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**From:** Eric Danner - NOAA Federal <eric.danner@noaa.gov>  
**Sent:** Tuesday, March 19, 2019 12:04 PM  
**To:** Miles Daniels - NOAA Affiliate  
**Subject:** Fwd: [EXTERNAL] NMFS ROC Questions

Some background on WYT.

----- Forwarded message -----

From: **Cathy Marcinkevage - NOAA Federal** <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)>  
Date: Fri, Mar 15, 2019 at 12:57 PM  
Subject: Fwd: [EXTERNAL] NMFS ROC Questions  
To: Eric Danner <[eric.danner@noaa.gov](mailto:eric.danner@noaa.gov)>, Miles Daniels - NOAA Affiliate <[miles.daniels@noaa.gov](mailto:miles.daniels@noaa.gov)>, Evan Sawyer - NOAA Affiliate <[evan.sawyer@noaa.gov](mailto:evan.sawyer@noaa.gov)>, Sarah Gallagher - NOAA Federal <[sarah.gallagher@noaa.gov](mailto:sarah.gallagher@noaa.gov)>

All --

During our "upper sac needs" call earlier this week, Miles and Eric got some action items. Evan requested seeing springtime storage values along with the temp and mortality modeling results.

I posed our questions to Derek, and his answer is below (we can have a chat with him if we need more explanation). He also provided the April and May Shasta storage values for COS and PA (attached). My take is that the April storage values from these sheets is what Evan would like to see with the temp and mortality values.

Enjoy!  
Cathy

----- Forwarded message -----

From: **Hilts, Derek** <[derek\\_hilts@fws.gov](mailto:derek_hilts@fws.gov)>  
Date: Thu, Mar 14, 2019 at 2:38 PM  
Subject: Re: [EXTERNAL] NMFS ROC Questions  
To: Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)>

Hi Cathy,

I can find no logic in the PA code that is related to the tiered temperature control operation described in the BA Section 4.9.1.3.1 on pages 4-28, 4-29, 4-30. It appears that that description applies to the real world once End-of-April Shasta storage is determined (unless the March forecasts suggests it will be a Tier 4 situation in which case real world planning is to start earlier). The SRTTG might change summer flows a little, but primarily, I think the BA is alluding to May15-Oct31 operations of the TCD.

BTW, CalSimII's "April" Shasta storage is End-of-April, i.e., May 1st Shasta storage.  
Hope this helps.

Derek

Derek Hilts M.S., P.E.  
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On Thu, Mar 14, 2019 at 1:51 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

Great, thanks!

On Thu, Mar 14, 2019 at 12:54 PM Hilts, Derek <[derek\\_hilts@fws.gov](mailto:derek_hilts@fws.gov)> wrote:

Hi Cathy,

I did see some code that was related to doing a pulse or not based on Shasta storage. I will look further at the code once I read the PA description regarding tiers (so I know better what I'm looking for.)

Attached is a workbook with Shasta storages for the COS and PA runs. The timeseries are highlighted in yellow.

Derek

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On Thu, Mar 14, 2019 at 12:38 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

Hi Derek --

We have a few questions and small asks....

First, is CalSim for the PA coded in a way to assign a "tier" to the Shasta operations based on a storage value in the spring (I believe). Does it use the April or May storage for that (since there is no "end of April")?

Next, can you pull from the CalSim results for COS and PA a time series for Shasta storage for end of April or May? We're getting some results from the science center's temperature and mortality modeling and it would be good to consider those along with this info on spring storage.

Thanks!

Cathy

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