Contact Information

2025 Upper Columbia Regional Project Pre-Application

* Pre-applications (SRFB & Monitoring) due March 12, 2025 (COB)

*Complete SRFB applications due in PRISM April 18, 2025 (COB)

*Complete Monitoring applications due in PRISM May 1, 2025 (COB)

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

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

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

Project Summary

Please provide a description or summary of the proposed project, including project goals. The goal of the project should be to solve identified problems by addressing the root causes. Then clearly state the desired future condition.

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

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

This project will plant riparian and wetland parts of the project zone at three sites in the Sugar Project Reach, and maintain plantings at an additional site. The sites include Sugar Left (2.6 acres), Sugar Right (12.3 acres) and WDFW Floodplain Phase 2 (1.4 acres), and maintain riparian plantings installed fall 2024 at the Eagle Rocks site (1.3 acres).

Budget Request

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

Anticipated Request - SRFB Riparian Funding 360000

Anticipated TOTAL Budget 360000

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

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

Project Location

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

Latitude (decimal degrees) 48.380

Longitude (decimal degrees) -120.127

Project subbasin Methow

Methow Assessment Unit(s) Methow River-Thompson Creek

Does the proposed project span multiple assessment units? No

Reach(es) Name Methow Thompson 1-4

Identify the reach(es) priority/ reach ranking. Note: If the project involves work in multiple reaches, select "Multiple" and include details in the text box that will appear below. Please reference the Prioritization Web Map: https://prioritization.ucsrb.org/. Multiple reaches (provide details below)

Please detail the reach-ranking of the reaches below

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

Project Information

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

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

Riparian Habitat

Riparian Habitat: Reporting Code

Total riparian miles streambank treated

Total riparian acres treated

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

Yes

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

Yes

Please explain which process(es) and how this proposal differs from the previous submission (e.g., different phase, modified scope, etc.)

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

6. What category is the project?

Restoration

If applicable, what is the secondary project category?

N/A

Is the project eligible for Riparian Funding?

Yes

Design and Restoration Proposals

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

Construction

8. Is your project within a completed (or soon-to-be completed) Reach Assessment or other type of assessment (e.g., Rapid Site Assessment, other)?

Middle Methow Reach Assessment August 2010

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

Riparian

Riparian - Canopy Cover

Riparian - Structure

10. Which life stages will the proposed project address?

Adult Migration

Adult Non-Spawning (Bull Trout)

Fry

Holding and Maturation

Smolt Outmigration

Summer Rearing

Winter Rearing

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

This project will plant 16.3 acres of riparian areas along priority areas of the Methow River in connection with a set of instream and floodplain habitat restoration projects. The project will also maintain these plantings along with an additional 1.3 acres planted in 2024. Riparian stands are critical for supporting aquatic food webs and supply nutrients and materials that build and maintain aquatic habitat. Riparian forests support nutrient cycling, support sediment budgets, buffer overland flows and contribute coarse organic matter. Salmon productivity and capacity is tied to the riparian food webs supported by riparian forests.

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

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

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

10-25 years

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

10-50 years

50+ years

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

This project will maintain 17.6 acres of riparian plantings for 5 years. In our experience, riparian plantings generally require 3-5 years of maintenance, including supplemental water, mulch, weed control, and browse protection to become self-sufficient. Once they are self-sufficient, plantings will become the responsibility of the underlying landowner.

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

Plantings include a combination of willow trenches, streamside, and riparian floodplain plantings. Willow trenches and streamside plantings are proposed in areas where the plants are expected to quickly establish connection with groundwater so are not expected to need maintenance once installed.
Native riparian trees and shrubs, including 40% black cottonwood trees and flowering riparian shrubs, will be planted on minimum 8-12 foot centers in the floodplain riparian plantings. These plantings will be mulched with woodchips to conserve moisture, and will receive supplemental irrigation for up to 5 years. Browse protection will be accomplished through a combination of individual cages and planting enclosure fences.

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

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

Assessment Proposals

Protection Proposals

Monitoring Proposals

Project Risk and Economic Benefits

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

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

Please explain

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

3. Describe any land owner requirements (e.g., design elements, right-of-ways, access agreements, liability waivers, etc.) and if/how they could affect the project

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

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

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

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

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

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

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

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

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

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

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

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

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

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

riparian project.

Optional Section - Preparation for PRISM (SRFB applications only)

The following questions are identical to the questions RCO requires in the PRISM application for SRFB projects. If desired, sponsors can complete associated questions early and copy responses into PRISM during the "Complete Application" phase due on April 18, 2025.
*please note, this section is not applicable for Monitoring proposals

Do you want to review and/or pre-populate PRISM questions?	No

Supporting Documents

Upper Columbia Process Guide 2025

SRFB Manual 18 (2025)

RCO Application Resources (2025)

PROJECT: 25-1218 REST, SUGAR REACH RIPARIAN RESTORATION

Sponsor: Methow Salmon Recovery Found Program: Salmon State Riparian Status: Application Returned

Parties to the Agreement

PRIMARY SPONSOR

Methow Salmon Recovery Foundation
Address PO Box 755
City Twisp **State** WA **Zip** 98856-0755
Org Type Non-Gov-Nonprofit
Vendor # SWV0091539-00
UBI 602134958
Date Org created
Org Notes

link to Organization profile
✓Org data updated (by Amee Bahr 05/02/2025)

QUESTIONS - PRIMARY SPONSOR

#1: What date was your organization created?

2002

#2: Is your organization registered as a non-profit with the Washington Secretary of State?

Yes

#2a: Please confirm the Unified Business Identifier (UBI) shown above is correct or provide if blank.

The UBI above is correct

#3: How long has your organization been involved in salmon and habitat conservation?

20 years

#4: Do your organizational documents (charter, bylaws, or articles of incorporation) include the authority for the protection or enhancement of natural resources or related activities?

Yes

#5: Do your organizational documents (charter, bylaws, or articles of incorporation) provide for an equivalent successor organization in case the nonprofit dissolves?

No

SECONDARY SPONSORS

No records to display

MANAGING AGENCY

Recreation and Conservation Office

LEAD ENTITY

Upper Columbia Salmon Rcy Bd L

QUESTIONS

#1: List project partners and their role and contribution to the project.

External Systems

Project Application Report - 25-1218

SPONSOR ASSIGNED INFO

Sponsor-Assigned Project Number

Sponsor-Assigned Regions

LINK AN EXISTING SRP PROJECT

Unlink

25-1218, Sugar Reach Riparian Restoration, Salmon State

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Project Contacts

Contact Name Primary Org	Project Role	Work Phone	Work Email
Amee Bahr Rec. and Conserv. Office	Project Manager	(360) 867-8585	Amee.Bahr@rco.wa.gov
Sabrina Subia Rec. and Conserv. Office	MAgy Fiscal Contact	(360) 725-3938	Sabrina.Subia@rco.wa.gov
Tara Gregg Methow Salmon Recovery Found	Project Contact	(509) 429-5999	tara@methowsalmon.org
Brian Fisher Methow Salmon Recovery Found	Alt Project Contact	(509) 429-4928	brian@methowsalmon.org
Jessica Goldberg Methow Salmon Recovery Found	Alt Project Contact		jessica@methowsalmon.org
Chris Johnson Methow Salmon Recovery Found	Agreement	(509) 429-1232	ChrisJ@methowsalmon.org
Ariel Edwards Upper Columbia Salmon Rcy Bd L	Lead Entity Contact	(208) 540-2691	ariel.edwards@ucsrb.org
Katy Williams Methow Salmon Recovery Found	Billing	(509) 433-8880	katy@methowsalmon.org
Marlene Fuchs Methow Salmon Recovery Found	Billing	(541) 231-0813	marlene@methowsalmon.org

Worksites & Properties

#	Worksite Name
#1	Sugar

Restoration	Property Name
✓	MSRF
✓	Okanogan County
✓	Sage
✓	Town of Twisp
✓	Vogt
✓	Webb

#2 Eagle Rocks

Restoration	Property Name
✓	Downs

#3 WDFW Floodplain

Restoration	Property Name
✓	WDFW

Worksite Map & Description

Worksite #1: Sugar

WORKSITE ADDRESS

Street Address 20049 HIGHWAY 20
City, State, Zip Twisp WA 98856

Worksite #2: Eagle Rocks

WORKSITE ADDRESS

Street Address 207 Twisp-Winthrop Eastside Rd
City, State, Zip Twisp WA 98856

Worksite #3: WDFW Floodplain

WORKSITE ADDRESS

Street Address
City, State, Zip Twisp WA 98856

Worksite Details

Worksite #1: Sugar

SITE ACCESS DIRECTIONS

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Chinook-Upper Columbia River Spring, Methow River, Endangered		✓	✓	Stable
Steelhead-Upper Columbia River, Methow River, Threatened	✓	✓	✓	Stable

Reference or source used

NMFS 2016

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Bull Trout	Migratory adults and potentially juveniles; population trend declining. Mapped FMO habitat.
Lamprey	

Questions

#1: Give street address or road name and mile post for this worksite if available.

The worksite is located along both sides of the Methow River east of Highway 20 between River Miles 41.25 and RM 42.5.

Worksite #2: Eagle Rocks

SITE ACCESS DIRECTIONS

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Chinook-Upper Columbia River Spring, Methow River, Endangered		✓	✓	Stable
Steelhead-Upper Columbia River, Methow River, Threatened	✓	✓	✓	Stable

Reference or source used

NMFS 2016

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Bull Trout	Migratory adults and potentially juveniles; population trend declining. Mapped FMO habitat.
Lamprey	

Questions

#1: Give street address or road name and mile post for this worksite if available.

The site is accessible from the driveway at 207 Twisp-Winthrop Eastside Rd.

Worksite #3: WDFW Floodplain

SITE ACCESS DIRECTIONS

TARGETED ESU SPECIES

Species by ESU	Egg Present	Juvenile Present	Adult Present	Population Trend
Chinook-Upper Columbia River Spring, Methow River, Endangered		✓	✓	Stable
Steelhead-Upper Columbia River, Methow River, Threatened	✓	✓	✓	Stable

Reference or source used

NMFS 2016

TARGETED NON-ESU SPECIES

Species by Non-ESU	Notes
Bull Trout	Migratory adults and potentially juveniles; population trend declining. Mapped FMO habitat.
Lamprey	

Questions

#1: Give street address or road name and mile post for this worksite if available.

From Twisp, the site is accessible off of Old Twisp Highway, about 1 mile north from where Old Twisp Highway branches off from Highway 20

Project Location

RELATED PROJECTS

Projects in PRISM

PRISM Number	Project Name	Program Name	Current Status	Relationship Type	Notes
15-1217 A	M2 Right Sugar Acquisition	Salmon Federal Projects	Closed Completed	Earlier Phase	
17-1180 A	M2 Mid-Sugar Acquisition	Salmon Federal Projects	Closed Completed	Earlier Phase	
21-1173 P	Sugar Reach Restoration Preliminary Design	Salmon Federal Projects	Closed Completed	Earlier Phase	
12-1662 A	Middle Methow (M2) Conservation Easement RM 45.75	Salmon Federal Projects	Closed Completed	Earlier Phase	
10-1802 A	Methow River Acquisition 2010 RM 41.5	Salmon Federal Projects	Closed Completed	Earlier Phase	
22-1806 R	Sugar Reach Channel Reconnections Implementation	Salmon State Supplemental Lg	Active	Earlier Phase	

Related Project Notes

Questions

#1: Project location. Describe the geographic location, water bodies or habitat types, and the location of the project in the watershed, i.e. nearshore, tributary, main-stem, off-channel, etc.

