



## Contact Information

# 2024 Upper Columbia Regional Project Pre-Application

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

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

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

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

|                        |  |
|------------------------|--|
| <b>Project Title</b>   | Methow at Goat Creek floodplain reconnection |
| <b>Sponsor</b>         | Cascade Fisheries                            |
| <b>Primary Contact</b> | Kristen Kirkby                               |
| <b>E-Mail Address</b>  | kristen@ccfeg.org                            |

## Budget Request

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

**Anticipated Request - SRFB (standard round)** 500000

**Anticipated Request - Tributary Committee** 500000

**Anticipated TOTAL Budget** 1000000

## Project Location

**Briefly describe the location of the project** The project will occur on the Methow River from approximately RM65-RM66

**Latitude (decimal degrees)** 48.572312

**Longitude (decimal degrees)** -120.382825

**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 08 and 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/>.**

Multiple reaches (provide details below)

**Please detail the reach-ranking of the reaches below**

Methow River Fawn 08 - Reach Rank 2

Methow River Fawn 09 - Reach Rank 1

## Project Information

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

This project seeks to address limiting factors of cover, floodplain connectivity, off-channel habitat, and pool quantity and quality for ESA-listed fish by implementing a restoration design focused on levee removal and the placement of instream mainstem and off-channel wood. The design includes selective excavation to reconnect high-flow channels along 0.5mi of levee, mainstem wood structures along roughly 0.75mi of river, and high-flow channel wood structures. Implementation would occur in 2025 or 2026. These reaches of the Methow are used by spring chinook and steelhead spawning and rearing, and bull trout feeding, migrating, and overwintering.

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

Spring Chinook

Steelhead

Bull Trout

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

Instream Habitat (Includes Floodplain & Off-Channel Reconnection)

**Instream Habitat: Reporting Code**

Total miles of instream habitat treated

Acres of channel/off-channel connected or added

Number of structures placed in channel

Pools created through channel structure placement

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

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

6. What category is the project?

Is the project eligible for Riparian Funding?

## Design and Restoration Proposals

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

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)?

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

10. Which life stages will the proposed project address?

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

This project would improve floodplain connectivity and expand high-flow off-channel habitat through targeted levee removal along 0.6mi of river, improving habitat quality and increasing habitat quantity for rearing juvenile fish and spawning, feeding, and migrating adults. Instream wood placement would create pools, provide cover, increase floodplain connection, and encourage lateral channel migration in both high-flow channels and the mainstem Methow, creating immediate habitat improvement and restoring or encouraging some of the natural processes that can create and maintain habitat in future. These actions would address some of the limiting factors identified for the two project reaches, Methow Fawn 08 and 09, including the following limiting factors that are currently rated as unacceptable in either one or both reaches: floodplain connectivity, off-channel habitat, and cover-wood. These reaches of the Methow are used by nearly all lifestages of spring chinook and steelhead, as well as by subadult and adult bull trout. This AU is ranked 1 for restoration for both steelhead and spring chinook, and the reaches within this project area are ranked 1 and 2 under prioritization.

**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 selectively remove areas of a levee that currently blocks floodplain connectivity and inundation of off-channel habitat along over a half-mile of the Methow River. The placement of large wood structures will also promote pool formation, lateral channel migration, and floodplain engagement. These actions will promote and restore natural processes that create and maintain habitat in this reach.

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

1-10 years

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

50+ years

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

No maintenance is planned, but the project will be assessed and monitored after implementation. If project goals are no longer being met, adaptive management will be used to modify the project to ensure habitat gain.

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

The methods for this restoration project will be selective excavation and removal of sections of 0.5mi of existing levees to improve floodplain connectivity and increase off-channel habitat; and placement of large wood structures in roughly 0.75mi of the mainstem Methow and in high-flow channels across the Goat Creek fan to provide cover, create pools, increase floodplain connection, and encourage lateral migration. The current design includes selective excavation at 12 high-flow channels across the floodplain, 3 apex jams, 8 bank-attached jams, 6 4-log structures, 66 single log structures, and 60 whole tree structures.

**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.**

n/a

## 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 primary landowners for the project, the Foster Homeowners Association, own the majority of the Goat Creek fan where levee removal would take place and are supportive of the current design. Another independent landowner with a conservation easement has also committed support for levee removal

restoration, along with the Methow Conservancy, who holds the CE.

**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**

Methow Trails has an easement for the Methow Community Trail, and CF has been worked actively to identify their needs for a restoration design, which focus on improvements to existing and potential future maintenance challenges. Methow Trails has expressed support for restoration and we anticipate improvements to current trail maintenance challenges during high-flow periods. The project will incorporate several hardened trail segments where appropriate, the trail crossing structure preferred by Methow Trails.

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

No, the project should reduce some maintenance challenges on the community trail and otherwise won't impact private landowners or public trail users and will act as an educational opportunity to have a restoration project on display along a heavily used public trail.

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

Methow Trails will continue to be responsible for maintenance of the trail through the project area. CF will work with current and future landowners to address any adaptive management needs from project actions.

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

No

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

We do not anticipate a large risk of failure for this project. Landowners have been supportive of restoration throughout the assessment and design phases. The design addresses risk associated with the placement of mainstem instream wood through the design of structures to withstand a 100-year flood.

