Tuesday, July 19, 2022

Fall 2022 Large Cap Grant Round Regional Pre-application

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* **Pre-applications (JotForm) due August 12, 2022** (Precursor to PRISM access - July submission recommended)
***Applications due (PRISM) August 30, 2022**
***Proposal Resubmittal with completed Preliminary Designs due December 1, 2022**

***Project Title**	Sugar Reach Channel Reconnections Implementation

Contact Information

***Sponsor**	Methow Salmon Recovery Foundation
***Primary Contact**	Jessica Goldberg
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Budget Request

***Anticipated Request - SRFB (Fall 2022 Large Cap)**	4,794,000.00
***Anticipated Request - Tributary Committee**	0
***Anticipated Request - BPA Programmatic**	0
***Anticipated Other Funding**	2,563,166
***Anticipated TOTAL Budget**	7,357,166

***Other Funding Source(s)**
Funding from BPA and Floodplains by Design

Project Location

***Briefly describe the location of the project**	The project spans the Methow River between RM 41.25 and RM 46.5
***Latitude (decimal degrees)**	48.390671

***Longitude (decimal degrees)**	-120.133027
***Project subbasin**	Methow
***Methow Assessment Unit(s)**	Methow River-Thompson Creek
***Reach(es) Name**	Methow River Thompson 04, 03, 02 and 01
***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.**	Unranked (not a priority or missing data)

Project Information

1. *In one or two sentences, what do you propose to do? Please include SMART objectives in your statement (Specific, Measurable, Achievable, Realistic, and Time-bound). 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].

MSRF is seeking funding support to complete a suite of restoration actions within the Sugar Reach. The objective of the project is to increase side channel habitat, floodplain connectivity, and in-stream habitat complexity to expand rearing and refuge habitat for Juvenile spring Chinook and UCR Steelhead. The proposed project will include levee modifications and fill removal, side channel enhancements, selective grading, ELJ construction and smaller wood placements, and riparian restoration.

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) Riparian Habitat
Instream Habitat: Reporting Code	Total miles of instream habitat treated Miles of off-channel stream created or connected Acres of channel/off-channel connected or added Number of structures placed in channel
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.)**

This project builds on more than a decade of work by MSRF and others to secure protections and initiate restoration actions in the M2 Sugar Project Reach. MSRF initiated outreach efforts with landowners in 2010 to determine their willingness to allow restoration actions after Reclamation identified the site as having very high potential for reach-scale restoration response. MSRF secured funding to purchase eight properties within the Project area between 2011 and 2018 to facilitate future restoration. Acquisition funding was secured through competitive grant awards from SRFB and Tributary, PRCC, and through the BPA YN Accords. In 2015 MSRF submitted a restoration proposal through the BPA Targeted process seeking technical support and construction funding to complete a setback the flood levee between RM 42.4 and RM 42.25 RM; the proposal was rated provisional at that time.

Reclamation retained Inter-fluve Inc. (IFI) in 2019 to develop conceptual designs for the Sugar Project in coordination with a Project Development Team (PDT) including MSRF, Reclamation, and members of the HCP Tributary Committees; this initial effort was completed in January 2021 and resulted in development of an appraisal-level (conceptual) design alternatives report.

Due to the scale of the project, 5 worksite areas were identified within the Project reach in anticipation that funding strategies or schedules may vary from site to site. Four of the five worksite areas are included in this proposal: Sugar Right, Sugar Left, Eagle Rocks and WDFW. No actions are currently being pursued at the 5th site. IFI has continued to provide design support for the WDFW and Eagle Rocks worksites, and in coordination with the PDT is working to finalize 30% design of the selected alternative for each site. Finalization of 30% for both worksites is expected in Fall 2022. In 2020 MSRF secured design support funding from BPA and worked in coordination with BPA, Reclamation, and UCSRB to refine the initial concepts for the Sugar Left and Sugar Right sites to identify a preferred alternative that BPA and MSRF believe could meet the objectives to maximize habitat functions within the identified constraints. In 2021 MSRF received design support funding from BPA and secured additional design funding from RCO/SRFB to refine, prioritize, and further develop the preferred alternative to a preliminary design. MSRF has retained Wolf Water Resources to advance the design to the preliminary design level with ongoing modeling support from Reclamation's Denver TSC office and with IFI providing additional support as needed. This work is ongoing and final 30% designs are expected in Fall 2022. Design schedules for all four worksites anticipates final design to be completed by the end of 2023.

