From: Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>

Sent:Sunday, April 28, 2019 11:23 AMTo:Sarah Gallagher - NOAA FederalSubject:Clear Creek EFFECTS section

Did you let Howard know about the discrepancy between your analysis and his PPT summary? The PPT summary for Maria and Barry reflects the effects analyses, so should be an accurate reflection, and if wrong, needs to be corrected

I'm still working my way through CC effects, and will also take a look at the channel maintenance flows section.

Without seeing my comments so far, hopefully you know where some holes are.

Sent from my iPhone

On Apr 26, 2019, at 5:33 PM, Sarah Gallagher - NOAA Federal < <u>sarah.gallagher@noaa.gov</u>> wrote:

I didn't actually officially telework check-in except that I responded to your email on what I would be working on today.

Went over my main points for dry run on Monday. One thing is, after still going channel maintenance flow section, I'm not sure that impacts to steelhead redds would be as high as I&S said, given the flows are not going to be that high, and not occur in at least 60% of years, and steelhead redds are exposed to high flows and drops regularly-winter spawning.

I worked on the channel maintenance flows chapter of the Clear Creek effects section and attaching it for your review.

I think one of the things about channel maintainance flows, and I am not sure that I captured it correctly, is that they are not going to occur frequently enough based on the restrictions they have set (when the creek needs in most-dry years), and the magnitude is not high enough to improve the channel and function (there is some chance to make it more downtream with storms, but the upper river will only see the approximate 900 cfs maximum). This is more likely covered in critical habitat I think. I don't think it comes out high in the risk analysis though...

Please let me know when I can get into Clear Creek effects and continue on with edits, I want to work on them over the weekend if it's at point where you can share. Let me know.

Sarah Gallagher | Fish Biologist

NOAA Fisheries | West Coast Region U.S. Department of Commerce 650 Capitol Mall, Suite 5-100, Sacramento, CA 95814 916-930-3712 | Sarah.Gallagher@noaa.gov

<Clear Creek Effects\_Channel\_Maintainence\_ ONLY\_SG 4.26.19.docx>