




DEPARTMENT OF
NATURAL RESOURCES

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MEMORANDUM

May 2, 2018

TO: Forest Practices Board 

FROM: Hans Berge, Adaptive Management Program Administrator

SUBJECT: Update on the PHB Validation Study Design Report

As directed by the Forest Practices Board (Board) in August 2017, I have been working with a team of experts to develop a study design to validate potential habitat breaks (PHBs) used in the fish habitat assessment methodology (FHAM) for water typing. The purpose of this memo is to provide an update on progress made to date in the development of the study design and outline a proposed course of action for 2018-2023.

Overview

The PHB validation study seeks to identify features that can be used to identify the end of fish habitat, thus the Type F/N regulatory break. As you recall, these features are to include optimal combinations of gradient, channel width, and obstacles that in appropriate circumstances may constitute a potential habitat break. The PHB criteria included in the study were selected by the Board for analysis at its meeting of 13 February, 2018.

The approach of the study is to examine the relationship between the end of fish points and PHB locations across forested EPA level III ecoregions in Washington to evaluate the effectiveness of Board selected PHB criteria used in the FHAM. The study will include three years of sampling across three hydrologically and biologically important seasons (March-June, Aug-October, and November-January) at 35 to 50 sites in each of the seven forested ecoregions. The results of the study will inform the Board on PHB criteria that can be easily identified in the field (implementable), are objective measurements (repeatable), and based upon empirical data representing fish habitat (enforceable).

The study is complex and therefore is broken into two important phases. The *pilot phase* is focused upon determining if the standard sampling methodologies recommended for the study can be used successfully to identify PHBs. The study *implementation phase* will take the most

reliable and cost-effective protocols identified in the pilot study and apply them to the population of sites selected across multiple ecoregions.

Status of the Study Design

The proposed study design was sent to the stakeholder technical committee and CMER's Instream Scientific Advisory Group (ISAG) and to the managing editor of our independent scientific peer-review (ISPR) group on 6 April 2018. To date, comments have been received from stakeholders and ISAG, but we are still awaiting comments from ISPR. Both the ISPR comments and stakeholder comments will be carefully considered and integrated into the study design, where appropriate. The team will prepare a response matrix for all comments received noting how their comments were or were not incorporated into the study design.

Schedule of the Study Design

The authors of the study design met on 1 May and reviewed feedback provided to date and discussed the approach for incorporating comments into a revised draft. Once the study design has been approved by ISPR the comment matrices with detailed responses will be provided to all commenters and the study design will be sent to the Board prior to your August 2018 meeting. Funding decisions around the implementation phase of the study can be considered for approval at that meeting without a substantive delay to the project.

Details on the Pilot

The pilot study will be imperative in understanding how sampling methodologies will provide useful information for implementing the validation study. The approach is to expose sampling crews to complex field situations to understand what challenges will occur in the implementation phase and to refine and select the most effective sampling strategy to efficiently gather data and identify PHBs. For the pilot phase 30 sites will be selected (15 east, 15 west) that represent PHB strata of low (n=5) and high (n=5) gradient, and passage obstacles (n=5) on each side of the state to provide context of the natural variability expected to be observed in the study implementation phase. The sampling for the pilot phase will take place in July and August 2018 and will test all proposed components of the study (locating last fish, measurement of channel gradient, size, and obstacles) and will include locating the Board's recommended PHBs in the field. Analyses of field methods of PHB identification will establish a proof of concept on whether or not the protocols will work in identifying/validating PHBs. A report on the pilot will be provided to the Board in October 2018 for your distribution, with a presentation of the findings at your

November 2018 meeting. The estimated cost of conducting the pilot phase of the validation study is \$128,000.

Project Schedule

The following schedule approximates the overall project timing of implementation during fiscal years 2019-2023 and includes time for CMER reviews, ISPR, findings report, Policy recommendations, and delivery of recommendations to the Board in May of 2023 (Table 1).

The proposed implementation of this study would follow the recent CMER Protocols and Standards Manual guidelines (Chapter 7), with technical support from CMER likely occurring via ISAG. First a project team is formed with a project manager to oversee the work, followed by selection of a contractor to implement the study. The project team would provide regular updates to CMER via ISAG, and when products are available they would be reviewed by ISAG and CMER. Annual presentations would be given to CMER and the Board on project progress. Final reports would follow the Adaptive Management Process outlined in Board Manual Section 23.

Table 1. Proposed timeline of the PHB Validation Study. Assumption for fiscal year 2023 includes 2 months for CMER initial review, 5 months of ISPR process, 1 month of CMER findings report approval, 2 months at Policy for discussion before going to the Board in May of 2023.

Fiscal Year	Pilot	Implementation			Annual Update		Final Report
	Mar - June	Aug - October	November - January	CMER	Board	CMER/Policy/Board	
2019	X	X			X	X	
2020		X		X	X	X	
2021		X		X	X	X	
2022			X	X	X	X	
2023							X