The Sugar Reach Riparian Project is a component of a larger restoration project under development that seeks to improve habitat conditions through a 5.25-mile reach of the Methow River near Twisp, between RM 41.25 and RM 46.5. The project area includes mainstem river, multiple existing and historic side channels, and floodplain areas. Property ownership includes private properties, public (Town of Twisp, DNR SOAL and WDFW), and lands acquired by MSRF for implementation.

#2: How does this project fit within your regional recovery plan and/or local lead entity's strategy to restore or protect salmonid habitat? Cite section and page number.

The Sugar Reach project is in the Methow-River-Thompson Creek Assessment Unit (AU), which is included within the Middle Methow Reach Assessment (Reclamation 2008). This area is considered to be a major spawning area for steelhead and summer Chinook, and critical rearing habitat for both steelhead and spring Chinook. The Upper Columbia Regional Technical Team's Biological Strategy and Prioritization Framework identify riparian condition as a limiting factor and unacceptable ecological concern for the assessment unit and project reach. Planting to restore riparian condition is part of the process-based approach advocated by the Biological Strategy (page 6). The Methow EDT model indicates that riparian condition is functioning at 34% of template conditions and trending down.

#3: Is this project part of a larger overall project?

Yes

#3a: How does this project fit into the sequencing of the larger project?

The proposed riparian project is a component of the Sugar Reach Project. Due to the scale of the project the Sugar Reach Project was divided into multiple worksites: Sugar Channels Reconnection Project, Eagle Rocks Habitat Enhancement Project and WDFW Floodplain Phase 2. The Sugar Reach Riparian Restoration Project directing supports riparian planting and/or maintenance in each of the three worksites.

Construction and riparian plantings were completed at the Eagle Rocks Worksite in Fall 2025. This proposal includes maintenance of these plantings for the 4-years (year 2 – 5 of the plant establishment period). Year 1 plant maintenance will be funded by other sources.

Construction and riparian plantings at the Sugar Worksite will be phased over 2 years. Phase 1 is expected to be completed Fall 2025. Riparian plantings will occur in October and November, immediately following construction. Phase 2 is planned for late summer/early fall 2026. This proposal includes planting and

#4: Is the project on State Owned Aquatic Lands? Please contact the Washington State Department of Natural Resources to make a determination. **Aquatic Districts and Managers**

No

Property Details

Property: MSRF (Worksite #1: Sugar)

✓ **Restoration**

LANDOWNER

Name	Methow Salmon Recovery Foundation
Address	PO Box 755
City	Twisp
State	WA Zip 98856-0755
Type	Private

CONTROL & TENURE

Instrument Type	Sponsor owned property (deed)
Timing	Existing
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Property: Okanogan County (Worksite #1: Sugar)

✓ **Restoration**

LANDOWNER

Name	Okanogan County
Address	123 5th Ave N Ste 110
City	Okanogan
State	WA Zip 98840-9436
Type	Local

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Property: Sage (Worksite #1: Sugar)

✓ **Restoration**

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LANDOWNER

Name	Sage Business Endeavors LLC
Address	
City	Twisp
State	WA Zip 98856
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Property: Town of Twisp (Worksite #1: Sugar)

✓ **Restoration**

LANDOWNER

Name	Town of Twisp
Address	PO Box 278
City	Twisp
State	WA Zip 98856
Type	Local

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Property: Vogt (Worksite #1: Sugar)

✓ **Restoration**

LANDOWNER

Name	Peter Vogt
Address	
City	
State	Zip
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Property: Webb (Worksite #1: Sugar)

✓ **Restoration**

LANDOWNER

Name	Chris Webb
Address	
City	
State	Zip
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Property: Downs (Worksite #2: Eagle Rocks)

✓ **Restoration**

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LANDOWNER

Name	Nathan Downs
Address	
City	
State	Zip
Type	Private

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Property: WDFW (Worksite #3: WDFW Floodplain)

✓ **Restoration**

LANDOWNER

Name	Department of Fish and Wildlife (WDFW)
Address	PO Box 43135
City	Olympia
State	WA Zip 98504-3135
Type	State

CONTROL & TENURE

Instrument Type	Landowner Agreement
Timing	Proposed
Term Length	Fixed # of years
# Yrs	10
Expiration Date	
Note	

Project Proposal

Project Description

The primary goal of the Sugar Riparian Restoration Project is to support improved riparian conditions at each of the restoration sites that comprise the larger Sugar Reach.

The larger Sugar Reach Project is being implemented to increase the quality and quantity of rearing habitat available for Upper Columbia River Spring Chinook and Steelhead through side channel and floodplain reconnection, construction of instream habitat complexity structures and restore the conditions needed to support properly functioning riparian habitats. This grant application will allow us to expand riparian planting densities to reduce the amount of time it will take to restore proper functioning conditions.

The proposed riparian planting project will plant 17.6 acres with native trees and shrubs to improve riparian condition and canopy cover (currently unacceptable limiting factors) in the reach. Riparian plantings are proposed to expand the riparian buffers into previously cleared or disturbed areas. The plantings will be designed using a reference approach, with nearby established self-sustaining stands as the desired future condition. Plantings will be maintained for 5 years until established and self-sufficient.

Project Questions

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#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 historic factors important to understand the problems.

Loss of riparian and floodplain ecosystems along the Methow River and throughout the Upper Colombia has significantly altered the processes that create and maintain fish habitat. Riparian forests provide critical components of fish habitat such as leaf litter and large wood, as well as ecosystem services like maintaining water quality, supporting nutrient cycling, and influencing sediment dynamics. Over the last century and a half, expansion of agricultural and residential development along the valley floor cleared riparian forests and resulted in confinement and simplification of the Methow River, reducing both the quantity and productivity of fish habitat. Floodplain areas have been attractive for development given the relatively flat terrain, good soils, and easy access to irrigation water. As a result, most of these transitional areas have been converted to agriculture and residential uses. These actions created a legacy of isolated floodplains, hardened banks and simplified habitats for Chinook, steelhead, and the organisms and processes upon which they depend.

This proposal includes riparian restoration work at three worksites.

1. The WDFW worksite (RM 45.5 to 46.5) is the location of the WDFW Floodplain Phase 2 Project. Phase 2 restoration actions seek to rebalance the flow split to enhance instream habitat in both channels and preserve the function of the MVID and Barkley fish return. Riparian planting work included in this proposal with restore areas disturbed by phase 2 construction and revegetate a large gravel bar at the flow split.

2. Portions of the Eagle Rocks worksite (RM 43.5 to 42.75) have been the site of prior riparian restoration efforts, but the high bank has limited the success of plantings. In Fall 2024 the Eagle Rocks Habitat Enhancement Project excavated portions of this high bank to create two floodplain benches and installed a series of wood structures and plantings. Riparian restoration work included proposal supports maintenance of these plantings.

3. The Sugar worksite includes two project areas covering the right and left banks. Sugar Right (RM 41.9 to 42.75) includes a levee built in 1972-3 in response to record flooding that breached existing bank protections. The levee constrains the river impacting river process on both sides of the river. The levee has directly cut off ~50 acres of floodplain on the right bank of the Methow, and resulted in isolation of ~20 acres on the left bank at Sugar Left (RM 41.25 to 41.9) as the river has responded to the levee. Continued maintenance of the levee has expanded the impact of the levee as surfaces have been refaced multiple times. Previous perennial channels have become seasonal, floodplain channel areas have become less connected resulting in concentration of flow in the main channel resulting in rapid bank erosion into high glacial terraces downstream as the river seeks equilibrium. Riparian planting work included in this proposal focus on expanding and improving riparian vegetation on lowered floodplain surfaces and along channel margins.

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

The Upper Columbia Salmon Recovery Board (UCSRB) prioritization strategy (2021) provides context on the priority species, life stages, strategies, and habitat conditions within the project reach vicinity. The individual worksites are located in Reaches 1-4 of the Methow River-Thompson Assessment Unit (AU). As summarized in the 2021 Habitat Action Prioritization Strategy the priority species include Spring Chinook, Upper Columbia Steelhead. Priority life stages include Summer and Winter rearing. Unacceptable limiting factors include Riparian, Riparian- Canopy Cover, and Riparian - Structure. Ecological concerns identified in this reach include stream temperature, riparian condition, floodplain and side channel connections, and river complexity.

Limited riparian, riparian canopy and structure are specifically addressed in planting projects like the Sugar Channels Riparian project by establishing self-sustaining trees and shrubs quicker than natural regeneration. In many cases young riparian species are not able to re-establish without protection from deer and supplemental irrigation. Planting projects can hasten the re-establishment of native riparian forest species by many years. Re-establishing trees and shrubs along the river provides shade to the river lowering stream temperature. Leaf litter and detritus improve riparian condition by providing opportunity for nutrient cycling for aquatic species and improving the riverine food web. The Sugar project reconnects former side channels cutoff by channelization and human development, improving the river complexity with large wood immediately. Over time this riparian planting project will provide consistent wood to the river and floodplain and native seed to the floodplain to naturally maintain the complexity of the river and overall riparian.

Levees, roads, bank armoring, and floodplain development in the Sugar reach has severely limited natural channel migration, floodplain inundation, nutrient cycling, and large wood recruitment, and reduced access to side channel habitat. This has reduced the quality of riparian conditions. Restoration actions planned for the larger project are designed to address these anthropogenic features and their effects. The riparian plantings including in this proposal will provide a more immediate improvement in riparian conditions in the project area by expanding and improving existing riparian areas, and restoring areas disturbed by construction.

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

The Sugar Riparian project is part of a larger series of projects to restore side channel floodplain connectivity, improve instream structural complexity, & riparian conditions to support and expand habitat for listed salmonids. The primary goal is to improve riparian conditions (density, structure, species composition) on 17.6 acres along the Methow river to increase instream shading, replenish the large wood cycle, & reestablish more naturally moderated channel migration rates to support habitat for UCR Spring Chinook & Steelhead.

MSRF developed planting plans for each restoration site using a reference stand approach from established riparian areas within the reach; mature riparian forest is the desired future condition. Plantings will be based on a synthesis of surveyed stands on nearby properties and will include a mix of trees (cottonwoods, pines, alder, & birch) & shrubs (e.g., willows, chokecherry, service berry) to achieve cottonwood/ponderosa pine forests with mixed shrubs.

Riparian forests will expand the buffer between developed areas (roadways, agricultural lands, residential areas) & the river, provide leaf litter through the summer & fall, shade the adjacent river, & provide large wood over the long-term. Accelerating establishment of riparian forest will ensure Sugar Reach projects achieve water quality, nutrient cycling, & in-stream shade objectives more quickly than possible through natural vegetation recruitment.

