



**DEPARTMENT OF  
NATURAL RESOURCES**

**Forest Practices Division**

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MEMORANDUM

April 15, 2021

TO: Forest Practices Board

FROM: Mark Hicks, Adaptive Management Program Administrator 

SUBJECT: Adaptive Management Program Quarterly Report

This memo highlights work completed and progress made in the Adaptive Management Program (AMP) since your February 2021 meeting.

**AMP Budget Update**

- At this point in time it appears likely the legislature will appropriate sufficient funds to cover the projects and costs identified in the Master Project Schedule for FY22-23.
- It is estimated that \$61,000 of the FY20-21 project funds will be left unspent in FY21.
- TFW Policy passed the 21-23 biennium MPS with non-consensus during their April meeting. Ray Entz, the Eastside Tribal representative, voted down the MPS based on concerns with three studies. A memo from Ray Entz explaining his concerns is being provided to the Board.
- The majority membership of the TFW Policy committee is asking for your support for the MPS provided to you for the Board's May meeting.

**AMP Staffing Update**

- The MPS budget approved by the Board in August includes phasing in the hiring of the two vacant CMER staff scientist positions, with a Wetland Scientist to be hired in in FY22 and the second vacancy filled in FY26. The hiring of these staff was delayed in August 2020 in order to keep the MPS budget in balance.
- Two employees of the AMP resigned their positions early in this quarter. These were the Supervisory Project Manager (Ben Flint) and the Administrative Assistant (Jacob Hibbeln).

At this time, we have rehired the Administrative Assistant position (welcoming Mary Colton) and expect to hire a new Supervisory Project Manager by your May meeting.

### **Cooperative Monitoring, Evaluation and Research Committee (CMER) Update**

#### **Projects with Key Stages Completed:**

- The Eastside Modeling Effectiveness Project applied forest health and fire risk models to an eastside riparian data. This project is now complete and will be presented to the Board at your May meeting. Policy accepted the results of the EMEP study and recommends no formal action be taken at this time by the FPB. Policy has additionally directed the results be incorporated into the eastern WA RMZ strategy.
- The Type N Hard Rock Phase II Extended Monitoring Report has been approved by ISPR and all topical chapters have been approved by CMER. Still to be completed are the comprehensive Executive Summary section, the Framework for Successful CMER-Policy Interaction questions (aka the CMER 6 questions), and the TFW Policy decision process. If there are no substantial points of disagreement the Board could receive recommendations from Policy as soon August or November 2021.

#### **Projects in Active Development:**

- The Type N Soft Rock study field work has been completed and a draft report submitted to ISPR. The authors are in the process of providing ISPR with suggested edits to satisfy the comments received. The authors should have an ISPR approved report before July 2021.
- The Road Prescription Scale Effectiveness Monitoring Project is in its second year of data collection. This remains a challenging study to manage due in part due to unexpected wear and tear on equipment and the need for more frequent maintenance visits.
- The Eastside Type N Riparian Effectiveness Project (ENREP) is in full implementation in the original four basin site-pairs, and has added one additional site-pair near Mt. Spokane to increase sample size and strengthen the study. Harvesting has begun in some of the test basins.
- The Eastside Timber Habitat Evaluation Types project is in scoping. The draft scoping document is in CMER with potential approval in April. If approved by CMER, it will go to the TFW Policy Committee along with CMER's answers to the CMER-Policy interaction

questions. Once received, Policy will need to select a preferred alternative for the approach that will be used in developing the study design by CMER.

- The Type F Effectiveness Monitoring Project Phase I Pilot Study remains in report preparation. This pilot study is intended to be used to develop a study design for a more rigorous test of the effectiveness of the Type F (fish bearing stream) rule buffers.
- The Riparian Characteristics and Shade (RCS) project's draft study design was approved by CMER in March and is now at ISPR. Two disputes occurred over the final report. Both disputes were over a proposal to add additional treatments to the study. Both of these disputes were combined into a single dispute resolution process and resolved at stage two of the CMER Guided Decision Making Process.
- The Unstable Slopes Criteria Project continues to examine the use of object-based mapping for identifying unstable features at the landscape scale using LiDAR and aerial photography. This is the critical first step of this project.
- The Landslide Mapping and Classification project-phase of the Deep-Seated Landslide Research Strategy remains in study design development within the Upland Processes Science Advisory Group (UPSAG).
- The Temperature and Amphibians in Discontinuously Flowing Type Np Steams is in project scoping within the Landscape and Wildlife Science Advisory Group (LWAG). Further work on this study beyond scoping was moved out 3 years on the MPS last August due to the AMP budget limitations.
- The Forested Wetlands Effectiveness Project (FWEP) has an approved study design and the Wetland Science Advisory Group (WetSAG) is currently working on developing site selection and monitoring implementation plans. The MPS has scheduled filling the current wetland scientist staff vacancy in FY22. This staff member would take on a significant role in moving this project forward.
- The LiDAR-based Wetland Intrinsic Potential Tool (WIP) remains near completion with WetSAG working to finalize answers to the 6 CMER-Policy Interactions questions by June 2021.
- The Wetland Management Zone Effectiveness Monitoring Study is expected to examine rule effectiveness on non-forested wetlands. This study is at the initial stage of scoping, and funding to assist in this work was moved out 3 years on the MPS last August due to the

AMP budget limitations. WetSAG is using available stakeholder and staff resources to move the project forward.<sup>1</sup>

- A Large Woody Debris Recruitment Study is opportunistically being scoped using available stakeholder and staff resources in RSAG. The current intention is to add it to the Phase II Westside Type F Effectiveness Monitoring Study once MPS funding is available to move that project forward.<sup>1</sup>
- The eDNA Method Development Report is a project in which the AMP contributed funds to add sites from western Washington to a collaborative study that was being led by the US Forest Service and large landowners in Oregon. Two disputes have occurred over the final report but both were resolved at stage one (informal discussion) of the CMER Guided Decision Making Process. ISAG is expected to finalize their work by June before conveying the report to TFW Policy.
- The Water Typing Strategy efforts continue to focus on developing a consensus study design to assess Potential Habitat Breaks (PHB), with the intention of add features to the study design later that will also allow an assessment of the Default Physical Criteria. Once these two projects are complete, the results would then be used in the development of a study to try and create an effective LiDAR based water typing model. A statistical consulting firm has just been hired to assist cooperators in evaluating methods for the PHB study design.
- The Small Forest Landowner Template Proposal Initiation included a white paper asserting a scientific basis for the proposal. This paper, developed outside the AMP, was recently passed on to CMER for their review. Policy directed CMER to provide their assessment of the scientific basis using the same six questions format used to transmit the results of studies developed within the AMP. A dispute in CMER invoked over a perceived lack of progress was resolved at stage one (informal discussion) of the CMER Guided Decision Making Process. However, this remains a challenge task for CMER to complete.
- The SMART Buffer study entered the AMP as a Washington Forest Protection Association (WFPA) Proposal Initiation request. WFPA employees and member companies intend to conduct a pilot study to test the feasibility of establishing site specific shade buffers that focus on retaining trees only in locations most needed to block incoming solar radiation

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<sup>1</sup> Projects being developed using cooperator and staff resources do still use funding from the AMP in the form of staff and cooperator financial compensation, and occupy time that could otherwise be invested in expediting projects formally prioritized by the Board.

during the peak of summer. Changes have been made to the WFPA-proposed study design in response to CMER comments, but at this time it is uncertain if all the key concerns have been satisfied and the project will be approved by consensus at CMER's April meeting.

### **TFW Policy Committee Update**

- On July 14<sup>th</sup> the Small Forest Landowner Caucus initiated Stage 1 of the dispute resolution process for work related to their proposed Alternate Plan Template. It was necessary to move this dispute to Stage 2 and an outside mediation firm was hired. Stage 2 also was unsuccessful in resolving the dispute. At this time, the mediator is developing a summary report, and after reviewing that report Policy members will produce minority and majority reports recommending appropriate action for the Board.
- Policy is continuing to discuss the use of Extensive Status and Trends Monitoring in the Adaptive Management Program.

If you have any questions, please feel free to contact me ([mark.hicks@dnr.wa.gov](mailto:mark.hicks@dnr.wa.gov), 360-902-1909).



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April 26, 2021

**TO:** Forest Practices Board TM

**FROM:** Tami Miketa, Manager, Small Forest Landowner Office – Forest Practices

**SUBJECT:** Small Forest Landowner Office and Advisory Committee

**Small Forest Landowner Office Advisory Committee**

Since my last report, the Small Forest Landowner Office Advisory Committee held one meeting on March 18, 2021 (via Zoom). Discussions focused on the following topics:

- SFLO Program and Staff Updates; and
- Continued discussion on Alternate Harvest Prescriptions
- Update on the Carbon Sequestration Advisory Committee
- Discussion on recommendations to be included in the 2020 Small Forest Landowner Demographic Report

**SFLO Program Updates**

In the FY2021-2023 biennial operating budget, the Small Forest Landowner Office received an additional \$2 million to restore staffing capacity reduced during the great recession and to support small forest landowners, including assistance related to forests and fish act regulations.

*Forestry Riparian Easement Program*

The Forestry Riparian Easement Program (FREP) received \$6 million with a \$600,000 re-appropriation from the State Capital Budget for the FY2021-2023 biennium. The program's funding is used for two main purposes: 1) purchase of easements and 2) valuation of easements. The Office is currently determining the number of easements this allotment can purchase.

*Family Forest Fish Passage Program*

The Family Forest Fish Passage Program (FFFPP) received \$5.957 million with a \$3.7 million re-appropriation from the State Capital Budget for the FY2021-2023 biennium. The program currently has in its queue over 1,000 eligible projects. The Office is currently determining the number of projects this allotment can purchase.

