
From: Evan Sawyer - NOAA Federal <evan.sawyer@noaa.gov>
Sent: Tuesday, April 23, 2019 7:57 AM
To: Cathy Marcinkevage - NOAA Federal
Subject: Re: Sac WUA Curves and Other Shasta Things
Attachments: Day_Above_53_Summary_ROC_LTO_by_TIER.png; WUA plots 3-26-19.xlsx; Daniels_Miles_IEP_2019_For_USBR_K_Harrison.pdf; Daniels_Sawyer discussion on spring pulse 4_10 - 4_19.pdf; Summary_Stats_Days_Redd_53F_3_22_19.xlsx

Hi Cathy,

I think I've answered your questions or provided the relevant information. (In the royal **PURPLE!**)

Evan

On Mon, Apr 22, 2019 at 11:51 PM Cathy Marcinkevage - NOAA Federal <cathy.marcinkevage@noaa.gov> wrote:

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.

[See the first attached file. I consolidated the files that reclamation sent to us with the revised WUA analysis \(3/26/19\) the available figures are there.](#)

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.

[I believe it should be segment \(in earlier versions they were all segments\). I went and modified the figures accordingly.](#)

2. Garwin and I had a brilliant idea. The Tier figure from Rec is soooooo 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..... [Not sure that that is how Reclamation is proposing to operate?](#) 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.

[Haven't looked at the files but sure I'll talk to Stephen about putting this together.](#)

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"?

There are two that I've been using:

M:\WATER OPS & DELTA BRANCH\Brycen Swart\CVP and SWP Water Ops\Real Time Opss and RPAs\SRTTG\WY 2016\02 Sac River Temp Planning 2016\Shasta Operation Temperature Compliance Memo 03.18.2016.pdf

or

M:\WATER OPS & DELTA BRANCH\Brycen Swart\CVP and SWP Water Ops\RPA Amendment\2017-01-19 Enclosure 3--Shasta RPA Adjustment Admin Memo.pdf

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.

Yes. Attached. I looked through my emails and didn't find anything you weren't included on but I went ahead and put the email chain in a pdf and attached for your convenience(?).

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. These numbers were provided by Miles/Eric after they were able to "replicate" Reclamation's analysis and then identify TDM by Tier. I've attached the summary analysis that Miles put together which has the numbers.

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?

No. The range is for Anderson (hatch) to Martin (emerge) models. The numbers represent the mean for each model. Mile provided the range of each model (graphically) in the attached PNG file, He also provided the data so it would be easy to provide a range for each but I don't know what makes sense, quartiles?

Same question for the Tier 3 table.

Same answer but if the question is asking whether the number or range reflects different shutter configuration "within Tier 2 or Tier 3" I believe the answer is NO. The TDM results are based on the CalSim results and HEC5Q modeling but not the 5 example years where HEC5Q results were revised and which were presented on 3/12/19. I only point this out because Reclamation is proposing differing operations within a Tier but those are not presented.

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.

I haven't done anything related to my mid-year review.

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