Proposal Initiation:

ANADROMOUS FISH FLOOR VALIDATION STUDY

The Department of Natural Resources (DNR) is initiating an Adaptive Management Proposal (PI) for an Anadromous Fish Floor (AFF) validation study. DNR is requesting the Adaptive Management Program Administrator (AMPA) to assess the proposal's applicability in the Adaptive Management Program (AMP) and to forward it for TFW Policy review and decision alongside the AMPA assessment.

This proposal is for a TFW Policy recommendation to the Forest Practices Board (FPB) to add a new AFF validation study in the AMP Master Project Schedule (MPS) such that:

a) The Cooperative Monitoring Evaluation and Research Committee (CMER) – in the 23-25 biennium - completes a scoping document leading to an independently reviewed study design for AFF validation;
b) CMER uses the following FPB accepted definition of an AFF:

> " *measurable physical stream characteristics downstream from which anadromous fish habitat is presumed and an agreement that the AFF would establish the location upstream of which fish protocol surveys may begin under fish habitat assessment methodology*"

c) CMER uses best available science, methods, and data to validate the criteria used in the Board accepted AFF alternative(s); and to do so from a scientific perspective only, without any consideration of the policy implications of the results or the eventual use of the results in policy decisions by the FPB;
d) CMER adds a new validation study to the existing Water Typing Rule Group of studies; and considers – at the committee's choice and discretion – AFF validation as a companion or add-on study to the existing Potential Habitat Breaks (PHB) study; and
e) CMER begins the scoping stage with the following initial research objectives and questions while not precluding further refinement or expansion through CMER and TFW Policy interactions:
    I. What combination of measurable physical stream or channel characteristics, metrics, or anadromous fish presence data can best reduce errors ("overshoots" and "undershoots") as well as best meet the FPB accepted definition of an AFF?
    II. Employ field methods to validate:
        - The GIS analysis in the findings report of the Anadromous Fish Floor Spatial Analysis prepared for the Board Water Typing System Committee; and,

- The criteria used to define the AFF in FPB accepted AFF alternative(s);

III. Incorporate habitat surveys to improve understanding of anadromous fish presence and association with habitat characteristics; and,

IV. What rule-tools and/or methods should be used to implement an AFF without anadromous fish distribution data?

DNR is confident that this proposal, if recommended by TFW Policy to the FPB, will allow CMER to begin scoping a new study and fully meet the FPB's intent and directive for an AFF validation study within the AMP.

Part 3.1 of Board Manual Section 22 (BM22) provides guidance on submitting PIs. Key aspects of the proposal are identified below as provided BM 22.

AFFECTED FOREST PRACTICES RULE, GUIDANCE, OR DNR PRODUCT

The PI affects and relates to the FPB efforts to adopt a permanent water typing system rule. In 2016, the FPB initiated the process to review, amend, and add to the water typing system rules, WAC 222-16-030 and WAC 222-16-031, to develop a single water typing system rule. The FPB intent was to establish a consistent, stable system to determine the water type classification for all typed waters. In 2018, the FPB approved inclusion of an AFF to rule language, and in 2019 requested the Board Water Typing Committee to provide oversight to further analyze two AFF alternatives accepted by the FPB. The alternatives included Eastern and Western Washington Tribal and Industrial Landowner AFF alternatives.

The FPB subsequently made two key decisions: In the first decision, in August 2022, the FPB accepted AFF alternatives A4(7%) and D for analysis and inclusion in the draft statewide permanent water typing system rule. In the second decision, in November of 2022, the FPB established the key elements for the water typing system including a definition of AFF. The FPB approved elements of the water typing system include:

- Balance error
- Minimize electrofishing
- Address stream segments not shown on the DNR hydro layer
- Improve water typing map over time
- Include methods to locate the type F/N break on the ground; and ensure the methods provide the ability to be applied by small forest landowners; and
- Be consistent with fish habitat as defined in rule

Included among these elements was also the following definition for an AFF: Measurable physical stream characteristics downstream from which anadromous fish habitat is presumed and agreement that AFF would establish the location upstream of which fish protocol surveys may being under fish habitat assessment methodology.

THE URGENCY BASED ON SCIENTIFIC UNCERTAINTY AND RESOURCE RISK

Reducing the use of electro-fishing is among the FPB's stated objective for a permanent water typing system. Extended use of electrofishing to determine the regulatory fish/non-fish (F/N) break can, at times, miss fish presence resulting in mistyped waters. Harm to fish and fertilized eggs is an unintentional consequence of using electrofishing as a method to determine the regulatory F/N break. The key resource risk includes adequate protection of fish habitat.

Two key sources of uncertainty – as reported in an AFF spatial analysis to the FPB[1] - require the validation of AFF through a CMER study:

1- **Uncertainty with anadromy and F/N breaks:**
   The spatial analysis of AFF – that were subsequently accepted by FPB as two AFF alternatives - is largely based on data in the Integrated Fish Distribution (SWIFD) database. Multiple methods have been used to populate this dataset. Additionally, the dataset includes points that are either documented (confirmed/observed fish presence) – 85% of points - or are presumed fish presence (15% of points). Together, the dataset does not represent the upper extent of anadromous fish or their habitat. Presumed anadromous presence is a key source of uncertainty that may over or under estimate the true distribution of anadromous fish.
2- **Uncertainty with modeled channel gradients and stream lengths**
   A CMER validation study employing field methods could reduce the second source or uncertainty in the analysis of AFF alternatives: uncertainties (gradient the resulting stream length) arising from modeling a synthetic stream network (using LiDAR) as compared to implementation on the ground. The modeled results may extend each alternative higher in the stream network as compared to field implementation.

ANY OUTSTANDING TFW, FFR, OR POLICY COMMITTEE AGREEMENTS SUPPORTING THE PROPOSAL

Directly relating to this PI are the AFF Workgroup reports in which TFW Policy members participated. While a consensus was not reached on one AFF alternative, their reports to the Board Water Typing Committee and the FPB lists an agreement or common understanding that supports a proposal for AFF validation. Implementation topics recommended by TFW Policy members and accepted by the FPB include, among others, validating the AFF metrics through AMP, and needed elements for Board Manual Guidance. Both of these aspects would need a

[1] Anadromous Fish Floor Spatial Analysis: Findings report. Prepared for the Water Typing Rule Committee of the Forest Practices Board.

CMER validation study to not only validate AFF metrics but to also improve our understanding on: a) establishing AFF locations in the field, b) implementation of AFF in locations without LiDAR coverage, and c) field methods to implement AFF in locations without anadromous fish distribution data.

On the broader water typing system, TFW Policy has a history of making consensus recommendations to the FPB. In August 2016, the FPB accepted the following consensus TFW Policy recommendations:

- Maintain consensus elements of the current rules by blending Washington Administrative Code (WAC) 222-16-030 and 222-16-031;
- Retain the current definition for wetlands, fish habitat, and bankfull width; and
- Develop a fish habitat assessment methodology (FHAM) to reduce electrofishing, establish known breaks limiting fish movement upstream, and achieve consistency in application

TFW Policy also recommended the following aspects of the water typing system rule to the FPB in August 2019:

- An AFF should be considered for inclusion as a component of the water typing system rule; and
- Additional water-crossing structure language not be included in the water typing system rule