From: Joe Heublein - NOAA Federal <joe.heublein@noaa.gov>

Sent: Friday, May 24, 2019 11:35 AM

To: Naseem Alston - NOAA Federal; Brian Ellrott; Brittany Cunningham - NOAA Affiliate

Subject: Re: Take Outline

Hi Naseem,

I think the approach taken in Table 13-3 from OCAP 2009 is the best we can do for take, there's ~6 American River categories that probably transfer directly over to ROCON. There is some discussion of redd stranding in the American R effects. We could attempt to model conditions and redd numbers associated with documented dewatering/stranding events and apply frequency of those conditions under the PA but I think that's impossible given our time constraints. In the latest comments from BOR there is also some proposed monitoring of stranding/dewatering which may reduce take but this also would be difficult to quantify.

-Joe

On Tue, May 21, 2019 at 4:59 PM Naseem Alston - NOAA Federal < <u>naseem.alston@noaa.gov</u>> wrote: Division Leads,

Brittany and I are working on the Take Statement, and it would be a big help if you could give us a few moments (15 min) of your time.

Please take a look at the attached one-pager Take Outline table (also on the drive: R:\Draft BiOp\2_ESA\2.11 ITS - Take Outline)

It is a *super quick/dirty* outline of the general categories of take per division based on the I&S tables.

I'm sure there are many more specific rows to add, but what we are looking for is your <u>initial thoughts on what</u> might be used for a surrogate.

(do we have actual numbers/data? do we have modeled numbers? might we use size of habitat affected? temps/flows? etc)

If you can take a quick look this week (check with managers on priorities if needed) - and let us know you've looked and offered some ideas (or had none), we'd really appreciate it!

thanks for your time,

Naseem O. Alston ESA-Section 7 Coordinator/Fish Biologist NOAA Fisheries West Coast Region U.S. Department of Commerce California Central Valley Office Sacramento, CA (916)930-3655 http://www.westcoast.fisheries.noaa.gov/ --

Joe Heublein California Central Valley Office 650 Capitol Mall, Suite 5-100 Sacramento, CA 95814 Office: 916-930-3719

FAX: 916-930-3629 joe.heublein@noaa.gov

www.westcoast.fisheries.noaa.gov