#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). **Example Goals and Objectives**

Specific objectives of the proposed riparian project are as following:

- Accelerate the establishment of riparian vegetation through plantings, browse projection, watering, fertilizing and weed management. Properly implemented and managed planting projects have demonstrated faster establishment and growth when compared to natural regeneration.
- Replant a total of 17.6 acres of riparian forests where feasible using native species to achieve a sustainable riparian forest density, structure, and species composition. The distribution of acreage amongst the worksites is as follows: WDFW – 1.4 acres, Sugar 14.9 acres, Eagle Rocks 1.3 acres.
- Riparian plantings will be designed to buffer runoff and provide a source of terrestrial insects and leaf litter and support nutrient cycling over the short term (5-15 years).
- Riparian plantings will be designed to provide stream shading and a source of large wood to the adjacent river over the long term (15+ years).
- Maintain riparian plantings so trees are at least 15’ tall, have 50% canopy cover, and are self-sufficient after 5 years. Maintenance will include browse protection, supplemental deep irrigation, mulch, and weed control.
- Utilize best management practices, including mulching, weeding, and mowing to reduce new noxious weed populations (classes A-C) and prevent expansion of existing populations.

#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.

Task 1 Finalize Riparian Planting plan – MSRF staff will finalize planting plans for each area during application phase. These plans will ensure that plantings will support approved objectives. Task 1 deliverable includes Riparian Planting Plans.

Task 2 Planting - Plant into each site with a native tree or shrub, mixing composted wood chips into the root horizon to provide biologically active soil at the roots. To be completed by planting contractor. Planting in a specific and well thought out pattern will produce an environment easily maintained, which will substantially increase the success of the plantings. Top dress each planting site with extra mulch to reduce grass growth near the plant stem which will increase plant survival by providing a biologically active nutrient bank and moisture retention from irrigation, rain and snow melt. To be completed by planting contractor in year 1. This may span fall and spring planting periods depending on weather events.

Task 3 Fencing and Irrigation - Install perimeter fencing or cage fencing to protect plants from deer browse. In planting areas where irrigation is available, and automatic watering system will be installed. To be completed by planting contractor in year 1 follow completion of planting.

Task 4 Monitoring - MSRF will monitor each planting area for the life of the Contract to ensure 80% survival (MSRF projects often have more than 80% survival)

Task 5 Maintenance – Maintenance is expected during the plant establishment period (typically 5 years). Maintenance will be more significant during year 1, with decreasing needs year 2 – 5. Tasks include
- Removal and replacement of fencing during spring freshets
- Fencing repairs
- Maintenance of irrigation system including winterization
- Replanting and reseeding as needed to achieve desired survival

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

The hot, dry summers in the Upper Colombia make care of young plants difficult until they establish roots down to perennial ground water. Riparian plantings in these areas are expected to require reliable access to water, mulch, and weed control for about 5 years to establish self-sustaining plants. Riparian planting zones are limited to areas that will be wetted annually and will be supplemented by irrigation where possible. MSRF is currently working with WDFW to expand access to banked water to expand irrigation water availability to ensure planting success though the critical establishment period. Significant heat in the Spring and/or Summer from atypical ‘heat domes’ are very stressful on establishing plants even with irrigation and could lead to higher mortality than expected.

#7: How have lessons learned from completed projects or monitoring studies informed this project?

Methow Salmon Recovery Foundation has implemented and monitored many riparian planting projects in the reach and throughout the watershed over the past 20 years. Lessons have informed our strategies on planting techniques including biologically active mulching, irrigation, planting depths relative to water table when irrigation is unavailable, and specific layout of plantings to accommodate effective and efficient maintenance. We have also evolved our plant protection strategies to encourage natural regeneration within protected pods rather than only protecting stems planted. Supplemental irrigation is available to the Eagle Rocks and Sugar worksites, which has been demonstrated to significantly reduce the time needed for plantings to mature.

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

Initial project concepts for the Sugar Reach were evaluated based on project goals, biological benefit, cost, feasibility, public support, and risk to select a preferred alternative. The Sugar Riparian project is directly linked the broader suite of restoration actions. Riparian planting plans have been developed to concentrate planting efforts in areas where riparian establishment success is supported by completed habitat restoration actions. Changes in these areas that promote the expansion of riparian vegetation include increased channel and floodplain activation through ELJ placements and grading.

When developing a riparian planting plan for the Sugar Reach the design team evaluated the success potential to three planting approaches: Natural regeneration with no manually installed plants, install plants without supplementation irrigation and/or browse protection, and install plantings with supplementation irrigation and browse protection.

Floodplain grading and ELJ placements associated with the larger project will expand the areas where riparian establishment is possible. However, the process of natural germination and growth takes significant time and some site areas may not see the conditions needed for germination for many years. Experience with riparian plantings in the Methow has highlighted the importance of water during initial plant establishment. Until plants have established roots down to perennial ground water, they need supplementation water to achieve the desired survival rate. Deer browse throughout the year is also a limiting factor on the growth of young plants. MSRF has found that installing plants as close to possible to groundwater, supplemental water and browse protection yields a substantially faster rate of establishment when compared to natural regeneration. The Sugar Project team selected an active management approach to riparian plantings on this project to yield a rapid plant establishment. Planting areas were select

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

The project area includes private properties, public lands (WDFW and DNR), and multiple jurisdictions (City, County, and State) with infrastructure protection responsibilities. MSRF actively engaged with stakeholders to ensure needs and limits were identified early. Stakeholder input was instrumental in design development to ensure that the preferred actions at each of the project areas were feasible, and met the project goals while balancing the interests of stakeholders. MSRF met on multiple occasions with affected stakeholders, including the county and Corps engineers responsible for levee maintenance and with adjoining landowners. MSRF worked with the Methow Conservancy to complete a restoration checklist to demonstrate that restoration actions would be consistent with conservation easements held on protected properties. The preferred alternatives have strong stakeholder support.

MSRF will maintain communication with all stakeholders to ensure ongoing coordination and communication throughout the design and implementation process.

#10: Does your project address or accommodate the anticipated effects of climate change?

Yes

#10a: How will your project be climate resilient given future conditions?

Establishing riparian forest stands is a step towards mitigating climate change by sequestering organic carbon and increasing shading to the near shore wetted environment. Establishing riparian trees capable of reaching groundwater will help ensure resilience in the face of modelled hotter and drier summers.

#10b: How will your project increase habitat and species adaptability?

Establishing riparian plantings with a mix of appropriate species in areas where they are capable of reaching groundwater will help to provide refugia for riparian dependent species. Establishing overhead canopy helps to shade the soil and allow for future plant recruitment in addition to the water quality and habitat benefits described above. Increasing nearshore floodplain planting complexity increases rearing and refuge habitat during potentially flashier flows as our snow driven system shifts toward an increasingly rain driven climate.

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

Methow Salmon Recovery Foundation has worked closely with local and regional recovery process to assist in prioritizing, selecting and securing resources to implement a wide array of restoration projects. For more than 20 years, MSRF has actively engaged in planning, developing, implementing, maintaining and evaluating complex habitat restoration projects.

Some habitat projects with similar riparian restoration components completed by MSRF include the Barkley Bear Project (2020, 2021, 2022), Twisp River Floodplain Habitat Project (2017, 2016), Upper Beaver Creek Channel Relocation (2022, 2021, 2013), Middle Methow (M2) WDFW Floodplain Project (2013), M2 3R Habitat Restoration Project (2014), M2 Whitefish Island Habitat Project (2012), Eagle Rocks Habitat Enhancement (2024).

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

No

Restoration Supplemental

#1: Is the primary activity of the project riparian planting?

Yes

#1a: Will your project occur solely on currently identified sites, or is this a geographic envelope or reach-scale project?

Identified Sites

#1b: Will the width of your riparian planting meet or exceed the **site potential tree height** at 200-years for your site?

Yes

#1c: Is there a **303(d) listing** for temperature on the stream?

Yes

#1ca: Does the project meet an exception?

NA: meets or exceeds SPTH

#2: Does the project include measures to stabilize an eroding stream bank?

No

#3: Does the project include side channel reconnection or floodplain re-grading worktypes?

No

#4: Does the project include an instream structure placement worktype?

No

#5: Is the primary activity of the project invasive species removal?

No

#6: Describe the steps you will take to minimize the introduction of invasive species during construction and restoration. Consider how you will use un-infested materials and clean equipment entering and leaving the project area.

Project managers will coordinate with planting crews and nursery staff to ensure all plant materials and soils associated are weed free. Trucks, excavators, tractors, trailers, and planting equipment will be brought to the site free of weeds as best possible. Excavator and tractors will be washed prior to arrival during planting season and during maintenance. All mulch provided for the plants will be composted wood chips, composted on site to not introduce off site weeds or certified weed free straw. If wood chips are imported, wood chip providers are instructed to only bring wood chips from native species such as pine, fir, aspen and cottonwood.

#7: Describe the long-term stewardship and maintenance obligations for the project.

The native plantings will be maintained annually for at least 5 years. Annual maintenance includes deer browse repairs from winter snow and harsh weather, annual fertilization with time release fertilizer and/or compost, periodic mowing of grasses and broadleaf weeds, periodic irrigation June through August. Annual monitoring will include inspection of plantings and their health and vigor and will inform and trigger an adaptive management suite of tasks including replanting, extra fertilization and/or mulching and irrigation infrastructure modifications.

Restoration Metrics

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Worksite: Sugar (#1)

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	1.21
Project Identified In a Plan or Watershed Assessment (C.0.c)	A biological Strategy to Protect and Restore Salmonid Habitat in the Upper Columbia Region (RTT 2017) Middle Methow Reach Assessment (Reclamation 2011) Upper Columbia Prioritization Framework (RTT 2021)
Priority in Recovery Plan	In priority area, addresses priority species, targets priority limiting factors
Type Of Monitoring (C.0.d.1)	None
Monitoring Location (C.0.d.2)	No monitoring completed

RIPARIAN HABITAT PROJECT

Total Riparian Miles Streambank Treated (C.5.b.1)	1.21
Total Riparian Acres Treated (C.5.b.2)	14.9

Planting (C.5.c.1)

Total cost for Planting	$274,250
Species Of Plants planted in riparian (C.5.c.2)	Populus trichocarpus, Pinus ponderosa, Alnus incana, Salix lucida
Acres Planted in riparian (C.5.c.3)	14.9
Miles of streambank planted (C.5.c.4)	1.21
Average Riparian Width	400
Site Potential Tree Height at 200 years (SPTH-200)	147

ARCHITECTURAL & ENGINEERING

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	$5,750

Worksite: Eagle Rocks (#2)

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.59
Project Identified In a Plan or Watershed Assessment (C.0.c)	A biological Strategy to Protect and Restore Salmonid Habitat in the Upper Columbia Region (RTT 2017) Middle Methow Reach Assessment (Reclamation 2011) Upper Columbia Prioritization Framework (RTT 2021)
Priority in Recovery Plan	Addresses priority limiting factor to improve conditions for priority species
Type Of Monitoring (C.0.d.1)	Implementation Monitoring None
Monitoring Location (C.0.d.2)	No monitoring completed Downstream Onsite Upslope Upstream