The Yakama Nation commissioned an assessment of the potential risk of an avulsion through the Suspension Creek area at the left-hand bend in the river at the bottom of our project reach on river right. Questions came up within the RTT about the project effects on this location. The majority of proposed wood structures are intended to encourage flow to leave the mainstem and disperse across the floodplain through high-flow channels on river left. Selective excavation will also encourage this. We anticipate that this action will reduce some of the velocity and shear stress in the mainstem by reactivating the river left floodplain, which should, if anything, remove some pressure from the area of interest on river right identified in the YN report. Hydraulic modeling does show that the mean and standard deviation of velocity in modeled cells is lower for proposed conditions, and limited reduction in the area of higher velocity is visible in the model results for the outside of that bend. While the project is perhaps unlikely to create a geomorphically significant decrease in the potential for avulsion at this location, an increase is not anticipated.

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

This project has provided CF the opportunity to work with a large homeowners association, and we have made several presentations to this group about native fish status, decline, recovery, and habitat restoration. The location of the project along the Methow Community Trail will also provide opportunity for community education and engagement, possibly through the placement of educational signs.

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

Construction contracts will provide economic benefit to both the contractor and the community. Trail

infrastructure improvements will also benefit Methow Trails, a community nonprofit, and the large trails user group.

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

The USBR has provided both in-kind support in the form of survey and direct financial support for a significant portion of the conceptual and final design of this project. Site assessment and hydraulic model development was supported by the USBR, and they will continue to provide technical support where needed. The Methow Conservancy, which holds a conservation easement within the project area, has also been a strong partner in this project, providing funding (RCO) for the conceptual design of this project.

## **Optional Section - Preparation for PRISM**

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

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

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.**

A history of levee building, riparian clearing, and stream cleaning have degraded instream, riparian, and floodplain habitat quality and limited the capacity for natural processes to create and maintain high-quality habitat in these reaches of the Methow River. Push-up levees and spoils piles were built throughout the project area to prevent flood inundation, limiting the river's ability to engage with historical high-flow channels that would spread high flows across the floodplain and constraining lateral migration. Riparian clearing and stream cleaning up through the 1970s reduced instream complexity, resulting in a legacy of homogeneity with long riffles and glides, limited shallow pools, and little cover. These conditions limit not only the current productivity of these reaches, which see several life stages of all three listed fish species, but also restrict future habitat development, as well. This project is needed to restore some of the natural physical processes that will create and maintain improved conditions for salmonids.

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

This project will work in a Tier 1 AU to address several limiting factors identified for these reaches based on Reach-based Ecosystem Indicators. Instream wood structures will provide complexity in the form of direct cover as well as through the creation of pools. Cover - Wood is identified as unacceptable in both Reach 08 and 09. Pool Quantity and Quality is identified as at-risk in both reaches. Selective levee removal will also allow the river to reengage with its floodplain, providing flow refuge, improved water quality, cover, and food resources to rearing juvenile fish. Off-Channel-Floodplain is identified as unacceptable in Reach 08 and at-risk in Reach 09. These reaches of the Methow provide habitat for several life stages of each of our ESA-listed fish species. Spring chinook and steelhead spawn, rear (summer and winter), migrate, and hold in these reaches. Bull trout use these reaches for subadult rearing and adult feeding, migrating, and overwintering. This project should improve conditions for both juvenile and adult fish, creating cover in the form of wood structures and deep pools and improving floodplain access during high flows.

### **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.**

The goal of this project is to develop a design to address some of the limiting factors identified for the two project reaches, improving habitat conditions for nearly all lifestages of spring chinook and steelhead, as well as for subadult and adult bull trout. This project would improve floodplain connectivity and expand high-flow off-channel habitat through targeted levee removal along 0.6mi of river, improving habitat quality

and increasing habitat quantity for juvenile and adult fish. Instream wood placement would create pools, provide cover, increase floodplain connection, and encourage lateral channel migration in both high-flow channels and the mainstem Methow, creating immediate habitat improvement and restoring or encouraging some of the natural processes that will create and maintain habitat in future.

**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).**

This project will implement a restoration design to restore some natural process and improve instream and floodplain habitat conditions along 0.8mi of the Methow River. The design identifies selective levee removal along 0.6mi of the river as well as the placement of wood jams in the mainstem Methow and high-flow channels in the floodplain. Implementation is anticipated in 2025 or 2026. The current design includes selective excavation at 12 high-flow channels across the floodplain, 3 apex jams, 8 bank-attached jams, 6 4-log structures, 66 single log structures, and 60 whole tree structures.

**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.**

Construction: This design will be implemented in 2025 or 2026. This project will be managed by Cascade Fisheries with construction oversight from Rio Applied Science and Engineering and continued technical assistance from the USBR.

**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?**

Landowners have been supportive of the project thus far, and although we don't anticipate any roadblocks from landowners, unexpected changes in landownership can always arise. CF and Rio ASE are both experienced designing and implementing projects in the region, and will be dedicated to working with landowners, stakeholders, and regulatory agencies to move this project forward successfully.

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

CF has successfully managed many design and construction projects in the region. We have developed a good working relationship with landowners and other involved parties such as the Methow Conservancy and Methow Trails. The USBR provided survey and technical assistance that informed the development of this design and will continue to be involved in the project moving forward.

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

The current design was selected and advanced to provide the most proposed benefit. A smaller-scale project of just selective levee removal was also considered; however, landowners have thus far indicated support to move forward with the larger-scale project that includes instream wood structures.

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

The primary landowners for the project, the Foster Homeowners Association, own the majority of the Goat Creek fan where levee removal would take place and, throughout many meetings and presentations, have remained supportive of moving forward with design. Another independent landowner with a conservation easement has also committed support for levee removal restoration, along with the Methow Conservancy, who holds the CE. CF has also reached out to Methow Trails to identify current maintenance issues for the community trail that runs through the project area and ensure that any needs are being met in the design process. Methow Trails is supportive of moving forward with the design, which includes several hardened fords (MT's preferred crossing structure) and work that will reduce current patterns of erosion along one section of trail.