*Rivers and Habitat Open Space Program*

The Rivers and Habitat Open Space Program (RHOSP) received \$1.4 million from the State Capital Budget for the FY2021-2023 biennium. The Office is currently determining the number of easements this allotment can purchase.

### **2020 Small Forest Landowner Demographic Report**

The Small Forest Landowner Demographic Report was written to fulfill the requirements of Revised Code of Washington (RCW) 76.13.110. This RCW requires the Small Forest Landowner Office to provide a report every four years to the Forest Practices Board (Board) and the Legislature containing the following information:

*(5) (a) Estimates of the amounts of nonindustrial forests and woodlands in holdings of twenty acres or less, twenty-one to one hundred acres, one hundred to one thousand acres, and one thousand to five thousand acres, in western Washington and eastern Washington, and the number of persons having total nonindustrial forest and woodland holdings in those size ranges;*

*(b) Estimates of the number of parcels of nonindustrial forests and woodlands held in contiguous ownerships of twenty acres or less, and the percentages of those parcels containing improvements used: (i) As primary residences for half or more of most years; (ii) as vacation homes or other temporary residences for less than half of most years; and (iii) for other uses;*

*(c) The watershed administrative units in which significant portions of the riparian areas or total land area are nonindustrial forests and woodlands;*

*(d) Estimates of the number of forest practices applications and notifications filed per year for forest road construction, silvicultural activities to enhance timber growth, timber harvest not associated with conversion to non-forest land uses, with estimates of the number of acres of nonindustrial forests and woodlands on which forest practices are conducted under those applications and notifications; and*

*(e) Recommendations on ways the board and the legislature could provide more effective incentives to encourage continued management of nonindustrial forests and woodlands for forestry uses in ways that better protect salmon, other fish and wildlife, water quality, and other environmental values.*

To see a copy of the full report go to:

[https://www.dnr.wa.gov/publications/fp\\_sflo\\_demographic\\_report\\_20210401.pdf](https://www.dnr.wa.gov/publications/fp_sflo_demographic_report_20210401.pdf)

### **Long Term Applications (LTA)**

There are a total of 298 approved long term applications, which is an increase of 4 approved applications since the end of the last reporting period (01/28/2021).

<b>LTA Applications</b>	<b>LTA Phase 1</b>	<b>LTA Phase 2</b>	<b>TOTAL</b>
Under Review	5	1	<b>6</b>
Approved	5	298	<b>303</b>
<b>TOTAL</b>	<b>10</b>	<b>299</b>	<b>309</b>

## Upcoming Landowner Events

### *Forest Stewardship Webinars*

- 8/11/2020 (new date): [The four horsemen of the root disease apocalypse](#)
- 8/18/2020: [Princes in disguise: Frogs and other amphibians in northwest woodlands](#)
- **Restoring the Narrative: Wildfires of Eastern Washington**  
Join Washington State University Extension Forestry – Northeast Region, Dr. Paul Hessburg (USFS/UW), and Guy Gifford (DNR) to discuss the history of fire on the landscape, how it shaped our forests, what we are doing today to manage these forests, and what landowners on the dry Eastern side of the state can do to protect their homes and resources.  
[Watch the recording on Youtube](#)
- **Wildfires in Western Washington, A Different Animal**
- Many believe that fire is not a concern west of the Cascades. While it's true that greater rainfall makes these forests more fire-resilient, it also inherently means greater fuel loads will be available when fires do occur. As the climate continues to change and we experience hotter summers and longer dry periods, catastrophic wildfires may become a more pressing concern on the west side. This is an alarming thought, but learning more about how these fires behave is the first step to being prepared. [View a recording of this webinar on Youtube!](#)

For more information regarding these events go to <http://forestry.wsu.edu/>

Please contact me at (360) 902-1415 or [tami.miketa@dnr.wa.gov](mailto:tami.miketa@dnr.wa.gov) if you have questions.  
TM/





**Timber, Fish and Wildlife Policy Committee  
Forest Practices Board**

**PO BOX 47012, Olympia, WA 98504-4712**

**Policy Co-Chairs:**

Marc Engel, Department of Natural Resources

Meghan Tuttle, Weyerhaeuser Company

TO: Washington Forest Practices Board

FROM: Marc Engel and Meghan Tuttle

SUBJECT: TFW Policy Committee Report (November & December 2020; January 2021)

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**SUMMARY OF POLICY RECOMMENDATIONS TO THE BOARD**

**Adaptive Management Program (AMP) Budget and Master Project Schedule (MPS)**

The TFW Policy Committee (Policy) supports the MPS approved by the Board in August 2020 for the FY 21-23 biennium and the updated and approved Cooperative Monitoring, Evaluation and Research Committee (CMER) Work Plan approved by CMER in December 2020.

In April, Policy passed the 21-23 biennium MPS budget in a non-consensus vote. Ray Entz, the Eastside Tribal caucus representative, voted down the MPS based on concerns with three studies. A memo from Ray Entz explaining his concerns is attached. The majority membership of the TFW Policy committee supports the MPS and its associated budget as provided to you by the Adaptive Management Program Administrator for review and approval at the Board's May meeting.

The changes to the budget since August 2020 include an updating of project costs and timelines and the inclusion of a line item adding funding for the mediation of future formal disputes within the adaptive management program. Policy notes that while the MPS is in balance for FY22-23 biennium, careful cost containment and project tracking will be needed to ensure the budget for the FY24-25 biennium will be brought into balance.

**Eastside Modeling Evaluation Project (EMEP)**

Policy has agreed by consensus that no action is warranted by the Board in response to the Eastside Modeling Evaluation Project (EMEP) findings. EMEP used randomly collected data on riparian stand conditions across eastern Washington from a previous study (i.e., Eastern Washington Riparian Assessment Project Phase I, 2008) to model stand trajectory, harvest opportunity, and fire and disease risks. The study used model predictions to compare and contrast these stands based on whether or not they are managed to the full extent permitted in the rules.

Overall, as riparian zone growth was simulated for 50-years with and without management, tree size and stand density increased, along with some increases in insect and disease susceptibility and potential fire severity without management and decreases with management. These results

generally confirm conventional expectations that thinning stands can reduce fire and disease risks and where thinning is more substantial would be expected to increase incremental growth rates in the trees retained.

The study also appropriately cautions that the potential benefits of harvesting at higher levels in riparian management zones needs to be balanced with potential negative impacts on ecological functions and processes and overall aquatic system health. Again, after considering the strength and limitations of the results, TFW Policy agreed by consensus that no action is warranted by the Board in response to this study. Policy further agreed the findings should be incorporated in an Eastside research strategy.

## **TFW POLICY COMMITTEE BUSINESS UPDATE**

### **Type Np Workgroup**

The Policy Type Np Workgroup delivered a draft report and presentation to Policy in April 2021 with the final report to be delivered to Policy by June 2021. When Policy receives the final *Review of Current and Proposed Riparian Management Zone Prescriptions in Meeting Westside Washington State Anti-degradation Temperature Standards* report from the Type Np Workgroup, Policy will have up to 180 days to develop recommendations for the Board. The Policy co-chairs will present a draft timeline to the Board at the May 2021 meeting.

### **Small Forest Landowner Request for Smaller Riparian Buffers**

In the December 2019 meeting Policy, by consensus, found that the Small Forest Landowner (SFL) Alternate Prescription (AP) Template proposal does not meet the criteria of a template per the rule standards in WAC 222-12-0403(3) in whole, but may in part be a template or other form of prescription with more site specific criteria. To address if part of the proposal could be a template, Policy formed a Technical SFL Prescriptions Workgroup to evaluate “*under what, if any, site-specific conditions a 75-foot and 50-foot buffer, respectively, would be acceptable as a prescription for Type F streams; and under what, if any, site-specific conditions a 25-foot buffer would be acceptable as a prescription for Type Np streams.*”

The Technical SFL Prescriptions Workgroup presented the results of their review and evaluation to Policy at their June 2020 meeting. Policy could not agree on how to proceed in the review of the results of the workgroup and in June 2020 the small forest landowner caucus invoked dispute resolution. The SFL Caucus invoked dispute resolution based upon the lack of progress on the core Riparian Management Zone (RMZ) width prescriptions of 25, 50, and 75 feet, despite some progress being made in the workgroup. Specifically, the dispute is limited to RMZ widths within WFFA’s *ALTERNATE PRESCRIPTIONS FOR SFL IN WESTERN WASHINGTON*, January 21, 2015 proposal.

Policy completed Stage 1 of the dispute resolution without consensus in December 2020. Stage 2 of dispute resolution was invoked and a mediator was contracted to initiate this stage in February 2021. This stage has also ended without consensus and final reports are being prepared by the mediator and caucuses by the end of July 2021. It is anticipated the final reports will be completed and ready to be presented to the Board at your November 2021 meeting.

### **Extensive Monitoring**

The extensive monitoring subcommittee is continuing to meet to evaluate potential extensive monitoring projects be brought to Policy for consideration this summer. Policy will then begin development of recommendations to present to the Board of an AMP extensive riparian monitoring strategy for inclusion in the MPS.

## East Side Tribal Governments' 2021-2023 MPS Non-Consent Budget Position Paper

The ESTG Caucus is in non-consensus with portions of the MPS budget as presented to the Forest Practices Board on 12 May 2021 by the TFW Policy Committee. While we recognize that this is out of sequence and not likely to affect the transmission of the MPS to the Forest Practices Board, we were not at the Table when this budget was approved. Our issues have been long standing and identified in previous MPS budgets over the previous 7 plus years. Many letters identifying these issues have been sent to the AMPAs, FPB Chair, FPB, and Commissioner with little to no action taken to resolve them.

We are also concerned with the impacts to the budget in the long term by prioritizing projects that are not meeting the HCP or FFR rule effectiveness and will likely never be used for rule adjustments. As we start to consider funding extensive and intensive monitoring, there is literally no room in the budget to be able to engage in those important next steps in the Program or complete effectiveness monitoring on remaining rules (especially on the eastside).

