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**From:** J. Stuart - NOAA Federal <j.stuart@noaa.gov>  
**Sent:** Thursday, May 9, 2019 4:20 PM  
**To:** Barbara Byrne - NOAA Federal  
**Subject:** Fwd: Preliminary ROC on LTO plots to start discussion  
**Attachments:** Daily survival by year COS vs PA.pdf; Daily travel time by year COS vs PA.pdf; Daily routing by year COS vs PA.pdf

Here's the email from Cathy with Russ' work.

J

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

**From:** Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)>  
**Date:** Thu, May 9, 2019 at 3:11 PM  
**Subject:** Fwd: Preliminary ROC on LTO plots to start discussion  
**To:** J. Stuart <[j.stuart@noaa.gov](mailto:j.stuart@noaa.gov)>

Jeff --

I've not even glanced at these but want to get them to you ASAP! Let's chat about what you think over the next few days.

Russ and Adam, always coming through!  
Cathy

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

**From:** Perry, Russell <[rperry@usgs.gov](mailto:rperry@usgs.gov)>  
**Date:** Thu, May 9, 2019 at 2:33 PM  
**Subject:** Preliminary ROC on LTO plots to start discussion  
**To:** Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)>, Vamsi Sridharan - NOAA Affiliate <[vamsi.sridharan@noaa.gov](mailto:vamsi.sridharan@noaa.gov)>, Adam Pope <[apope@usgs.gov](mailto:apope@usgs.gov)>

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 disaggregated 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

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