

PROJECT CHARTER

Extensive Riparian Status and Trends Monitoring Program – Riparian Vegetation and Stream Temperature Project ~~November 2023~~February 2026

1. PROJECT CHARTER OVERVIEW

The purpose of the Project Charter is to describe Extensive Riparian Status and Trends Monitoring Program – Riparian Vegetation and Stream Temperature Project. ~~the riparian vegetation and stream temperature components of the Extensive Riparian Status and Trends Monitoring Program.~~

OVERSIGHT COMMITTEE

Riparian Science Advisory Group (RSAG)

PROJECT TEAM MEMBERS

Alexander Prescott- Project Manager
Jenelle Black- CMER Scientist/Principal Investigator
~~Hans Berge~~
~~Jeff Robbins~~
Mark Meleason
Aimee McIntyre
Douglas Martin
~~Ash Roorbach~~
Principal Investigator(s) (TBD)

2. APPROVAL DATES

	SAG Approval Date	CMER Approval Date
Charter Version 1	10/11/2023	10/24/23
Charter Version 2	01/14/2026	xx

3. PROJECT TITLE

Extensive Riparian Status and Trends Monitoring Program – Riparian Vegetation and Stream Temperature Project

4. PROBLEM STATEMENT

The Forests & Fish Agreement (further adopted within the Forest Practices Habitat Conservation Plan: FPHCP) is intended to maintain riparian and aquatic resources for the protection of fish and other riparian-dependent species on over nine million acres of state and private forest lands in the State of Washington. There is uncertainty surrounding how well resource objectives of the FPHCP are met across the full extent of forestlands subject to the Forest Practices Rules. Implementation of the Extensive Monitoring Project will reduce uncertainties surrounding the status and trends of aquatic conditions, riparian forest structure and functions that support desired habitat conditions for the species identified in the FPHCP on lands managed under the current Forest Practices Rules.

~~The Forests and Fish Agreement (further adopted within the Forest Practices Habitat Conservation Plan: FPHCP) is intended to restore and maintain riparian and aquatic resources for~~

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the protection of fish and other riparian dependent species on over nine million acres of state and private forest lands in the state of Washington. However, uncertainty exists as to whether resource objectives of the FPHCP are met across the full extent of forestlands subject to the Forest Practices Rules. Previous Cooperative Monitoring Evaluation and Research Committee (CMER) studies (Table 1) addressed various aspects of extensive monitoring, but none had the spatial and temporal scope components needed to address the identified uncertainty. Designing and implementing an extensive monitoring program will reduce uncertainties surrounding the status and trends of aquatic conditions, riparian forest structure and functions that support desired habitat conditions on lands managed under the current forest practices rules.⁴

Table 1. List of Previous Related CMER Studies.List of Previous CMER Studies with an Extensive Monitoring Focus.

Project Title	Year Completed
The Suitability of Aerial Photography for Riparian Buffer Monitoring Study	2007
Extensive Riparian Status & Trend Monitoring Program- Draft Study Plan: Including Westside and Eastside Projects	2007
Eastern Washington Riparian Assessment Project - Riparian conditions on Type F streams	2007-2008
Extensive Riparian and Stream Temperature – first-round sampling	2008-2009
Development of Protocol for Monitoring Riparian Vegetation and Trends Using Remote Sensing	2009
The Extensive Riparian Status and Trends Monitoring – Temperature, Type F/N Eastside Project report	2013
The Feasibility of Applying Remote Sensing to a Riparian Stand Conditions Assessment Literature Review	2015
The Extensive Riparian Vegetation Monitoring - Remote Sensing Pilot Study	2017
The Extensive Riparian Vegetation Monitoring Implementation Pilot Study	2018
The Extensive Riparian Status and Trends Monitoring – Temperature, Type F/N Westside Project report	2019
The Extensive Riparian Vegetation Monitoring Model Transferability Testing Study	2020

5. PURPOSE STATEMENT

The purpose of the Extensive Riparian Status and Trends Monitoring Project is to (1) document the current status of the key watershed resources of stream shade, stream temperature, and riparian stand large wood supply potential (FPHCP Appendix N (Schedule L-1), 2005) across Washington State lands managed under the FPHCP, (2) evaluate trends in conditions over time as Forest Practices prescriptions are applied, and (3) assess whether condition trends are moving towards meeting Schedule L-1 resource objectives and performance targets at the landscape scale.