### **We are in non-consensus with projects prioritized on lines 40, 47, 56 of the MPS budget spreadsheet.**

Line 40 – Amphibians in discontinuous flowing Np reaches. Our principal concern is prioritizing single species/guild projects in front of rule effectiveness projects. There are still several rules that have yet to be tested for effectiveness and we are in year 22 of the FFR AMP implementation. “Nice to know” or “want to know” projects should not be prioritized over the “need to know” projects.

Line 47 – Riparian Characteristics and Shade Response. The cost of this study has continued to increase significantly and based on a recent RSAG request; this study is down to studying a single variable at a cost exceeding \$1 million. Consistent with previous discussions in 2018, we have again pointed out this study could be done on non-fish bearing streams or upland forests. The current AMPA (original author) and some members of CMER feel the only way to complete this study is by degrading riparian habitat on Type F and Np streams up to 25' BFW. The east side tribes find these impacts from buffer reductions unacceptable and inconsistent with current state riparian protection policy (especially considering offers have been made to alleviate those concerns). Our non-consensus for this project can change if the eastside portion of the study is either removed, or the study design is changed to eliminate impacts to Type F buffers.


Line 56 – Hard Rock Phase III. This study is another response-based extension to a project that seems to be never ending. We disagree that (CMER and Policy) approvals for this project remain valid. That said, the PI for the project did indicate that this question has already answered in that no data to date has shown that amphibian genetics nor demographics have been impacted over the long term in very intensively managed watersheds. We feel this study needs to move into future potential projects. It is also another example of a “want to” or “nice to know,” versus a “need-to-know” project.



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May 12, 2021

## MEMORANDUM

**To:** Forest Practices Board   
**From:** Gary Bell, Wildlife Biologist, Forest Habitats Section  
**Subject:** Upland Wildlife Update

The following provides a brief status update for ongoing or pending actions pertaining to priority wildlife species in forested habitats:

### Marbled Murrelet

1992: Federally listed as Threatened  
1993: State listed as Threatened  
1996: Federal critical habitat designated by USFWS  
1997: FPB enacted State Forest Practices Rules  
2017: State uplisted to Endangered

The marbled murrelet population in Washington's marine waters has declined by 3.93% annually (2001-2019) with the strongest annual declines (4.96%; 2001-2020) in the inland marine waters of the State (Puget Sound and Strait of Juan de Fuca). The species' status in Washington has not improved since state listing in 1993. As a result of state uplisting to endangered status, the Washington Department of Natural Resources (WDNR), in consultation with Washington Department of Fish and Wildlife (WDFW), recommended that the Forest Practices Board (Board) support initiation of a forest practices rule (FP Rule) assessment including a diverse group of stakeholders. WDFW established a Wildlife Working Group (WWG) to evaluate rule effectiveness in protecting murrelet habitat, identify weaknesses in rule language and on-the-ground implementation, consider potential habitat conservation incentives, and provide recommendations for FP Rule improvements to the Board.

The WWG held its most recent online meeting April 15, 2021. Due to the complexities of data gathering and analysis for habitat elements and selection by murrelets resulting in a lack of forward progress on rule evaluation, efforts shifted to identifying and evaluating existing rule language and content. We will continue gathering and analyzing new information on threats and the appropriate definition of habitat concurrently with evaluation of existing rules. Updated science will ultimately inform if the current definition identifies attributes that provide functional murrelet habitat or if it should be modified.

As previously reported, WDFW continues to monitor marbled murrelet populations at-sea in both Zones 1 (Puget Sound and Strait) and Zone 2 (Washington coast) during the nesting season. Each zone is monitored in alternating years and Zone 2 was monitored in 2019 and Zone 1 was monitored in 2020 and the reports summarizing these results have been finalized. Of note is that these are the only data available to assess murrelet abundance and trends for the listed population. The NW Forest Plan Effectiveness Monitoring team's 25-year report is in-press and expected to be released in 2021. WDFW started the ninth year of Navy funded non-breeding season surveys in Puget Sound. The 2019/2020 at-sea survey report is now available; however, the March/April 2020 season was cut short due to the COVID-19 pandemic.

### Canada Lynx

1993: State listed as Threatened  
1994: FPB enacted voluntary management approach  
2000: Federally listed as Threatened  
2017: State uplisted to Endangered

The Canada Lynx was uplisted to state endangered on February 4, 2017. It was recommended that no action be taken to add lynx to the forest practices rule designation for critical habitats (state) and to maintain the voluntary protection approach for lynx. WDFW efforts continue to identify lynx conservation opportunities in collaboration with landowners, Canadian federal and provincial entities, US Fish & Wildlife Service (USFWS), US Forest Service (USFS), conservation organizations, tribes and academic partners. The goal is to refine recovery actions that can be implemented in the near- and long-term to benefit lynx conservation in Washington.

Forest Practice Application (FPA) screening continues to identify potential impacts to lynx and, given wildfire impacts to habitat in northcentral Washington, WDFW has been working with partners to heighten awareness of the importance in protecting remaining lynx habitat at risk to fires, with increased focus on federal lands. DNR and WDFW participate in the *Transboundary Lynx Work Group*, and the group is exploring conservation strategies including coordination with Canadian partners to augment demographic support for Washington's lynx population. More recently, the Colville Confederated Tribes have initiated planning for lynx translocations from Canada into Colville Tribal lands near the Kettle range.

DNR and WDFW also participate in a transboundary *Lynx Climate Workgroup* intended to develop an updated and dynamic lynx habitat model that can be used to inform landscape-level spatial habitat distribution, both at present and over time. The model will also be useful in predicting potential lynx distribution and habitat use.

The November 2017 USFWS summary of the lynx 5-year Species Status Assessment determined that regulatory improvements addressed the threat that led to the original listing of the lynx distinct population segment (DPS). The proposal to remove lynx from the federal list of threatened and endangered species is still pending.

### **Northern Spotted Owl**

1988: State listed as Endangered  
1990: Federally listed as Threatened  
1996: FPB enacted State Forest Practices Rules  
2012: USFWS designation of revised critical habitat  
2016: State retention of Endangered status

Recognized as a state endangered species, the Northern Spotted Owl (NSO) population has continued to decline primarily due to ongoing competitive interactions with Barred Owls. Habitat changes associated with timber management and forest health issues, as well as wildfires, have also affected NSO.

The Barred Owl removal experiment on the Cle Elum study area in the eastern Cascade Range has been completed. The analysis timeframe for this multi-year project is not currently known, although annual reports have been published each year of the project. The USFWS is beginning to address Barred Owl management options and implementation strategies related to Spotted Owl conservation. WDFW will be involved in that initiative.

In response to commitments made at the [August 12, 2020 meeting of the Forest Practices Board](#), DNR and WDFW conducted an evaluation whether goals within the North Blewett Spotted Owl Special Emphasis Area (SOSEA) are being achieved. As discussed then, success toward achieving the SOSEA goals was evaluated based on how well applicable forest practices rules have been implemented for forest practices applications (FPAs) associated with the SOSEA. Results of this analysis will be presented to the board at the May 10, 2021 meeting.

### **Fisher**

1998: State listed as Endangered  
2016: Federal status: Final decision for west coast DPS - not warranted for listing (April 2016)

2018: Northern District Court of California ruling on 2017 USFWS fisher ESA listing withdrawal  
2019: Federal publication of Candidate Notice of Review (October), including fisher

Fisher reintroductions into Washington have been completed by WDFW and cooperating partners. A total of 260 fishers have been reintroduced, including 90 in Olympic National Park (2008-2010), and 170 in other federal lands within the southern and northern Cascade Mountains.

Combined with the Candidate Conservation Agreement with Assurances (CCAA) program administered by WDFW, the reintroductions have assisted the species return to the state. Non-federal landowners can continue to enroll in the CCAA and receive federal regulatory assurances if the fisher were to become listed under the ESA in the future. By signing on to the CCAA, landowners agree to follow basic conservation measures that protect fishers that may use private lands. At this time, 60 landowners representing 3,436,117 acres of non-federal forest lands are enrolled in the CCAA.

WDFW is also exploring options for on-going fisher monitoring to assess re-colonization success.

### **Future Updates to the Board**

The forest practices rules require that when a species is listed by the Washington Fish and Wildlife Commission and/or the U.S. Secretary of the Interior or Commerce, WDNR consults with WDFW and makes a recommendation to the Forest Practices Board as to whether protection is needed under the Critical Habitat (State) rule (WAC 222-16-080). WDFW and WDNR continue coordinating to anticipate federal actions and to respond to changes in the status of any given species.

cc: Chris Conklin (WDFW)  
Hannah Anderson (WDFW)  
Taylor Cotten (WDFW)  
Wendy Connally (WDFW)  
Marc Engel (DNR)  
Colleen Granberg (DNR)  
Joseph Shramek (DNR)

## MEMORANDUM

**DATE:** April 26, 2021

**TO:** Forest Practices Board

**FROM:** Cooperative Monitoring Evaluation and Research Committee (CMER) and the Instream Processes Science Advisory Group (ISAG)

**THROUGH:** Mark Hicks, Adaptive Management Program Administrator

**SUBJECT:** Update on Water Typing Study Design Development

This memo highlights work completed and progress made on water typing projects by the Instream Science Advisory Group since February 2021.

