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

Sent: Tuesday, May 28, 2019 3:34 PM

To: Garwin Yip

Cc: Naseem.Alston; Howard Brown

Subject: ROC LTO Draft Shasta Effects Analysis Section

Garwin --

Attached for you to provide to Maria with other effects sections is the subject document (also on the server). I worry about losing work so I saved as yet another version. Notable for this version:

++I don't recommend reading top to bottom, especially since the temperature management part is in the latter half. I recommend hitting these areas before the rest (numbers with tracks on):

- p. 14 Project Uncertainties
- p. 29 Paragraph on building storage
- p. 37 Feb forecast
- p. 53 Summer Cold Water Pool Management

++This shows track changes compared to V13, which POSTDATES what we provided to Reclamation. Therefore the tracks in this version show changes made:

- 1) due to last week's meetings,
- 2) as needed to clean it up/keep it consistent with other sections
- 3) newer info/plots/etc we got and inserted since V13.
- ++There are some things in here that are NOT in tracks that Reclamation has not yet seen. I want to highlight that for Reclamation -- we had to continue to work on the document while they reviewed it. With some work we could provide a version that compares to theirs...but they have the Word files so so can they.
- ++Yellow highlighted comments are meant to get your attention. Blue comments are references so can be ignored. Other remaining comments perhaps have yet to be addressed.
- ++In the comments I make reference to points where we can refer to the memo to the AR regarding ability to build storage, but I have not inserted text indicating that concern or reference.
- ++I need to make that memo to the record (which will include Jeff R.'s table, Derek's email, data from BA App D). Will do for tomorrow morning.

Let me know if you need anything more --

Cathy

S:\Draft BiOp\2 ESA\2.5-2.6 Effects of the Action\Shasta Division\2.5 and 2.6 Upper Sac Effects V15.docx