The purpose of the Extensive Riparian Status and Trends Monitoring Program is to provide data needed to evaluate landscape-scale effects and changes over time of implementing forest practices riparian prescriptions. This information will inform State and Federal regulatory

⁴Extensive monitoring programs are defined in the 23-25 CMER Work Plan as follows, “Extensive monitoring programs evaluate the current status of key watershed resources and habitat condition indicators across FP HCP lands, and document trends in these indicators over time as the forest practices prescriptions are applied across the landscape. Extensive monitoring provides a statewide, landscape-scale assessment of the effectiveness of forest practices rules to attain specific performance targets on FP HCP lands. Extensive monitoring is designed to provide report card-type measures of rule effectiveness (i.e., to what extent are FP HCP performance targets and resource condition objectives being achieved on a landscape scale over time). These measures can then be used to determine the degree to which progress is meeting expectations.”

agencies if the Forest Practices Rules meet resource objectives for key aquatic conditions and processes affected by forest practices and Clean Water Act requirements. This program will also help CMER prioritize, plan, conduct, interpret, and assess scope of inference of other CMER studies and monitoring work.

6. PROJECT OBJECTIVES

- Measure and evaluate current stream temperature, stream shade level, and riparian stand structure across forestlands covered under the FPHCP.
- Measure and evaluate how stream temperature, stream shade level, and riparian stand structure are changing over time.

The Timber Fish and Wildlife (TFW) Policy committee has directed CMER to “develop options for a monitoring program to help determine how stream temperature and riparian functions have changed or are changing in association with the application of the forest practice rules.” (TFW Policy Committee Minutes, March 2, 2023). The objective is to build and maintain a status and trends monitoring program that will evaluate how aquatic conditions, riparian forest structure and functions, and the desired habitat conditions they support change on a landscape scale.²

7. CRITICAL QUESTIONS

Main Study

- CQ 1.A What is the distribution of stream temperatures in streams with perennial flow across watersheds on FPHCP lands?
- CQ 1.B How is the distribution of stream temperatures in streams with perennial flow across watersheds on FPHCP lands changing over space and time?
- CQ 2.A What is the riparian stand composition (e.g., hardwood, conifer, shrub) and characteristics (e.g., height, basal area, cover) along all streams on FPHCP lands?
- CQ 2.B How is the distribution of riparian stand composition and characteristics along all streams changing on FPHCP lands over space and time?
- CQ 3.A What is the riparian stand potential to provide shade and large wood ecological functions on FPHCP lands?
- CQ 3.B How is the distribution of riparian stand potential to provide shade and large wood ecological functions changing on FPHCP lands over time and space?

Add-Ons (Add-ons have not yet received final selection from TFW Policy, expected before the end of Study Design development)

- S.1.A What is the spatial distribution of FP-designated stream-associated amphibian occurrence across FPHCP lands? (Status)
- S.1.B How does the distribution of FP-designated stream-associated amphibian occurrences across FPHCP lands change over time and space? (Trends)
- S.2.A What is the proportion and/or length of streams in FPHCP lands that have been managed under 2001 and later FP Rules? (Status)
- S.2.B How is the proportion and/or length of streams in FPHCP lands that have been managed under 2001 and later FP Rules changing over space and time? (Trends)
- S.3.A How have the riparian functions/conditions (that are observable using the remote sensing and field methods used in the Extensive Monitoring Project) changed in the

²TFW Policy directed CMER to consider cost efficient add-ons, specifically such as amphibian presence/eDNA in their April 2022 memo, which the project team describes here as “desired habitat conditions”.

