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**From:** Cathy Marcinkevage - NOAA Federal <cathy.marcinkevage@noaa.gov>  
**Sent:** Friday, May 17, 2019 11:37 AM  
**To:** Barbara Byrne  
**Subject:** Fwd: Additional ROC on LTO figures from STARS model  
**Attachments:** Daily interior Delta routing by year 16May2019.pdf; Daily survival by year 16May2019.pdf; Daily travel time by year 16May2019.pdf; Daily routing by year 16May2019.pdf; Summary figures for ROC on LTO effects analysis using the STARS model.docx

I haven't looked at these yet, forwarding to you hot off the press!

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

**From:** Perry, Russell <[rperry@usgs.gov](mailto:rperry@usgs.gov)>  
**Date:** Fri, May 17, 2019 at 11:35 AM  
**Subject:** Additional ROC on LTO figures from STARS model  
**To:** Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)>, J Stuart <[J.Stuart@noaa.gov](mailto:J.Stuart@noaa.gov)>  
**Cc:** Adam Pope <[apope@usgs.gov](mailto:apope@usgs.gov)>

Hi Cathy and Jeff,

Find attached updates of the plots I sent last week, plus some additional summary plots.

For the pdfs with one page for each year, the bottom panel now shows the difference between scenarios and shaded region is the 90% credible (i.e., confidence) interval (except for the stacked routing plots, which are the same). I also added a new pdf for the proportion of fish entering the interior Delta (Georgiana + DCC). I should not the the daily flow panel in the figures is shown on a log scale - Just FYI.

Also attached is Word Doc with box plots that summarize the findings across years. The first three figures show the distribution among years for the probability that the difference between scenarios is less than or greater than zero. So, for example, if the median for a particular date is 0.8, then in half the years there was an 80% probability that the differences between scenarios was different from zero.

The second series of figures shows the distribution of the magnitude of differences between scenarios, by date. So, for example, in Fig. 4, you'll notice that the 25th percentile in Nov. is about -0.10. This means that in 25% of years, survival for the PA is 10 percentage points (or more) lower than COS for these dates.

The third series of graphs is the same as the second except broken down by water year type.

I will be in the office next week if you would like to discuss.

Have a great weekend!  
Russ

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