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	Implement Methow Subbasin Habitat Status and Trend Monitoring
Sponsor	Confederated Tribes of the Colville Reservations
Primary Contact	John Arterburn
E-Mail Address	john.arterburn@colvilletribes.com

Project Summary

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

The Methow subbasin lacks a strategic and comprehensive habitat monitoring program. Over the last year, a working group of Federal, state and tribal agencies along with local NGO's have worked with Cramer Fish Sciences to develop and long-term Monitoring Plan in the Methow subbasin. This proposal is to provide funding support to implement the first two years of a seven year design. The study design encompasses data collection on instream and floodplain physical habitat, water quality, hydrology, riparian condition, and biota using traditional field-based sampling methods and remote sensing technologies whenever applicable or available.

The goal of the monitoring is to assess the status and trends of fish habitat within the subbasin, ensuring that data and resulting products are meaningful, useful, and timely for fisheries managers, policymakers, restoration practitioners, and the public. Specific objectives and future outcomes include:

1. Monitor the change in habitat characteristics over time and evaluate how these changes impact important target fish species
2. Assessing progress in addressing habitat-limiting factors and survival bottlenecks at the reach scale.
3. Establish methods for collecting data to support restoration prioritization and ecosystem models such as Ecosystem Diagnosis and Treatment (EDT) and NOAA's Habitat Assessment and Restoration Planning (HARP) models at the reach, subwatershed, and subbasin scales.

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].

Specific objectives of the monitoring program are to:

1. Evaluate the status and trends of fish habitat characteristics considered to be key ecological concerns for spring and summer Chinook salmon, steelhead, bull trout, coho salmon and Pacific lamprey in the Methow subbasin.
2. Evaluate progress made toward ameliorating habitat limiting factors.
3. Establish an environmental baseline at the reach scale.
4. Collect data needed to inform and update subbasin and reach UCSRB/UCRTT prioritization, assist with restoration planning, and to run models that link salmon production to habitat conditions (e.g., EDT and NOAA HARP models).

Budget Request

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

Anticipated Request - Monitoring Grant Funding	$250,000
Anticipated TOTAL Budget	$250,000

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

The Colville Tribes will provide funding support through Bonneville Power Administration directed through the Okanogan Basin Monitoring and Evaluation Program (OBMEP). The actual amount at this time is still uncertain but it is anticipated to be in the ballpark of $200,000 beginning in FY26.

Project Location

Briefly describe the location of the project	The location of the project is the extent of the EDT/UCSRB/UCRTT

Methow subbasin stream reach network.

Latitude (decimal degrees)	Multiple
Longitude (decimal degrees)	Multiple
Project subbasin	Methow
Does the proposed project span multiple assessment units?	Yes
List the additional assessment units directly impacted by this proposal.	All
Reach(es) Name	All
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

The monitoring plan will address all reaches in the network upon completion of the 7 year monitoring cycle.

Project Information

1. What species will the project benefit?	Spring Chinook, Steelhead, Bull Trout, Summer Chinook, Lamprey
2. Select the project's objectives and the associated tracking metrics	Design, Monitoring or Assessment
4. Does this project already exist in Salmon Recovery Portal or PRISM?	No
5. Has this project been submitted previously for funding through the SRFB and/or other process(es)?	No
6. What category is the project?	Monitoring
If applicable, what is the secondary project category?	N/A
Is the project eligible for Riparian Funding?	No

Design and Restoration Proposals

Assessment Proposals

Protection Proposals

Monitoring Proposals

7. Does this project address a Tier 1 data gap in the MaDMC Regional Data Gaps List?

Yes

8. To what extent does your project address a regional data gap?

This project will completely address data gaps 2.8, 2.19 and 2.20 for the Methow subbasin at the end of the 7-year monitoring cycle. Per the MaDMC Regional Data Gaps list, there are 29 Methow reaches lacking habitat data and 82 reaches with survey data that is >10 years old. The project is intended to provide an updated, reach-specific set of habitat data in every reach in the UCSRB reach network.