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Westside Type F Riparian Prescriptions Exploratory Study sites since the exploratory sampling in 2019? (Status)

- S.3.B How do the riparian functions/conditions change over time? (Trends)
- S.3.C How accurate are the selected remote sensing methods for measuring riparian stand conditions and change?

The following critical questions are provided as they currently exist in the CMER Workplan. Critical Questions will be revised as part of the project scoping phase.

CMER Work Plan Rule Group Critical Questions

- What is the current status of riparian conditions and the HCP-specified functions in and along Type F/N streams on a statewide scale, and how are conditions changing over time?

CMER Work Plan Program Research Critical Questions

- What is the distribution of maximum summer stream temperature and 7-day mean maximum daily water temperature on FP HCP lands, and how is the distribution changing over time as the forest practices prescriptions are implemented?
- What proportion of stream length, at the landscape scale, on FP HCP lands meets specific benchmarks for water temperature, and is this proportion changing over time as the forest practices prescriptions are implemented?
- What are current riparian stand attributes on FP HCP lands, and how are stand conditions changing over time as the forest practices prescriptions are implemented?

8. CMER RULE GROUP AND PROGRAM

Rule Group	Type-N, Type-F, Wetlands
Description	Extensive Riparian Status and Trends Monitoring– Riparian Vegetation and Stream Temperature
Rule Context	WAC 222-30
Program	Extensive Riparian Status and Trends Monitoring

9. PROJECT DELIVERABLES AND PROJECT TIMELINE

Task	Deliverable	Responsible Team Member	Estimated Completion Date
1. Charter			
1.1 RSAG. Charter for RSAG approval	RSAG approved Charter	Project Team /PI	10/2023
1.2 CMER. Charter for CMER approval	CMER approved Charter	Project Team /PI	11/2023
1.3 TFW Policy. Charter for TFW Policy approval	Policy approved Charter	Project Team /PI	01/2024
2. Scoping Document			
2.1 RSAG. Scoping Document for RSAG approval	RSAG approved Scoping Document	Project Team /PI	10/2024 06/2025

2.2 CMER. Scoping Document for CMER approval	CMER approved Scoping Document	Project Team /PI	<i>09/2025</i> 12/2024
2.3 TFW Policy. Scoping Document for TFW Policy approval	TFW Policy approved Scoping Document	Project Team /PI	<i>11/2025</i> 02/2025
3. Study Design			
2.1 RSAG. Study Design Document for RSAG for approval	RSAG approved Study Design Document	Project Team /PI	<i>11/2026</i>
2.2 CMER. Study Design Document to CMER for approval	CMER approved Study Design Document	Project Team /PI	<i>03/2027</i>
2.3 TFW Policy. Study Design Document to TFW Policy for approval	TFW Policy approved Study Design Document	Project Team /PI	<i>10/2027</i>
3.4. Prospective Six Questions			
3.1 RSAG. Prospective Six Questions for RSAG approval.	RSAG approved Prospective Six Questions	Project Team /PI	<i>04/2025</i>
3.2 CMER. Prospective Six Questions for CMER approval.	CMER approved Prospective Six Questions	Project Team /PI	<i>06/2025</i>
3.3 TFW Policy. Prospective Six Questions for TFW Policy review.	TFW Policy reviewed Prospective Six Questions	Project Team /PI	<i>08/2025</i>

**Italicized dates are preliminary targets.*

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10. BUDGET

The Adaptive Management Program (AMP) Extensive Monitoring Project is a Forest Practices Board priority project and is a long-term program monitoring over 9,000,000 acres of forestland, that will require long-term stable funding. Preliminary project scoping indicates a long-term (at least through the 25 remaining years of the FPHCP) need for both AMP staff and project paid contractors to successfully implement this effort. Currently, study design development is being conducted by AMP staff and other CMER participants. The project costs will be estimated as the study design development proceeds. Once developed, annual project budgets will need to anticipate and adjust for inflation.

