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**From:** Evan Sawyer - NOAA Federal <evan.sawyer@noaa.gov>  
**Sent:** Wednesday, May 15, 2019 10:57 AM  
**To:** Eric Danner - NOAA Federal  
**Cc:** Cathy Marcinkevage - NOAA Federal; Garwin Yip - NOAA Federal; Howard Brown - NOAA Federal  
**Subject:** ROCON consideration of performance metrics  
**Attachments:** ROCON Shasta performance metrics.docx

Hi Eric,

NMFS and Reclamation have agreed to consider a series of performance metrics related to Shasta summer temperature management, as one approach to dealing with uncertainty. Reclamation has stated that they may be amenable to considering performance metrics related to temperature dependent mortality and egg to fry survival. However, Maria wants to ensure that what we're considering is sufficiently protective and that any metric would not further imperil the species. Does the science center have a way of helping us understand the risk (?) associated with using performance metrics like these being considered? The concern is that we don't want to propose something that undermines the viability of the population/species.

Attached is a quick write up of some possible metrics and the identification of the data on which the metrics are based. In the document I've identified 3 possible TDM performance metrics and one possible ETF survival metric. Do any of these standout as being not protective enough? Are there others that should be considered? Is there a way to assess how the population would fair if a given set of metrics were met?

If you have any questions if I need to explain thing further please feel free to give me a call.

Thanks,  
Evan

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