9. What is the scale of inference?

Population Scale

10. Purpose - How will the monitoring complement, enhance, or leverage ongoing monitoring efforts?

The intent of this monitoring program is to establish a coordinated, cost-effective, long-term (20+ year) habitat status and trends monitoring program for the Methow Subbasin. It builds on existing monitoring efforts while addressing critical data gaps to support recovery planning, modeling, and status assessments. It incorporates lessons learned from past efforts and, where feasible, has been designed to align with existing reach structures and reporting platforms, the Upper Columbia Regional Salmon Recovery Plan, the Bonneville Power Administration (BPA) Tributary Habitat Monitoring Strategy, Okanogan Basin Monitoring and Evaluation Program (OBMEP) protocols, current and future reach assessments, the Upper Columbia Salmon Recovery Board (UCSRB) Habitat Action Prioritization Strategy, Independent Scientific Review Panel (ISRP) guidance, existing and planned Light Detection and Ranging (LiDAR) collections, and the NOAA HARP model.

The proposal herein is to start implementing the Methow Subbasin Monitoring Plan (CCT 2025) that was the outcome of an extensive effort over the last year. This plan considered existing data gaps in the subbasin and proposes monitoring actions to fulfill the known data needs across the entirely of the UCSRB/UCRTT reach network. Further, this plan was designed to leverage the existing 20+ years experience of the Okanogan Basin Monitoring and Evaluation Program (OBMEP) for for data collection/support, data management, synthesis and analysis. OBMEP is partnering with the Methow Restoration Council and Cascade Fisheries for the first 2-years of data collection in this proposal.

11. Methods - Briefly describe the methods and how they are appropriate to the monitoring question

We will be using a hybrid of methods including USFS Level II Stream Inventory Protocols, OBMEP protocols, remote sensing (LiDAR/NAIP) and other protocols and methods as need to meet the identified data gaps. The basic field methodology includes identifying and mapping spatially referenced channel units associated with metadata including length along the thalweg, wetted width, average depth, maximum depth, crest depth (pools only), wood, and substrate metrics. Remote sensing methods are likely to be used for floodplain and riparian data sets.

This data set is the basic building block of data needs for EDT/HARP modeling and other habitat assessments. The end data product of this effort is, in essence, a digital facsimile of the stream network and floodplain which the end user can manipulate as needed to meet the specific metric needs of the applied assessment methodology.

12. Describe how the data (raw and processed), results, and other information will be disseminated and accessed once the project is complete

Raw data are collected and stored via the ESRI Field Maps platform and therefore are available in an online cloud-storage system with a diverse capacity for access control. Processed data would be made available in the same format and its stand-alone derivatives. These data will be stored in the OBMEP database and leveraged for use in other products such as the UCSRB prioritization tool, OBMEP EDT report cards, and NOAA HARP modeling which will be publically accessible via the internet. However, these end products are beyond the scope of this initial proposal.

13. Briefly explain how this project will address one or more of the identified strategic priorities in Manual 18M (survival bottlenecks, limiting factors, or project effectiveness).

The data collected under this project are a subset of what is needed to inform and update subbasin and reach scale UCSRB/UCRTT prioritization which is directly used to guide restoration and protection efforts in the Upper Columbia. This same data set will be used to rerun established models that link salmon production to habitat conditions (e.g., EDT and NOAA HARP models) and help to inform survival bottlenecks and limiting factors. These models are also used to evaluate status and trends over time which can be leveraged to inform the effectiveness of actions at the population scale. This Methow monitoring plan was specifically designed to leverage one set of data to help inform all these purposes. However, these end products are beyond the scope of this initial proposal.

Project Risk and Economic Benefits

1. What is the landownership? Mixed

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

Please explain

Due to the broad extent and mixed ownership of the project, it is certain that some areas of the subbasin could prove inaccessible to survey efforts. We are partnering with local entities that have an intrinsic understanding of these relationships and existing access agreements to facilitate implementation as broadly as possible. A key part of the first years work will be to establish where landowner access is necessary and to reach out to landowners for necessary permissions.

