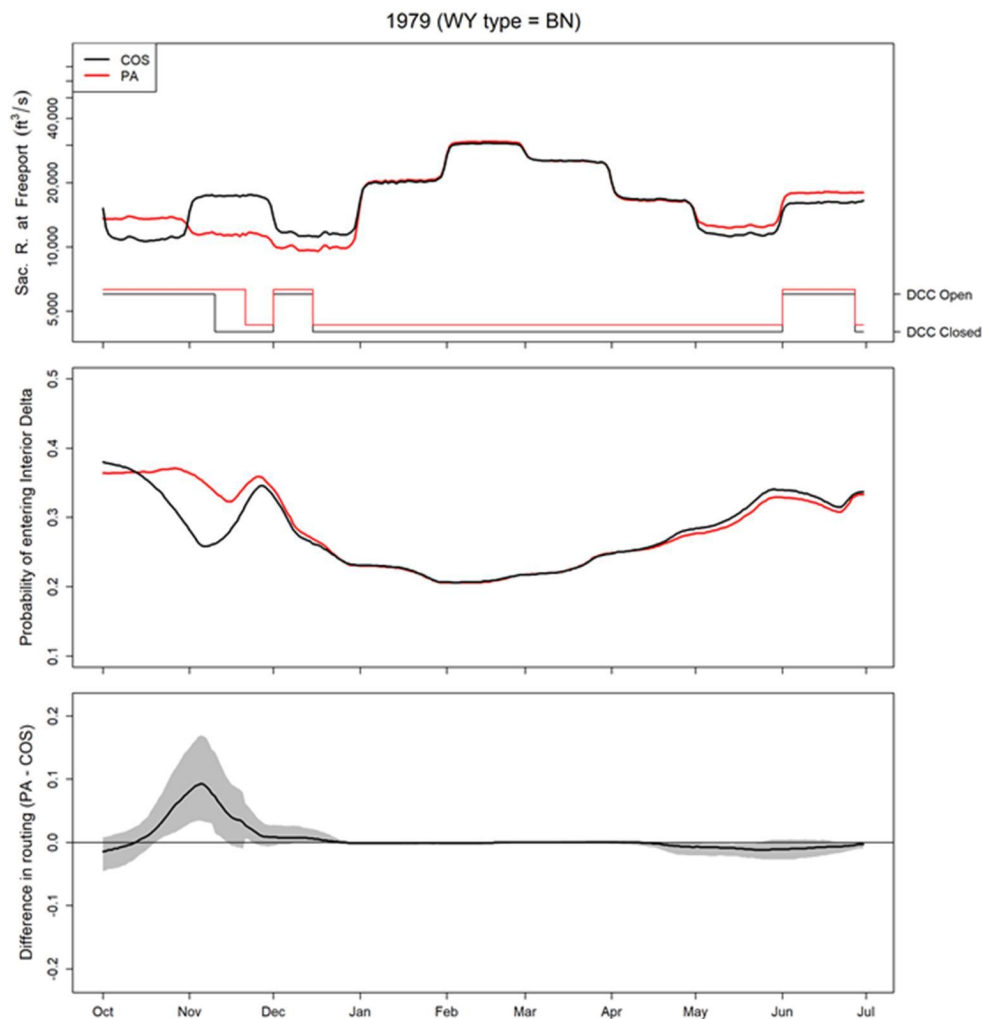


**From:** Perry, Russell <rperry@usgs.gov>  
**Sent:** Thursday, May 23, 2019 11:35 AM  
**To:** Vamsi Sridharan - NOAA Affiliate; Micko, Steve/SAC  
**Cc:** Cathy Marcinkevage - NOAA Federal; Adam Pope; J Stuart  
**Subject:** Re: [EXTERNAL] Re: Preliminary ROC on LTO plots to start discussion

Hi Vamsi and Steve,

Thanks for the help in understanding how daily flows were constructed from the monthly flows. I have another question about DCC operations to help us interpret our results. In October/November we are finding some differences in DCC operation between scenarios in some years (see top panel below). Can you tell us the control rule that is causing there to be different DCC operations between scenarios? It doesn't appear to be flows > 25 kcfs, which triggers a DCC closure.

Thanks,  
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](mailto:rperry@usgs.gov)  
Website: <http://wfrc.usgs.gov>

On Thu, May 9, 2019 at 3:35 PM Vamsi Sridharan - NOAA Affiliate <[vamsi.sridharan@noaa.gov](mailto:vamsi.sridharan@noaa.gov)> wrote:  
Hi Steve,

Hope you are doing great. After running our survival model for the COS and PA scenarios, we noticed that the daily flow into the Delta has distinct monthly jumps, but is more or less constant each day in a given month. It was my understanding that typically DSM2 rim flows from CALSIM monthly flows are disaggregated daily using a spline fit to the monthly histogram.

Am I correct in assuming that in this case, the monthly discharge values from CALSIM have been applied as a constant for each day with some inter-day randomness added in? Please advise.

Regards,  
Vamsi

On Thu, May 9, 2019 at 2:33 PM Perry, Russell <[rperry@usgs.gov](mailto:rperry@usgs.gov)> wrote:  
Hi Cathy,

Find attached three pdfs -- one each for survival, median travel time, and migration routing from Freeport to Chipps Island. Each page is a water year showing flows, DCC operations, and survival, travel time, and routing for PA and COS. So there's 82 pages in each pdf. We'll summarize this down into box plots, but I think these are a good place to start understanding how operations change both within and among years and how that affects daily survival, travel time, and routing.

Vamsi,

Cathy asked if we could summarize the STARS runs that we did for the life cycle model to provide some further insights in the ROC on LTO effects analysis. I'd like to include you as a co-author on our report for for the work that you've done gathering the daily flow and DCC data and summarizing our investigations of using STARS for the life cycle model.

All,

The flow data changes daily, but does have obvious monthly "jumps", which seems quite different the from CALSIM daily dissaggregated flow data we used for WaterFix. Is this a characteristic that you've noticed before with these runs?

Are we just focused on COS and PA, or do we want to do anything with WOA?

These are hot off the presses and we haven't had a chance to absorb them yet, so let me know if you see anything wonky.

I will be off much of the next week, but we'll be pecking away at more summary plots and pass them along when we have them. I will be checking email once a day or so. Adam will be available to answer questions that arise.

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](mailto:rperry@usgs.gov)  
Website: <http://wfrc.usgs.gov>

--

Vamsi Krishna Sridharan, Ph.D.  
Assistant Project Scientist (Hydrodynamics)  
*Division of Physical and Biological Sciences*  
*University of California, Santa Cruz*

110 McAllister Way, Santa Cruz, CA 95060  
[vamsi.sridharan@noaa.gov](mailto:vamsi.sridharan@noaa.gov) | +1-831-420-3905  
<http://www.vamsikrishnasridharan.wordpress.com>