ESTUARINE / NEARSHORE PROJECT

INSTREAM HABITAT PROJECT

PRE-RESTORATION ACQUISITIONS AND NURSERY OPERATIONS PROJECT

RIPARIAN HABITAT PROJECT

Total Riparian Miles Streambank Treated (C.5.b.1)	0.59
Total Riparian Acres Treated (C.5.b.2)	1.3

Debris/structures removal (C.5.j.1)

Fencing (C.5.d.1)

Forestry practices / stand management (C.5.i.1)

Planting (C.5.c.1)

Total cost for Planting	$18,110
Species Of Plants planted in riparian (C.5.c.2)	Populus trichocarpus, Pinus ponderosa, Alnus incana, Salix lucida
Acres Planted in riparian (C.5.c.3)	1.3
Miles of streambank planted (C.5.c.4)	0.59
Average Riparian Width	235
Site Potential Tree Height at 200 years (SPTH-200)	147

Riparian Plant removal / control (C.5.h.1)

Water gap development (C.5.f.1)

SITE STEWARDSHIP PROJECT

CULTURAL RESOURCES

PERMITS

ARCHITECTURAL & ENGINEERING

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	$1,890

AGENCY INDIRECT COSTS

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Worksite: WDFW Floodplain (#3)

Miles of Stream and/or Shoreline Treated or Protected (C.0.b)	0.31
Project Identified In a Plan or Watershed Assessment (C.0.c)	A biological Strategy to Protect and Restore Salmonid Habitat in the Upper Columbia Region (RTT 2017) Middle Methow Reach Assessment (Reclamation 2011) Upper Columbia Prioritization Framework (RTT 2021)
Priority in Recovery Plan	Addresses priority limiting factor to improve conditions for priority species
Type Of Monitoring (C.0.d.1)	Implementation Monitoring None
Monitoring Location (C.0.d.2)	No monitoring completed Downstream Onsite Upslope Upstream

ESTUARINE / NEARSHORE PROJECT

INSTREAM HABITAT PROJECT

PRE-RESTORATION ACQUISITIONS AND NURSERY OPERATIONS PROJECT

RIPARIAN HABITAT PROJECT

Total Riparian Miles Streambank Treated (C.5.b.1)	0.31
Total Riparian Acres Treated (C.5.b.2)	1.4

Debris/structures removal (C.5.j.1)

Fencing (C.5.d.1)

Forestry practices / stand management (C.5.i.1)

Planting (C.5.c.1)

Total cost for Planting	$58,110
Species Of Plants planted in riparian (C.5.c.2)	Populus trichocarpus, Pinus ponderosa, Alnus incana, Salix lucida, Salix melanopsis
Acres Planted in riparian (C.5.c.3)	1.4
Miles of streambank planted (C.5.c.4)	0.31
Average Riparian Width	300
Site Potential Tree Height at 200 years (SPTH-200)	147

Riparian Plant removal / control (C.5.h.1)

Water gap development (C.5.f.1)

SITE STEWARDSHIP PROJECT

CULTURAL RESOURCES

PERMITS

ARCHITECTURAL & ENGINEERING

Architectural & Engineering (A&E)

Total cost for Architectural & Engineering (A&E)	$1,890

AGENCY INDIRECT COSTS

Overall Project Metrics

COMPLETION DATE	
Projected date of completion	9/30/2030

Restoration Cost Estimates

Worksite #1: Sugar

Category	Work Type		Estimated Cost	Note
Riparian Habitat Project	Planting (C.5.c.1)		$274,250	
		Subtotal:	$274,250	
Admin, Architecture, and Engineering			$5,750	
		Total Estimate For Worksite:	$280,000	

Worksite #2: Eagle Rocks

Category	Work Type		Estimated Cost	Note
Riparian Habitat Project	Planting (C.5.c.1)		$18,110	
		Subtotal:	$18,110	
Admin, Architecture, and Engineering			$1,890	
		Total Estimate For Worksite:	$20,000	

Worksite #3: WDFW Floodplain

Category	Work Type		Estimated Cost	Note
Riparian Habitat Project	Planting (C.5.c.1)		$58,110	
		Subtotal:	$58,110	
Admin, Architecture, and Engineering			$1,890	
		Total Estimate For Worksite:	$60,000	

Summary

Total Estimated Costs Without AA&E:	$350,470
Total Estimated AA&E:	$9,530
Total Estimated Restoration Costs:	$360,000

Cost Summary

	Estimated Cost	Project %	Admin/AA&E %
Restoration Costs			
Restoration	$350,470		
Admin, Architecture, and Engineering	$9,530		2.72 %
SUBTOTAL	$360,000	100.00 %	
Total Cost Estimate	$360,000	100.00 %	

Funding Request and Match

FUNDING PROGRAM

Salmon State Riparian	$360,000	100.000000

SPONSOR MATCH

Questions

#1: Explain how you determined the cost estimates

Cost estimates for this proposal are based on recent projects in similar planting areas, with similar infrastructure, access, and landowner engagement. They are based on a per acre cost that includes plants, deer protection, mulch, fertilizers, and irrigation. Maintenance and monitoring costs are similarly based on a per acre rate.

Other Funding

OTHER FUNDING DETAILS

Cultural Resources

Cultural Resource Areas

Worksite #1: Sugar

Area: Sugar APE

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Work within this worksite includes planting native riparian vegetation and installing irrigation and temporary fencing for browse protection at the Sugar Right and Sugar Left project areas. The scope also includes ongoing maintenance of riparian plantings and related infrastructure for the plant establishment period (typically 5 years), including:
- Removal and replacement of deer fencing before and after spring freshets
- Fencing repairs
- General maintenance of irrigation system including winterization
- Replanting and reseeding as needed to achieve desired survival

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

Plantings areas will be prepared under the scope of work included in the Sugar Channels Reconnection Project. Ground disturbance activities included in the scope of the riparian project will include planting holes and fencing. Planting holes will be dug up to 2 feet deep using a mini excavator or shovel, and back-filled by hand. Fences will be installed using “T-posts" driven up to 2 feet deep. Irrigation will sit on the surface using a mix of hand lines and poly-tubing. Access will use existing access routes.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

No pre-construction/restoration ground disturbing work is proposed outside the Sugar Channels Reconnection Project.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The Sugar Worksite includes the Sugar Right and Sugar Left project areas.

The Sugar Right project area is dominated by the 1972-3 constructed levee that extends from Highway 20 easterly approximately 1500 feet to a point in the active channel of the Methow River. The levee was built after the 1972 flood surpassed an existing protection feature located south of the current levee along the bank of the river at that time. Imagery suggests that the current levee bisects the 1972 active river channel, and that a substantial volume of imported fill was placed behind the levee. Vegetation is extremely sparse due to the depth of fill and elevation above the river.

Imagery of the Sugar Left project area shows the Methow River avulsed at this location in the 1948 flood and this was the primary channel as recently as the 1970's (prior to levee construction upstream). Since the 1970s the channel migrated west. Floodplain channels in the left project area remain connected above the Q5, but the floodplain area is characterized with mature cottonwood will minimal undergrowth and cottonwood succession.

Prior to the 1948 flood event, imagery suggests the upper half of the project area may have been used for agricultural purposes. Upland areas of the property adjacent to the project are still actively farmed, but imagery suggests that agricultural use of the lower floodplain area was not viable after the flood. The upland property is fully fenced and remnants of fence lines cross

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

The larger construction project requires a Corps permit, but the planting does not.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

Yes

#6a: Please list the federal agency and funding sources.

BPA is providing funding assistance for construction, including riparian restoration.

#6b: Does the federal funding you are utilizing as match require you to receive state funding?

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

BPA has completed S.106 for the entire project area, including planting areas. Consultation was completed August 22, 2024

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

No

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

The Levee is more than 45 years old, but will not be affected by the riparian project.

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Worksite #2: Eagle Rocks

Area: Eagle Rocks APE

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Work within this worksite includes maintenance of existing riparian plantings and related infrastructure installed by the Eagle Rocks Habitat Enhancement Project in Fall 2024, including
- Removal and replacement of deer fencing before and after spring freshets
- Fencing repairs
- General maintenance of irrigation system including winterization
- Replanting and reseeding as needed to achieve desired survival

Maintenance needs are expected during the plant establishment period (typically 5 years).

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

If replanting is needed, planting holes will be dug up to 2 feet deep using a mini excavator or shovel, and back-filled by hand. Deer fencing was previously installed as part of the Eagle Rocks Habitat Enhancement Project, but if replacement posts are needed “T-posts" will be driven up to 2 feet deep. Irrigation will sit on the surface using a mix of hand lines and poly-tubing. Access will use existing access routes.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

No ground disturbing pre-construction work is proposed

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

Historic imagery suggests that this has been the primary river channel for the period of record, although variations in vegetation on the left floodplain indicate that the river historically occupied this area. There are no structures. This property is actively grazed by livestock and the left bank of the project area is characterized by a steep cobble bank with minimal complexity and large sections of cleared riparian. Portions of this worksite have been the site of prior riparian restoration efforts by others, but the high bank and lack of water has limited the success of plantings. MSRF completed the Eagle Rocks Habitat Enhancement project in Fall 2024. As part of this project riparian plantings were established on two excavated floodplain benches. Post project these floodplain benches are wetted annually April – June and receive supplemental irrigation water.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

The Corps of Engineers completed S.106 consultation for the project, including the planting areas, in 2024.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

No

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Worksite #3: WDFW Floodplain

Area: WDFW APE

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Work within this worksite includes planting native riparian vegetation, and installing temporary fencing for browse protection. The scope also includes ongoing maintenance of riparian plantings and related infrastructure for the plant establishment period (typically 5 years), including:
- Removal and replacement of deer fencing before and after spring freshets
- Fencing repairs
- Replanting and reseeding as needed to achieve desired survival

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

Plantings areas will be prepared under the scope of work included in the WDFW Floodplain Phase 2. Ground disturbance activities included in the scope of the riparian project will include planting holes and fencing. Planting holes will be dug up to 2 feet deep using a mini excavator or shovel, and back-filled by hand. Fences will be installed using “T-posts" driven up to 2 feet deep. Access will use existing access routes.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

No pre-construction/restoration ground disturbing work is proposed outside the WDFW Floodplain Phase 2 Project.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The WDFW Worksite is on the valley floor on a mix of private and WDFW-owned property along the Methow River. During the early 1900's, most of the worksite was cleared for agriculture and used as a dairy through the 1970's. As the economy of the Methow Valley has become more dependent on recreation, much of the worksite has converted to rural residential and open spaces uses, and riparian forest has regrown in portions of the worksite. Remnants of the agricultural history on the site include an old pumphouse and remnants of an irrigation ditch that has become a floodplain side channel. This worksite overlaps with the WDFW Floodplain Project completed in 2013 and the WDFW Floodplain Phase 2 project planned for 2026.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

The riparian plantings will not require a federal permit. However, the larger project will require a Corps permit, and we expect that the Corps will complete S.106 for the larger project, including planting areas.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

BPA completed S.106 for portions of the project area for the Phase 1 habitat project in 2013.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

Yes

#8a: Please name the area and specify when the site was established.