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

Physical access permissions for survey crews is the only anticipated need of land owners.

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

We are not aware of any such concerns. Given that the planning process involved most if not all the local agencies and NGO's we feel that if there were concerns they would have been highlighted in the planning process.

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

The data sets will be housed in OBMEP data systems maintained by the Colville Tribes and freely shares with other interested parties. Landowners will have no responsibilities.

6. Are other projects being proposed immediately upstream or downstream of worksite? Don't know

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

There is no risk of failure.

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

No. This proposal is focused on implementing the monitoring plan. During the development of the monitoring plan we invited a broad range of participants to engage with our working group. After these data are collected subsequent data products and modeling efforts will be publicly accessible via the internet.

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

All dollars spent by this project will goto local agencies that pay staff or contractors.

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

This project will directly involve the Methow Restoration Council and Cascade Fisheries both agencies have vast experience with in the Methow subbasin and collecting habitat and water quality data. The Colville Tribes Okanogan Basin Monitoring and Evaluation Program has been successfully implementing habitat status and trend monitoring for over 20 years and will have oversight, coordination and training responsibilities along with being responsible for all data management.

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

Supporting Documents

Upper Columbia Process Guide 2025

SRFB Manual 18 (2025)

RCO Application Resources (2025)

Colville Confederated Tribes
Fish and Wildlife Department

25 B Mission Road, Omak, WA 98841

March 12, 2025

Monitoring Grants Manager
jeannie.abbott@gsro.wa.

Dear Jeannie:

This is a letter of intent to submit a monitoring proposal on behalf of The Colville Tribes per resolution number 2014-428 in conjunction with our partners the Methow Restoration Council and Cascade Fisheries. This proposal is designed to begin implementing the Methow River subbasin long-term habitat status and trend monitoring plan. This plan has been developed over the last year using funding from the Bonneville Power Administration through the Colville Tribes Okanogan Basin Monitoring and Evaluation Program (OBMEP) via subcontract with Cramer Fish Sciences. This monitoring plan leveraged a work group including applicable state, tribal, and federal agencies and local NGO's active in salmon recovery in the Methow subbasin including the Upper Columbia Salmon Recovery Board (UCSRB) staff. The draft plan is currently being reviewed by the working group and Regional Technical Team (RTT). Once all comments and edits are addressed, the final plan will be used as the basis of our funding request.

The UCSRB and RTT have both identified the lack of long-term habitat status and trend monitoring and funding as a Tier 1 data gap. This proposal will help fill ongoing needs to inform progress toward recovery, help prioritize recovery efforts and limiting factors and has the potential to address effectiveness monitoring at the population scale. However, these evaluations are beyond the scope of this initial proposal. This proposal will leverage the OBMEP as the largest habitat monitoring program in the region with an active presence in the Methow subbasin. The OBMEP efforts to date in the Methow has been limited to modeling and reporting on existing data. and this proposal will allow for a more systematic approach toward colleting these habitat monitoring data.

Feel free to reach out with any questions, sincerely,

John Arterburn

John Arterburn, Subdivision Manager John.arterburn@colvilletribes.com
1-(509) 631-2134