**PHB Project Charter.** ISAG has developed a PHB Project Charter, in accordance with Chapter 7 of the CMER Protocol and Standards Manual (PSM). Project charters are periodically updated to communicate substantive changes to AMP projects. As such, ISAG updated a previous version of the charter, dated April 5, 2019. CMER approved the updates in February 2021. The primary changes include:

- Clarifying language to *Problem Statement*, *Purpose Statement*, and *Project Objectives* sections. Changes were not substantive in that they did not alter the scope of the project.
- Addition of study questions to *Critical Questions*. Study questions are subsets of the critical questions, intended to facilitate hypothesis testing of each critical question. ISAG also added that the decision to include eDNA in the PHB study design is pending further discussion.
- A new, detailed *Project Tasks and Deliverables* table. Please note that it has been revised from the version that was delivered to the Board in February 2021. More information below.
- Updated project *Budget*. The budget is aligned with *Project Tasks and Deliverables* timeline. Please note that it has been revised from the version that was delivered to the Board in February 2021. More information below.
- Updated *Project Team Roles and Responsibilities*. Currently, all Project Team members are assigned to the Project Manager or Project Team categories. Additional roles are placeholders and will be assigned as the project approaches implementation.
- Restructuring of *Communication Plan* to reflect current and anticipated project workflow.
- Addition of language to *Authorization* to indicate that PHB is a Board-directed project.

**PHB Project Management Plan.** ISAG has developed a PHB Project Management Plan (PMP), in accordance with Chapter 7 of the CMER PSM. The PMP breaks down project work into logical steps to help provide a framework to efficiently allocate resources, reliably estimate project costs, and help guide schedule, budget development, and project scope. While the project charter and PMP share several elements, the PMP provides more detail and includes project-specific assumptions, constraints, and risk mitigation. The primary audience is intended to be the Project Team, but the document also serves as a helpful reference for CMER and the Forest Practice Board.

**PHB Timeline and Budget.** ISAG agreed to shift field implementation from Fiscal Year 22 to Fiscal Year 23. This decision was based on budget needs and constraints, as well as refinement of task timeframes, particularly for development of Default Physical Criteria, ISPR review, and site selection. No changes have



been made to task items or order of completion.

The PHB budget estimates include labor, travel, per diem, equipment, and project on-going expenses for each study phase. Expenditures and estimates do not include CMER staff or ISPR review. More accurate estimates will be forthcoming pending completion of the study designs. Because the PHB and DPC projects will be implemented concurrently, the PHB budget estimates are expected to capture the majority of costs associated with both projects. However, these estimates may change as the DPC study design is finalized.

	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
<b>PHB</b>	<b>Study Design</b>							
		<b>ISPR Review</b>						
		<b>Implementation Plan</b>						
			<b>Site Selection and Field Reconnaissance</b>					
				<b>Data collection</b>				
				<b>QA/QC and Data Analysis</b>				
							<b>Report Writing</b>	
<b>PHB Budget</b>	\$0	\$0	\$185,600	\$911,400	\$929,900	\$953,400	\$419,300	\$59,500
<b>DPC</b>	<b>Study Design</b>							
		<b>ISPR Review</b>						
		<b>Implementation Plan</b>						
			<b>Site Selection and Field Reconnaissance</b>					
				<b>Data collection</b>				
				<b>QA/QC and Data Analysis</b>				
							<b>Report Writing</b>	
<b>DPC Budget</b>	\$0	\$0	TBD	TBD	TBD	TBD	TBD	TBD
<b>LiDAR</b>	<b>Postpone implementation of the LiDAR Model study until after the completion of DPC and PHB studies and the development of a statewide LiDAR derived stream network.</b>							
<b>LiDAR Budget</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**Statistical Consultation.** As of March 2021, DNR is soliciting a Request for Qualifications and Quotations for statistical consultation for PHBs. The consultant will serve as an advisor and provide temporary support to the Project Team in FY21 to:

- o Estimate sample size for the study.
- o Determine spatiotemporal and analytical tradeoffs between sampling frequency and intensity.
- o Compare several stratification methodologies, including cluster and Generalized Random Tessellation Stratified, to ensure an unbiased, representative, and spatially-balanced sample. Determine appropriate strata and pros and cons of pre-and post-hoc stratification.
- o Ensure the most appropriate analytical methods are used to answer study questions.

# **PROJECT CHARTER**

## **EVALUATION OF PHYSICAL FEATURES THAT DEFINE FISH HABITAT IN FORESTED LANDSCAPES ACROSS WASHINGTON STATE POTENTIAL HABITAT BREAK (PHB) VALIDATION STUDY**

*February 2021*

### **PROJECT CHARTER OVERVIEW**

The purpose of the Project Charter is to describe the project and give the Project Manager and the Project Team the authority to begin utilizing program resources and spending allocated project funds (CMER Protocols and Standards Manual (PSM) Chapter 7, section 4). In general, Project Charters should be brief and updated as needed as the project is implemented to accurately, reliably, and concisely communicate the projects' basic elements and objectives. When substantive changes are considered necessary, which amend the scope of the project (i.e. study design, budget, or schedule), the charter should to be updated (version #2, #3, etc.) to communicate those changes.

### **PROJECT CHARTER APPROVAL DATES**

April 5, 2019

### **OVERSITE COMMITTEE**

In-Stream Scientific Advisory Group (ISAG)

### **PROJECT TEAM MEMBERS**

Cody Thomas (Spokane Tribe of Indians/ISAG co-chair), Jason Walter (Weyerhaeuser Co./ISAG co-chair), Jenelle Black (CMER Science staff), Doug Martin (Martin Environmental/WFPA), Chris Mendoza (Conservation Caucus), John Heimborg (WDFW), Don Nauer (WDFW)

### **PROBLEM STATEMENT**

The upper extent of fish habitat in forested watersheds is influenced by many factors including gradient, channel condition, nutrients, flow, barriers to migration, and history of anthropogenic and natural disturbance. The Washington Forest Practices Board has identified criteria to be used in determining Potential Habitat Breaks (PHBs) between fish (Type F) and non-fish bearing waters (Type N) across the state. These criteria are based upon data collected during single-pass Washington Department of Natural Resources (DNR) protocol electrofishing surveys and include gradient, bankfull width, and vertical and non-vertical natural barriers to migration. To evaluate which physical criteria best define the end of fish (EOF) habitat (the uppermost stream segments that actually or potentially are inhabited by fish at any time of the year), detailed information is needed on the uppermost fish location and associated habitat in small streams

across Washington State. While some data on habitat conditions at last detected fish locations are available (e.g., from existing water type modification forms (WTMFs) submitted to DNR), the Board made the decision for CMER to implement a field study specifically focused on PHB assessment and determination.

## **PURPOSE STATEMENT**

The purpose of the PHB study is to develop the criteria to identify the point (F/N break) that; 1) represents the upper extent of habitat that is both accessible and likely to be used by fish; 2) is based on measurable physical stream characteristics, and 3) is associated with a protocol electrofishing survey within the context of FHAM.

## **PROJECT OBJECTIVES**

Additionally, this study is intended to provide insight into how last detected fish points, EOF habitat, and PHBs proposed by the Washington Forest Practice Board may vary across ecoregions, seasons, and years. The study will evaluate the PHB criteria selected by the Board to be used in FHAM as part of a water-typing rule and explore potentially useful attributes that may help to more accurately describe PHBs (Table 1). It is designed to identify PHB criteria that can be used to identify EOF habitat in forested streams across Washington and to better understand how PHBs may be influenced by seasonal and/or annual variability in fish distribution, and by location within Washington State (e.g., reduce uncertainty). The overall goal is to test the accuracy and reliability of PHB criteria as an aid in identifying EOF habitat in an objective and repeatable manner.

It is important to note that this study is not intended to evaluate the current water typing system or the FHAM; or to describe how the regulatory Type F/N break should be determined. Other factors such as temperature, flow, water quality, and biological interactions are important covariates that might influence the distribution of fishes but do not affect PHBs. Therefore, they are not being evaluated in this study.

## **CRITICAL QUESTIONS**

- How can the line demarcating fish and non-fish habitat waters be accurately identified?
- To what extent does the current water typing survey window encompass account for seasonal and annual variability in fish distribution considering potential geographic differences?
- How do different fish species use seasonal habitats (timing, frequency, duration)?
- How does the upstream extent of fish use at individual sites vary seasonally?
- How does the delineation of the upstream extent of fish habitat change seasonally?
- **Additional critical question pending discussion:** How well and under what conditions does eDNA sampling accurately and consistently identify the upstream extent of fish presence, abundance, and/or fish habitat?

Additional, testable study questions were developed to complement critical questions:

- Which combinations of physical channel features and basin characteristics (for example, gradient, channel width, barriers to migration) best identify the end of fish habitat relative to the location of the last detected fish?
- How do the locations of the last detected fish vary interannually?
- How do the locations of the last detected fish vary seasonally?
- How does the interannual variability of last detected fish influence identification of the PHB features?
- How does the seasonal variability in location of last detected fish influence the identification of the PHB features?
- How do the locations of last detected fish vary geographically across the state of Washington?
- Where the location of the last detected fish changes, how does that influence the PHB that is associated with the F/N break and how frequently does that occur?
- How do these physical channel and basin characteristics (e.g. bankfull width, average gradient, basin size) associated with the identified end of fish habitat vary geographically across the state of Washington?
- How do the physical channel features at the locations initially identified as PHBs change in time?
- How well do the PHB criteria provided by the Washington Forest Practices Board accurately identify the EOF habitat when applied in the Fish Habitat Assessment Methodology (FHAM)?
- Can protocols used to describe PHB be consistently applied among survey crews and be expected to provide similar results in practice?

## CMER RULE GROUP AND PROGRAM

The PHB Validation Study is part of the CMER, Stream Typing Rule Group.

