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**From:** Miles Daniels - NOAA Affiliate <miles.daniels@noaa.gov>  
**Sent:** Thursday, May 23, 2019 2:23 PM  
**To:** Evan Sawyer - NOAA Federal  
**Cc:** Eric Danner - NOAA Federal; Cathy Marcinkevage - NOAA Federal  
**Subject:** Re: Interior Comments on Shasta Effects, PART 2  
**Attachments:** EOS\_EOA\_Plot\_V2.png

Hi Evan,

Yes, WYT is based on current year and not prior year.

A few other things to note.

- 1) the updated attached plot has  $R^2$  goodness of fit statistics for the three different linear models shown in the dashed lines. All models are not very predictive, but do show a trend.
- 2) the Y-axis is showing total storage in Shasta and not the storage of cold pool. I just want to make this clear.
- 3) we obtained data from CDEC, but some of the numbers do not match with USBR's plot. For example USBR plot for 2015 shows storage is above 2,500 TAF, but CDEC reports it as 2,404 TAF.

Thanks,  
Miles

On Thu, May 23, 2019 at 1:36 PM Evan Sawyer - NOAA Federal <[evan.sawyer@noaa.gov](mailto:evan.sawyer@noaa.gov)> wrote:  
Thanks Eric,

I think this is really helpful for showing that relationship. Quick question, the WYT coloration is based on the year indicated not the previous year right?

Could one interpretation be that a higher EOS storage is one way to avoid back to back "dry" storage conditions?

Thanks,  
Evan

On Thu, May 23, 2019 at 1:15 PM Eric Danner - NOAA Federal <[eric.danner@noaa.gov](mailto:eric.danner@noaa.gov)> wrote:  
Cathy,

Here is a plot from Miles similar to the figure on p9. Let me know if you have any questions.

Eric

On Tue, May 21, 2019 at 10:27 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

Hi guys!

Two more things:

1. On the section I sent in my previous email, see the figure on p. 9 (inserted by Rec, plotting end of April storage vs. end of Sept storage from previous year) and their comment. I like that they provided something, but I'm thinking that it would be much more solid to have some sort of analysis. And while the comment from Rec says that they do not see a correlation...well...without a line or analysis that seems to be in the eye of the beholder.

We'll probably talk with them about this on Wednesday, and I may put it in a parking lot with them until we can look into it more. Any thoughts on the relationship between these two storage values? Have you looked at this before?

2. Can you send us the hindcasted TDM for whatever time period you've got? We are working on performance metrics and realized that we don't have on hand and with confidence the values for 2016-2018. It would probably be best to just get it all in one file and we'll have that in our record.

Finally....look for one more email from me regarding the performance metrics. We made some good progress over the last two days, and will probably try to discuss either Wed afternoon or Thurs morning. I plan to get that out tonight. I'll try to connect with you to see if/when we can touch base on them.

Thanks!  
Cathy

On Tue, May 21, 2019 at 2:57 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

Miles and Eric --

We provided Interior a courtesy copy of our draft effects section for Shasta. They responded with providing over 500 comments and track changes back. Yay!

There are a few that I would like your feedback on. With tracks ON, please see:

p. 10 - 11. Comments on your figure. Any thoughts on this? My initial thoughts are:

-This is a NMFS analysis and is used in considering management and operational challenges in our analysis. And this kind of info would be used in developing a TMP.

-Temperatures aren't typically a concern when flows are as high at 17,000 cfs, so not really needed to inform us here.

p. 60. Text "according to the authors...." Is this accurate?

Please know that we are by no means poised to simply accept these edits and comments. First, NMFS writes NMFS' effects analysis. Next, many revisions are written as Rec would write them, not as the fisheries agency would. But we may discuss these in a meeting tomorrow and I'd like to have your thoughts.

We have some updates on performance metrics but they aren't ready yet -- there's a lot moving very quickly. Have fun at your training, but know there may be a document for you to review while in the airport tomorrow 😊.

Thanks --  
Cathy

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