
From: Barbara Byrne - NOAA Federal <barbara.byrne@noaa.gov>
Sent: Monday, April 1, 2019 10:32 AM
To: Cathy Marcinkevage - NOAA Federal
Cc: Howard Brown - NOAA Federal; Garwin Yip
Subject: Re: LCM results

I'm busy today so a conversation later sounds good to me.

One question (perhaps can e-mail Noble today, or can ask Eric later) -- How hard would it be to do a sensitivity analysis assuming the "worst case" OMR flows under the PA description?

The PA modeling assumes (I think) 7 days of -6000 cfs OMR in Jan and Feb of Above Normal and Below Normal years, and -5000 the rest of the time (and sometime more positive due to smelt-related protections). It also assumes -3,500 cfs OMR in April and May of Above Normal and Below Normal years (based on hitting some real-time triggers). I personally think that OMR flows under the actual PA terms are likely to be more negative (because I think they may operate more aggressively in Jan and Feb, and maybe in more yeartypes; and because I don't think they will hit the triggers leading to -3,500 cfs OMR limit in April and May as often as they predict). **I would be interested to understand the LCM results under a range of potential OMR conditions in winter and spring (not sure how many WR smolts transit the Delta in April and May -- if a small percentage, maybe sensitivity analysis can be limited to Jan-March flows).**

Are there old CWF modeling results that, while not reflective of the PA, might be "good enough" (given our timeframe) to explore the ballpark effects of some range of change in OMR during the winter?

On Mon, Apr 1, 2019 at 10:16 AM Cathy Marcinkevage - NOAA Federal <cathy.marcinkevage@noaa.gov> wrote:

I only offer toay b/c it is the last time to talk with Noble before mid Apr. Otherwise we can def wait and talk with Eric w/o noble.

On Mon, Apr 1, 2019 at 10:10 AM Howard Brown - NOAA Federal <howard.brown@noaa.gov> wrote:

Thanks Cathy, this is exciting to have! I agree that today is not the best day to meet with the Science Center but maybe tomorrow or Wednesday.

Howard

On Mon, Apr 1, 2019 at 10:07 AM Cathy Marcinkevage - NOAA Federal <cathy.marcinkevage@noaa.gov> wrote:

We got draft initial LCM results, attached. I haven't distributed to anyone else yet. Eric and Noble could be available at noon today for any initial conversation, but I personally don't think that we need to sidetrack people today to discuss. I think we distribute and talk with Eric about them later this week.

Let me know if you agree, thanks.

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

From: **Eric Danner - NOAA Federal** <eric.danner@noaa.gov>

Date: Mon, Apr 1, 2019 at 8:28 AM

Subject: LCM results

To: Cathy Marcinkevage - NOAA Federal <Cathy.Marcinkevage@noaa.gov>

Good morning Cathy,

Attached are the LCM results. I will send a followup email with the data for each of the figures. Below is a description provided by Noble.

Eric

Powerpoint attached, and each slide has a short narrative describing the figure in the slide.

The CRR and abundance metrics were using all years of data, which was affecting to some small degree the differences in productivity among water year types. The first 4 years are initialization years, so all metrics were updated to start with model year 5 (1926). Likewise we use model output to year 79 (2000) as this is the last year where we can calculate the full age class of returns. Ultimately, the patterns in the productivity by water year type remained, suggesting that those categories are generally not very useful for describing good versus bad productivity years for winter-run.

When we use the model years 5 to 79 (1926 to 2000), then we obtain the results presented in the slides. Namely, there is a lower abundance in the PA relative to the COS of about 3% (95% intervals supplied as well) and this happens in almost all iterations. This result was basically the same as the one that I showed you and Steve (which used years 2 to 79). But, when I recalculate the CRR under the PA relative to the NAA when using the model years 5 to 79 the results changed. Basically there is negligible difference between PA and COS in CRR. This is due to the first few years, particularly the 4th having a moderate negative CRR under PA relative to COS during this initiation phase and that year influencing the previous results that included all years.

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