Budget/Cost Items	Estimated Budget by Fiscal Year*				
	FY26	FY27	FY28	FY29	FY30
Study Design	\$0	\$0	<i>tbd</i>	-	-
Implementation	-	-	<i>tbd</i>	<i>tbd</i>	<i>tbd</i>

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**Budgets beyond FY27 are estimates only. CMER staff are utilized in all phases of the project but cost for their time is not included in budget estimates. Preliminary budget estimates will be determined in the Study Design.*

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Budget/Cost Items	Estimated Budget by Fiscal Year*				
	FY24	FY25	FY26	FY27	FY28
Scoping	-\$50,000	\$50,000	-	-	-
Study Design	-	-	\$300,000	-	-
Implementation	-	-	-	\$250,000	\$250,000

**Budgets beyond FY24 are estimates only. CMER staff are utilized in all phases of the project but cost for their time is not included in budget estimates. Estimated budgets do not reflect estimated need, due to undetermined project scope. Preliminary budget estimates will be determined in the Scoping Document.*

11. PROJECT TEAM ROLES AND RESPONSIBILITIES

<u>Name, Title, Affiliation, Contact Info</u>	<u>Roles and Responsibilities</u>
<p><u>Project Manager (PM):</u> <u>Alexander Prescott</u> <u>Alexander.Prescott@dnr.wa.gov</u> <u>WA Department of Natural Resources</u></p>	<ul style="list-style-type: none"> • <u>Monitor project activities and the performance of the Project Team.</u> • <u>Communicate progress, problems, and problem resolution to the Adaptive Management Program Supervisory Project Manager and Administrator (AMPA), and CMER.</u> • <u>Work with RSAG/CMER, and Project Team to help develop Project Charters and Project Plans, and keep them updated as needed over time.</u> • <u>Work with RSAG, CMER, and Project Team (including PI, contractors, and other Team members) to resolve problems and build consensus.</u> • <u>Ensure communication between all team members is clear, concise, and consistent.</u> • <u>Assist and monitor site access, including maintaining GIS site database(s).</u> • <u>Maintain contact and process access agreements once site access is granted.</u> • <u>Ensure coordination between RSAG/CMER, Project Team and landowners.</u> • <u>Coordinate all technical reviews and responses in a timely fashion.</u> • <u>Facilitate archiving of all data and documents.</u> • <u>Work with the AMPA, RSAG/CMER, and Project Team to develop and review proposals, RFPs or RFOQs, review contractor proposals, monitor contract performance, and provide input on budgeting, schedule, scope changes, and contract amendments.</u> • <u>See that contract provisions are followed.</u> • <u>Provide direction and support to the Project Team to achieve clear and specific scopes of work, schedules, and budgets within approved contracts.</u> • <u>Communicate and/or authorize communication with all project-related contractors.</u> • <u>Maintains sole responsibility for all aspects of project management even if other individuals are completing or helping complete parts of the project.</u>