Portions of the worksite are within the Methow Wildlife Area. The lands were
acquired by WDFW and integrated into the Methow Wildlife Area in 2008.

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Area: WDFW APE part 2

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Work within this worksite includes planting native riparian vegetation, and installing temporary fencing for browse protection. The scope also includes ongoing maintenance of riparian plantings and related infrastructure for the plant establishment period (typically 5 years), including:
- Removal and replacement of deer fencing before and after spring freshets
- Fencing repairs
- Replanting and reseeding as needed to achieve desired survival

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

Plantings areas will be prepared under the scope of work included in the WDFW Floodplain Phase 2. Ground disturbance activities included in the scope of the riparian project will include planting holes and fencing. Planting holes will be dug up to 2 feet deep using a mini excavator or shovel, and back-filled by hand. Fences will be installed using “T-posts" driven up to 2 feet deep. Access will use existing access routes.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

No pre-construction/restoration ground disturbing work is proposed outside the WDFW Floodplain Phase 2 Project.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The WDFW Worksite is on the valley floor on a mix of private and WDFW-owned property along the Methow River. During the early 1900's, most of the worksite was cleared for agriculture and used as a dairy through the 1970's. As the economy of the Methow Valley has become more dependent on recreation, much of the worksite has converted to rural residential and open spaces uses, and riparian forest has regrown in portions of the worksite. Remnants of the agricultural history on the site include an old pumphouse and remnants of an irrigation ditch that has become a floodplain side channel. This worksite overlaps with the WDFW Floodplain Project completed in 2013 and the WDFW Floodplain Phase 2 project planned for 2026.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

The larger construction project requires a Corps permit, but the planting does not.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

BPA completed S.106 for portions of the project area for the Phase 1 habitat project in 2013.

#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

Yes

#8a: Please name the area and specify when the site was established.

Portions of the worksite are within the Methow Wildlife Area. The lands were
acquired by WDFW and integrated into the Methow Wildlife Area in 2008.

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Area: WDFW APE part 3

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Work within this worksite includes planting native riparian vegetation, and installing temporary fencing for browse protection. The scope also includes ongoing maintenance of riparian plantings and related infrastructure for the plant establishment period (typically 5 years), including:
- Removal and replacement of deer fencing before and after spring freshets
- Fencing repairs
- Replanting and reseeding as needed to achieve desired survival

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

Plantings areas will be prepared under the scope of work included in the WDFW Floodplain Phase 2. Ground disturbance activities included in the scope of the riparian project will include planting holes and fencing. Planting holes will be dug up to 2 feet deep using a mini excavator or shovel, and back-filled by hand. Fences will be installed using “T-posts" driven up to 2 feet deep. Access will use existing access routes.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

No pre-construction/restoration ground disturbing work is proposed outside the WDFW Floodplain Phase 2 Project.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The WDFW Worksite is on the valley floor on a mix of private and WDFW-owned property along the Methow River. During the early 1900's, most of the worksite was cleared for agriculture and used as a dairy through the 1970's. As the economy of the Methow Valley has become more dependent on recreation, much of the worksite has converted to rural residential and open spaces uses, and riparian forest has regrown in portions of the worksite. Remnants of the agricultural history on the site include an old pumphouse and remnants of an irrigation ditch that has become a floodplain side channel. This worksite overlaps with the WDFW Floodplain Project completed in 2013 and the WDFW Floodplain Phase 2 project planned for 2026.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

The riparian plantings will not require a federal permit. However, the larger project will require a Corps permit, and we expect that the Corps will complete S.106 for the larger project, including planting areas.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

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#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

Yes

#8a: Please name the area and specify when the site was established.

Portions of the worksite are within the Methow Wildlife Area. The lands were
acquired by WDFW and integrated into the Methow Wildlife Area in 2008.

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Project Application Report - 25-1218

Area: WDFW APE part 4

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Work within this worksite includes planting native riparian vegetation, and installing temporary fencing for browse protection. The scope also includes ongoing maintenance of riparian plantings and related infrastructure for the plant establishment period (typically 5 years), including:
- Removal and replacement of deer fencing before and after spring freshets
- Fencing repairs
- Replanting and reseeding as needed to achieve desired survival

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

Plantings areas will be prepared under the scope of work included in the WDFW Floodplain Phase 2. Ground disturbance activities included in the scope of the riparian project will include planting holes and fencing. Planting holes will be dug up to 2 feet deep using a mini excavator or shovel, and back-filled by hand. Fences will be installed using “T-posts" driven up to 2 feet deep. Access will use existing access routes.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

No pre-construction/restoration ground disturbing work is proposed outside the WDFW Floodplain Phase 2 Project.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

The WDFW Worksite is on the valley floor on a mix of private and WDFW-owned property along the Methow River. During the early 1900's, most of the worksite was cleared for agriculture and used as a dairy through the 1970's. As the economy of the Methow Valley has become more dependent on recreation, much of the worksite has converted to rural residential and open spaces uses, and riparian forest has regrown in portions of the worksite. Remnants of the agricultural history on the site include an old pumphouse and remnants of an irrigation ditch that has become a floodplain side channel. This worksite overlaps with the WDFW Floodplain Project completed in 2013 and the WDFW Floodplain Phase 2 project planned for 2026.

#5: Will a federal permit be required to complete the scope of work on the project areas located within this worksite?

No

The riparian plantings will not require a federal permit. However, the larger project will require a Corps permit, and we expect that the Corps will complete S.106 for the larger project, including planting areas.

#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

Yes

#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

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#8: Is the worksite located within an existing park, wildlife refuge, natural area preserve, or other recreation or habitat site?

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#8a: Please name the area and specify when the site was established.

Portions of the worksite are within the Methow Wildlife Area. The lands were acquired by WDFW and integrated into the Methow Wildlife Area in 2008.

#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Area: WDFW APE part 5

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

Work within this worksite includes planting native riparian vegetation, and installing temporary fencing for browse protection. The scope also includes ongoing maintenance of riparian plantings and related infrastructure for the plant establishment period (typically 5 years), including:
- Removal and replacement of deer fencing before and after spring freshets
- Fencing repairs
- Replanting and reseeding as needed to achieve desired survival

#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

Plantings areas will be prepared under the scope of work included in the WDFW Floodplain Phase 2. Ground disturbance activities included in the scope of the riparian project will include planting holes and fencing. Planting holes will be dug up to 2 feet deep using a mini excavator or shovel, and back-filled by hand. Fences will be installed using “T-posts" driven up to 2 feet deep. Access will use existing access routes.

#3: Describe any planned ground disturbing pre-construction/restoration work. This includes geo-technical investigation, fencing, demolition, decommissioning roads, etc.

No pre-construction/restoration ground disturbing work is proposed outside the WDFW Floodplain Phase 2 Project.

#4: Describe the existing project area conditions. The description should include existing conditions, current and historic land uses and previous excavation/fill (if depths and extent is known, please describe).

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The riparian plantings will not require a federal permit. However, the larger project will require a Corps permit, and we expect that the Corps will complete S.106 for the larger project, including planting areas.

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#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

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#7a: Summarize the previous cultural resource review; including lead agency and date of review, reference name and numbers, etc. If RCO, include the prior phase grant number. NOTE: Do not provide any site-specific information considered confidential. Attach previous surveys or other reference documents.

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#9: Are there any structures over 45 years of age within this worksite? This includes structures such as buildings, tidegates, dikes, residential structures, bridges, rail grades, park infrastructure, etc.

No

Area: WDFW APE part 6

#1: Provide a description of the project actions at this worksite (acquisition, development and/or restoration activities that will occur as a part of this project)

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- Removal and replacement of deer fencing before and after spring freshets
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#2: Describe all ground disturbing activities (length, width and depth of disturbance and equipment utilized) that will take place in the Area of Potential Effect (APE). Include the location of any construction staging or access roads associated with your project that will involve ground disturbance.

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#6: Are you utilizing Federal Funding to complete the scope of work? This includes funds that are being shown as match or not.

No

#7: Do you have knowledge of any previous cultural resource review within the project boundaries during the past 10 years?

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No

Project Application Report - 25-1218

Project Permits

Permits and Reviews	Issuing Organization	Applied Date	Received Date	Expiration Date	Permit #
Archaeological & Cultural Resources (EO 21-02)	DAHP				

Permit Questions

#1: Are you planning on using the federal permit streamlining process? **Limit 8**

No

Attachments

Required Attachments	8 out of 8 done
Applicant Resolution/Authorizations	✓
CCA Tribal Notification	✓
Cost Estimate	✓
Landowner acknowledgement form	✓
Map: Restoration Worksite	✓
Photo	✓
RCO Fiscal Data Collection Sheet	✓
Riparian Enhancement Plan	✓

PHOTOS (JPG, GIF)

Photos (JPG, GIF)

666888 Primary

666889 Secondary

PROJECT DOCUMENTS AND PHOTOS

Project Documents and Photos

File Type	Attach Date	Attachment Type	Title	Person	File Name, Number Associations	Shared
	05/27/2025	Riparian Enhancement Plan	25-1218 Riparian Enhancement planting plan_DRAFT_ 5-272-2025	BrianF	25-1218 Sugar Reach Riparian Enhancement planting plan_DRAFT_updated 5-27-2025.docx, 670519	✓
	05/21/2025	Application Review Report	Grant Manager Comments, 25-1218R(rtnd 05/21/25 12:21)	AmeeB	Grant Manager Comments Report - 25-1218 (rtnd 05-21-2025_12-21-32).pdf, 670168	✓
	04/18/2025	Project Application Report	Project Application Report, 25-1218R (sub 04/18/25 19:13:57)	JessicaG	Project Application Report - 25-1218 (submitted 04-18-2025_19-13-57).pdf, 666894	✓
	04/18/2025	Map: Restoration Worksite	SugarReach_Riparian_SiteRestorationMap	JessicaG	SugarReach_Riparian_SiteRestoratio… 666892	✓
	04/18/2025	Photo	WDFW_Project_Area_flow_split.JPG	JessicaG	WDFW_Project_Area_flow_split.jpg, 666889	✓
	04/18/2025	Photo	Sugar_Right_Project_Area_levee_floodpla	JessicaG	Sugar_Right_Project_Area_levee_floo… 666888	✓
	04/18/2025	Application Document	Methow-Thompson-1-4-Sugar-Reach-Riparian-Restoration.pdf	BrianF	Methow-Thompson-1-4-Sugar-Reach-Riparian-Restoration.pdf, 666859	✓
	04/18/2025	Landowner acknowledgement form	25-1218 Sugar Reach Riparian Restoration SAL-LandownerAckFor	JessicaG	25-1218 Sugar Reach Riparian Restoration SAL-LandownerAckForm_MSRF.pdf, 666854	
	04/18/2025	Applicant Resolution/Authorizations	MSRF Placeholder Applicant Resolution Authorizations.docx	JessicaG	MSRF Placeholder Applicant Resolution Authorizations.docx, 666850	✓
	04/18/2025	CCA Tribal Notification	MSRF Placeholder CCA Tribal Notification.docx	JessicaG	MSRF Placeholder CCA Tribal Notification.docx, 666849	✓
	04/18/2025	RCO Fiscal Data Collection Sheet	MSRF Placeholder RCO Fiscal Data Collection Sheet.docx	JessicaG	MSRF Placeholder RCO Fiscal Data Collection Sheet.docx, 666848	
	04/18/2025	Cost Estimate	SUGAR RIPARIAN SAL-CostEstimate.xlsx	BrianF	Copy of SUGAR RIPARIAN SAL-CostEstimate_V2.xlsx, 666844	✓

Application Status

Application Due Date: 06/23/2025

Project Application Report - 25-1218

Status Name	Status Date	Submitted By	Submission Notes
Application Returned	05/21/2025	Amee Bahr	Hey folks, the RP had just a couple of questions for you regarding your application. If you could provide the answers by the end of today, we can review them tomorrow and likely clear the project. Let me know if you have any questions.
Application Submitted	04/18/2025	Jessica Goldberg	
Preapplication	04/02/2025		

I certify that to the best of my knowledge, the information in this application is true and correct. Further, all application requirements due on the application due date have been fully completed to the best of my ability. I understand that if this application is found to be incomplete, it will be rejected by RCO. I understand that I may be required to submit additional documents before evaluation or approval of this project and I agree to provide them. (Jessica Goldberg, 04/18/2025)

Date of last change: 05/21/2025

Review Panel Q: Questions #3a, and # 8 are incomplete. It appears verbiage cut off due to character limitations. Use response here to complete explanation or attach as separate file to PRISM if needed.

