From: Hilts, Derek <derek_hilts@fws.gov>
Sent: Wednesday, March 20, 2019 12:34 PM

To: Miles Daniels - NOAA Affiliate
Cc: Barbara.Byrne@noaa.gov

Subject: Re: [EXTERNAL] Question on Shasta Temperature Tier for ROC

Attachments: Shasta_Storages_4NOAA.xlsx

Hi Miles.

Though CalSimII itself doesn't operate based on the Tiers, the HEC-5Q temperature model may. I missed most of the meeting in which Rob Leaf (Jacobs) and Mike Wright (USBR) discussed the HEC-5Q temperature studies. IF the temp model did somehow implement the Tiered approach, presumably it was based on CalSimII's End-of-April (May 1st) storage.

The way I read Appendix A (pages 4-28 and 4-29), I think the HEC-5Q modelers would have simulated Tier 1 ops when CalSimII-simulated May 1st Shasta storage was at or above 4.1 MAF (corresponding to a cold water pool of 2.8 MAF). Similarly, Tier 2 ops presumably would have been simulated when CalSimII-simulated May 1st Shasta storage was at or above 3.5 MAF (corresponding to a cold water pool of 2.3 MAF). Similarly, Tier 3 ops presumably would have been simulated until CalSimII-simulated May 1st Shasta storage was at or below 2.5 MAF (corresponding to a cold water pool of 1.5 MAF) at which point Tier 4 ops would have been simulated.

I would check with Barb Byrne to confirm this - she was at the meeting with Rob and Mike. If the above is correct, then the May 1st CalSimII-simulated storages tell you which Tiers were applied in which years. The storages are attached.

Derek

Derek Hilts M.S., P.E. US Fish and Wildlife Service 650 Capitol Mall Room 8-300 Sacramento, California 95814 Work desk phone 916.930.5633

On Wed, Mar 20, 2019 at 11:36 AM Miles Daniels - NOAA Affiliate < miles.daniels@noaa.gov > wrote: Hi Derek,

I work with Eric Danner at the SWFSC and am doing some analysis on the ROC LTO. I was wondering if you have or are aware of a table that indicates the Shasta temperature tiers by year for each scenario? I see how the tiers are classified in appendix A, page A-46, but not what each year were classified as in the modeling.

Thanks for the help you can provide, Miles

--

Miles Daniels, Ph.D. Assistant Project Scientist University of California, Santa Cruz Phone: 831-420-3946