MEMORANDUM

DATE: September 28, 2021

TO: Forest Practices Board

FROM: Cooperative Monitoring Evaluation and Research Committee (CMER) and the

Instream Science Advisory Group (ISAG)

THROUGH: Saboor Jawad, Adaptive Management Program Administrator

SUBJECT: Update on Water Typing Study Design Development

Background

At the November 5, 2019, Washington Forest Practices Board (WFPB) meeting the following motion was passed:

"Recommend the Cooperative Monitoring, Evaluation and Research Committee (CMER) to develop study designs for the PHB validation, physical characteristics, and map-based Lidar model studies. Design the studies for cost savings, including the phasing of the studies with eastern Washington to be initiated first, and the possibility and advisability of combining the PHB validation, physical characteristics and map based Lidar model studies, and then to report on the study designs to the Board by their May, 2020 meeting."

In December 2019, CMER voted that the Instream Scientific Advisory Group (ISAG) should have the lead in drafting a response to the Forest Practices Board motion (above) by developing a Water Typing Strategy for CMER approval that addresses the WFPB's request. In April 2020, CMER delivered the 'CMER Water Typing Strategy Update' to the Board with recommendations including next steps in the revisions/development of the PHB and DPC Study Designs. This Water Typing Strategy and further updates may be found in prior memos from CMER to the Board.

Updates

This memo highlights work completed, and progress made on water typing projects by ISAG since May 2021. ISAG members are currently meeting at least two times per month and working on revisions to the PHB Study Design. Once the draft of the PHB Study Design is completed ISAG will move on to developing the DPC Study Design (see attached timeline).

Statistical Consultation: ISAG began working with a statistical consultant in April 2021. The consultant has served as an advisor and has provided support to ISAG in developing the PHB Study Design. Work with the statistical consultant is ongoing. The contract with the statistical consultant was extended through FY22 to extend through the development of the PHB Study Design and to provide support for the development of the DPC Study Design, as well.

eDNA: ISAG is currently working on a recommendation for possible inclusion of an eDNA component into the PHB and/or DPC Study Design.

PHB Timeline and Budget

ISAG is on track to submit a final proposed draft of the PHB Study Design to CMER by February 2022. Pending the CMER review and approval process, we anticipate sending the study design to ISPR for review and approval no later than July 2022, with the initiation of site selection in the spring of 2023 (end of FY23).

ISAG agreed to shift field implementation from Fiscal Year 23 to Fiscal Year 24. This decision was based on the need to conduct initial surveys in Spring, budget needs and constraints, as well as refinement of task timeframes, particularly for development of the DPC Study Design, 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 current 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.

PHB and DPC Study Design Development Timelines

	Sept '21	l Oct '21 N	lov '21	Dec '21	Jan '22	Feb '22	Mar '22	2 Apr '22	May '2	2 Jun '22	Jul '22	Aug '22	Sept '22	Oct '22	Nov '22	Dec '2	2 Jan '23	Feb '23	Mar '23 A	pr '23 May '	'23 Jun '23 July '	23 Aug '2	3 Sept '23	Oct '23	Nov '23 D	ec '23 Jan '2	4 Feb '24	Mar '24 /	Apr '24 May '	'24 Jun '2
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# Water Typing Strategy Project Timelines and Budgets

	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
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LiDAR Budget	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

### PHB and DPC Preliminary Budgets

Budget/Cost Items	Expenditures FY17 - FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	Project Total
Inter-Agency Agreements (IAAs)	\$0	\$0	\$30,000	\$175,400	\$727,800	\$902,300	\$905,400	\$366,200	\$59,500	\$3,166,600
Field implementation (IE USGS) - Field Manual, Site Selection, and Reconinaisance	\$0	\$0	\$30,000	\$175,400	\$112,400	\$0	\$0	\$0	\$0	\$317,800
Field implementation (IE USGS) -training, data coll. and mgmt.	\$0	\$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	\$0	\$3,100	\$0	\$0	\$3,100
Reporting (IE USGS)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$87,600	\$59,500	\$147,100
Service Contracts (PSCs)	\$322,408	\$32,247	\$5,250	\$0	\$0	\$0	\$0	\$0	\$0	\$359,905
Wild Fish Conservancy	\$3,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cramer Fish Sciences (Pilot Study)	\$124,497	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cramer Fish Sciences (Study Design)	\$190,629	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
WEST	\$3,333	\$32,247	\$5,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Project Team (PSC)	\$76,293	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,293
Pete Bisson	\$3,680	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Jeff Kershner	\$36,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Patrick Trotter	\$36,236	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supply and Expense (On-going)	\$0	\$0	\$0	\$0	\$0	\$27,600	\$27,600	\$27,600	\$0	\$82,800
Science Technician Supplies (Small Supplies, Tools)	\$0	\$0	\$0	\$0	\$0	\$27,600	\$27,600	\$27,600	\$0	\$82,700
Supply and Expense (One-time)	\$0	<b>\$0</b>	<b>\$0</b>	\$10,200	\$183,600	\$0	\$20,400	\$25,500	\$0	\$239,700
eDNA analysis	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,500	\$0	\$25,500
eDNA sampling equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$20,400	\$0	\$0	\$20,400
Data Collection devices/Equipment Manufacture/Equipment Purchase	\$0	\$0	\$0	\$10,200	\$183,600	\$0	\$0	\$0	\$0	\$193,800
FY Total	\$398,702	\$31,247	\$30,000	\$185,600	\$911,400	\$929,900	\$953,400	\$419,300	\$59,500	\$3,925,299