From: Seth Naman - NOAA Federal <seth.naman@noaa.gov>

Sent: Thursday, March 7, 2019 4:02 PM **To:** Barbara Byrne - NOAA Federal

Cc:Cathy MarcinkevageSubject:Re: hydrology tools

I'm not sure how useful it is to everyone else's analysis of the effects of particular divisions within the CVP but I'm going to plan on using for some of the hydro stuff. Might be more of a pain for people if they haven't used it before.

On Thu, Mar 7, 2019 at 3:27 PM Barbara Byrne - NOAA Federal < barbara.byrne@noaa.gov > wrote: Seth -- Interesting thought; haven't heard that mentioned by anyone else. I actually had an intern run that for the Stanislaus years ago (to look at pre- and post- expansion of New Melones in the early 80's), but I don't think CCVO has ever used it for an operations BiOp (but don't know about CWF...). Are you combining the CALSIM flow outputs for the COS (before) and PA (after) scenarios to run as a "pseudo pre- and post-impact" flow series?

Cathy -- Is this an example of an "in-house analysis" we're doing that we should shoot over to the SWFSC for their quick thoughts?

Both --Wondering if it's something we should do for each Division and include all results in an appendix. I think the IHA tool is pretty fast and simple if all we need to do is create our pseudo-flow series and plug and play. Maybe Derek could do it for us? I don't think we'd need to do a detailed discussion in our analysis, it would just be a nice "at a glance" way to see flow changes that would be an alternative to "see the 30 tables and figures in Appendix D".

On Thu, Mar 7, 2019 at 2:37 PM Seth Naman - NOAA Federal <<u>seth.naman@noaa.gov</u>> wrote: Barbara,

Do you know if anyone is going to rely on Indicators of Hydrologic Alteration tool for quantifying effects to river hydrology? Some of us did that during the OCAP remand effort and I was thinking about updating all the data I have in thiose files and using that program to have a quantifiable output for the effects to hydrology.

Seth

Seth Naman
Fisheries Biologist
National Marine Fisheries Service
1655 Heindon Rd
Arcata, CA 95521

Voice: 707-825-5180 Fax: 707-825-4840



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Barb Byrne

Fish Biologist NOAA Fisheries West Coast Region U.S. Department of Commerce Office: 916-930-5612

barbara.byrne@noaa.gov

California Central Valley Office 650 Capitol Mall, Suite 5-100 Sacramento, CA 95814



Find us online

www.westcoast.fisheries.noaa.gov



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Seth Naman Fisheries Biologist National Marine Fisheries Service 1655 Heindon Rd Arcata, CA 95521

Voice: 707-825-5180 Fax: 707-825-4840

