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**From:** Miles Daniels - NOAA Affiliate <[miles.daniels@noaa.gov](mailto:miles.daniels@noaa.gov)>  
**Sent:** Tuesday, March 19, 2019 3:07 PM  
**To:** Eric Danner - NOAA Federal  
**Subject:** Re: Water Year Type for ROC?

Hi Eric,

Attached is the table (Matlab version) for days WR eggs spend above 55.3 F. To make the table have a single value for the hatch and emergence model for the PA and COS (i.e. 4 values for each year), I used the time and space weights USBR provided and collapsed the 11 redd deposition dates and the 8 river reaches into a single weighted value. The table also has Shasta storage in TAF on April 31st for each year.

Also attached is a summary plot. Some general trends include:

- 1) When considering the hatch or emergence model, the PA often has redds exposed to fewer days above 53.5 F, however, not during wet and above normal water year types.
- 2) As expected, the hatch model has redds exposed to fewer days above 53.5 F compared to the emergence model regardless of scenario as the time frame the two models considers is different.

PS: Cerise is on a field trip till tomorrow evening and so I'll be leaving the lab around 3:45 to go pick up Mila. I can talk by cell phone (831-392-6913) after that if needed.

-Miles

On Tue, Mar 19, 2019 at 2:36 PM Miles Daniels - NOAA Affiliate <[miles.daniels@noaa.gov](mailto:miles.daniels@noaa.gov)> wrote:  
I have not dealt with the SQL database, but we should be able to grab all these directly from the Calsim or HEC-5Q files. Specific comments for each driver below.

For Keswick Temp: we can grab from HEC-5Q.

For Delta Exports: I'm not sure if there is a single Calsim node for this or multiple. Can we ask Nobel which nodes he uses for this?

For Freeport, Wilkins Slough, and Verona flow I currently do not know the Calsim node, but should be able to find out, or we can ask Nobel which nodes he uses.

-Miles

On Tue, Mar 19, 2019 at 2:23 PM Eric Danner - NOAA Federal <[eric.danner@noaa.gov](mailto:eric.danner@noaa.gov)> wrote:  
Miles - these are the physical drivers Noble summarized for the LCM. He is re-running the model after our discussions, but these should not change. We should be able to get these data right out of the SQL database, right?

On Tue, Mar 19, 2019 at 12:06 PM Miles Daniels - NOAA Affiliate <[miles.daniels@noaa.gov](mailto:miles.daniels@noaa.gov)> wrote:

Thanks. I'm almost done with the table the region asked for last week regarding days above 53.5 F. I'll share some summary plots and the table with you once I'm done before sharing with the larger group.

-Miles

On Tue, Mar 19, 2019 at 12:02 PM Eric Danner - NOAA Federal <[eric.danner@noaa.gov](mailto:eric.danner@noaa.gov)> wrote:  
Here is what Vamsi gave me.

On Tue, Mar 19, 2019 at 11:56 AM Miles Daniels - NOAA Affiliate <[miles.daniels@noaa.gov](mailto:miles.daniels@noaa.gov)> wrote:  
Hi Eric and Vamsi,

Would either of you be able to share the water year type designations for the ROC with me?

Thanks,  
Miles

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