From:Perry, Russell <rperry@usgs.gov>Sent:Wednesday, March 27, 2019 9:42 AMTo:Cathy Marcinkevage - NOAA Federal

Cc: Adam Pope

Subject: Re: [EXTERNAL] Potential NMFS Assistance for OCAP Reinitiation

Good morning Cathy,

Well, for a shot in the dark, you might have hit a bullseye. It just so happens that we have already run the STARS model for three ROC LTO scenarios (COS, PA, and WOA) and have stored most of the critical output (like through-Delta travel times). That's the good news. The bad news is that mid-April is around the corner! I'm sure we could get you some figures and summaries in short order, but it's the write up and peer-review that would be a tight squeeze.

Let's chat. I'm available from 1 - 3:30 today, after noon tomorrow, and anytime before 2:30 on Friday.

Also, FYI, we are re-fitting our 2018 Bayesian survival model to estimate export effects on survival of fish that enter the Interior Delta. Our initial model showed weak effects of exports on survival, so we're going to run some other covariates (e.g., IE ratio). I'd be interested in any suggestions you have for export-related variables that might be influence survival. We don't want our models to be scrapped the next time around because they don't account for exports!

Cheers, Russ

Russell W. Perry, Ph.D.
Research Fisheries Biologist
Quantitative Fisheries Ecology Section
USGS Western Fisheries Research Center
Columbia River Research Laboratory
5501A Cook-Underwood Road
Cook, WA 98605

Phone: (509) 538-2942 Email: rperry@usgs.gov Website: http://wfrc.usgs.gov

On Tue, Mar 26, 2019 at 2:47 PM Cathy Marcinkevage - NOAA Federal <<u>cathy.marcinkevage@noaa.gov</u>> wrote:

Russ and Adam --

We are in the THICK of work for BiOp for the ROC LTO (aka reinitiation of consultation on the long-term ops of the CVP/SWP), as you may or may not know!

This is a shot in the dark, but I wanted to explore the potential for you to provide some analysis to support this effort. With the decision to use the Newman equation rather than the STARS model in the WRLCM, we are lacking an application of your work and models in this opinion. Jeff Stuart is our lead for the Delta division,

and, when asked, he said that of any of the work that was used in the CWF BiOp, the travel time analysis would be most useful to him (the work based on Perry, R.W., and Pope, A.C., 2018, Effects of the proposed California WaterFix North Delta Diversion on survival of juvenile Chinook salmon in the Sacramento-San Joaquin River Delta).

Is there any possibility that you have bandwidth (and other resources, which we could explore) to do this? It's a tight turnaround. We'd like results by mid-April. It would be for two scenarios.

I'm happy to talk more if you want. Let me know!

Thanks! Cathy