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**From:** Kristin Begun - NOAA Affiliate <kristin.begun@noaa.gov>  
**Sent:** Wednesday, May 8, 2019 11:47 AM  
**To:** Barbara Byrne - NOAA Federal  
**Cc:** Garwin Yip - NOAA Federal; J. Stuart - NOAA Federal  
**Subject:** Fwd: Entrainment Tool for Longterm Planning?

Hi Barb,

From ICFs response below, it sounds like the tool cannot assess long-term risk, but could be used to compare COS vs PA for past years. I'm not sure if this would be helpful. Elissa had said she's not that familiar with this tool, so I'm not sure if she could demonstrate this during her presentation. Let me know if you have any follow-up questions for ICF.

Kristin Begun, Biologist  
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----- Forwarded message -----

**From:** Tillotson, Mike <[Mike.Tillotson@icf.com](mailto:Mike.Tillotson@icf.com)>  
**Date:** Wed, May 8, 2019 at 10:38 AM  
**Subject:** RE: Entrainment Tool for Longterm Planning?  
**To:** Buttermore, Elissa <[ebuttermore@usbr.gov](mailto:ebuttermore@usbr.gov)>, Collins, Alison L <[ACollins@mwdh2o.com](mailto:ACollins@mwdh2o.com)>  
**Cc:** Barbara Byrne - NOAA Federal <[barbara.byrne@noaa.gov](mailto:barbara.byrne@noaa.gov)>, Kristin McCleery - NOAA Affiliate <[kristin.begun@noaa.gov](mailto:kristin.begun@noaa.gov)>

Hi Elissa,

Although the model is not specifically designed for the task you describe, it is certainly possible to look at how expected loss would have changed in previous years if water operations were different.

I'm happy to discuss this more and provide more depth on this process and the potential limitations.

Best,

Mike

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**From:** Buttermore, Elissa <[ebuttermore@usbr.gov](mailto:ebuttermore@usbr.gov)>

**Sent:** Tuesday, May 7, 2019 3:57 PM

**To:** Collins, Alison L <[ACollins@mwdh2o.com](mailto:ACollins@mwdh2o.com)>; Tillotson, Mike <[Mike.Tillotson@icf.com](mailto:Mike.Tillotson@icf.com)>

**Cc:** Barbara Byrne - NOAA Federal <[barbara.byrne@noaa.gov](mailto:barbara.byrne@noaa.gov)>; Kristin McCleery - NOAA Affiliate <[kristin.begun@noaa.gov](mailto:kristin.begun@noaa.gov)>

**Subject:** Entrainment Tool for Longterm Planning?

Hi Alison and Mike,

NMFS is interested in learning more about the tool. They would like to know if the tool could be used to compare expected loss for long-term planning scenarios, e.g. in comparing current operations vs. proposed actions in (a future) reinitiation of consultation for long term water operations effort.

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Elissa N. Buttermore

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