**10. Does your project address or accommodate the anticipated effects of climate change?**

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 these reaches. 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.

Increasing instream, riparian, and floodplain habitat diversity will 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. Wood structures will provide immediate benefits through cover and will support the development of habitat heterogeneity over time. Levee removal will 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.**

CF has developed and implemented a number of restoration projects in our region to improve instream complexity and floodplain engagement and has worked with Rio ASE on several of these.

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

No

## Supporting Documents

[Upper Columbia Process Guide 2024](#)

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

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





## Contact Information

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

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

|                        |  |
|------------------------|--|
| <b>Project Title</b>   | Habitat Connectivity Improvement @ Twisp Ponds |
| <b>Sponsor</b>         | MSRF   |
| <b>Primary Contact</b> | Jessica Goldberg                               |
| <b>E-Mail Address</b>  | jessica@methowsalmon.org                       |

## Budget Request

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

**Anticipated Request - SRFB (standard round)** \$63,750

**Anticipated Request - Tributary Committee** \$11,250

**Anticipated TOTAL Budget** \$75,000

## Project Location

**Briefly describe the location of the project**

This project is located in the Twisp River Lower 02 reach and within Reach T2a of the 2010 Lower Twisp River Reach Assessment. The project extends from approximately RM 1.0 - 1.5 and includes approximately 27 acres of adjacent riparian and floodplain habitat and a series of ponds and channels that have been the site of on-going restoration since 2002.

**Latitude (decimal degrees)** 48.3673

|  |                      |
|--|----------------------|
| Longitude (decimal degrees)  | -120.1396            |
| Project subbasin   | Methow               |
| Methow Assessment Unit(s)  | Lower Twisp River    |
| Does the proposed project span multiple assessment units?  | No                   |
| Reach(es) Name   | Twisp River Lower 02 |
| 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: <a href="https://prioritization.ucsr.org/">https://prioritization.ucsr.org/</a> . | Rank 2               |

## Project Information

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

The project will remove barriers that impede water movement through the system at an off-channel site in lower Twisp River between river miles 1.0-1.5. The project site is located at Methow Salmon Recovery Foundation's Twisp Ponds restoration site, an off-channel system consisting of five ponds and channels, which provides high quality spawning and rearing habitat for UCR spring chinook, UCR steelhead, and other species.

Project goals:

- 1) Remove barriers that impede water movement through the system which cause downstream dewatering, juvenile stranding, and mortality.
- 2) Develop an adaptive management plan with action triggers to address barriers to flow reductions leading to stranding and mortality.

Project objectives:

- 1) Increase culvert size in two locations at the upstream end of the site to reduce the potential for flow interruption due to accumulated debris or beaver damming activities.
- 2) Create a secondary overflow channel near the top of the site and leading to Pond 1 (the uppermost pond) to ensure flow is maintained through the system in the event of a debris blockage in the primary channel.

Plant approximately 0.3 acres of riparian buffer adjacent to this secondary channel and maintain for 3-5 years until established.

- 3) Develop and implement an adaptive management plan with action triggers to address flow barriers leading to stranding and mortality.
- 4) Reduce periods of elevated water temperature in the off-channel habitat by removing the barriers that impede water movement.

Twisp Ponds provides off-channel rearing habitat in an otherwise constrained reach of the lower Twisp

River. Target fish species, including spring Chinook, steelhead, and coho rear in the network of connected side channels and pond habitats. Since the site was acquired by MSRF in 2002, a series of restoration activities have improved connectivity between the Twisp River and the series of five ponds and channels that make up the site. However, site monitoring has identified periods of dewatering due to undersized culverts in the upper channel reach that are likely a result of the initial project design. Removing flow obstructions will increase high quality rearing habitat in both deep-water pool habitat and higher velocity channel habitat to benefit ESA listed fish species throughout the Twisp Ponds site.

Currently the surface water supply to the ponds and channels is provided by a surface water diversion at RM 1.5. Surface water flows are routed through a narrow single thread channel from the diversion to the uppermost pond. Connections between each of the remaining ponds, and to the Twisp River, are also through relatively narrow single thread channels. There are currently two outflow channels to the mainstem Twisp River at the downstream end of the project site.

The greatest risk to flows occurs in the upper canal section between the diversion and the first pond. Debris jams in this segment can backwater the diversion, reducing flow conveyance to the remainder of the pond and channel system. To decrease the potential for flow interruption, the project proposes to remove the remaining culverts that routinely become impacted by beaver dams, and replace them with bridges or larger natural bed culverts as outlined in Project Objectives.

A secondary channel will also be created below the headgate and leading to Pond 1 (the uppermost pond) to reduce the potential that debris jams could result in flow loss downstream through the system. This secondary channel will be slightly perched to engage as an overflow channel, only becoming wetted in the event of a debris jam in the primary channel. Riparian plantings will be implemented adjacent to the secondary channel.

The Twisp Ponds site has provided ideal habitat for beavers to seasonally occupy portions of the project area. The current undersized culverts and relatively simple channels have created pinch points that can easily be blocked by beaver activities. Each of the proposed actions would further support the coexistence of fish and beavers at this site.

