From: Cathy Marcinkevage - NOAA Federal <cathy.marcinkevage@noaa.gov>

Sent: Friday, December 21, 2018 10:05 AM

To: Barbara Byrne; Andrew Hein - NOAA Affiliate; Rachel Johnson - NOAA Affiliate; Steve

Lindley; Adam Pope; Dalton Hance

Subject: CCVO-SWFSC Discuss SJR I:E Support for ROC

Attachments: 2018-07-19 I-E ratio alternatives_to Reclamation.docx

Hi all --

Here are some items related to our call this morning. The excerpt below is from an interagency agreement between NMFS and USGS to do some analysis of the six-year study data. The attached document is some information on alternatives to the I:E ratio that we provided to Reclamation during WIIN Act discussions. I don't expect you to read these before the meeting, just have them with you so we can chat.

Thanks! Cathy

This agreement acquires the services of U.S. Geological Survey to perform a complete data analysis of the acoustic tag experiment and to present the results to NMFS management in order to inform future operations. Such analysis is needed to inform the current CVP/SWP Opinion as well as the future reinitiation of consultation for the CVP/SWP Opinion.

Objectives:

Goal: Understand potential effects of a full set of environmental variates, including old and middle river route selection, head of old river barrier status, Vernalis flow, I:E ratios, and OMR flows on outmigrating juvenile steelhead smolt travel time and survival.

Objective 1: Analyze the six-year acoustic data with special emphasis on the relationship of survival to the full set of environmental variates, including, but not limited to old and middle river route selection, head of old river barrier status, Vernalis flow, I:E ratios, and OMR flows. Deliverables: Provide complete data analysis in the form of preliminary findings to NMFS management.

Due Date: Data analysis and draft findings completed by September 30, 2019.