Continued support to complete project designs for the four work sites is anticipated from BPA, Reclamation, and Floodplains by Design.

This proposal to SRFB will support construction of a suite of coordinated actions at the four worksites within the Sugar Reach Project: Sugar Right, Sugar Left, Eagle Rocks and WDFW.

6. *What category is the project? Design

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 RA

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

Cover - Wood | Off-Channel - Floodplain | Off-Channel - Side-Channels

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

Fry | Holding and Maturation | Winter Rearing

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

The primary objective of this project is to increase both the quality and quantity of suitable juvenile rearing habitat available throughout the year through side channel and floodplain reconnection actions and construction of instream habitat complexity structures. Side channel actions will add perennial and seasonal secondary channels to support juvenile rearing and high flow refuge. Levee alterations will be developed to reconnect floodplain and side channel habitat to support high water refugia and the development of riparian forest. In-stream ELJ's and individual wood placements will be designed to both increase habitat directly and support sediment transport and sorting needed to restore perennial flow in existing side channels. Implementing the developed actions will increase the total amount of habitat available during low flow summer and winter rearing periods, and increase the with of active river corridor to maintain these benefits into the future.

The project is designed to address habitat factors limiting survival and capacity across a range of flow conditions. Perennial side channels and wood structures, including the primary side channel at the Sugar Right site, the lower end of the Sugar Left side channels, and at the WDFW Floodplain site, are designed to increase habitat capacity and hiding cover available to rearing salmonids during low to moderate flow conditions. At higher flows, seasonally inundated floodplains and intermittent side channels will be active and providing important rearing and access to additional food sources. Over the long-term, engaging fluvial processes is intended to allow the river opportunities to build and renew habitat. The large spatial scale of the project will ensure that these habitats are available throughout the 5-mile-long project reach, and individual actions are large enough to have an effect at each of the specific work areas. For example, the proposed levee modifications and side channel actions at the Sugar Right and Sugar Left sites are designed to restore function and connectivity on the more than 84 acres of previously connected floodplain (BOR, 2010).

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

The Sugar Reach of the Methow River is a populated segment of the Methow River between the Towns of Winthrop and Twisp. Constraints within this reach include Highway 20, which parallels the river, multiple areas of constructed flood protection controls including residential bank armoring and the larger public levee at the Sugar property, as well as multiple buildings and residences. The existing residential, public, and agricultural developments require a level of continued protection. These constraints preclude actions such as a complete levee removal to fully restore natural processes, but neglecting to take action would result in additional degradation as landowners are expected to add riprap and further confine the river in the Sugar Right and Sugar Left work areas.

The proposed project is designed to restore natural processes to the extent possible, expanding the active river corridor and reconnecting side channel and floodplain surfaces, and reconnecting natural

sediment transport processes. Modifying the existing Sugar Levee would increase the area where meander could occur and reduce velocity currently confined within the main channel though the project area. These actions will help restore more natural rates of channel migration through the reach, and increase the effective river corridor in the project area. Levee alterations and regrading of the placed fill behind the levee would support development of off-channel high flow refuge areas and connected riparian forest. Side channel actions will be designed to reengage channel processes and support more sustainable sediment and channel processes. The project will also include actions to increase channel complexity with ELJ's and smaller wood feature placements to both increase habitat directly and support sediment mobility needed to restore perennial flow in the existing side channel.

Actions at the Eagle Rocks and WDFW Floodplain work areas are designed to maintain sediment transport processes and promote and maintain perennial side channel and floodplain connectivity.

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

Less than or equal to 1 year

10-25 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?

Habitat structure placements and perennial side channels are expected to be provide immediate habitat benefit. Process-based benefits (floodplain and side channel connectivity) are expected to begin with the first high water, and continue to provided expanded benefit in subsequent years as process is restored. Riparian restoration actions take longer, often 10-15 years before they provide the full suite of benifits. Benefits from restoration actions are anticipated to persist for medium term (eg. habitat structure placement or side channel re-connections anticipated to last 10-25 years). Levee modifications and riparian restoration are anticipated to have long-term or permanent effects (lasting 25-50+ years). The projects are being developed as process supportive projects, meaning that they are anticipated to change and deform over time without the need for active protection or intervention.