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

- Spring Chinook
- Steelhead
- Bull Trout
- coho, Pacific lamprey

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

Instream Habitat (Includes Floodplain & Off-Channel Reconnection)

**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

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

Don't Know

**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?

No

## 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)?

Yes. Lower Twisp River Reach Assessment, June 2010.  
Prepared by Interfluve for Yakama Nation Fisheries Program

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

Entrainment/Stranding

Off-Channel - Floodplain

Off-Channel - Side-Channels

Riparian

Riparian - Canopy Cover

Riparian - Disturbance

Riparian - Structure

10. Which life stages will the proposed project address?

Subadult Rearing (Bull Trout)

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 project will result in increased summer and winter juvenile salmonid survival by increasing flow between ponds and channels, thereby reducing juvenile stranding and mortality. The project increases the site's capacity to support rearing juvenile fish and distribution of juveniles and adults through increased water flow, improving access, and increasing spawning habitat.

Each of the proposed actions would create opportunities for increased use by resident fish species and non-target species, such as Pacific lamprey and coho salmon. The project currently supports a robust population of deer, bear, beavers, river otters, water birds, and birds of prey. The actions proposed by this project will increase the complexity of habitat for each of these species and support the coexistence of target fish species and beavers at this site.

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 be designed to be consistent with natural processes and site and reach scale geomorphology. Channel modifications will provide continued passage of water in the event of channel blockages from downed woody materials and damming by beavers. Increasing the redundancy of connecting channels will allow beavers to remain in the system where they provide temporary flooding effects, natural wood recruitment, and enhance the dynamic nature of the system.

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

Less than or equal to 1 year

1-10 years

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

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?**

Development of an adaptive management plan for the site is a key component of this project. New riparian plantings will be maintained for at least five years. Downed materials or beaver dams may need to be removed on a seasonal basis if they are negatively impacting base flows leading to fish stranding. Debris and dam removal will not negatively impact beavers, as they have ample deep-water habitat within the system and minimal risk of predation. Because the majority of the project is on property where Methow Salmon Recovery Foundation holds an access easement or owns the property outright, access for maintenance is assured.

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

Replacing the undersized culverts and providing an overflow channel in the upper channel will decrease the potential that seasonal accumulations of debris or beaver damming result in a reduction of flow to downstream ponds and channel reaches.

## 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 headgate for the system, the culverts proposed for removal, and excavation of a secondary channel are located on an adjacent private property upstream of MSRF property. MSRF holds an easement to access and maintain the headgate and has support from the landowner for the proposed restoration efforts.

**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**

Actions will be designed to decrease risk to the existing infrastructure within the site. WDFW currently utilizes an access road through the property to maintain a rotary screw trap and PIT antenna system on the adjacent mainstem Twisp River. Site access for WDFW employees and infrastructure will be maintained in project design. Removal of the culverts in the intake channel will be replaced by a bridge or natural bed culverts to maintain vehicle access to the dike and headgate. MSRF maintains a trail system open to the public on the downstream end of the property, which will not be impacted by project implementation.

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

Project design will not impact current recreational trail access to the site, will maintain WDFW's site access to their screw trap, and MSRF will consult with adjacent landowners on site improvements prior to construction. There is no impact to recreational river users.

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

The Methow Salmon Recovery Foundation and the Methow Beaver Project will be responsible for adaptive maintenance of the project and monitoring for channel obstructions.

**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.**

This project carries a very low risk of failure. MSRF has successfully maintained the ponds site for more than 20 years. The proposed actions are expected to reduce management needs by providing increased flow path redundancy. By owning much of the underlying property, much of the risk associated with changing landowner requirements is mitigated.

Redundant overflow channels below the headgate will reduce risk of downstream dewatering and reduce maintenance requirements.

There is very low risk to downstream/adjacent properties as flow discharge into the ponds system is low.

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

Yes, project activities will include posting signage explaining the purpose of the project, the construction phases, as well as a specific list of native vegetation utilized in the project. The Twisp Ponds site is viewed as a valuable community asset and is used by a large number of individuals and groups as a destination for walking, bird watching and gatherings. Signage and art installations currently engage visitors and highlight salmon recovery projects throughout the Methow Valley and serve to increase community support for salmon recovery efforts.

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

Yes, this project will directly employ local and regional contractors to complete most aspects of the project assessment, design, and future management. MSRF has built an approved roster of qualified local and regional contractors and prioritizes local contractor preference when possible. MSRF has implemented restoration actions in the Methow Valley for more than 20 years, and the majority of our awarded contracts have been directed to local and regional contractors with consistently high-quality results. Our findings are supported by an economic analysis completed by UCSRB that showed that funds spent on restoration projects cycle through the local community 4 to 7 times, significantly multiplying the local economic benefit.

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

This project will be led by MSRF staff who bring a breadth and depth of strengths to the project, including expertise in restoration ecology, community outreach, and engagement, permitting, and project management. MSRF has been actively engaged in habitat restoration in the Methow Valley since 2001 and has successfully served as a project sponsor for many restoration projects in the watershed. The Methow Beaver Project (MBP) was founded in 2008 and became a program of MSRF in 2014 and brings a wealth of beaver coexistence experience and strategies required to manage beavers in modified systems like Twisp Ponds.