## PROJECT DELIVERABLES AND PROJECT TIMELINE

Project Milestones	Responsible Party	Estimated Dates of Completion								
		FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
<i>Study Development</i>										
Charter - updated	ISAG subgroup	Mar-21								
Scoping & BAS Alternatives	ISAG subgroup	NA								
Study design- ISAG approved	ISAG subgroup		Jul-21							
Study design- CMER approved	ISAG subgroup		Nov-21							
Study design- ISPR approved	ISAG subgroup			May-22						

Site Selection and Data Management Document	ISAG subgroup			Apr-22						
<b>Field Implementation</b>										
RFQQ for field implementation	Project Manager			Jul-22						
Site Selection and Field Reconnaissance	ISAG Subgroup/ Contractor			Oct-23						
Data Collection	Contractor				Dec-26					
QA/QC	ISAG Subgroup/ Contractor				Jan-27					
<b>Data Analysis and Reporting</b>										
Data analysis	PI/Contractor				Mar-27					
Final Report - ISAG approved	PI/Contractor								Sep-27	
Final Report - CMER approved	PI/Contractor								Dec-27	
Final Report - ISPR approved	PI/Contractor								Jun-28	
6 Questions Document	Project Team									Sep-28
Board approval	ISAG Subgroup									Nov-28
Publication to DNR and CMER Websites	Project Manager									Dec-28
Written and verbal updates to the Board and CMER	Project Manager	As needed								

## BUDGET

Budget/Cost Items	Expenditures FY17 - FY19	FY22	FY22	FY23	FY24	FY25	FY26	FY27	Project Total
<b>Inter-Agency Agreements (IAAs)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$175,400</b>	<b>\$727,800</b>	<b>\$902,300</b>	<b>\$905,400</b>	<b>\$366,200</b>	<b>\$59,500</b>	<b>\$3,136,600</b>
Field implementation (IE USGS) - Field Manual, Site Selection, and Reconnaissance	\$0	\$0	\$175,400	\$112,400	\$0	\$0	\$0	\$0	\$287,800
Field implementation (IE USGS) - training, data coll. and mgmt.	\$0	\$0	\$0	\$615,400	\$902,300	\$902,300	\$278,600	\$0	\$2,698,500
Field implementation (IE USGS/USFS) - eDNA sampling	\$0	\$0	\$0	\$0	\$0	\$3,100	\$0	\$0	\$3,100
Reporting (IE USGS)	\$0	\$0	\$0	\$0	\$0	\$0	\$87,600	\$59,500	\$147,100
<b>Service Contracts (PSCs)</b>	<b>\$319,076</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$319,076</b>
Wild Fish Conservancy	\$3,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cramer Fish Sciences (Pilot Study)	\$124,497	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cramer Fish Sciences (Study Design)	\$190,629	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Project Team (PSC)</b>	<b>\$76,293</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$76,293</b>
Pete Bisson	\$3,680	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Jeff Kershner	\$36,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Patrick Trotter	\$36,236	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Supply and Expense (On-going)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$27,600</b>	<b>\$27,600</b>	<b>\$27,600</b>	<b>\$0</b>	<b>\$82,800</b>
Science Technician Supplies (Small Supplies, Tools)	\$0	\$0	\$0	\$0	\$27,600	\$27,600	\$27,600	\$0	\$82,700

<b>Supply and Expense (One-time)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,200</b>	<b>\$183,600</b>	<b>\$0</b>	<b>\$20,400</b>	<b>\$25,500</b>	<b>\$0</b>	<b>\$239,700</b>
eDNA analysis	\$0	\$0	\$0	\$0	\$0	\$0	\$25,500	\$0	\$25,500
eDNA sampling equipment	\$0	\$0	\$0	\$0	\$0	\$20,400	\$0	\$0	\$20,400
Data Collection devices/Equipment Manufacture/Equipment Purchase	\$0	\$0	\$10,200	\$183,600	\$0	\$0	\$0	\$0	\$193,800
<b>FY Total</b>	<b>\$395,369</b>	<b>\$0</b>	<b>\$185,600</b>	<b>\$911,400</b>	<b>\$929,900</b>	<b>\$953,400</b>	<b>\$419,300</b>	<b>\$59,500</b>	<b>\$3,854,469</b>

**Project Total: \$3,854,469**

## PROJECT TEAM ROLES AND RESPONSIBILITIES

Name, Title, Affiliation, Contact Info	Roles and Responsibilities
<p><b>Project Manager:</b></p> <ul style="list-style-type: none"> <li>• Eszter Munes eszter.munes@dnr.wa.gov</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor project activities and the performance of the Project Team.</li> <li>• Communicates progress, problems, and problem resolution to the Adaptive Management Program Supervisory Project Manager and Administrator (AMPA), and CMER.</li> <li>• Work with ISAG/CMER, and Project Team to help develop Project Charters and Project Plans, and keep them updated as needed over time.</li> <li>• Work with ISAG, CMER, and Project Team (including PI, contractors, and other Team members) to resolve problems and build consensus.</li> <li>• Work with PI and Project Team members to develop interim and final reports.</li> <li>• Ensure communication between all team members is clear, concise, and consistent.</li> <li>• Maintain contact and process access agreements, once site access is granted.</li> <li>• Ensure coordination between ISAG/CMER, Project Team and landowners.</li> <li>• Coordinate all technical reviews and responses in a timely fashion.</li> <li>• Facilitate archiving of all data and documents.</li> <li>• Works with PI to manage documents on Microsoft Teams.</li> <li>• Work with the AMPA, ISAG/CMER, and Project Team to develop and review proposals, RFPs or RFQQs, review contractor proposals, monitor contract performance, and provide input on budgeting, schedule, scope changes, and contract amendments.</li> <li>• See that contract provisions are followed.</li> <li>• Provide direction and support to the Project Team to achieve clear and specific scopes of work, schedules, and budgets within approved contracts.</li> <li>• Communicate and/or authorize communication with all project-related contractors.</li> <li>• Maintains sole responsibility for all aspects of project management even if other individuals are completing or helping complete parts of the project.</li> </ul>
<p><b>Principal Investigator(s):</b> <i>TBD</i></p>	<ul style="list-style-type: none"> <li>• Attends ISAG and Project Team Meetings.</li> <li>• Oversees the technical aspects of the project including protocol development and refinement, site selection, data collection, analysis, and reporting.</li> <li>• Works with PM and field manager in overseeing data collection by field crew.</li> </ul>



	<ul style="list-style-type: none"> <li>• Oversees and conducts data analysis and QA/QC of data provided by field staff.</li> <li>• Leads in developing, writing, and preparation of the final report.</li> <li>• Lead author of findings report.</li> <li>• Responds to comments by reviewers of reports.</li> <li>• Prepares quarterly summary and progress reports of project status, as needed.</li> <li>• Presents technical findings to ISAG, CMER, TFW Policy, and the Board as necessary.</li> <li>• Communicates concerns or issues that arise with PM.</li> </ul>
<b>Project Team members:</b> <ul style="list-style-type: none"> <li>• Donald Nauer Donald.Nauer@dfw.wa.gov</li> <li>• Douglas Martin doug@martinenv.com</li> <li>• Christopher Mendoza cmendoza2@comcast.net</li> <li>• John Heimburg John.Heimburg@dfw.wa.gov</li> <li>• Jenelle Black jblack@nwifc.org</li> <li>• Cody Thomas cody.thomas@spokanetribe.com</li> <li>• Jason Walter Jason.Walter@weyerhaeuser.com</li> </ul>	<ul style="list-style-type: none"> <li>• Attends Project Team and ISAG meetings.</li> <li>• Provides expertise as necessary for successful completion of project.</li> <li>• Assists PI for addressing technical and scientific questions/issues.</li> <li>• Assists PI with communications, data analyses, and reporting, as needed.</li> <li>• Provides timely review and constructive feedback on project documents and the final report.</li> <li>• Participates in completing site selection.</li> <li>• May assist contractor and PI with training of field crews.</li> <li>• Helps implements QA/QC protocol.</li> </ul>
<b>Contracted Field Manager:</b> <i>TBD</i>	<ul style="list-style-type: none"> <li>• Works with PI to coordinate field activities.</li> <li>• Provides primary oversight of field crew schedules, logistics, and needs.</li> <li>• Works with PI to provide training to field crews.</li> <li>• Communicates implementation status, changes, and needs to PI and PM.</li> <li>• Provides expertise as necessary for successful completion of project.</li> <li>• Provides timely review and constructive feedback on project documents and the final report.</li> <li>• Participates in project meetings and conference calls, as needed.</li> </ul>
<b>Contracted Field Crew:</b> <i>TBD</i>	<ul style="list-style-type: none"> <li>• Collects and QA/QCs field data.</li> <li>• Responsible for field gear and equipment.</li> <li>• Transmits data to Field Manager and PI according to designated schedule.</li> <li>• Participates in project meetings and conference calls, as needed.</li> </ul>
<b>Contracted Technical Lead Staff:</b> <i>TBD</i>	<ul style="list-style-type: none"> <li>• In coordination with the PI, oversees and conducts QA/QC of data provided by field staff.</li> <li>• Conducts project data summaries and analyses.</li> </ul>

	<ul style="list-style-type: none"> <li>• Assists PI with reporting. Helps prepare interim and final reports.</li> <li>• Responds to comments by reviewers of reports.</li> <li>• Creates spatial and tabular databases for all project data.</li> <li>• Participates in project meetings and conference calls, as needed.</li> </ul>
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## 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. For PHBs and other water typing projects, the role of TFW Policy is being fulfilled by the Board. As such, project documents, budget, and requests will be brought to the Board for review and approval.

## RECOGNITION OF SUPPORT

Committee	Date of Acceptance	Reference
ISAG	02/16/2021	meeting minutes
CMER	02/24/2021	meeting minutes
FP Board		meeting minutes

## REFERENCES

Cooperative Monitoring Evaluation and Research (CMER) Committee. (2013), Fiscal Year 2014 Work Plan. [http://www.ndr.wa.gov/publications/bc\\_CMER\\_WorkPlan.Pdf](http://www.ndr.wa.gov/publications/bc_CMER_WorkPlan.Pdf).

