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**From:** Sarah Gallagher - NOAA Federal <sarah.gallagher@noaa.gov>  
**Sent:** Wednesday, March 6, 2019 11:06 AM  
**To:** Cathy Marcinkevage - NOAA Federal; Garwin Yip - NOAA Federal; Barbara Byrne - NOAA Federal; Howard Brown - NOAA Federal; Brian Ellrott - NOAA Federal; Evan Sawyer - NOAA Federal  
**Subject:** Re: ROC FAST TURNAROUND METHOD NEED

Cathy, see my responses in [blue](#). Let me know if you have any questions.

**Sarah Gallagher | Fish Biologist**

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On Tue, Mar 5, 2019 at 5:38 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

All --

A few directed questions that will help ICF prioritize work.

**Please respond by noon Wednesday.**

**Evan and Sarah:** Lines 26-27 (Sac River Redd Dewatering) and Line 29 (Clear Creek Redd Dewatering).

Here's a caveat to that:

Redd dewatering analyses that use monthly time step flow data (Clear Creek) are of questionable value (unless daily flow changes are monotonic over the month). Of course, if the simulated daily time step data (as used in Sac River) do not represent actual flow variations reasonably well, they're not much better than monthly flows.

What priority to you put on this analysis, knowing this caveat? [I don't fully understand the monthly step flow data and questionable value, so instead I will explain what I results I would hope to get. If the modeling can't get to that, then maybe this would not be a useful analysis . Dewatering would be directly related to known operational flow decreases. What I hope to get from analysis for Clear Creek would be dewatering proportions for spring, fall, late-fall and steelhead when flows need to be decreased because temperature compliance is no longer a driver for maintaining flows at which spawning occurred \(after Oct 31\). The flow change would be ramped over several days \(ex 225 cfs to 150 cfs or less\) to base flows, in the early winter, especially in critical years. For Sacramento River, this would be similar for temperature compliance after Oct 31, and looking at winter and fall run, then again in early winter to minimum flow \(if not already there\) for steelhead, spring \(early portion of fall redds\) fall and late-fall.](#)

**All, especially Barb:** Line 37-39 and 40-48. For lines 37-39 (Stan and Lower SJR floodplain inundation), the result is area inundated based on the average monthly flow. For Lines 40-48 (tribs and bypasses using the SIT relationships), it is area suitable as rearing habitat.

First, I told ICF to prioritize Lines 37-38 to give us Stan results (because there isn't a lot for the Stan in other methods). Any disagreements? [No](#)

Next, are there strong feelings on priority of tribs vs bypasses or vice versa for Lines 42-48? Or some tribs vs others? If you really want your division, speak up! [I would think Upper and Middle Sacramento, but would assume all. I would like more understanding from someone who knows about why we would value some and not other sections.](#)

Finally, what format would you want to see results? Average acres per month? And by water year type? Or exceedance plots for each month and WYT? [I agree with the format that Barb mentioned.](#)

**Evan and Sarah :** SALMOD. The SALMOD model is applied to the Upper Sac, with that broken into five (I think) reaches and results generated for each reach. I don't know that we need all reaches. Could you look at the CWF SALMOD description and analysis and tell me which reaches we need, and if all of them, which we need first /most? I think reach 5 may be the most useful. I can point you to the locations in the CWF BiOp Wed morning. [It looks like it goes from Keswick to RBDD, and is broken into 14 segments for temperature, and 8 for spawning? I would say Keswick to Balls Ferry \(Seg 1-7 and 1-4\).](#)

All for now. Thanks all!

Cathy

On Thu, Feb 28, 2019 at 2:31 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

All --

Please see the attached list of WUA and IFIM related methods. This is in response to an initial request from us to ICF. The green rows are more specific to our request, and the rest are similar/related by weren't asked for specifically.

***Please respond by noon tomorrow with an indication of methods that you would like completed for your division.***

Note that the last column is ICF's take on the method -- if you have more "on the ground" or update knowledge that differs, you should defer to your own expertise.

Let me know if you have any questions.

Thanks!  
Cathy

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

From: **Ellis, Gregg** <[Gregg.Ellis@icf.com](mailto:Gregg.Ellis@icf.com)>

Date: Thu, Feb 28, 2019 at 1:50 PM

Subject: Available models.xlsx

To: Cathy Marcinkevage - NOAA Federal ([cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov))

<[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)>