<p><u>Principal Investigator(s) (PI):</u> <u>Jenelle Black</u> <u>jblack@nwifc.org</u> <u>CMER Scientist</u></p>	<ul style="list-style-type: none"> • <u>Provides technical expertise in computer modeling, hydrology, fluvial geomorphology, in-stream geomorphology measurement, forest growth dynamics, remote sensing, statistical methods, and stream temperature sampling</u> • <u>Coordinates and integrates technical aspects of the multiple work efforts in project</u> • <u>Provides GIS mapping and analysis products to project team and contractors as needed</u> • <u>Participates in and coordinates with partners and PT members in development of stream temperature spatial models.</u> • <u>Leads in developing, writing, and preparation of project documents.</u> • <u>Assists project manager in any contracting - drafting contract documents for PT review, initial review of deliverables, data management, etc.</u> • <u>Responds to comments by reviewers of reports.</u> • <u>Prepares quarterly summary and progress reports of project status, as needed.</u> • <u>Presents technical findings to RSAG, CMER, TFW Policy, and the Board as necessary.</u> • <u>Communicates concerns or issues that arise with PM.</u> • <u>Attends RSAG and bi-weekly Project Team Meetings.</u>
<p><u>Project Team Members:</u> <u>Mark Meleason</u> <u>ConsultMeleason@outlook.com</u> <u>Washington State Association of Counties</u></p>	<ul style="list-style-type: none"> • <u>Provides expertise in forest and stream ecology, statistical methods, riparian forest dynamics, fish habitat mensuration and modeling.</u> • <u>Completes GIS analyses, as needed.</u> • <u>Provides technical support, participates in document development/writing, and conducts document review as needed.</u> • <u>Attends monthly RSAG and bi-weekly Project Team Meetings.</u>
<p><u>Aimee McIntyre</u> <u>aimee.mcintyre@dfw.wa.gov</u> <u>Washington Department of Fish and Wildlife DFW</u></p>	<ul style="list-style-type: none"> • <u>Provides expertise in amphibian habitat requirements, life cycles, and population dynamics.</u> • <u>Lead development of amphibian presence add-on.</u> • <u>Provides coordination, as needed, with WDFW staff and programs.</u> • <u>Provides technical support, participates in document development/writing, and conducts document review as needed.</u> • <u>Attends monthly RSAG and bi-weekly Project Team Meetings.</u>

<p><u>Douglas Martin</u> <u>doug@martinenv.com</u> Martin Environmental</p>	<ul style="list-style-type: none"> • <u>Provides expertise in fish life cycle habitat needs; ground and remote riparian forest stand mensuration with regard to shade and wood supply for fish habitat</u> • <u>Provides technical support, participates in document development/writing, and conducts document review as needed.</u> • <u>Attends monthly RSAG and bi-weekly Project Team Meetings.</u>
<p><u>Jeff Robbins</u> <u>jeffr461@ecy.wa.gov</u> Department of Ecology</p>	<ul style="list-style-type: none"> • <u>Provides expertise in stream ecology, expertise in and connections with Department of Ecology data and monitoring programs</u> • <u>Experience modeling stream habitat conditions</u> • <u>Completes GIS analyses, as needed.</u> • <u>Provides coordination, as needed, with ECY staff and programs.</u> • <u>Provides technical support, participates in document development/writing, and conducts document review as needed.</u> • <u>Attends monthly RSAG and bi-weekly Project Team Meetings.</u>

Name, Title, Affiliation, Contact Info	Roles and Responsibilities
<p>Project Manager (PM): Alexander Prescott <u>Alexander.Prescott@dnr.wa.gov</u> WA Department of Natural Resources</p>	<ul style="list-style-type: none"> • Monitor project activities and the performance of the Project Team. • Communicate progress, problems, and problem resolution to the Adaptive Management Program Supervisory Project Manager and Administrator (AMPA), and CMER. • Work with RSAG/CMER, and Project Team to help develop Project Charters and Project Plans, and keep them updated as needed over time. • Work with RSAG, CMER, and Project Team (including PI, contractors, and other Team members) to resolve problems and build consensus. • Work with PI and Project Team members to develop interim and final reports. • Ensure communication between all team members is clear, concise, and consistent. • Maintain contact and process access agreements once site access is granted. • Ensure coordination between RSAG/CMER, Project Team and landowners.