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

MSRF began acquiring land within the project areas in 2010, and has been working with landowners and stakeholders to identify restoration opportunities for more than a decade. In 2021 the Sugar Project Development Team (PDT) completed a project opportunities analysis of the Sugar Project area (RM 41.25-RM 46.5), based on prior Reach Assessment and Geomorphic Assessment analysis and reports, 2018 LIDAR for the reach, existing conditions (2019) 2-D modeling and substantial local knowledge. This analysis identified areas where anthropogenic features that adversely impact river process and habitat availability may be addressed. These include areas of bank hardening (rip-rap), flood hazard reduction (levee placement), and infrastructure operation and maintenance (culverts, roads, etc.). Conceptual designs were developed to enhance / restore floodplain inundation, increase activation of side channels, and support lateral migration when possible. Preferred alternatives were selected by the PDT based on landowner support, stakeholder feedback and biological benefit. Refinement of conceptual designs yielded a suite of actions designed to increase side channel and floodplain connectivity, and instream complexity at four worksites: Sugar Right, Sugar Left, Eagle Rocks and WDFW. At Sugar Right levee modification, ELJ placement, and floodplain grading will reduce the hydraulic effect of the levee on downstream landowners, increase the amount of connected floodplain and improve the connectivity of an adjacent side channel from seasonal to perennial. At Sugar Left selective grading and ELJ placement will increase the connection frequency and duration of a series of relict floodplain channels. Grading and ELJ placement will rebalance mainstem and side channel flow splits at the Eagle Rocks and WDFW worksites. Additional actions at the WDFW worksite will increase connectivity of the floodplain channel using ELJs and selective grading to remove culverts and access

roads that transect the floodplain.

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

1. *What is the landownership?

MSRF, private, DNR (SOAL), WDFW, Town of Twisp, Okanogan County

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

Yes

***Please explain**

We have on-going conversations with landowners within and around the project area, and have obtained preliminary written and verbal support for the proposed project actions from landowners within the project area. Based on initial landowner outreach, MSRF previously acquired key portions of the WDFW, Sugar Right, and Sugar Left project areas with support from RCO, PRCC, and HCP Tributary Committees to allow the widest range of options and facilitate future restoration projects. MSRF is in active discussion with several additional owners to secure other property areas if needed to maximize restoration benefits. In additional to private lands, implementing the project will require work within areas of State-Owned Aquatic Lands, lands managed by the Corps of Engineers and Okanogan County (Levee), and property owned and by Washington Department of Fish and Wildlife (WDFW). MSRF has initiated consultations with each of the agencies, and they are actively participating in the design process and support actions designed to improve habitat functions that do not increase risk to private and public properties.

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

MSRF has acquired numerous properties within the project area, but this is a developed reach of the river and much of the project area is on private or public lands. This requires ongoing coordination with landowners to ensure that restoration projects have the needed support. During initial concept development the project sought to identify an river corridor where restoration actions were possible. The result was a suite of actions that sought to restore river processes to the greatest degree possible within a 5 mile reach while respecting the interests and concerns of the landowners. The project has been designed to provide the greatest benefit possible within the identified constraints. Portions of the levee in the Sugar Right project area are actively managed by Okanogan County and the Corps of Engineers through the Public Lands 8499 system for cost-share of Corps-constructed levees. MSRF acknowledges that the preferred alternative for levee modifications will need to provide assurance to the management agencies and local landowners that it will not reduce current protections for properties outside of MSRF's ownership. WA State Highway 20 lies immediately to the west of the project. No impact to the highway is anticipated, but risk to infrastructure will continue to be evaluated throughout the design process. At the upper extent of the project reach, the shared MVID/BIC irrigation diversion is immediately adjacent to the WDFW project. This project is expected to improve the long term function of the diversion's fish return.

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 Project Team recognizes it is essential to engage early and often with the community at large - as well as individuals who have already indicated concern - to provide them with clear and accurate

information on project objectives, benefits, and any increased risks. Previous restoration actions have been completed within the project area and on adjacent properties, including projects by MSRF and Yakama Nation. A key function of our outreach includes soliciting input from the community and stakeholders so that we can document that concerns were listened to and accounted for. Low lying areas within the project area have experienced flooding several times over the past 100 years. Several properties within the study area have experienced increased rates of bank erosion over the past decade, with owners expressing the belief that the erosion was exacerbated by maintenance of the flood control levee in 2012. Other property owners have verbalized concerns over unbalanced flows splits between primary and secondary channels.