## Optional Section - Preparation for PRISM

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

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

No

## Supporting Documents

[Upper Columbia Process Guide 2024](#)

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

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



Friday, March 8, 2024

## Contact Information

# 2024 Upper Columbia Regional Project Pre-Application

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

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

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

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

|                        |                                   |
|------------------------|-----------------------------------|
| <b>Project Title</b>   | Riparian Restoration @ M23R       |
| <b>Sponsor</b>         | Methow Salmon Recovery Foundation |
| <b>Primary Contact</b> | Jessica Goldberg                  |
| <b>E-Mail Address</b>  | jessica@methowsalmon.org          |

## Budget Request

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

|  |           |
|--|-----------|
| <b>Anticipated Request - SRFB Riparian Funding</b> | \$199,468 |
|--|-----------|

|                                 |           |
|---------------------------------|-----------|
| <b>Anticipated TOTAL Budget</b> | \$199,468 |
|---------------------------------|-----------|

## Project Location

|   |  |
|---|--|
| <b>Briefly describe the location of the project</b> | The project is located on the Methow River between Winthrop and Twisp, Okanogan County from river mile 46 to 47.25 |
|---|--|

|                                   |         |
|-----------------------------------|---------|
| <b>Latitude (decimal degrees)</b> | 48.4377 |
|-----------------------------------|---------|

|                                    |           |
|------------------------------------|-----------|
| <b>Longitude (decimal degrees)</b> | -120.1563 |
|------------------------------------|-----------|

|                         |        |
|-------------------------|--------|
| <b>Project subbasin</b> | Methow |
|-------------------------|--------|

|                                  |                             |
|----------------------------------|-----------------------------|
| <b>Methow Assessment Unit(s)</b> | Methow River-Thompson Creek |
|----------------------------------|-----------------------------|



**Does the proposed project span multiple assessment units?**

No

**Reach(es) Name**

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.ucsr.org/>.**

Rank 2

## Project Information

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

The M23R Implementation is part of the larger 3R project designed to improve conditions through the 1.25 mile reach. This project seeks to improve riparian conditions, connect and improve side channel conditions, and add complex cover in the main channel to improve habitat for UCR Spring Chinook and Steelhead. The project will plant 4.3 acres with native trees and shrubs in 2026 to improve riparian condition and canopy cover (unacceptable limiting factors).

Riparian plantings are proposed to expand the riparian buffers into previously cleared areas. Riparian plantings will be designed using a reference approach to establish stands that will develop to be similar to existing self-sustaining stands. Plantings will be maintained for 3-5 years until established and self-sufficient.

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

Spring Chinook

Steelhead

Bull Trout

Summer Chinook

Pacific Lamprey, Westslope Cutthroat, Coho

**3. 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?**

Don't Know

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

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 (Reclamation 2010)

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

Off-Channel - Side-Channels

Riparian

Riparian - Canopy Cover

Riparian - Disturbance

Riparian - Structure

10. Which life stages will the proposed project address?

Subadult Rearing (Bull Trout)

Fry

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 project is designed to capitalize on the concentration of groundwater-fed thermal refugia within the project area. Three (3) of the 5 cold-water areas found between Twisp and Winthrop in the 2009 FLIR imagery are within this project area. Site visits and temperature data confirm that all three of these locations are still present, but access and condition can be improved. The project seeks to expand the extent and connectivity of these three thermal refugia, as well as to provide complex cover in and adjacent to this thermal refuge.

Riparian plantings are intended to support nutrient cycling, provide inputs important to building and maintaining habitat, and contribute stable support to the aquatic-terrestrial food web over time. The project will plant 4.3 acres to expand and restore riparian buffers. Riparian plantings will be designed based on a reference approach using the nearby existing healthy riparian stands. Riparian buffers support nutrient cycling, help maintain water quality, and provide a number of key materials that support salmonid populations.

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 plantings will be designed based on a reference approach to develop towards existing riparian

stands in

the project reach. Riparian plantings support nutrient cycling, food web dynamics, provide wood and other materials, and more natural rates of bank erosion.

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

1-10 years

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?**

Riparian plantings will require up to 5 years of regular maintenance to ensure survival of trees, shrubs and seedlings. To ensure good survival past this grant opportunity we would secure funding through alternate grant opportunities.

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

Riparian plantings will be designed using a reference stand approach based on adjacent riparian stands. Plantings will be watered, weeded and mulched for 3-5 years until established. Once trees are established and self-sufficient, water will be withdrawn and browse protection will be removed.

**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.**

We are seeking riparian funding for the 4.3 acres of riparian plantings. Instream elements are included in the complementary SRFB application.

## 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 landowners have been actively involved in project development and support implementation of the project 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**

Four of the five properties have Conservation Easements held by the Methow Conservancy. The Methow

Conservancy requires a restoration project checklist to be filled out by the sponsor, and we will need to show evidence and results of project monitoring for three years post-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)?**

No, this project is not expected to raise concerns for interest groups or the community at large.

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

Riparian components of the project will be managed and maintained by MSRF until the plantings are established and self-sufficient. Once they are established on-going maintenance is not expected to be needed for riparian components.

**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.**

This project carries a low to moderate risk of failure. The landowners are supportive of the proposed project and have participated and approved of the design process to date.

Riparian components inherently carry a very low risk of adverse consequences, but can be challenging to establish. Proposed planting areas have access to irrigation water, which significantly improves the probability of successfully establishing riparian stands where desired.

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

This project requires ongoing outreach and coordination with landowners and the Methow Conservancy to maintain support. Several of the project parcels are owned by people active in the community; consequently, working with them has the potential to help build and maintain community support.

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

Yes, this project will directly employ local and regional contractors to complete most aspects of the project assessment, design, and future management. MSRF has built an approved roster of qualified local and regional contractors and weights bidding review to prioritize local contractor preference when possible. MSRF has implemented restoration actions in the Methow Valley for more than 20 years and the majority of our awarded contracts have been directed to local and regional contractors with consistently high-quality results. Our findings are supported by an economic analysis completed by UCSRB that showed that funds spent on restoration projects cycle through the local community 4 to 7 times, significantly multiplying the local economic benefit.

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

This project will be led by MSRF staff who bring a breadth and depth of strengths to the project, including expertise in restoration ecology, community outreach, and engagement, permitting, and project management. MSRF has been actively engaged in habitat restoration in the Methow Valley since 2001 and has successfully served as a project sponsor for many restoration projects in the watershed.

