background density of juvenile spring Chinook and steelhead is very low in areas without complex structure and scour pool habitat. Instream wood structures are designed to scour pools that support higher rearing densities of these 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?

Project features are designed to fit within the geomorphic context of the reach by mimicking natural structures. Channel complexity and instream wood levels in this reach are limited by more than a century of logging, vegetation clearing, road building and channelization. This project will mimic aspects of natural wood jams that would be expected under more natural stream and watershed processes.

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

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

This project is designed to be self-maintaining. Wood structures are low-profile and pile secured so they are stable and maintain scour pools. Side channel cuts are designed to limit the potential for both siltation and capture.

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

Build 4-6 instream wood structures to promote pool scour and provide complex hiding cover. Construct 2 perennial backwater alcoves at the lower end of seasonally active side channels that connect with cold groundwater. Add cover wood in alcove habitats to increase habitat capacity within these side-channels.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership? Private, DNR State Owned Aquatic Lands

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

Please explain

Primary activities are on land owned by Methow Salmon Recovery Foundation

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

None identified

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 designed to meet FEMA No-Rise requirements and not increase chances of channel avulsions. Wood structures are consistent with existing recreational hazards in the project area.

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

This project is designed to be self-maintaining with out having extensive maintenance and management requirements. Structures are designed to break apart if they fail to minimize risk and concerns to downstream landowners.

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

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

Project structures are designed to be relatively low risk. Wood structures are designed to be consistent with existing recreational hazards in the project area, and to break apart if they are undermined. Low profile structures are designed to not increase flood risks.

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

No specific public outreach is planned as part of this project. The project will seek to employ local and regional contractors where possible to help build support for salmon recovery efforts within our community.

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

The project will favor local and regional contractors where practical. Projects that employ local contractors support local economic communities, because local contractors represent local jobs and tend to spend more money within the local and regional economy.

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

This project was designed under a SRFB grant with an experienced engineering team from Anchor QEA.

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

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Contact Information

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

Project Title	Sugar Reach Riparian Restoration
Sponsor	Methow Salmon Recovery Foundation
Primary Contact	Brian Fisher
E-Mail Address	brian@methowsalmon.org

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 will plant and maintain riparian plantings at four sites in the Sugar Reach.

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 will plant riparian and wetland parts of the project zone at three sites in the Sugar Project Reach, and maintain plantings at an additional site. The sites include Sugar Left (0.2 acres), Sugar Right (7 acres) and WDFW Floodplain Phase 2 (0.8 acres), and maintain riparian plantings installed fall 2024 at the Eagle Rocks site (1.2 acres).

Budget Request

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

Anticipated Request - SRFB Riparian Funding 360000

Anticipated TOTAL Budget 360000

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

This project will support installation and maintenance of riparian plantings connected with instream complexity projects built with secured funding through SRFB, HCP Tributary Committees, Washington Department of Ecology Floodplains by Design, PRCC, BPA and Bureau of Reclamation.

Project Location

Briefly describe the location of the project Methow River between RM 41 and RM 46

Latitude (decimal degrees) 48.380

Longitude (decimal degrees) -120.127

Project subbasin Methow

Methow Assessment Unit(s) Methow River-Thompson Creek

Does the proposed project span multiple assessment units? No

Reach(es) Name Methow Thompson 1-4

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/. Multiple reaches (provide details below)

Please detail the reach-ranking of the reaches below

Methow Thompson Reach Rank 1
Methow Thompson Reach Rank 3
Methow Thompson Reach Rank 3
Methow Thompson Reach Rank 1

Project Information

1. What species will the project benefit? Spring Chinook, Steelhead, Bull Trout, Summer Chinook

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

Riparian Habitat

Riparian Habitat: Reporting Code

Total riparian miles streambank treated

Total riparian acres treated

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.)

Acquisitions, Design and Instream Restoration portions of this project have received funding from SRFB, Floodplains by Design, BPA, PRCC, and Tributary Committee processes.

6. What category is the project?

Restoration

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?

Construction

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)?

Middle Methow Reach Assessment August 2010

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

Riparian

Riparian - Canopy Cover

Riparian - Structure

10. Which life stages will the proposed project address?

Adult Migration

Adult Non-Spawning (Bull Trout)

Fry

Holding and Maturation

Smolt Outmigration

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?

This project will plant 8.0 acres of riparian areas along priority areas of the Methow River in connection with a set of instream and floodplain habitat restoration projects. Riparian stands are critical for supporting aquatic food webs and supply nutrients and materials that build and maintain aquatic habitat. Riparian forests support nutrient cycling, support sediment budgets, buffer overland flows and contribute coarse organic matter. Salmon productivity and capacity is tied to the riparian food webs supported by riparian forests.

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?

Riparian forests play a key role in supporting natural stream and watershed processes. Plantings will be designed to mimic surrounding naturalized forest stands and are expected to naturalize.

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

10-25 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?

This project will maintain 9.2 acres of riparian plantings fro 5 years. In our experience, riparian plantings generally require 3-5 years of maintenance, including supplemental water, mulch, weed control, and browse protection to become self-sufficient. Once they are self-sufficient, plantings will become the responsibility of the underlying landowner.

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

Plantings include a combination of willow trenches, streamside, and riparian floodplain plantings. Willow trenches and streamside plantings are proposed in areas where the plants are expected to quickly establish connection with groundwater so are not expected to need maintenance once installed.
Native riparian trees and shrubs, including 40% black cottonwood trees and flowering riparian shrubs, will be planted on minimum 10 foot centers in the floodplain riparian plantings. These plantings will be mulched with woodchips to conserve moisture, and will receive supplemental irrigation for up to 5 years. Browse protection will be accomplished through a combination of individual cages and planting enclosure fences.

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.

While this project does not include in-stream components, it is tied to a larger project (with separate funding) that does include in-stream components. In-stream portions of the larger project include wood habitat structures, side channel connections and levee removal.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. What is the landownership? Private, WDFW, MSRF

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

Please explain

MSRF has been working with the landowners in the project area to develop this project over the past 5 years, and has secured landowner acknowledgements or agreements with the landowners.

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

Landowner requirements have had significant effects on project design, including what areas are included in this project request. No significant limitations are in place that cover the riparian planting zones included as part of the project.

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

The riparian plantings are not expected to raise concerns with any interest group.

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

MSRF will have responsibility to manage and maintain the project through the monitoring and maintenance phase. Once the plantings are established and self-sufficient, they will be the responsibility of the underlying landowners.

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 largest risk of the riparian project is the potential failure of plantings to become self-sufficient. This will be mitigated by securing 5 years of maintenance and using native plants adapted to our climate and landscape conditions.

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

No outreach is proposed as part of the riparian project. However, the associated implementation projects have an outreach component, including public access in specific locations.
Establishing riparian forest stands at the Sugar Right project site is expected to increase recreational use of the floodplain at this site.

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

This project will use locally grown and sourced plant material and local labor. Using local materials and labor supports the local economy as the money will be spent within the local economy.

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

MSRF has collaborated with numerous partners in designing, developing and implementing the larger projects, including the Bureau of Reclamation, design firms (Wolf Water Resources, Lichen Land and Water, InterFluve Inc), Floodplains by Design, Tributary Committees, PRCC, USFWS, and BPA. We will be working with native planting contractors (Methow Natives and Plantas Nativas) to plant and maintain the

riparian 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)