The complete responses to these questions are:
#3a
The proposed riparian project is a component of the Sugar Reach Project. Due to the scale of the project the Sugar Reach Project was divided into multiple worksites: Sugar Channels Reconnection Project, Eagle Rocks Habitat Enhancement Project and WDFW Floodplain Phase 2. The Sugar Reach Riparian Restoration Project directing supports riparian planting and/or maintenance in each of the three worksites.

Construction and riparian plantings were completed at the Eagle Rocks Worksite in Fall 2025. This proposal includes maintenance of these plantings for the 4-years (year 2 – 5 of the plant establishment period). Year 1 plant maintenance will be funded by other sources.

Construction and riparian plantings at the Sugar Worksite will be phased over 2 years. Phase 1 is expected to be completed Fall 2025. Riparian plantings will occur in October and November, immediately following construction. Phase 2 is planned for late summer/early fall 2026. This proposal includes planting and maintenance for both phases for 5 years

Construction and riparian plantings at the WDFW Worksite are planned for 2026. This proposal includes planting and maintenance for 5 years.

#8
Initial project concepts for the Sugar Reach were evaluated based on project goals, biological benefit, cost, feasibility, public support, and risk to select a preferred alternative. The Sugar Riparian project is directly linked the broader suite of restoration actions. Riparian planting plans have been developed to concentrate planting efforts in areas where riparian establishment success is supported by completed habitat restoration actions. Changes in these areas that promote the expansion of riparian vegetation include increased channel and floodplain activation through ELJ placements and grading.

When developing a riparian planting plan for the Sugar Reach the design team evaluated the success potential to three planting approaches: Natural regeneration with no manually installed plants, install plants without supplementation irrigation and/or browse protection, and install plantings with supplementation irrigation and browse protection.

Floodplain grading and ELJ placements associated with the larger project will expand the areas where riparian establishment is possible. However, the process of natural germination and growth takes significant time and some site areas may not see the conditions needed for germination for many years. Experience with riparian plantings in the Methow has highlighted the importance of water during initial plant establishment. Until plants have established roots down to perennial ground water, they need supplementation water to achieve the desired survival rate. Deer browse throughout the year is also a limiting factor on the growth of young plants. MSRF has found that installing plants as close to possible to groundwater, supplemental water and browse protection yields a substantially faster rate of establishment when compared to natural regeneration. The Sugar Project team selected an active management approach to riparian plantings on this project to yield a rapid plant establishment. Planting areas were selected based on their proximity to perennial water. When possible, planting zones will be

supplemented with irrigation for the first 5 years. Plants will be fenced in pods or individual cages to protect from deer browse.

Review Panel Q: Is the only planting at Eagle Creek under this proposal the live staking behind the jams? All other planting categories in the Riparian Enhancement Plan Sugar Creek map indicates that they are "not in contract". How will those plantings be funded?

No, the plantings to be maintained under this grant request at the Eagle Rocks site includes all planting categories shown on the included map. The map was re-used from the construction contract, and riparian plantings were installed under separate contract from general construction. The General Contractor planted the willow bundles and facines under the general construction contractor because these plantings required equipment access to areas that would be unaccessable after water control measures were removed. We will revise the figure in the riparian planting plan to remove these callouts when we finalize it.

RESTORATION

				OVERALL PROJECT	GRANT REQUEST	MATCH			
				Budget must account for all costs to complete the project	*Enter only the amount of the grant request*	*The Grant Request and Match should equal the total project cost and Budget Check cell should be 0. Sponsors must account for all sources and types of match need to complete the project.*			
				Amount	Grant Amount	Match in PRISM	Funding not reported in PRISM	Source (Grant, Cash, Materials, Labor, Volunteers, etc)	Match Type (federal, state, local)
Construction									
Category (choose one)	**Task Description**	**Qty**	**Rate**						
Mobilization		1.00	$ 1,000.00	$ 1,000	$ 1,000	$ -	$ -		
Materials	*Fencing (foot)*	1,000.00	$ 8.00	$ 8,000	$ 8,000	$ -	$ -		
Materials	*Plants (each)*	911.00	$ 10.00	$ 9,110	$ 9,110	$ -	$ -		
Materials	*Mulch (yard)*	40.00	$ 50.00	$ 2,000	$ 2,000	$ -	$ -		
Construction labor	*Planting labor (per acre)*	1.40	$ 10,000.00	$ 14,000	$ 14,000	$ -	$ -		
Construction labor	*Maintenance (per year)*	5.00	$ 4,500.00	$ 22,500	$ 22,500	$ -	$ -		
Construction supervision	*Planning, Planting and maintenance supervision (ls)*	1.00	$ 1,500.00	$ 1,500	$ 1,500	$ -	$ -		
					$ -	$ -	$ -		
					$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 58,110**	**$ 58,110**	**$ -**	**$ -**		

Administrative, Architechtural & Engineering				Amount	Grant amount	Match in PRISM	Funding not reported in PRISM	Match Source	Match Type (federal, state, local)
Category	**Task Description**	**Qty**	**Rate**						
Administrative	*Grant administration and Repo*	10.00	$ 66.00	$ 660.00	$ 660	$ -	$ -		
Other	*Contract Management*	15.00	$ 82.00	$ 1,230.00	$ 1,230	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			$ -	$ -	$ -	$ -	$ -		
			STotal	**$ 1,890**	**$ 1,890**	**$ -**	**$ -**		

Indirect Costs				Amount	Grant amount	Match in PRISM	Funding not reported in PRISM	Match Source	Match Type (federal, state, local)
	Description	**Approved Rate**	**Total Project Base**						
	Indirect	0.000%	$ -	$ -	$ -	$ -	$ -		
	Indirect	0.000%	$ -	$ -	$ -	$ -	$ -		
			STotal	**$ -**	**$ -**	**$ -**	**$ -**		

AA&E Budget Check		Totals	**$ 60,000**	**$ 60,000**	**$ -**	**$ -**
A&E maximum allowed in PRISM	*$ 17,433.00*			**PRISM Project Total**	$ 60,000	
A&E validation	15,543			**RCO Percentage**	**Match Percentage**	
				100.000000%	**0.000000%**	

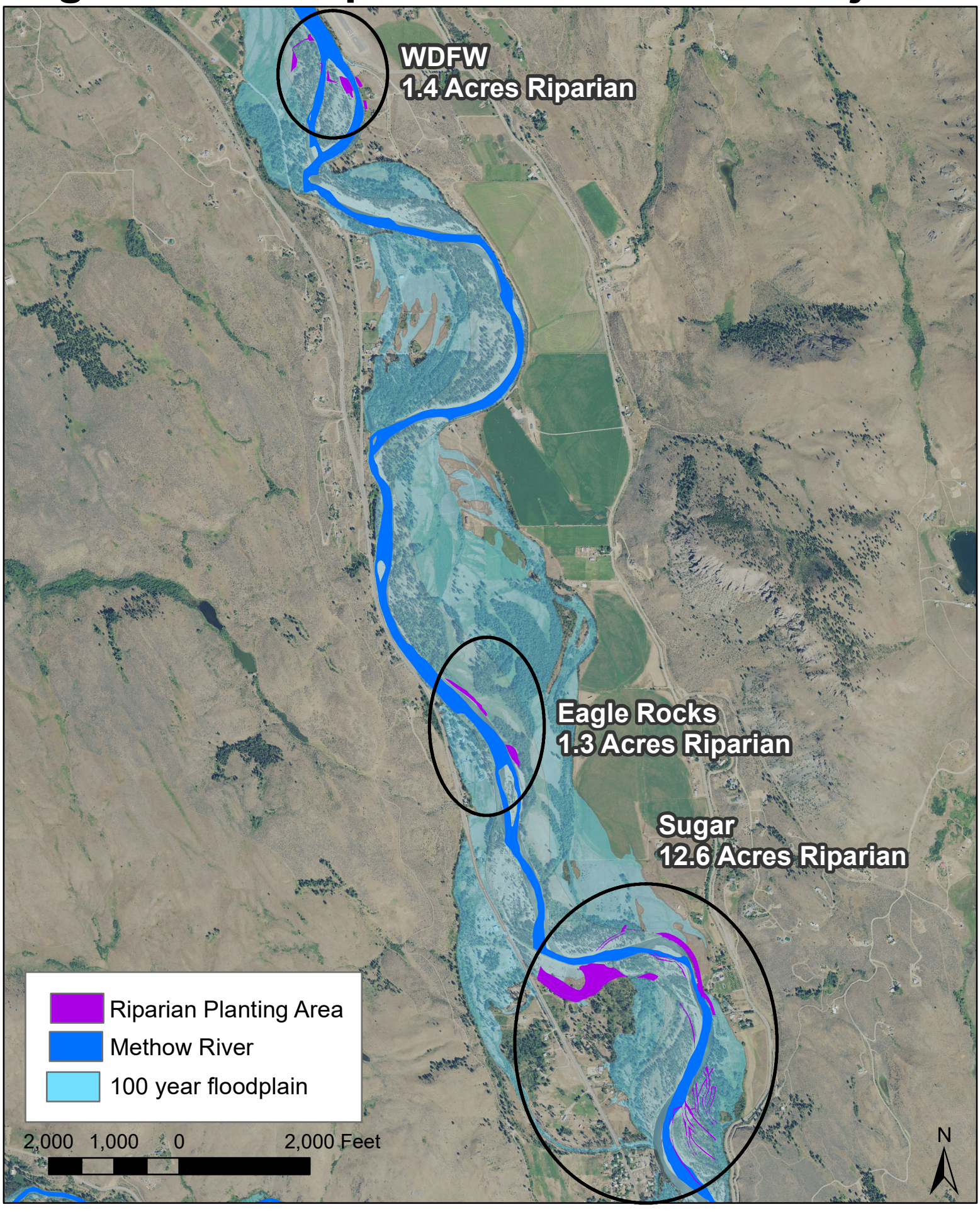
CUMULATIVE TOTALS

This sheet contains automatic calculations

Project Name	Sugar Reach Riparian Restoration
SRFB #	25-1218
Sponsor	Methow Salmon Recovery Foundation