Cooperative Monitoring Evaluation and Research (CMER) Committee. (January 2019), 2019-2021 Biennium Work Plan. [https://www.dnr.wa.gov/publications/fp\\_cmer\\_2019\\_2021\\_workplan\\_20190119.pdf?o9uq19w](https://www.dnr.wa.gov/publications/fp_cmer_2019_2021_workplan_20190119.pdf?o9uq19w).

Protocols and Standards Manuel (PSM). (2017), CMER Review5 06\_19\_2017 Final Draft, Chapter 7, Section 4.

Protocols and Standards Manuel (PSM). (2017), CMER Review5 06\_19\_2017 Final Draft, Chapter 7, Section 6.3.

WAC 222-12-045. April 2013. <http://apps.leg.wa.gov/wac/default.aspx?cite=222-12-045>.

# **PROJECT MANAGEMENT PLAN**

## ***Potential Habitat Breaks (PHBs)*** ***February 2021***

### **PROJECT MANAGEMENT PLAN OVERVIEW**

The Project Management Plan breaks down project work into logical steps to help provide a framework to efficiently allocate resources, reliably estimate project costs, and help guide schedule, budget development and project scope. Previously in the CMER Protocols and Standards manual (PSM), this document was titled an implementation plan. The Project Management Plan documents and tracks the progress of a CMER project through its various stages. The contents of the Project Management Plan will vary depending on the type and complexity of the project. The Project Team is the primary audience for the Project Management Plan; however, SAG/CMER members are encouraged to provide feedback on the plan.

### **OVERSIGHT COMMITTEE**

Instream Science Advisory Group (ISAG)

### **BACKGROUND**

In 2001, the Washington State Forest Practices Board (Board) approved a comprehensive set of new forest practice rules based on the Forest and Fish Report (FFR). One of the goals of these rules is to protect water quality, including aquatic life, in streams on non-federal forest lands in Washington State. In concurrence with the approval of the FFR, the Board adopted a Forest Practices Adaptive Management Program (AMP). The purpose of the Forest Practices AMP is to “provide science-based recommendations and technical information to assist the Board in determining if and when it is necessary or advisable to adjust rules and guidance for aquatic resources to achieve resource goals and objectives”. To provide the science needed to support adaptive management, the Board established the CMER Committee which has been tasked with performing research in support of the AMP.

The Board is currently in the process of establishing a permanent water typing rule. Ultimately, the rule must be implementable, repeatable, and enforceable by practitioners and regulators involved in the water typing system. The Board is considering the use of a fish habitat assessment method (FHAM) that incorporates known fish use with potential habitat breaks (PHBs) to identify fish habitat. The Board recommended that PHBs be based on permanent physical channel characteristics such as, gradient, stream size, and/or the presence of natural non-deformable vertical and non-vertical obstacles as potential barriers to upstream fish movement.

In 2018, a Science Panel convened by the Board developed a study design to validate PHBs. The purpose of this study is to develop criteria for accurately identifying PHBs through

the evaluation of PHB criteria selected by the Washington Forest Practices Board (Board) for use in the fish habitat assessment methodology (FHAM) as part of a water typing rule.

The study design (Roni et al. 2019) was reviewed and approved by ISPR, however there were varying levels of comments and criticisms from all caucuses participating in the forest practices adaptive management program to particular aspects of the study design and the review process. In 2019, the Forest Practices Board remanded the project to the Department of Natural Resources' adaptive management science program. The Cooperative Monitoring, Evaluation and Research (CMER) committee was tasked with revising the study design following CMER's protocols and standards, referenced in AMP board manual (Section 22). CMER then tasked the Instream Science Advisory Group (ISAG) with revising the study design. The Project Team, a subgroup of ISAG members, is currently developing the study design.

All project phases may be impacted by Covid-19 restrictions, particularly in FY21-22. If restrictions continue into the implementation phase, the project will be re-evaluated to ensure that policies and guidelines can be followed, without compromising project outcomes and budget.

### PROJECT MILESTONES AND TASKS/PROJECT DELIVERABLES

Project Milestones	Responsible Party	Estimated Dates of Completion								
		FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
<i>Study Development</i>										
Charter - updated	ISAG subgroup	Mar-21								
Scoping & BAS Alternatives	ISAG subgroup	NA								
Study design- ISAG approved	ISAG subgroup		Jul-21							
Study design- CMER approved	ISAG subgroup		Nov-21							
Study design- ISPR approved	ISAG subgroup			May-22						
Site Selection and Data Management Document	ISAG subgroup			Apr-22						
<i>Field Implementation</i>										
RFQQ for field implementation	Project Manager			Jul-22						
Site Selection and Field Reconnaissance	ISAG Subgroup/ Contractor			Oct-23						

Data Collection	Contractor				Dec-26					
QA/QC	ISAG Subgroup/ Contractor				Jan-27					
<b>Data Analysis and Reporting</b>										
Data analysis	PI/Contractor				Mar-27					
Final Report - ISAG approved	PI/Contractor								Sep-27	
Final Report - CMER approved	PI/Contractor								Dec-27	
Final Report - ISPR approved	PI/Contractor								Jun-28	
6 Questions Document	Project Team									Sep-28
Board approval	ISAG Subgroup									Nov-28
Publication to DNR and CMER Websites	Project Manager									Dec-28
Written and verbal updates to the Board and CMER	Project Manager	As needed								

## PROJECT TEAM MEMBERS

Name, Title, Affiliation, Contact Info	Roles and Responsibilities
<p><b>Project Manager:</b></p> <ul style="list-style-type: none"> <li>Eszter Munes <a href="mailto:eszter.munes@dnr.wa.gov">eszter.munes@dnr.wa.gov</a></li> </ul>	<ul style="list-style-type: none"> <li>Monitor project activities and the performance of the Project Team.</li> <li>Communicates progress, problems, and problem resolution to the Adaptive Management Program Supervisory Project Manager and Administrator (AMPA), and CMER.</li> <li>Work with ISAG/CMER, and Project Team to help develop Project Charters and Project Plans, and keep them updated as needed over time.</li> <li>Work with ISAG, CMER, and Project Team (including PI, contractors, and other Team members) to resolve problems and build consensus.</li> <li>Work with PI and Project Team members to develop interim and final reports.</li> <li>Ensure communication between all team members is clear, concise, and consistent.</li> </ul>

	<ul style="list-style-type: none"> <li>• Maintain contact and process access agreements, once site access is granted.</li> <li>• Ensure coordination between ISAG/CMER, Project Team and landowners.</li> <li>• Coordinate all technical reviews and responses in a timely fashion.</li> <li>• Facilitate archiving of all data and documents.</li> <li>• Works with PI to manage documents on Microsoft Teams.</li> <li>• Work with the AMPA, ISAG/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.</li> <li>• See that contract provisions are followed.</li> <li>• Provide direction and support to the Project Team to achieve clear and specific scopes of work, schedules, and budgets within approved contracts.</li> <li>• Communicate and/or authorize communication with all project-related contractors.</li> <li>• Maintains sole responsibility for all aspects of project management even if other individuals are completing or helping complete parts of the project.</li> </ul>
<p><b>Principal Investigator(s):</b> <i>TBD</i></p>	<ul style="list-style-type: none"> <li>• Attends ISAG and Project Team Meetings.</li> <li>• Oversees the technical aspects of the project including protocol development and refinement, site selection, data collection, analysis, and reporting.</li> <li>• Works with PM and field manager in overseeing data collection by field crew.</li> <li>• Oversees and conducts data analysis and QA/QC of data provided by field staff.</li> <li>• Leads in developing, writing, and preparation of the final report.</li> <li>• Lead author of findings report.</li> <li>• Responds to comments by reviewers of reports.</li> <li>• Prepares quarterly summary and progress reports of project status, as needed.</li> <li>• Presents technical findings to ISAG, CMER, TFW Policy, and the Board as necessary.</li> <li>• Communicates concerns or issues that arise with PM.</li> </ul>

<p><b>Project Team members:</b></p> <ul style="list-style-type: none"> <li>• Donald Nauer Donald.Nauer@dfw.wa.gov</li> <li>• Douglas Martin doug@martinenv.com</li> <li>• Christopher Mendoza cmendoza2@comcast.net</li> <li>• John Heimburg John.Heimburg@dfw.wa.gov</li> <li>• Jenelle Black jblack@nwifc.org</li> <li>• Cody Thomas cody.thomas@spokanetribe.com</li> <li>• Jason Walter Jason.Walter@weyerhaeuser.com</li> </ul>	<ul style="list-style-type: none"> <li>• Attends Project Team and ISAG meetings.</li> <li>• Provides expertise as necessary for successful completion of project.</li> <li>• Assists PI for addressing technical and scientific questions/issues.</li> <li>• Assists PI with communications, data analyses, and reporting, as needed.</li> <li>• Provides timely review and constructive feedback on project documents and the final report.</li> <li>• Participates in completing site selection.</li> <li>• May assist contractor and PI with training of field crews.</li> <li>• Helps implements QA/QC protocol.</li> </ul>
<p><b>Contracted Field Manager:</b> <i>TBD</i></p>	<ul style="list-style-type: none"> <li>• Works with PI to coordinate field activities.</li> <li>• Provides primary oversight of field crew schedules, logistics, and needs.</li> <li>• Works with PI to provide training to field crews.</li> <li>• Communicates implementation status, changes, and needs to PI and PM.</li> <li>• Provides expertise as necessary for successful completion of project.</li> <li>• Provides timely review and constructive feedback on project documents and the final report.</li> <li>• Participates in project meetings and conference calls, as needed.</li> </ul>
<p><b>Contracted Field Crew:</b> <i>TBD</i></p>	<ul style="list-style-type: none"> <li>• Collects and QA/QCs field data.</li> <li>• Responsible for field gear and equipment.</li> <li>• Transmits data to Field Manager and PI according to designated schedule.</li> <li>• Participates in project meetings and conference calls, as needed.</li> </ul>
<p><b>Contracted Technical Lead Staff:</b> <i>TBD</i></p>	<ul style="list-style-type: none"> <li>• In coordination with the PI, oversees and conducts QA/QC of data provided by field staff.</li> <li>• Conducts project data summaries and analyses.</li> <li>• Assists PI with reporting. Helps prepare interim and final reports.</li> <li>• Responds to comments by reviewers of reports.</li> <li>• Creates spatial and tabular databases for all project data.</li> <li>• Participates in project meetings and conference calls, as needed.</li> </ul>