MSRF has maintained a continued dialogue with each of the landowners who have and invested interest in following project development and implementation.

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

For actions on lands owned by MSRF, the short-term responsibility for managing and maintaining the project following restoration will be built into project funding applications for individual project actions. Each of the MSRF owned properties are subject to long-term management responsibilities associated with conservation agreements. The majority of the restoration actions are likely to be developed to naturalize with river processes and will not require active maintenance. Actions that could impact public infrastructure may require funding for stewardship or other agreements. Where actions occur on private property, landowners would be responsible for not removing project features and allowing continued riparian growth. For project actions located on public lands (WDFW, WA DNR), it is anticipated that MSRF will be required to enter into right of entry agreements that will remain in place for a period of up to 6 years, after which responsibility will transfer to the state of Washington.

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 Sugar Project lies between the two primary roads connecting Twisp and Winthrop and includes lands that have experienced flooding several times in the past 100 years, which raises the perception of risk. The work areas are rural but lie upstream of more densely developed property within the Town of Twisp. Development of individual project actions included careful evaluation and articulation of potential risks. The Project Team will be responsible for working with community members to identify project elements to ensure measurable biological benefit can be secured within social risk tolerance. Specific mitigation actions may be required to ensure high biological benefits can be secured and maintained in areas where high public infrastructure protection needs have been identified. MSRF will rely on the professional guidance and expertise of professional licensed engineers in development and implementation of potential actions.

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

Yes, from design through implementation, the Project team recognizes that the project will require significant and continued community outreach and engagement. It will be important to build and maintain public support for all restoration elements. The Sugar Right worksite includes a flood levee built in 1972 that is situated about a mile north of the Town of Twisp and is maintained by Okanogan County and the US Army Corps of Engineers. While outreach has already been initiated during the conceptual phase of the project, the team recognizes that continued outreach will be important for all project elements. It is also anticipated that additional conversations related to modifying a portion of the levee will be required as the project design advances. While the levee was constructed to protect only a small number of properties, there is a public perception that it provides protection against flooding to a much larger area and is essential for protection of public infrastructure. During the design process, the Project Team will expand the on-going community engagement process to demonstrate

what the levee does and does not protect.

The WDFW worksite proposes actions to complement a restoration project completed in 2013. It will be important to share the message that rivers are dynamic features and subsequent phase actions are the result of and new restoration opportunities that support work completed during the initial phase. Outreach efforts will include public meetings, media releases, and one on one meetings designed to communicate that the project actions have been engineered to address community concerns and why they are needed to secure salmon recovery benefits.

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 development, implementation and assessment. 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 nearly 20 years and the majority of our awarded contracts have been awarded 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.

The Sugar Project is an outgrowth of a Project Development Team (PDT) that included MSRF, members of the Tributary Committees, and the Bureau of Reclamation. Reclamation's Technical Services Center in Denver completed existing conditions 2-D hydraulic modeling. Inter-Fluve served as the design engineer to identify a suite of project concepts at five worksites within a 5 mile length of river. BPA provided technical services to ground truth the conceptual designs for Sugar Left and Sugar Right, and select a preferred alternative. Preferred alternatives for four worksites were selected. Alternatives are being advanced to preliminary design by Inter-Fluve (WDFW and Eagle Rocks) and Wolf Water Resources (Sugar Right and Sugar Left). Reclamation's Technical Services Center is continuing to provide technical support for proposed conditions 2-D hydraulic modeling. Project funders, including BPA and RCO/SRFB and partners including members of the HCP Tributary Committees, WDFW, and DNR provide additional design review. Each of these partners have brought a breadth and depth of strengths to the project, including expertise in restoration design, community outreach and engagement, hydraulic modeling, 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 Reclamation since 2006. Inter-Fluve and Wolf Water Resource have been active been active in developing river restoration projects for more than two decades, and have extensive work experience in the Methow Valley. MSRF has completed several projects in collaboration with Inter-Fluve and Wolf Water Resources.

Supporting Documents

Upper Columbia Process Guide 2022 (Fall Large Cap)

SRFB Manual 18 (2022)

RCO Application Resources (2022)