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**From:** Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>  
**Sent:** Monday, April 22, 2019 11:33 AM  
**To:** Cathy Marcinkevage - NOAA Federal  
**Subject:** Re: Shasta Section Help

See attached. I turned off and on the track changes, so it'd be helpful for you to do the same so you can see my edits and comments. Edits were in line in red, and new comments in this review are highlighted in fuscia.

Organization looks good, given that particular section.

-Garwin-

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On Sun, Apr 21, 2019 at 11:06 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

Hey Garwin --

I hope you aren't thinking that you have to write this for me. But I'm overhauling this subsection enough that it should get a look-see before I complete it and move forward with restructuring the rest of the section.

Shortly I will upload **V9** to the server. it's also attached.

S:\Draft BiOp\2\_ESA\2.5-2.6 Effects of the Action\Shasta Division\Sacramento River

The section in question: With tracks OFF, start with 2.5.2.4.3.2 Summer Cold Water Pool Management on p. 31 overall up to 2.5.2.4.4 Shasta Fall Operations on p. 46.

**Don't** closely review all of this. Scan mostly for structure and to understand layout. I haven't changed layout, but likely will address structure of the full document b/c it doesn't really make sense to me.

Specifics: Note Table 2.5.2-12 and subsequent like them. I think these are out of place and should be 1) rearranged to have one table for each species and 2) moved down to the species response, exposure, risk discussion in, eg, 2.5.2.4.3.2.1 on p. 41 (tracks off).

I added a lot on uncertainty throughout, as you'll see if you turn on tracks.

I am cleaning so deleted some comments. Of note is that comments in yellow have yet to be addressed/confirmed.

Your comment on p. 38 (tracks off) re: Tier 3. Do you have docs with this info? I assume Evan does too?

p. 41 (tracks off), section 2.5.2.4.3.2.1 WRC Exposure, Response, and Risk. This is where I really slashed. It may be best to turn tracks ON when looking at this part. I removed all reference to the weighted exposure work throughout. I really emphasized the uncertainty of the Anderson model. For each Tier, I emphasized the assumed exposure based on calsim runs and their lack of reliability as well as the uncertainty of expected operations within the tiers b/c the tiers have such wide bands themselves. I think that this is what Maria was getting at. It was just too soft before, taking their numbers and saying "ok". Also, I think that the earlier tables should be redone by species and inserted here since the info to support them is in this section.

I stopped mid-spring run just...because I got tired.

I have specific needs of Evan so will ask him to address those Monday morning. Have to figure out how to send to him without him seeing all the edits.....

Enjoy!!!!!!!!!!!!!! and thanks!

Cathy