## **PROJECT CONSTRAINTS AND ASSUMPTIONS**

### **Schedule constraints:**

- The PHB project timeline may be influenced by scheduling and deliverable milestones of other ISAG/AMP projects.
- The PM will revisit the project timeline with the Project Team at least one time per month. Changes to the timeline will be made in consensus. The PM will communicate any changes to the timeline to AMP within one week.
- Extension of study design development and/or review periods within the current timeline developed by the PM may result in implementation delay from FY22 to FY23.
  - The Project Team only has partial influence on the ISPR review timeline, including the development of a comment matrix and making revisions to the document. An ISPR review process that exceeds six months may delay implementation from FY22 to FY23.
- Contracting should be initiated approximately three months in advance of anticipated contract start date for site selection.
- Equipment procurement and replacement must occur in a timely manner to prevent any delays in field work. Equipment should be available for crew field training.
- There are inter- and intra-annual constraints on site visits. Sampling must occur at a frequency and timing to be determined in the final study design.

### **Budget constraints:**

- There is currently no Board-approved budget for the water typing projects, including PHBs. It may need to be secured through a one-time, supplemental legislative request by the DNR.
- The PHB study design phase does not have a budget.
  - Funding for a biometrician will require a request for AMP funds.
- The current project budget (below) is in-part, based on the assumptions from the Science Panel version of the study design. It will be refined on the basis of the ISAG study design and Site Selection and Data Management Document. The PM, in consultation with the Project Team, will create a detailed budget to ensure the requested funds accurately reflect project needs.
- Project expenditures will be constrained to the final legislature-approved, supplemental budget.
  - Expenditures above the project budget will require a request of additional funds.
- Ongoing covid-19 restrictions may result in added and/or unexpected expenditures, such as extra vehicle rental and personal protective equipment. These potential expenses are captured in the “on-going expenses and supplies” line item of the budget, which also includes other field consumables and equipment replacement costs.

### **Human resource constraints:**

- The Project Team will develop the study design and other deliverables (primarily) using resources within AMP. Roles are defined in the Project Team table above.

- Changes to the Project Team may impact project development, execution, and reporting.
- The Project Team may contract with a biometrician for the study design/and or final report.
- Contract support will be necessary for field implementation and reporting. Contract staff may include lead field staff, field technicians, as well as technical staff to assist with oversight, data analysis and reporting.
  - The PI, lead field staff, and possibly contracted technical leads, will provide oversight for field crew training and data collection effort, ensuring QA/QC protocols are followed.
- The PM will facilitate successful execution of contracts.

**Resource constraints:**

Technical, study site, and equipment/supply constraints will be most applicable to the implementation phase of the PHB study.

- Field crews will require rigorous training in field protocols and equipment, including e-fishing, data entry on tablets, stream measurements, and possibly, eDNA sampling.
- Equipment and supplies will need to be procured within budget constraints. Replacement of lost or damaged equipment must occur in a timely manner to avoid project delays.
- Sites will be screened according to criteria from the study design. Availability of these sites may be constrained by land ownership, landowner willingness, and accessibility by road, accessibility by season, and/or any changes in accessibility.

**Project assumptions:**

Project assumptions largely reflect schedule, budget, human resource, and resource constraints.

<b>Assumption</b>	<b>Risk</b>	<b>Mitigation</b>
The Science Panel version of the study design (in the absence of a scoping document) serves as a proxy for a scoping document.	1. Changes to scope without oversight committee approval violate PSM guidelines. 2. Changes to scope without adequate planning can adversely affect project outcomes.	1. Project Team will regularly revisit core objectives, timelines, and budgets to avoid “scope creep”. 2. Necessary changes to scope will be identified as soon as possible. 3. Changes to scope will be brought to CMER and the Board for approval.
Milestones and deliverables will follow the project timeline.	Deviations may affect timelines and budgets of other AMP projects.	PM, in coordination with the Project Team, monitors timeline on a weekly basis and promptly communicate changes to SAG, CMER, and AMP.
Project Team members will reach consensus on deliverables.	Non-consensus will delay study implementation or lead	Project Team members will identify source of non-consensus

	to termination of project within the SAG.	and initiate dispute resolution per the PSM.
Project Team members will stay consistent throughout the project.	Project Team member turnover may result in inefficiencies to work flow. Loss of Project Team members increases workload for remaining members and may lead to delays.	<ol style="list-style-type: none"> <li>1. Ensure Project Team time commitment is clear to all members.</li> <li>2. Anticipate and communicate changes to Project Team in a timely manner.</li> </ol>
The project will be developed with the full extent of expertise needed to complete all deliverables.	Knowledge gaps may produce deficiencies in the study design and reporting.	<ol style="list-style-type: none"> <li>1. Identify necessary expertise.</li> <li>2. Project Team may consult with someone within or outside of AMP who has appropriate expertise to bridge any knowledge gaps.</li> <li>3. Report any assumptions and/or knowledge gaps in deliverables.</li> </ol>
Supplemental budget can be secured to implement and complete the project.	Project cannot be completed without contractor support. Funding through the AMP budget will affect other projects.	<ol style="list-style-type: none"> <li>1. Delay project until funding can be secured.</li> <li>2. Look for internal/external funding and grant opportunities to decrease ask from legislature.</li> </ol>
Expenses for field implementation will remain at or below the project budget.	Project may be delayed or compromised if budget gap cannot be filled.	<ol style="list-style-type: none"> <li>1. Be proactive. See <i>Budget Constraints</i>.</li> <li>2. Make additional funding requests in a timely manner.</li> </ol>
Covid-19 restrictions will not impair data collection activities or add unexpected expenses to the budget.	Ongoing or changes to restrictions may complicate logistics, delay data collection, and/or increase project expenses.	<ol style="list-style-type: none"> <li>1. See <i>Budget Constraints</i>.</li> <li>2. Monitor covid-19 guidance and policy at multiple levels. Assess impact to workflow and budget.</li> </ol>
There will be a sufficient number of sites available to meet minimum sample size requirements as defined in the study design.	If the minimum number of sites cannot be secured, the statistical power to detect an effect will be reduced.	<ol style="list-style-type: none"> <li>1. Oversample during the site screening process.</li> <li>2. If needed, revise and/or re-scope the project to accommodate a smaller sample size, if alignment with original questions and objectives is possible.</li> </ol>
Access to sites will not change throughout the study.	Loss of access reduces amount of data collected for analysis.	<ol style="list-style-type: none"> <li>1. Oversample during the site screening process.</li> <li>2. Be prepared to use backup sites.</li> </ol>
Field technicians will have sufficient skill to ensure consistent data collection among crews and years.	Inconsistent data collection will produce poor-quality data and compromise project.	<ol style="list-style-type: none"> <li>1. Ensure crews are consistently and centrally-trained.</li> </ol>

		<ol style="list-style-type: none"> <li>2. Produce well-defined data collection protocols, forms, and checklists.</li> <li>3. Ensure robust QA/QC procedures. Identify and rectify inconsistencies in field crews quickly.</li> </ol>
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A separate Risk Management Plan will not be developed unless one of these constraints or assumptions occurs or if one is deemed necessary. The process for developing a detailed Risk Management Plan is outlined in section 7.11 of the PSM. A Risk Management Plan identifies potential actions to avoid, reduce, and/or mitigate impacts to a project.

### **DECISION-MAKING AUTHORITY**

The Forest Practice Board (Board) has approval authority over proposed CMER projects, annual work plans, and expenditures. The Board manages the Timber, Fish and Wildlife Policy Committee (Policy), the Cooperative Monitoring, Evaluation, and Research (CMER) Committee, and the Adaptive Management Program Administrator (AMPA) to assist with the Board’s directives. Policy assists the Board by providing guidance to CMER and recommendations on adaptive management issues. CMER is responsible for understanding available scientific information that is applicable to the questions at hand, selecting the best and most relevant information and synthesizing it into reports for Policy and the Board. The AMPA coordinates the flow of information between Policy and CMER according to the Board’s directives. Decision-making authority described in this section needs to be consistent with CMER process and ground rules per the Board Manual section 22.

For PHBs and other water typing projects, the role of Policy will be fulfilled by the Board. This deviation is reflected throughout this document, typically as a substitution of “the Board” for “TFW Policy”. The substitution is notated if it’s a part of standard PSM language.

Decisions related to science and/or technical items is the responsibility of the PIs and the Project Team. If needed, decisions for scientific and/or technical items could be expanded to include the SAG and CMER. Final documents will be prepared by the project team and then reviewed and approved by the SAG, CMER, Independent Scientific Peer Review (ISPR), and the Board. Although the PM will assist in the facilitation of the discussion and decision making process, the PM will not be directly involved in decisions related to science and/or technical items.

Decisions related to contractual (scope of work, RFQQ, contract process, contractor interaction, etc.) and budgetary items is the responsibility of the PM along with input from the Project Team. Requests for additional funding will be approved by the PM and Project Team and sent to the SAG and CMER for formal approval. Minor budgetary or contractual items will be handled directly by the PM with notification provided to the Project Team. Major budgetary or contractual items will be decided between the PM, Project Team, and AMPA. If needed, decision making for budgetary items may require CMER and/or Policy input and/or approval.