## **Optional Section - Preparation for PRISM**

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

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

No

## Supporting Documents

[Upper Columbia Process Guide 2024](#)

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

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



Monday, February 12, 2024

## Contact Information

# 2024 Upper Columbia Regional Project Pre-Application

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

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

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

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

|                        |                                    |
|------------------------|------------------------------------|
| <b>Project Title</b>   | Riparian Restoration @ Twisp Ponds |
| <b>Sponsor</b>         | MSRF                               |
| <b>Primary Contact</b> | Jessica Goldberg                   |
| <b>E-Mail Address</b>  | jessica@methowsalmon.org           |

## Budget Request

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

|  |           |
|--|-----------|
| <b>Anticipated Request - SRFB (standard round)</b> | \$        |
| <b>Anticipated Request - SRFB Riparian Funding</b> | \$218,550 |
| <b>Anticipated Request - Targeted Investment</b>   | \$        |
| <b>Anticipated Request - Tributary Committee</b>   | \$        |
| <b>Anticipated Request - BPA Programmatic</b>      | \$        |
| <b>Anticipated Other Funding</b>                   | \$        |
| <b>Anticipated TOTAL Budget</b>                    | \$218,550 |

## Other Funding Source(s)

None

## Project Location

### Briefly describe the location of the project

This project is located in the Twisp River Lower 02 reach and within Reach T2a of the 2010 Lower Twisp River Reach Assessment. The project extends from approximately RM 1.0 - 1.5 and includes approximately 27 acres of adjacent riparian and floodplain habitat and a series of ponds and channels that have been the site of on-going restoration since 2002.

### Latitude (decimal degrees)

48.3673

### Longitude (decimal degrees)

-120.1396

### Project subbasin

Methow

### Methow Assessment Unit(s)

Lower Twisp River

### Does the proposed project span multiple assessment units?

No

### List the additional assessment units directly impacted by this proposal.

X

### Reach(es) Name

Twisp River Lower 02

### 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.ucsr.org/>.

Rank 2

## Project Information

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

The project will create a riparian buffer between a county road and three large ponds, increase pond shading to mitigate solar gain and reduce water temperatures through riparian plantings, and increase habitat complexity and diversity for juvenile salmonids at an off-channel site in lower Twisp River between river miles 1.0-1.5. The project site is located at Methow Salmon Recovery Foundation's Twisp Ponds restoration site, an off-channel system consisting of five ponds and channels, which provides high quality spawning and rearing habitat for UCR spring chinook, UCR steelhead, and other species.

**Project goals:**

- 1) Increase a riparian buffer between Twisp River Road and the ponds, increasing shade and reducing water temperature.
- 2) Increase habitat complexity and diversity for juvenile salmonid rearing within the ponds.

**Project objectives:**

- 1) Increase the riparian buffer between Twisp River Road and the three middle ponds through benches constructed with a high volume of woody material, encased in soil, and planted with approximately one acre of riparian vegetation for pond shading and complex nearshore habitat, completed and with plantings established within five years of funding. The riparian plantings will mitigate solar gain and increased water temperature of the ponds.
- 2) Place additional woody structure within the ponded habitats to increase habitat complexity for juvenile summer and winter use.

Twisp Ponds provides off-channel rearing habitat in an otherwise constrained reach of the lower Twisp River. Target fish species, including spring Chinook, steelhead, and coho rear in the network of connected side channels and pond habitats. Since the site was acquired by MSRF in 2002, a series of restoration activities have improved connectivity between the Twisp River and the series of five ponds and channels that make up the site. However, a lack of in-pond habitat complexity and shading persists, and is likely a result of the initial project design. Increasing site complexity, improving edge habitat, and pond shading will increase high quality rearing habitat in deep-water pool habitat to benefit ESA listed fish species throughout the Twisp Ponds site.

Currently the surface water supply to the ponds and channels is provided by a surface water diversion at RM 1.5. Surface water flows are routed through a narrow single thread channel from the diversion to the uppermost pond. Connections between each of the remaining ponds, and to the Twisp River, are also through relatively narrow single thread channels. There are currently two outflow channels to the mainstem Twisp River at the downstream end of the project site.

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

- Spring Chinook
- Steelhead
- Bull Trout
- coho, Pacific lamprey

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

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

**Acquisition, Easements, Leases: Reporting Code**

- Miles of streambank and/or Shoreline Protected by Land or Easement Acquisition
- Acres by Acreage Type (easement) and/or Acres by Acreage Type (fee simple)
- Floodplain Areas Protected\*\* this reporting metric does not appear in PRISM. Work with the LE to ad this metric upon completion of project.

**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

**Riparian Habitat: Reporting Code**

Total riparian miles streambank treated

Total riparian acres treated

**Water Quality: Reporting Code**

Total acres feet of water treated for water quality

Miles of stream treated with nutrients

Water quality limitation treated

**Wetlands: Reporting Code**

Acres of wetland improvement/enhancement

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

Don't Know

**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

**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)?**

Yes. Lower Twisp River Reach Assessment, June 2010. Prepared by Interfluve for Yakama Nation Fisheries Program

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

Cover - Wood

Off-Channel - Floodplain

Off-Channel - Side-Channels

Riparian

Riparian - Canopy Cover

Riparian - Disturbance

Riparian - Structure

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

Subadult Rearing (Bull Trout)

Fry

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 project will result in increased summer and winter juvenile salmonid survival by improving riparian habitat and reducing water temperatures. The project increases the site's capacity to support rearing juvenile fish and distribution of juveniles through increased habitat complexity.