	<ul style="list-style-type: none"> ● Coordinate all technical reviews and responses in a timely fashion. ● Facilitate archiving of all data and documents. ● Work with the AMPA, RSAG/CMER, and Project Team to develop and review proposals, RFPs or RFQs, review contractor proposals, monitor contract performance, and provide input on budgeting, schedule, scope changes, and contract amendments. ● See that contract provisions are followed. ● Provide direction and support to the Project Team to achieve clear and specific scopes of work, schedules, and budgets within approved contracts. ● Communicate and/or authorize communication with all project related contractors. ● Maintains sole responsibility for all aspects of project management even if other individuals are completing or helping complete parts of the project.
<p>Principal Investigator(s) (PI): To be determined</p>	<ul style="list-style-type: none"> ● Oversees the technical aspects of the project including protocol refinement, site selection, data collection, analysis, and reporting. ● Works with PM and field manager in overseeing data collection by field crew. ● Oversees and conducts data analysis and QA/QC of data provided by field staff. ● Leads in developing, writing, and preparation of the final report. ● Lead author of findings report. ● Responds to comments by reviewers of reports. ● Prepares quarterly summary and progress reports of project status, as needed. ● Presents technical findings to RSAG, CMER, TFW Policy, and the Board as necessary. ● Communicates concerns or issues that arise with PM. ● Attends RSAG and Project Team Meetings.
<p>Project Team Members: Jenelle Black jblack@nwife.org CMER Scientist</p>	<ul style="list-style-type: none"> ● Provides technical support, participates in document development/writing, and conducts document review as needed. ● Attends monthly RSAG and bi-weekly Project Team Meetings.
<p>Hans Berge hans.berge@fishsciences.net Cramer Fish Sciences</p>	<ul style="list-style-type: none"> ● Provides technical support, participates in document development/writing, and conducts document review as needed.

	<ul style="list-style-type: none"> Attends monthly RSAG and bi-weekly Project Team Meetings.
<p>Mark Meleason ConsultMeleason@outlook.com Washington State Association of Counties</p>	<ul style="list-style-type: none"> Provides technical support, participates in document development/writing, and conducts document review as needed. Attends monthly RSAG and bi-weekly Project Team Meetings.
<p>Aimee McIntyre aimee.mcintyre@dfw.wa.gov Washington Department of Fish and Wildlife DFW</p>	<ul style="list-style-type: none"> Provides technical support, participates in document development/writing, and conducts document review as needed. Attends monthly RSAG and bi-weekly Project Team Meetings.
<p>Douglas Martin doug@martinenv.com Martin Environmental</p>	<ul style="list-style-type: none"> Provides technical support, participates in document development/writing, and conducts document review as needed. Attends monthly RSAG and bi-weekly Project Team Meetings.
<p>Ash Roorbach aroorbach@nwife.org Northwest Indian Fisheries Commission</p>	<ul style="list-style-type: none"> Provides technical support, participates in document development/writing, and conducts document review as needed. Attends monthly RSAG and bi-weekly Project Team Meetings.

12. AUTHORIZATION

The Washington Forest Practices Board (Board) has empowered the CMER committee and the TFW Policy committee to participate in the Adaptive Management Program (AMP) (WAC 222-12-045(2)(b)). CMER is responsible for completing technical information and reports for consideration by TFW Policy and the Board. CMER has been tasked with completing a programmatic series of work tasks in support of the AMP; these tasks are outlined in CMER’s biennial work plan approved by TFW Policy and the Board.

13. RECOGNITION OF SUPPORT

13. Charter Version 1

Committee	Date of Acceptance	Reference
Project Team	10/02/2023	meeting minutes
RSAG	10/11/2023	meeting minutes
CMER	10/24/2023	meeting minutes
TFW Policy	11/02/2023	meeting minutes

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Charter Version 2

Committee	Date of Acceptance	Reference
Project Team	12/15/2025	meeting minutes
RSAG	01/14/2026	meeting minutes

<u>CMER</u>		
<u>TFW Policy</u>		

14. REFERENCES

- ~~Cooperative Monitoring, Evaluation and Research (CMER) Committee. 2023-2025 Biennium
CMER Work Plan. January 2023.~~
- ~~Jawad, Saboor. TFW Policy Request to Scope Extensive Monitoring Project. April 2002.
Monitoring Design Team (MDT), Monitoring Design for the Forestry Module of the Governor's
Salmon Recovery Plan, July 2002.~~
- ~~Timber, Fish and Wildlife (TFW) Policy Committee. Meeting Minutes. March 2023.
Washington State Department of Natural Resources (DNR). Forest Practices Habitat
Conservation Plan. December 2005.~~