2025 SRFB Monitoring Program
Letter of Intent Form

Project Name:	Implement Methow Subbasin Habitat Status and Trend Monitoring
Project Sponsor:	Confederated Tribes of the Colville Reservations
Funding Request:	$250,000
Sponsor Contact Info: *Include email and cell number*	John.arterburn@colvilletribes.com; (509)631-2134
Key Partners:	Methow Restoration Council, Cascade Fisheries
Has the project been vetted and endorsed by the regional organization (Y/N)?	Yes
Brief Project Description:	The Methow subbasin lacks a strategic and comprehensive habitat monitoring program. Over the last year, a working group of Federal, state and tribal agencies along with local NGO's have worked with Cramer Fish Sciences to develop a long-term Monitoring Plan in the Methow subbasin. This proposal is to provide funding support to implement the first two years of a seven year design. The study design encompasses data collection on instream and floodplain physical habitat, water quality, hydrology, riparian condition, and biota using traditional field-based sampling methods and remote sensing technologies whenever applicable or available. The goal of the monitoring is to assess the status and trends of fish habitat within the subbasin, ensuring that data and resulting products are meaningful, useful, and timely for fisheries managers, policymakers, restoration practitioners, and the public. Specific objectives and future outcomes include: 1. Monitor the change in habitat characteristics over time and evaluate how these changes impact important target fish species 2. Assessing progress in addressing habitat-limiting factors and survival bottlenecks at the reach scale. 3. Establish methods for collecting data to support restoration prioritization and ecosystem models such as Ecosystem Diagnosis and Treatment (EDT) and NOAA's Habitat Assessment and Restoration Planning (HARP) models at the reach, subwatershed, and subbasin scales.
Data collection and analysis:	We will be using a hybrid of methods including USFS Level II Stream Inventory Protocols, OBMEP (Okanogan Basin Monitoring and Evaluation Program) protocols, remote sensing (LiDAR/NAIP) and other protocols and methods as needed to meet the identified data gaps. The basic field methodology includes identifying and mapping spatially referenced channel units associated with metadata including length along the thalweg, wetted width, average depth, maximum depth, crest depth (pools only), wood, and substrate metrics. Remote sensing methods are likely to be used for floodplain and riparian data sets. This data set is the basic building block of data needs for EDT/HARP modeling and other habitat assessments. The end data product of this effort is, in essence, a digital facsimile of the stream network and floodplain which the end user can manipulate as needed to meet the specific metric needs of the applied assessment methodology.

	Raw data are collected and stored via the ESRI Field Maps platform and therefore are available in an online cloud-storage system with a diverse capacity for access control. Processed data would be made available in the same format and its stand-alone derivatives. These data will be stored in the OBMEP database and leveraged for use in other products such as the UCSRB prioritization tool, OBMEP EDT report cards, and NOAA HARP modeling which will be publicly accessible via the internet. However, these end products are beyond the scope of this initial proposal.
How does the project inform regional information needs or data gaps and where are those identified in a regional research, monitoring, or evaluation plan **(if not, then provide a separate statement of endorsement from the regional organization which explains why this is a regional priority)**	The UCSRB and RTT have both identified the lack of long-term habitat status and trend monitoring and funding as a Tier 1 data gap. This proposal will help fill ongoing needs to inform progress toward recovery, help prioritize recovery efforts and limiting factors and has the potential to address effectiveness monitoring at the population scale. However, these evaluations are beyond the scope of this initial proposal. This proposal will leverage the OBMEP as the largest habitat monitoring program in the region with an active presence in the Methow subbasin. The OBMEP efforts to date in the Methow has been limited to modeling and reporting on existing data. and this proposal will allow for a more systematic approach toward collecting these habitat monitoring data.
Monitoring priorities from the Upper Columbia MaDMC data gaps list this project will address:	This project will completely address data gaps 2.8, 2.19 and 2.20 for the Methow subbasin at the end of the 7-year monitoring cycle. Per the MaDMC Regional Data Gaps list, there are 29 Methow reaches lacking habitat data and 82 reaches with survey data that is >10 years old. The project is intended to provide an updated, reach-specific set of habitat data in every reach in the UCSRB reach network.
How will this project address one or more of the 2025 SRFB strategic priorities below: • **Survival Bottlenecks** • **Limiting Factors** • **Effectiveness**	The data collected under this project are a subset of what is needed to inform and update subbasin and reach scale UCSRB/UCRTT prioritization which is directly used to guide restoration and protection efforts in the Upper Columbia. This same data set will be used to rerun established models that link salmon production to habitat conditions (e.g., EDT and NOAA HARP models) and help to inform survival bottlenecks and limiting factors. These models are also used to evaluate status and trends over time which can be leveraged to inform the effectiveness of actions at the population scale. This Methow monitoring plan was specifically designed to leverage one set of data to help inform all these purposes. However, these end products are beyond the scope of this initial proposal.
How does this project align with the Action Agenda for Puget Sound? (Puget Sound Projects Only)	*NA*