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Beaver Coexistence & Mi...

Submission Date  
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*Project Title	Beaver Coexistence & Mimicry for Salmonid Habitat Benefits
*Sponsor	Methow Salmon Recovery Foundation - Methow Beaver Project
*Primary Contact	Alexa Whipple
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*Anticipated Request - SRFB	\$75,000
*Anticipated Request - Tributary Committee	\$15,000
*Anticipated Other Funding	\$15,000
*Anticipated TOTAL Budget	\$105,000
*Other Funding Source(s)	Defenders of Wildlife, The Burning Foundation
*Briefly describe the location of the project	Projects will occur in the Methow sub-basin in several reaches including the Upper Methow, the Chewuch, Beaver Creek, the Lower Twisp reach, the Methow Twisp to Carlton reach, and SF Gold Creek in the Lower Methow Reach.
*Latitude (decimal degrees)	48.36554
*Longitude (decimal degrees)	-120.03774
*Project subbasin	Methow
*Methow Assessment Unit(s)	Lower Beaver Creek
*Reach(es) Name	Beaver Creek Lower 06
1. *In one or two sentences, what do you propose to do?	We propose to provide beaver coexistence strategies, services, and adaptive management where beaver activity already exists or build beaver mimicking structures where beaver benefits are desired in identified sites within anadromous side channels and off channel habitat to improve salmonid survival. These actions will contribute to the restoration of natural processes, support

base stream flows, and increase habitat complexity and ecosystem resilience including the increase in quantity and quality of off channel and side channel habitat providing critical hydraulic refugia, rearing, and overwintering habitat to salmonids.

2. \*What species will the project benefit?

Spring Chinook

Steelhead

Bull Trout

Summer Chinook

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

Instream Habitat (Includes Floodplain & Off-Channel Reconnection)

Instream Habitat: Reporting Code

Acres of channel/off-channel connected or added

Miles of instream habitat treated

4. \*Does this project or any of its phases (e.g., design) already exist in Salmon Recovery Portal or PRISM?

No

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

No

6. \*What category is the project?

Restoration

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)?

Chewuch RA

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

Cover - Wood

Flow - Summer Base Flow

Food - Food Web Resources

Icing

Off-Channel - Floodplain

Off-Channel - Side-Channels

Pool Quantity & Quality

Pools - Deep Pools

Temperature - Rearing

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

Adult Migration

Subadult Rearing (Bull Trout)

Spawning and Incubation

Summer Rearing

## Winter Rearing

11. \*Freshwater Benefits - To what extent will your project improve survival, capacity and/or distribution for target species at the project scale?

Our proposed projects will increase water residency time in anadromous side channel and off channel habitat, support summer/fall base stream flows, increase structure for cover and habitat complexity, engage greater floodplain area to support water storage and reduce sediment transport, and provide increased hydraulic refugia which will improve survival, capacity, & distribution of salmonids.

12. \*Temporal Effect - Briefly describe how and to what extent the project would promote natural stream/watershed process consistent with reach-scale geomorphology?

Process restoration via beaver management & mimicry is the primary goal of our projects and will be accomplished with landowner/manager partnership through development of contextual coexistence solutions. Solutions and services will be implemented when beaver dam building has been determined to compromise salmon restoration priorities or habitat use or is desired in a location where it does not currently exist but could be supported. Solutions to coexist with beavers includes but is not limited to use of flow devices to control water elevation and sufficient fish access & passage, physically controlling dam height, creating & protecting permanent notches in dams, protecting road culverts from damming while allowing fish passage. When beaver activity is desired but ideally in a different location or is absent all together, the addition of small wood structures can substitute, distract, and eventually may attract beaver establishment. Both beaver coexistence and mimicry promote and sustain natural processes through increased stream structure, floodplain connection, and extended water residency time.

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

In sites identified for beaver coexistence and adaptive management for the benefit of salmonid survival, capacity, and distribution, services will address conflict with beaver structure building and fish passage with regard to site context and landowner priorities ranging from control of surface water elevation, control of dam height for natural fish passage at high flows, providing alternative fish passage, protecting available fish passage, protecting riparian vegetation, and protecting human infrastructure.

In sites identified for process restoration, small wood structures will be installed as complexes of 3-15 redundant structures per complex, in 2 or more complexes per restoration site to reduce stream power, force channel and habitat unit complexity through erosion, scouring, and aggradation, capture sediment, nutrients, and woody debris promoting further enhanced cover, activate floodplain connectivity, and increase water residency time and base flows to the benefit of salmonid survival, capacity, and distribution.

1. \*What is the landownership?

Private, WDFW

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

Yes

\*Please explain

We are working with five private landowners for restoration and/or beaver coexistence: Methow Salmon Recovery Foundation is the owner of two proposed parcels on the Twisp River, and one on Beaver Creek. The Devany family is the owner

of one proposed parcel on the Twisp River. The Olsen family is the owner of one proposed parcel on the Chewuch River. The Plante and Bastian families are the owners of two proposed parcels on the South Fork Gold Creek. The Molesworth/Saladay family is the owner of one proposed parcel on Beaver Creek.

All other proposed restoration and/or beaver coexistence sites are owned by WA Dept of Fish & Wildlife including the Fender Mill site in the Upper Methow, RM 4.2 on the Chewuch River, RM 6.3 on the Twisp River, and Silver Side Channel and Alder Creek Side Channel sites in the Twisp to Carlton reach of the Methow (RM 34-34.25).

We will work with adjacent private landowners to increase awareness, understanding, and support for restoration and coexistence actions on public lands.