	OVERALL PROJECT Cost	GRANT REQUEST Amount	PRISM MATCH Amount	MATCH NOT IN PRISM Amount	*Budget Check*
Sheet #1 Acquisition					
Property Costs	$ -	$ -	$ -	$ -	0
Incidental Costs	$ -	$ -	$ -	$ -	0
Administrative Costs	$ -	$ -	$ -	$ -	0
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ -	$ -	$ -	$ -	0
Sheet #2 Design					
Design Costs	$ -	$ -	$ -	$ -	
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ -	$ -	$ -	$ -	0
Sheet #3 Restoration					
Construction Costs	$ 459,570	$ 350,470	$ -	$ 109,100	0
AA&E	$ 9,530	$ 9,530	$ -	$ -	0
Indirect Costs	$ -	$ -	$ -	$ -	
STotal	$ 469,100	$ 360,000	$ -	$ 109,100	0
Totals	$ 469,100	$ 360,000	$ -	$ 109,100	0

Sugar Reach Riparian Restoration Project



Sugar Right Project Area – levee, floodplain

WDFW Project Area – flow split

Sugar Reach Riparian Restoration Project Riparian Enhancement Plan

1. Existing Conditions Assessment

Overview: The Sugar Reach riparian restoration project is a conglomeration of privately and publicly owned land encompassing 180 acres of riparian along the Methow River in Okanogan County, WA. A total of 17.6 acres of plantings at three restoration sites including Sugar Channels Reconnection, Eagle Rocks, and WDFW Floodplain Phase 2 are collectively referred to in this application as the Sugar Reach. The project areas are a combination of riverbanks of sparsely vegetated riparian species, floodplain, and adjacent fields with a mixture of non-native field grass and broadleaf weeds. Previous and continued land clearing as well as the channelization of the river for flood control have prevented much of the natural riparian species to re-populate. Adjacent forests provide proof and examples of riparian forests and their roles in providing shade, nutrients, woody debris, and complexity to the riverine environment.

Target species: The Upper Columbia Salmon Recovery Board (UCSRB) prioritization strategy (2021) provides context on the priority species, life stages, strategies, and habitat conditions within the project reach vicinity. The project reach is located in Reaches 1-3 of the Methow River-Thompson Assessment Unit (AU). As summarized in the 2021 Habitat Action Prioritization Strategy the priority species include Spring Chinook, Steelhead. Priority life stages include Summer and Winter rearing.

Environmental Setting: Much of the Methow River is within the Columbia basin foothill riparian woodland and shrubland as described by the WA DNR (2015). Habitats in the Methow watershed are a mixture of Ponderosa pine and Douglas fir forests, shrub steppe and Aspen/Cottonwood riparian areas. Dominant climax species along the Sugar reach in the Methow River include Cottonwood and Ponderosa pine.

Land use: Loss of riparian and floodplain ecosystems along the Methow River and throughout the Upper Columbia has significantly altered the processes that create and maintain fish habitat. Riparian forests provide critical components of fish habitat such as leaf litter and large wood, as well as ecosystem services like maintaining water quality, supporting nutrient cycling, and influencing sediment dynamics. Over the last century and a half, expansion of agricultural and residential development along the valley floor cleared riparian forests and has resulted in confinement and simplification of the Methow River, reducing both the quantity and productivity of fish habitat. Floodplain areas have been attractive for development given the relatively flat terrain, good soils, and easy access to irrigation water. As a result, most of these transitional areas have been converted to agriculture and residential uses. These actions created a legacy of isolated floodplains, hardened banks and simplified habitats for Chinook, steelhead, and the organisms and processes upon which they depend. Much of this reach has been negatively affected by human activity and a significant portion of the riparian in the

downstream end of the reach has been cut-off from the river with a levee since the early 1970's. Since then, riparian vegetation has recovered in limited areas, with much of the area persisting in a poorly vegetated condition. The majority of the acreage stays dry enough to prevent natural regeneration of riparian species critical to sustaining large wood production and verdant riparian expanses in the reach. A substantial riparian buffer in this this reach can also buffer the river from sediment and agricultural run-off.

Soils: U.S. Department of Agriculture mapped soils within the Sugar Reach planting areas as Owhi ashy sandy loam, Leavenworth silt loam, river wash and xerofluvents. The well drained soils profile is ashy fines sandy loam to 11 inches followed by gravelly sandy loam and progressing to extremely gravelly coarse sand at 31-60 inches. USDA survey water depth properties are consistent with other riparian sites in the overall reach at 80" to water table at low water.

Hydrology/Water Quality: Precipitation in the form of rain and snow is the main source of fresh water in the Methow Basin. The Methow River can have an abundance of clear and cold water providing high quality habitat for salmonids including ESA listed Steelhead and Spring Chinook. With rising land temperatures and the modelled climatological pattern of annual precipitation of more rain than snow in the Cascade Mountains, critical habitats will benefit from more buffers to add shade to reduce river temperatures, provide nutrients for adult and juvenile fish and complex habitats for all aquatic species.

Site Constraints: The hot, dry summers in the Upper Columbia makes care of young plants difficult until they establish roots down to perennial ground water. Available annual rainfall can slow growth of planted stock and stunt growth. Some of the plantings in this project area are expected to require irrigation, while some will be inundated long enough to sustain annual growth and vitality. Mulch and manual weed control for up to 5 years will help establish self-sustaining plants where grass, weed competition and drought conditions prevent vigorous growth. Expected heavy deer pressure can stunt and even kill young establishing plants. Deer browse protection will be employed where riparian conditions allow. Where deer browse cages and/or deer fencing is inapplicable, larger plants will be installed to hasten growth. Past success in this reach with the similar soil profiles and types have proven successful with consistent irrigation, proper planting techniques and care.

2. Restoration Objectives

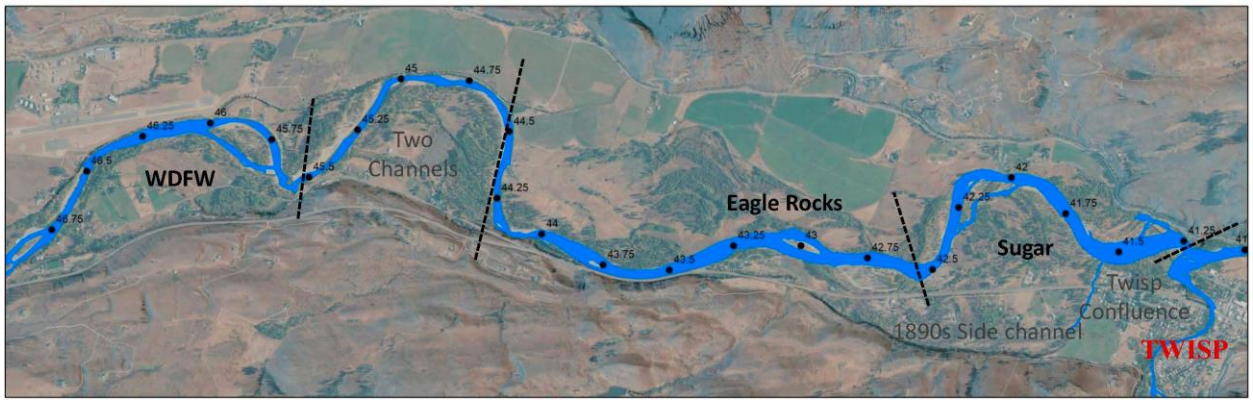
The root cause of these riparian floodplains being denuded of riparian vegetation is human activity. The current condition of the open fields, floodplains and sparsely vegetated banks will evolve into a mixed shrub and tree forest that will provide nutrient cycling, help maintain water quality, and provide shade for salmonids at all life stages.

Specific objectives include establishing 17.6 acres of riparian forest on three project sites with 6,282 self-sustaining native trees and shrubs including Cottonwood, Birch, Alder, Ponderosa pine, Serviceberry, Chokecherry, Black hawthorn, and Willow. These plantings will take 3-5

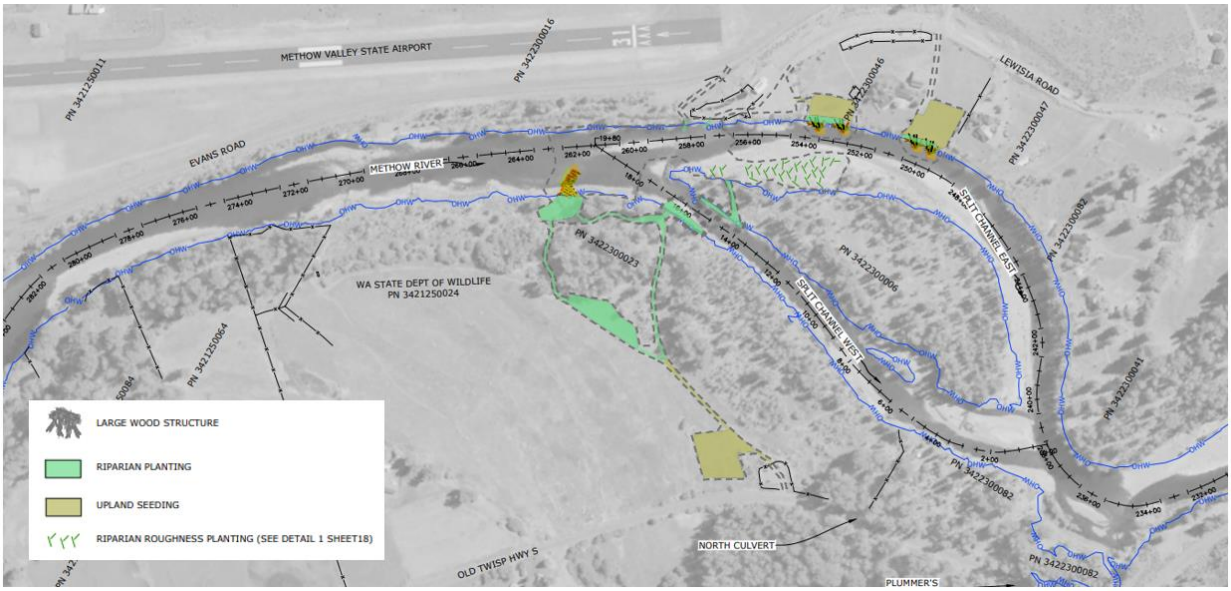
years to establish and be self-sufficient once established. The water table at low water is between 5 and 7 feet below existing grade of the planting areas. Proposed restoration will lower the floodplain in a portion of the planting areas. Trees and shrubs will be planted in a manner to encourage deep rooting by soaking the root horizon and mulching to keep the roots moist, provide microbiological cycling, and keep competitive grasses away from the plant stem. Plantings of a similar nature and similar elevation have proven successful in the reach making the proposed plantings achievable over the grant period. Trees will provide shade to the channels and mainstem, leaf litter, small woody debris, and seed for recruitment. Shrubs will also provide leaf letter and vegetative plant material for nutrient cycling and a food web to benefit aquatic species including ESA listed Spring Chinook and Upper Columbia Steelhead.