Each of the proposed actions would create opportunities for increased use by resident fish species and non-target species, such as Pacific lamprey and coho salmon. The project currently supports a robust population of deer, bear, beavers, river otters, water birds, and birds of prey. The actions proposed by this project will increase the complexity of habitat for each of these species and support the coexistence of target fish species and beavers at this site.

**Additional Space for #11 \*Freshwater Benefits**

placeholder text

**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 be designed to be consistent with natural processes and site and reach scale geomorphology. The placement of woody structures within the ponds will generate cover for salmonids while preserving deep cold-water habitat.

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

1-10 years

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?**

Development of an adaptive management plan for the site is a key component of this project. New riparian plantings will be maintained for at least five years. Because the entire project is on property owned by Methow Salmon Recovery Foundation, access for maintenance is assured.

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

Increasing the distance between the county road and pond habitat by creating a bench of woody material, soil, and riparian plantings will improve pond and edge habitat and species biodiversity, as well as increasing shade to the ponds. Adding woody structure to the pond's system will increase habitat complexity for summer and winter rearing juvenile salmonids. Narrowing three of the ponds to provide a riparian planting bench will increase shade to the existing ponds, reducing solar gain and summer stream temperatures to improve juvenile rearing habitat.

**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.**

Yes, this project contains in-stream components. A raised bench created along the southern edge of the ponds will be planted with riparian vegetation, increasing shade to the ponds, reducing instream temperatures, and increasing the riparian buffer between Twisp River Road and the ponds.

## 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**

Methow Salmon Recovery Foundation owns the parcels where the restoration actions will take place. MSRF holds an easement to access the upstream property and maintain the headgate area and has support from the landowner for the proposed restoration efforts.

**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**

Actions will be designed to decrease risk to the existing infrastructure within the site. Planting benches in ponds 2-4 will increase the buffer between the county road and the ponds. WDFW currently utilizes an access road through the property to maintain a rotary screw trap and PIT antenna system on the adjacent mainstem Twisp River. Site access for WDFW employees and infrastructure will be maintained in project design. MSRF maintains a trail system open to the public on the downstream end of the property, which will not be impacted by project implementation.

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

Project design will not impact current recreational trail access to the site, will maintain WDFW's site access to their screw trap, and MSRF will consult with adjacent landowners on site improvements prior to construction. There is no impact to recreational river users.

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

The Methow Salmon Recovery Foundation and the Methow Beaver Project will be responsible for adaptive maintenance of the project.

**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.**

This project carries a very low risk of failure. MSRF has successfully maintained the ponds site for more than 20 years. By owning much of the underlying property, much of the risk associated with changing landowner requirements is mitigated.

The project will be designed with wood structures intended and designed primarily to provide habitat, cover, and shading, and will be placed well out of the main river channel.

There is very low risk to downstream/adjacent properties as flow discharge into the ponds system is low.

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

Yes, project activities will include posting signage explaining the purpose of the project, the construction phases, as well as a specific list of native vegetation utilized in the project. The Twisp Ponds site is viewed as a valuable community asset and is used by a large number of individuals and groups as a destination for walking, bird watching and gatherings. Signage and art installations currently engage visitors and highlight salmon recovery projects throughout the Methow Valley and serve to increase community support for salmon recovery efforts.

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

Yes, this project will directly employ local and regional contractors to complete most aspects of the project assessment, design, and future management. MSRF has built an approved roster of qualified local and regional contractors and prioritizes local contractor preference when possible. MSRF has implemented restoration actions in the Methow Valley for more than 20 years, and the majority of our awarded contracts have been directed to local and regional contractors with consistently high-quality results. Our findings are supported by an economic analysis completed by UCSRB that showed that funds spent on restoration projects cycle through the local community 4 to 7 times, significantly multiplying the local economic benefit.

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

This project will be led by MSRF staff who bring a breadth and depth of strengths to the project, including expertise in restoration ecology, community outreach, and engagement, permitting, and project management. MSRF has been actively engaged in habitat restoration in the Methow Valley since 2001 and has successfully served as a project sponsor for many restoration projects in the watershed. The Methow Beaver Project (MBP) was founded in 2008 and became a program of MSRF in 2014 and brings a wealth of beaver coexistence experience and strategies required to manage beavers in modified systems like Twisp Ponds.

**Optional Section - Preparation for PRISM**

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

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

**Supporting Documents**

[Upper Columbia Process Guide 2024](#)

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

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



## Contact Information

# 2024 Upper Columbia Regional Project Pre-Application

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

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

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

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

|                        |   |
|------------------------|---|
| <b>Project Title</b>   | Goat and Eight Mile Creek Riparian Protection (Cub Allotment) |
| <b>Sponsor</b>         | Trout Unlimited   |
| <b>Primary Contact</b> | Alli Pardis   |
| <b>E-Mail Address</b>  | allison.pardis@tu.org   |

## Budget Request

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

|  |         |
|--|---------|
| <b>Anticipated Request - SRFB Riparian Funding</b> | 137,000 |
|--|---------|

|                                 |        |
|---------------------------------|--------|
| <b>Anticipated TOTAL Budget</b> | 137000 |
|---------------------------------|--------|

## Project Location

|   |   |
|---|---|
| <b>Briefly describe the location of the project</b> | The project will occur in the Goat Creek Watershed, Eight Mile Creek Watershed and Chewuch RM from 8.6 to 18.4, called the Cub Allotment. |
|---|---|

|                                   |           |
|-----------------------------------|-----------|
| <b>Latitude (decimal degrees)</b> | 48.648914 |
|-----------------------------------|-----------|

|                                    |             |
|------------------------------------|-------------|
| <b>Longitude (decimal degrees)</b> | -120.271617 |
|------------------------------------|-------------|

|                         |        |
|-------------------------|--------|
| <b>Project subbasin</b> | Methow |
|-------------------------|--------|

|                                  |                  |
|----------------------------------|------------------|
| <b>Methow Assessment Unit(s)</b> | Eight Mile Creek |
|----------------------------------|------------------|

