From: Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov>

**Sent:** Wednesday, March 6, 2019 11:51 AM **To:** Cathy Marcinkevage - NOAA Federal

**Cc:** Evan Sawyer - NOAA Affiliate; Barbara Byrne - NOAA Federal; Garwin Yip - NOAA

Federal

**Subject:** Re: Upper Sac Science Support

Here are some suggested needs and would appreciate any feedback. I don't want them to do extra work (or not get us what we need).

- A historical summary of raft and mortality model from previous years' redd data, and comparison to PA.
- Compare mortality modeling results (comparing Martin and Anderson) to see where mortality differences occur, and compare results to PA and COS.
- Does the science center have ability to provide analysis of winter run juvenile habitat changes after fall and winter flow decreases and stranding effects to juveniles in the upper river?
- Derek Hilts mentioned that he could plot historical accretion/depletion to help us understand trends. Is this something science center has looked at?

## Sarah Gallagher | Fish Biologist

NOAA Fisheries | West Coast Region U.S. Department of Commerce 650 Capitol Mall, Suite 5-100, Sacramento, CA 95814 916-930-3712 | Sarah.Gallagher@noaa.gov

On Tue, Mar 5, 2019 at 8:22 AM Cathy Marcinkevage - NOAA Federal < <a href="mailto:cathy.marcinkevage@noaa.gov">cathy.marcinkevage@noaa.gov</a>> wrote:

All --

Critical path is getting the Science Center our needs for the Upper Sac so that they can do any analyses in time.

Please reply by Noon on Wednesday.

I think we have to simply do this by email -- I'll pull together conversations as needed after seeing your responses.

Indicate what questions you would like the center to attempt to answer given that they have capabilities to 1) analyze temperature data used in the BA, 2) analyze the mortality modeling results (from two methods) used in the BA, 3) run the CV TEMP model, 4) run the martin mortality model based on CV Temp results, and 5) probably other things.

I feel like these needs are floating in your heads. I wouldn't expect this to take more than 60-90 min, so please let me know if it is taking you longer than that.

Thanks -- Cathy

## **Cathy Marcinkevage**

California Central Valley Office NOAA Fisheries West Coast Region U.S. Department of Commerce

Office: (916) 930-5648 Cell: (562) 537-8734

cathy.marcinkevage@noaa.gov