3. Plan Maps

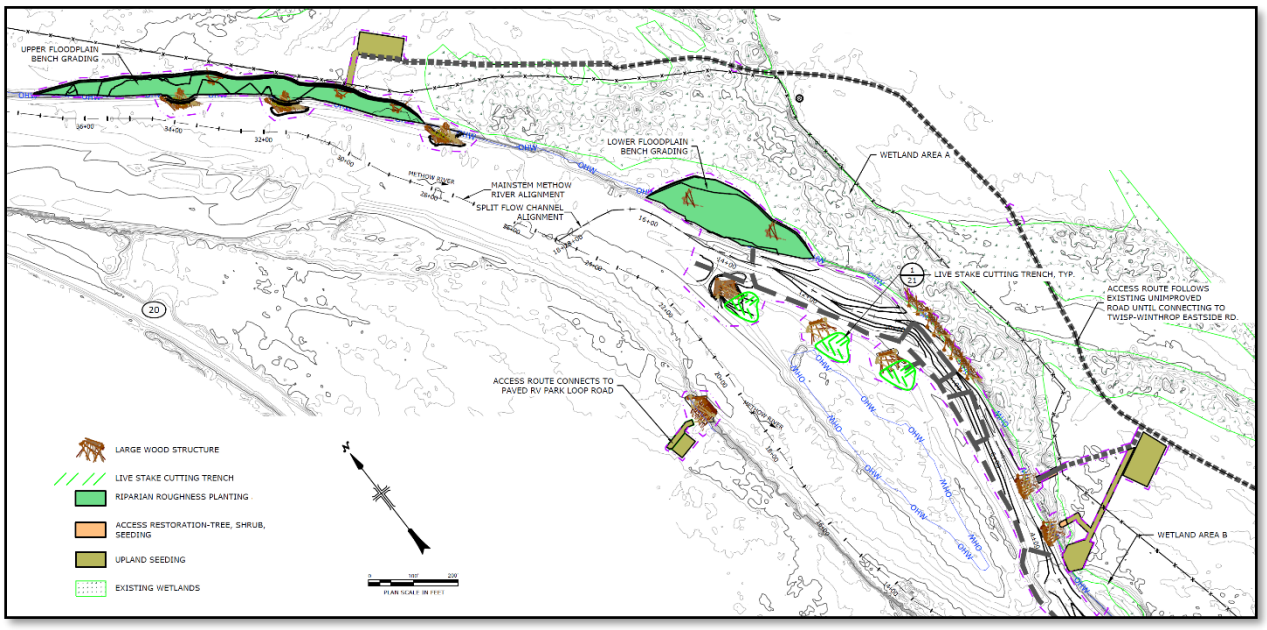
Project Reach



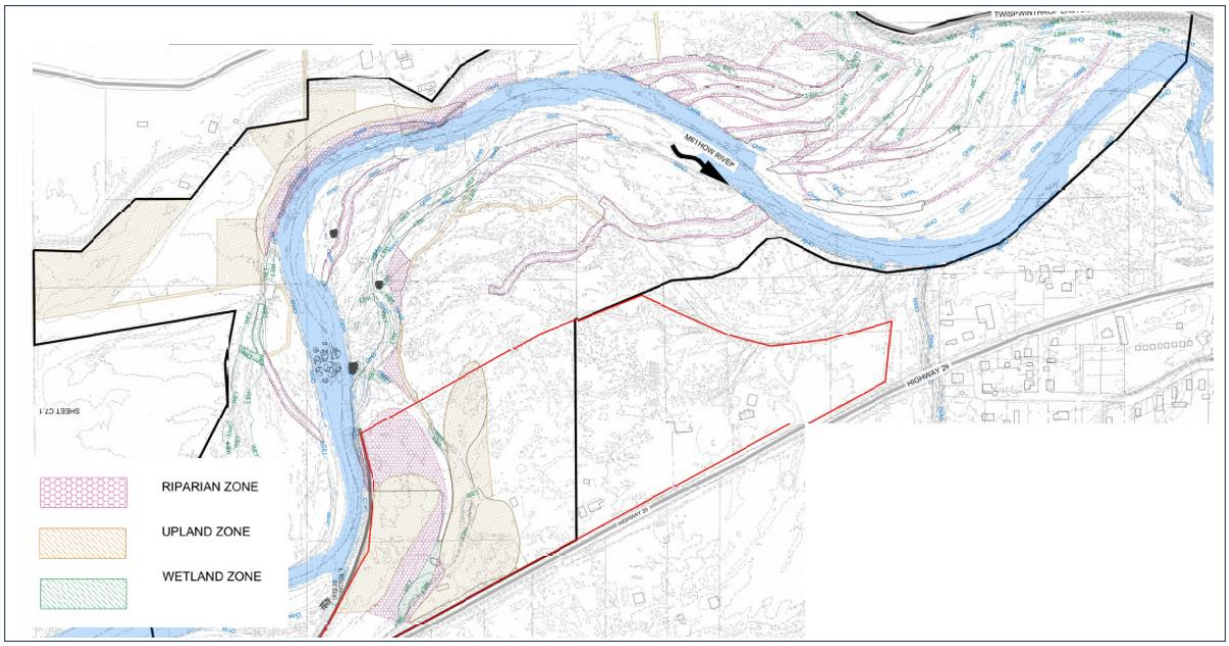
WDFW Floodplain phase 2



Eagle Rocks



Sugar Channels Reconnection



4. Site Preparation Methods

Planting contractor will prepare planting sites by removing grass and roots and prepare the planting sites in rows or spacing of 8'-12' centers.

Secondly, mulch will be deposited at each planting site with composted wood chips from native trees and shrubs or site sourced forest detritus.

Contractor will plant into each prepared site with a native tree or shrub, mixing composted wood chips or site sourced forest detritus into the root horizon.

After planting, each site will be top dressed with extra mulch or forest detritus to reduce competitive grass growth near the plant stem.

The sponsor will secure funding, hire, and supervise field crews to complete site preparation work. The sponsor will secure any permits and licenses needed to complete work, including land-use permits and permission, and will ensure field crews possess necessary licenses and qualifications. The sponsor will provide forty- eight-hour notice before accessing the property or identify and individualized plan for access with each landowner.

Maintenance of the tree and shrub plantings will be included in the Post-Implementation Maintenance Table B and adaptive management section below.

5. Riparian Planting Methods

Planting will consist of potted plant stock (1 gallon or 40 cubic inch). The sponsor will source native plant stock from a local native plant nursery and cross reference available tools such as the seed-lot selection tool (seed-lot selection tool) to choose material to increase resilience under the modelled climate change scenario for the region. The sponsor will install potted stock no later than the end of December. A species list is included in Table A. This list is subject to change based on plant availability and landowner input.

Plant stock installation will occur with a power auger, shovel or mini excavator. Holes will be dug 2 times larger than the potted plant materials container size. Plants will be watered in where irrigation is accessible and tamped by hand or foot to ensure root to soil contact and be left adequately moist. Plants will then be lightly mulched with leftover composted wood chips or forest detritus to prevent competitive grasses from re-establishing and provide a carbon source for microbiological activity to thrive and produce nutrients over time. Mulch will trap moisture from rain and snow, as well as irrigation in the summer months. At project sites with access to irrigation, plants will be irrigated weekly in the first two years and reduced to 1-2 times a month in years 3-5 as presented in the maintenance plan. Where irrigation is not available deep rooted and larger plant materials is preferred.

Table A: Species List

Species		Quantity	Sugar	Eagle Rocks	WDFW
Acres			14.9	1.3	1.4
Trees					
Ponderosa pine	*Pinus ponderosa*	1716	1453	127	137
Black cottonwood	*Populus trichcocarpa*	2402	2034	177	191
Alder	*Alnus incana*	1373	1162	101	109
Birch	*Betula occidentalis*	1373	1162	101	109
Total Trees		**6864**	**5811**	**507**	**546**
Shrubs					
Serviceberry	*Amelanchier alnifolia*	549	465	41	44
Chokecherry	*Prunus virginiana*	549	465	41	44
Black hawthorn	*Crataegus douglasii*	549	465	41	44
Snowberry	*Symphoriocarpus alba*	366	310	27	29
Wood's rose	*Rosa woodsii*	412	349	30	33
Dogwood	*Cornus alba*	686	581	51	55
Pacific Willow	*Salix lucida*	732	620	54	58
Dusky Willow	*Salix melanopsis*	732	620	54	58
Total Shrubs		**4576**	**3874**	**338**	**364**
Total Plants		**11440**	**9685**	**845**	**910**

6. Implementation Monitoring

To evaluate if the enhancement activities meet the restoration objectives (section 2), the sponsor will perform implementation monitoring in years one through five. Percent survival of tree stock will be based on quantitative counts from year one through five.

Naturally regenerating species will be included in this count. The sponsor will use high resolution drone imagery to determine the percentage of canopy cover of trees, possibly other species, using an off-the-shelf analysis software.

- Percent survival of tree and shrub species (quantitative), years one through five
- Vigor and health assessment of species (qualitative)

Monitoring results will allow sponsor to assess the need for adaptive management of the restoration site. Monitoring likely will occur between May and July, to target growing season and correspond with annual maintenance activities. As part of quantitative and qualitative monitoring efforts, the sponsor will take a minimum of three photos at six established photo stations. Drone imagery of the entire site also may be captured.

Table B: Maintenance Schedule

Mowing and mechanical weed abatement	Years 1-5 in summer and fall
Replant native species to maintain survival objectives	Years 1-2 in spring or fall
Maintain herbivory protection	Years 1-5 in spring
Mulch as needed	Years 1, 3, and 5 in spring
Irrigation	Years 1-5 in summer (as needed)
Remove herbivory protection	Year 5
Remove any irrigation or maintenance infrastructure	Year 5

The native plantings will be maintained annually for 5 years. Annual maintenance includes deer browse repair from winter snow and harsh weather, annual fertilization with time release fertilizer and/or compost, periodic mowing of grasses and annual and perennial broadleaf plants in between planting rows, periodic irrigation June through August, periodic inspection of plantings and their health and vigor. With successful maintenance and limited unpredicted constraints, the plantings should be able to survive on their own and be a self-sustaining young forest.

7. Adaptive Management

Under heavier loss conditions, the following adaptive management will be considered.

Rodent: Vole and small rodent damage in the first two years of establishment can cause high mortality in a field planting site. Adding extra mulch, providing hawk perches, and wrapping young stems in soffit screens (small gauge wire mesh) can be employed as secondary measures to prevent vole and rodent damage.

Flooding: In the event of a flood event that inundates the plantings, care to replace or resurrect the fencing will be necessary.

Irrigation: Extra irrigation will be employed if temperatures are extraordinarily high, and/or if there is limited winter and/or spring precipitation.