**Does the proposed project span multiple assessment units?** Yes

**List the additional assessment units directly impacted by this proposal.** Goat Creek, Chewuch River - Doe Creek

**Reach(es) Name** Chewuch River Pearrygin 09, 10, 11; Doe 01, 02, 03; Eight Mile Creek 01, 03, 04, 05, 06, 07, 08, 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/>.** Multiple reaches (provide details below)

**Please detail the reach-ranking of the reaches below**

Chewuch River Pearrygin 09 - Rank 3, Chewuch River Pearrygin 10 - Rank 1, Chewuch River Pearrygin 11 - Rank 1, Chewuch River Doe 01 - Rank 2, Chewuch River Doe 02 - Rank 1, Chewuch River Doe 03 - Rank 1, Eight Mile Creek 01, 03, 04, 05, 06, 07, 08, 09 - Unranked.

## Project Information

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

The project seeks to address bank stability, riparian canopy cover and riparian disturbance for spawning steelhead and bull trout by excluding cattle from the riparian area and increasing riparian function and cover through planting up to 5 sites excluded to cattle from invisible fencing to create an estimated 32 river miles of protected riparian area from cattle grazing through 2029 and identify up to 5 sites in need of riparian cover and planting to be implemented by 2029.

**2. What species will the project benefit?** Spring Chinook Steelhead Bull Trout

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

**Riparian Habitat: Reporting Code** Total riparian acres treated Miles of fence along stream

**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

If applicable, what is the secondary project category?

Design

Is the project eligible for Riparian Funding?

Yes

## Design and Restoration Proposals

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

Conceptual Design

Preliminary Design

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)?

Chewuch Reach Assessment 2010

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

Bank Stability

Riparian

Riparian - Disturbance

10. Which life stages will the proposed project address?

Adult Non-Spawning (Bull Trout)

Spawning and Incubation

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

The project will exclude cattle from accessing riparian areas and stream banks in critical habitat during spawning by utilizing novel invisible fencing technology that allows managers to set a perimeter that excludes cattle from critical habitat areas. This technology allows for the protection of a 6-7 mile radius from the base station, this particular allotment, the Cub Allotment, is 65,750 acres and includes Goat Creek, Eight Mile Creek and perimeters the Chewuch River. Reducing disruption and bank stability will improve survival of offspring of spawning steelhead and bull trout by keeping cows out of redds and reducing water quality issues that can lead to mortality of eggs and sac-fry. Further, reducing cows in the riparian and stream area reduces disturbance of spawning fish. Virtual fencing allows real-time tracking of cattle, unlike traditional fence which can get damaged, allowing cattle into excluded zones without knowing, virtual fencing allows quick response to these situations.

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 grazing allotment was burned in 2021 and much of the riparian area is recovering from fire. Keeping cows out of the riparian area will allow these riparian areas to recover without increased disturbance from cattle. Recovery and planting of these areas will stabilize the stream banks and reduce excess erosion.

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?**

Less than 10 years

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?**

Virtual fencing requires very little maintenance. Collars can be monitored in real-time and batteries replaced as necessary during the off season, if a cow damages . Up to five riparian planting sites will be identified in this project, minimal maintenance is expected, because virtual fencing requires so little maintenance, this will help reduce maintenance of planting sites. Through partnership with the Forest Service we will develop monitoring locations to inform adaptive management as necessary.

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

Fence (virtually) up to 32 river miles of riparian area within the cub allotment and pastures in critical habitats for spawning steelhead, bull trout and spring chinook.

**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.**

There are no in-stream components.

## Assessment Proposals

### Protection Proposals

**7. What type of protection are you proposing?**

Other

### Monitoring Proposals

## Project Risk and Economic Benefits

**1. What is the landownership?**

Forest Service

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

Yes

### Please explain

The Forest Service purchased the base station to support virtual fencing. The cattle owner is excited to support a project that supports healthy riparian areas and fish habitat. Without the virtual fencing, the cattle owner and Forest Service would have to rely on herding methods to exclude cattle from these areas, which is not very effective.

**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 landowner requirements that could affect 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)?**

This project should not raise any concern for interest groups. It keeps cattle out of the stream without

putting miles of barbed wire on the landscape.

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

The landowner is responsible for applying the collars and maintaining the collars. Trout Unlimited and the landowner will enter into agreement to maintain the equipment and adhere to the exclusion areas. This project in part, seeks funding to pay for the annual fees of the collar for the remainder of the 5 year permit held by the cattle owner.

**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.**

Risk is very low. This method of cattle exclusion is effective and was successful in 2023 and has been successful in many other state on Forest Service land.

**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. This project does build community support from the ranching community as an effective method to support cattle production and salmon and steelhead restoration.

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

The project represents several opportunities for economic benefit. Virtual fencing is cheaper and often more effective than traditional fencing methods, requiring less maintenance and materials. The project also supports the profit realized through cattle production and leasing on Forest Service land.

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

The Forest Service has utilized this virtual fencing before, they also purchased the base station needed to support virtual fencing and are supporting the project through monitoring and technical support.

**Optional Section - Preparation for PRISM**

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

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

Yes

## Supporting Documents

[Upper Columbia Process Guide 2024](#)

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

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