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**From:** Cathy Marcinkevage - NOAA Federal <cathy.marcinkevage@noaa.gov>  
**Sent:** Friday, April 5, 2019 10:58 PM  
**To:** Dan Lawson - NOAA Federal  
**Cc:** Howard.Brown; Barbara Byrne - NOAA Federal; Garwin Yip - NOAA Federal  
**Subject:** Re: check-in re: killer whale analysis, including some questions and action items for ROC management

Dan --

As we discussed today, here is a matrix that shows which stressors are addressed/incorporated into which models/analytical methods that people may be using for the Chinook analysis. I'm sure some of these could be arguable, but I used my basic knowledge of the understood and identified drivers of the models, and feel it should be pretty accurate. If you have any questions or something looks off, let me know.

Thanks,  
Cathy

S:\BiOp Analyses\Models\_Stressors\_Matrix.docx

On Wed, Apr 3, 2019 at 4:18 PM Barbara Byrne - NOAA Federal <[barbara.byrne@noaa.gov](mailto:barbara.byrne@noaa.gov)> wrote:  
Dan set up a call this morning with John Hannon to go over John's Chinook production analysis; I sat in as well. Dan, please weigh in if I forgot, or mischaracterized, anything.

Highlights:

- John fielded questions from Dan (and a few from me)
- **Bottom line:** Based on models used and current assumptions, the percent abundance change in adult Chinook in the Ocean from COS to PA = -0.14%.
- John will make a few revisions based on our questions/suggestions; he will send those revisions to me & Dan next week (I don't think the revisions are substantive enough to postpone review of the current draft).

Action Items/Questions:

**1. Dan would like feedback on the approach of comparing PA to COS.**

--In an earlier call with John and Dan, we let John know that we were generally using the COS scenario as our "baseline".

--John pointed out that the modelers generally recommend using the models to compare scenarios, rather than interpret absolute outputs.

--John pointed out that the '09 analysis compared the PA to a "Max production" scenario that assumed the projects were operated for max benefit to fish. He still has those runs if we wanted to do that comparison.

**Action Item:** ROC Management (and Naseem?) to discuss.

**2. Expert eyes on overall approach and assumptions.** Can we get the SWFSC or maybe someone in SFD to do a quick review of the overall approach and assumptions for this wrap-up of CV-wide Chinook production? (This is Barb's suggestion, but fully in line with Dan's first question)

**Action Item:** ROC Management to discuss.

**3. Dan would like to get the master Integration & Synthesis stressor tables ASAP.**

**Action Item:** Barb will send Dan Division-specific I&S tables on Thursday, 4/4. Whenever we develop a "master table", we can share that with him.

**4. Dan would also like to understand and document which stressors are "accounted for" in the modeling, and which aren't.** One option we discussed was to explicitly add an additional column into the stressors table -- I suggested that maybe he and I could sit down with Cathy to work through that but am open to the most efficient approach. Might be easier to describe the general kinds of stressors that each model is, and is not, sensitive to rather than cover every single stressor.

**Action Item:** Cathy to advise best way to meet this need.

**5. Modeling documentation.** During the call, we touched on the lack of model documentation/explanation of results. John tracked down some information, but hasn't captured that in his write-up. Are there model descriptions/run assumptions in the CWF BiOp or BA that we can use?

**Action Item:** Cathy to advise best way to meet this need.

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**Barb Byrne**

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