## PROJECT RESOURCE NEEDS

The list of project resources is *preliminary and tentative*. It will be fully detailed in the Site Selection and Data Collection Document. The budget will be updated in the charter as resource needs are refined.

Project Resource	Purpose	Quantity
Global Positioning System Units	Navigation	TBD
Field laptops	Interact with scanner and data transfer	TBD
1 TB SSD's	Data storage and backup	TBD
Data collection tablets	Data collection and photos	TBD
Field files: maps, data forms, phone numbers, gear checklist	Navigation, access information, safety contacts	TBD
Consumables: logger tape, batteries, magic markers, tree tags or placards, rebar, flagging, hip chain string,	Data collection	TBD
Personal protective equipment	Data collection	TBD
Laser range finder	Data collection	TBD
Clinometer	Data collection	TBD
Hip chain	Data collection	TBD
Tape measure	Data collection	TBD
Stadia rod	Data collection	TBD
4 Port eDNA sampling unit and pump	Data collection	TBD
PX80 scanner and peripherals	Data collection	TBD

## PROJECT BUDGET

The budget is *preliminary and tentative* and will be revised upon the completion of the study design. It is aligned with the timing of implementation and deliverables from table above. It contains funding for data analysis and reporting, which may add members to the Project Team. Any changes to the budget or Project Team will be reported in the charter and submitted for CMER and Board review and approval.

Budget/Cost Items	Expenditures FY17 - FY19	FY22	FY22	FY23	FY24	FY25	FY26	FY27	Project Total
<b>Inter-Agency Agreements (IAAs)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$175,400</b>	<b>\$727,800</b>	<b>\$902,300</b>	<b>\$905,400</b>	<b>\$366,200</b>	<b>\$59,500</b>	<b>\$3,136,600</b>
Field implementation (IE USGS) - Field Manual, Site Selection, and Reconnaissance	\$0	\$0	\$175,400	\$112,400	\$0	\$0	\$0	\$0	\$287,800
Field implementation (IE USGS) - training, data coll. and mgmt.	\$0	\$0	\$0	\$615,400	\$902,300	\$902,300	\$278,600	\$0	\$2,698,500
Field implementation (IE USGS/USFS) - eDNA sampling	\$0	\$0	\$0	\$0	\$0	\$3,100	\$0	\$0	\$3,100
Reporting (IE USGS)	\$0	\$0	\$0	\$0	\$0	\$0	\$87,600	\$59,500	\$147,100
<b>Service Contracts (PSCs)</b>	<b>\$319,076</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$319,076</b>
Wild Fish Conservancy	\$3,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cramer Fish Sciences (Pilot Study)	\$124,497	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cramer Fish Sciences (Study Design)	\$190,629	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Project Team (PSC)</b>	<b>\$76,293</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$76,293</b>
Pete Bisson	\$3,680	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Jeff Kershner	\$36,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Patrick Trotter	\$36,236	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Supply and Expense (On-going)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$27,600</b>	<b>\$27,600</b>	<b>\$27,600</b>	<b>\$0</b>	<b>\$82,800</b>

Science Technician Supplies (Small Supplies, Tools)	\$0	\$0	\$0	\$0	\$27,600	\$27,600	\$27,600	\$0	\$82,700
<b>Supply and Expense (One-time)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$10,200</b>	<b>\$183,600</b>	<b>\$0</b>	<b>\$20,400</b>	<b>\$25,500</b>	<b>\$0</b>	<b>\$239,700</b>
eDNA analysis	\$0	\$0	\$0	\$0	\$0	\$0	\$25,500	\$0	\$25,500
eDNA sampling equipment	\$0	\$0	\$0	\$0	\$0	\$20,400	\$0	\$0	\$20,400
Data Collection devices/Equipment Manufacture/Equipment Purchase	\$0	\$0	\$10,200	\$183,600	\$0	\$0	\$0	\$0	\$193,800
<b>FY Total</b>	<b>\$395,369</b>	<b>\$0</b>	<b>\$185,600</b>	<b>\$911,400</b>	<b>\$929,900</b>	<b>\$953,400</b>	<b>\$419,300</b>	<b>\$59,500</b>	<b>\$3,854,469</b>

**Project Total: \$3,854,469**

## PROJECT SITES

Specific information about project sites and site selection is pending completion of the study design and Site Selection and Data Collection Plan. Preliminary site selection is scheduled for FY22-23, with field reconnaissance in FY23-24 (Spring – Fall 2023). Sites will be located throughout Washington State, and will require contract support for field reconnaissance and data collection.

## COMPANION CMER DOCUMENTS

Companion documents were produced by the Board Designated Science Panel, outside of the CMER process. Therefore, documents are not necessarily CMER-approved or include all project documents as required by the PSM. The previous and current effort share many elements, and the documents are listed here to provide continuity. Project documents that have not been completed yet are listed in the *Milestones, Tasks, and Deliverables* table above.

Document	Completion Date (Act.* or Est.)
Science Panel Project Charter	4/5/2019*
Science Panel Final Study Design	3/20/2019*
Science Panel Field Manual (Site Selection and Data Collection Plan)	5/22/2019*
Science Panel Pilot Study Manuscript	7/8/2019*

\*Actual dates.

## PROJECT COMMUNICATION OVERVIEW

Transparent and accurate communication between the different adaptive management parties (Project Team/SAG/CMER/AMPA/Board<sup>1</sup>) is critical for the AMP to guide and oversee the work of the Project Team. This section provides a framework to manage and coordinate the communications needed for all phases of a project. If a separate Communication Plan is needed for a project, see section 7.6 of the PSM for detailed guidelines.

Two primary pathways exist for project communication to occur when working on CMER projects - 1) between the Project Team and project oversight committees (i.e. SAGs/CMER/Board), and 2) communication within the Project Team.

## PROJECT OVERSIGHT COMMITTEE COMMUNICATION

This section covers communication between the Project Team and the project oversight committees (i.e. SAGs/CMER/Board<sup>1</sup>). Project oversight communication includes three categories of documents/communication: 1) Project management documents that enable oversight committees to understand how projects will be managed, 2) Project tracking and communication to enable the oversight committee(s) to track project progress and provide guidance and approvals to move projects forward, and 3) communication with contractors.

<sup>1</sup> Indicates change CMER Protocol and Standards Manual language change from “TFW Policy” to “Board”



## 1. Project management documents

The PM is the lead author for the Project Charter, Project Management Plan, and other project management documents. If the Principal Investigator (PI) has been identified at the time of project launch, the PM will work with the PI to draft the Project Charter and Project Management Plan, in consultation with the oversight committee.

Project Management Documents*	Primary Author	Collaborators	Final Approval	Primary Audience
Project Charter	PM	PI and Project Team (if identified)	CMER and the Board <sup>1</sup>	Project Team, SAG, CMER, and Board <sup>1</sup>
Project Management Plan (including communication and risk sections)	PM	PI and Project Team	CMER	Project Team, SAG, and CMER
Document Management and Closure Plan	PM	PI	N/A	Project Team, SAG, and CMER

\*For details regarding these documents, see PSM Section 7.6

## 2. Project tracking and guidance documents

The PM is responsible for ensuring that all reporting tasks are complete and provided on schedule. When preparing progress reports, the PI is responsible for providing detailed and comprehensive costs, schedule, and project updates, in writing, to the PM consistent with prior written agreement. The PM, in turn, is responsible for summarizing project update information into progress reports, and presenting these progress reports to the overseeing SAG and to CMER per the project schedule or as requested by the SAG or by CMER. The PM may delegate preparation or presentation of progress reports to the PI or other Project Team members, with their consent.

Project Tracking/Guidance Documents*	Primary Author	Collaborators	Final Approval	Primary Audience
Project updates	PM	PI	N/A	Project Team, SAG, CMER, and Board <sup>1</sup>
CMER quarterly and annual project progress reports	PM	PI	N/A	SAG and CMER
CMER Requests	PM	Project Team	CMER	CMER
Board Requests/Check-ins	AMPA/Project Team	Project Team	CMER	Board <sup>1</sup>
Public Presentations	PI/PM	Project Team	N/A	Public

\*For details regarding these documents, see PSM Section 7.6

<sup>1</sup> Indicates change CMER Protocol and Standards Manual language change from “TFW Policy” to “Board”

### **3. Contractor Communications**

In all cases, the PM is primarily responsible for facilitating open and transparent communication between contractor(s) and project oversight committee(s) members. Committee members should generally not directly communicate with the contractor(s) about substantive project elements outside of formally organized meetings, conference calls, or PM-facilitated group e-mail discussions, unless specifically authorized in pre-established contract terms, or approved in advance to do so by the PM. The PM may verbally grant authorization, and the rest of the Project Team and oversight committee members should be informed when this occurs. The PM is responsible for informing the contractor(s) of this policy as well.

### **INTRA-PROJECT TEAM COMMUNICATION**

The PM provides assistance to Project Team members by coordinating communication (e.g. one-on-one and group meetings, conference calls, etc.) when needed as well as maintaining the e-mail distribution list for the Project Team. The PM also ensures that any communication resulting in a formal decision about the project occurs in a transparent and inclusive way.

The PI is responsible for preparing and writing technical reports for CMER. How the PI communicates and works with other Project Team members to produce these documents will vary based on the nature of the project and dynamics of the Project Team. The PI works together with the PM to coordinate communication with other team members as needed.

Communication by individual team members includes participation at meetings and conference calls, providing feedback on draft documents, researching specific topics/issues, taking the lead on writing report sections, and/or acting as co-author(s) of CMER documents. The expectation is that Project Team members, including PMs and PIs, who communicate outside of normal project meetings, conference calls, and other venues will share substantive, project-related conversations they have with the rest of the Project Team. For additional details regarding project team communication see PSM section 7.6.3.

## Communication structure

