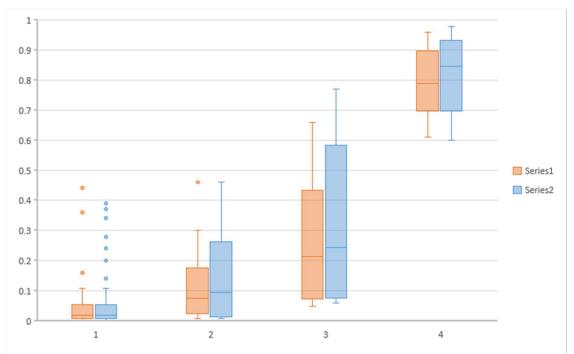
From: Evan Sawyer - NOAA Federal <evan.sawyer@noaa.gov>

Tuesday, April 23, 2019 9:23 AM Sent: Cathy Marcinkevage - NOAA Federal To:

Subject: Re: Sac WUA Curves and Other Shasta Things

Attachments: image.png

for what it's worth Miles provided the data for the TDM results and it's easy to produce figures like this:



that's weird(?), the data labels didn't copy and paste with the figure? Just says series 1 & 2? Well, orange is PA Anderson and blue is PA Martin. I still think this would be "easy" to produce.

Evan

On Tue, Apr 23, 2019 at 9:05 AM Cathy Marcinkevage - NOAA Federal < cathy.marcinkevage@noaa.gov > wrote:

Awesome, thank you!!!!!

- > On Apr 23, 2019, at 7:56 AM, Evan Sawyer NOAA Federal <evan.sawyer@noaa.gov> wrote:
- > 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 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..... 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
> 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.
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>

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>> 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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>
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>
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> www.westcoast.fisheries.noaa.gov
> < 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>
```

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