

Enclosure 1

Detailed Comments on NMFS Draft Proposed RPA Adjustments Document

(Enclosure 1 to NMFS January 19, 2017 Transmittal)

March 22, 2017

General/Summary – The National Marine Fisheries Service (NMFS) provided a draft proposed amendment to the components of the reasonable and prudent alternative (RPA) related to Shasta Dam operations from the 2009 Biological Opinion (BiOp) as the first enclosure to its January 19, 2017 transmittal. As discussed in additional detail below, Reclamation believes that the draft proposed amendments should be analyzed for their feasibility, as well as impacts to Central Valley Project (CVP) and State Water Project (SWP) operations, other legal users of water, and river conditions for other fish species throughout the Central Valley (given that other rivers are impacted by Shasta Dam operations due to the integrated nature of the complete system). Additional detailed comments follow.

Page 10 – The document notes that it is based in part on multiple annual reviews, and in particular the 2015 review. Reclamation requests that there be citations as to which proposed amendments pertain to specific annual review findings.

Page 11 – The document notes the amendments are based on “lessons learned” from recent drought conditions. Reclamation recommends changing this terminology to “information gained”.

Page 11 – The document refers to a phased approach to issuance of the RPA amendments. Reclamation recommends removal of much of this language, given that the language appears to assume that the amendments would have been formally issued for 2017 operations.

Page 20 – The table identifying conceptual objectives contains objectives for “recovery” and “enhancement” in Below Normal and Above Normal/Wet year types. Reclamation believes additional dialog and analysis need to be completed on the meaning, intent, and implementation of the fish management priorities identified for these categories in the table.

In addition, though Reclamation supports the goal of enhancement of the species, Reclamation questions the use of enhancement objectives in the development of an RPA.

Page 20 – The document refers to the ongoing development of temperature-dependent mortality objectives. Though Reclamation supports the concept of the use of biological objectives, Reclamation believes that the scientific basis for specific values contained in the objectives needs to be further refined prior to initial implementation to ensure the values are feasible and meet the purposes of the RPA.

Page 20/21/22 - The document identifies spring and fall storage targets for Shasta operations. Reclamation questions the feasibility of meeting these targets, particularly during Dry and Critically Dry years. This will be further explored during this year’s evaluation. In addition, the targets will be the subject of further evaluation this year for the potential to cause impacts to the

CVP/SWP, other legal users of water, and river conditions for other fish species.

Specific to spring target concepts; Reclamation questions the utility of these spring storage targets in the context of fall/winter/early spring operations. However, Reclamation does believe that spring storage projections would be a useful metric for forecasting temperature management capability in the context of the development of initial allocation decisions, and recommends further discussion and development of that concept under Action I.2.3.

Page 21 – Specific temperature dependent mortality objectives are provided; as noted above, Reclamation believes that the scientific basis for specific values contained in the objectives needs to be further refined prior to initial implementation to ensure the values are feasible and meet the purposes of the RPA.

Page 22/23 - Reclamation notes that adjustment of the end of September target of 2.4 MAF will be subject to the previously referenced evaluation.

Page 27 - For the initial forecast of deliverable water discussed in Action I.2.3, Reclamation recommends removing the requirements for extensive river temperature modeling and accomplishment of specific storage targets, but rather that projected April/May storage levels be used as a surrogate for this extensive modeling to determine the likelihood to achieve temperature compliance during the temperature management season. This will provide a streamlined method to determine if initial allocations can be issued based on conservative projections of adequate storage and cold water pool going into the temperature management season. The basic concept would be that if April/May storage levels are projected to be in a range that ensures temperature compliance during the temperature management season is highly likely, Action 1.2.3.A would be triggered. If storage levels are projected to fall short, either Action 1.2.3.B or C would be triggered, depending on the specific projected storage level. The ranges for each trigger would be developed based on historic data and additional modeling that could be undertaken this year.

Page 28 - Reclamation notes that the revised March through May 15 temperature compliance metric will need to be analyzed during this year's evaluation for potential impacts to the CVP/SWP, other legal users of water, and river conditions for other fish species.

Page 28 - For Action I.2.3.A, see comment above regarding revision of the initial forecasting method (related to Page 27). For this action, Reclamation recommends removing requirements for extensive river temperature modeling and accomplishment of specific storage targets in the event projected April/May storage levels indicate the strong likelihood to achieve temperature compliance during the temperature management season.

Page 29 - For Action I.2.3.B, see comment above regarding revision of the initial forecasting method (related to Page 27). For this action, Reclamation notes the need to analyze the proposed April and May release schedule during this year's evaluation for potential impacts to the CVP/SWP, other legal users of water, and river conditions for other fish species.

Page 30 - Reclamation questions the need for defining a specific model run for forecasting

purposes, and the underlying basis of the table containing specific flow rates for use with the model run. In addition, this section (Action 1.2.3.B.3) does not appear to conform to the purpose of Action 1.2.3.B, which only is designed to guide spring operations prior to development of the formal temperature management plan.

Page 30 - For Action 1.2.3.C, see comment above regarding revision of the initial forecasting method (related to Page 27).

Page 32/33 - Reclamation questions the feasibility and effectiveness of meeting a seven day average daily maximum (7 DADM) metric as opposed to a daily average temperature (DAT) metric, which will be further explored as part of this year's evaluation. Reclamation believes that in certain instances, due to the averaging function and lag times associated with the metric's response to actual conditions, this metric will have the effect of driving specific operations that may provide for compliance with the metric, but be undesirable for ecosystem needs under both short term and seasonal approaches. In addition, Reclamation questions the feasibility of meeting the specific revised compliance value and location, particularly during Critically Dry years. The temperature metric, location, and value concepts from the proposal are anticipated to be further explored during this year's system-wide evaluation for their effectiveness, and potential to cause impacts to the CVP/SWP, other legal users of water, and river conditions for other fish species.

Page 36 - Reclamation requests the documentation/analysis supporting establishment of post-season survival metrics, and how those relate to the objective of avoiding jeopardy to the continued existence of the species. These metrics do not appear to be discussed in the draft administrative memo. In addition, Reclamation notes that it is not clear how the action would be carried out, and therefore how its benefits or impacts can be evaluated.

Page 40 - Reclamation notes that adjustment of Wilkins Slough minimum flows should be subject to the previously referenced evaluation.