From: Steve Zeug <stevez@fishsciences.net>

Sent: Friday, May 31, 2019 3:10 PM

To: Cathy Marcinkevage - NOAA Federal **Cc:** Ellis, Gregg; Greenwood, Marin

Subject: RE: IOS Results for ROC LTO

Hi Cathy-

Sorry for the late reply. You are correct that these results should be compared among scenarios rather than considering them a prediction of what egg survival would be if measured in the river. The data used to generate the egg survival functions only considered temperature. The model then uses daily temperature to determine daily mortality and maturation rate. There is no consideration of other potential egg mortality sources. Hope this helps.

Steve

From: Cathy Marcinkevage - NOAA Federal <cathy.marcinkevage@noaa.gov>

Sent: Thursday, May 30, 2019 10:35 PM **To:** Steve Zeug <stevez@fishsciences.net>

Cc: Ellis, Gregg <Gregg.Ellis@icf.com>; Greenwood, Marin <Marin.Greenwood@icf.com>

Subject: IOS Results for ROC LTO

Steve --

Consider the figure below of egg survival by water year type, which we generated from the IOS results you provided for the ROC LTO. These would be quite high observed values for egg survival. Is it correct for us to assume that the absolute values of these numbers should not be considered as accurate? And, that, instead, it is better to use the comparative results of either one set of water years to another or between the PA and the COS? These high numbers raised some flags.

Thanks-Cathy

