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

**Sent:** Monday, April 22, 2019 11:52 PM **To:** Evan Sawyer - NOAA Affiliate

**Cc:** Garwin Yip

**Subject:** Sac WUA Curves and Other Shasta Things

Evan ---

A few things that I could use your help in managing while you continue on the LCM writeup:

1. Can you pull for me the WUA curve plots that should go into the Shasta section? Your latest draft referred to one for fall-run (as SR proxy) and steelhead, both for rearing.

Also, for the WR plot that's already in the draft, it has: Segment 6 w/ ACID boards Segment 6 w/o ACID boards Reach 5 Reach 4

Any idea why there is reach AND segment? Are they supposed to be the same, so we could pick one and be consistent? I want to assume that Segment 6 abuts reach 5, but with different names, that's not so clear.

2. Garwin and I had a brilliant idea. The Tier figure from Rec is sooooooo not to scale. We think someone should make one. So, for instance, to take an example year and find the date of first redd and date of last redd and adjust the plot to show when the lifestage-specific target would be implemented. that I think should be \*at least\* 67 days. And unless the last redd is observed by mid August, that 67 days would put them managing until the end of Oct....which is what is typically called for anyhow..... Anyhow, we thought this would be a good visual, and I thought that you could get Stephen on this to help out. Garwin forwarded the following to me, we thought that 2014 could be a good year to use.

PPT showing 2014 WR spawning, hatching, and incubation timing that we can use as an actual example implementation of the Anderson model: M:\OCAP related\OCAP briefing PPTs and presentations\2014-11-18 Fish Agency presentation to the SWRCB

- 3. Can you point me to "Brycen's Memo to the record"?
- 4. Miles' work regarding spring pulses. I don't have his IEP presentation to know what that it talking about. Can you send me that? And I was cc'd on several email exchanges, but I'm not sure if on all. Can you check to see if there was anything between him/you that I wasn't on that would be useful for me to see? I'm trying to see how we best frame up that section and knowing what we are trying to incorporate will help with that.
- 5. In Table 2.5.2-12, for instance, we have Anderson and Martin results for WR (a 6% increase in mortality for Anderson, and 9% for martin). Can you point me to where those numbers come from (the BA?), and any other info we have that provides the range around those numbers? Garwin made this comment and I'm following up.
- 6. Similarly, Garwin had the following comment for Table 2.5.2-13:

Is the range of temperature-dependent mortality for a single operational scenario within Tier 2, or based on the worst (or best) case scenario of operations within that range of temperatures?

Same question for the Tier 3 table.

Can you answer these for me, so that we can identify the assumptions going into the model results reflected in this table?

All for now..... Thanks! Cathy

PS If you need to do mid-year prep, you can do it before this.