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**From:** Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>  
**Sent:** Wednesday, May 22, 2019 11:25 PM  
**To:** Cathy Marcinkevage - NOAA Federal  
**Cc:** Naseem.Alston  
**Subject:** Re: ROC LTO Climate Change Text

Cathy--Attached are minor track changes edits.

Naseem--I'm rethinking this, and changing my mind that I don't think we need a key consultation consideration for climate change. Thoughts?

I'm gonna accept all edits, then send to Rosalie, Chris, and Maria for review in the a.m. unless either/both of you don't think it's necessary/desired.

-Garwin-

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On Wed, May 22, 2019 at 10:21 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

Garwin and Naseem --

Attached an on the server is the updated climate change language. See Garwin's email below for thoughts on where this should be inserted. What is left off of the list is putting it at the beginning of the effects section, near the stressor intros, so that it provides blanket coverage of all subsequent effects sections.

I believe that next steps are:

- 1) Garwin review and sign off and
- 2) Naseem as UCDCM inserts whatever excerpts she likes in whatever places seem relevant.

Let me know how I can help.

S:\Draft BiOp\2\_ESA\2.5-2.6 Effects of the Action\Climate Change

Thanks!  
Cathy

On Fri, Apr 12, 2019 at 10:09 AM Garwin Yip - NOAA Federal <[garwin.yip@noaa.gov](mailto:garwin.yip@noaa.gov)> wrote:  
See attached for my track changes.

I agree with how the document lays out our consideration of the best available climate change assessment, and how we would qualitatively consider those effects on top of those in our analyses.

Seems like we could add a general summary of climate change in the "key consultation considerations" section, then paste the attached into the BiOp (I forget whether it's environmental baseline, cumulative effects, or both), and insert a qualitative summary in each of the division effects sections (and in turn, the I&S section).

-Garwin-

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*Garwin Yip*

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On Thu, Apr 11, 2019 at 11:43 PM Cathy Marcinkevage - NOAA Federal <[cathy.marcinkevage@noaa.gov](mailto:cathy.marcinkevage@noaa.gov)> wrote:

All --

Attached is a first draft of text to insert (in the effects analysis?). This mirrors some language already inserted into the latest draft of the analytical approach, but with some more detail. I'd like to use this to help identify how we thread a qualitative assessment of the updated climate change projections into our document -- recognizing that we simply DO NOT have something that quantitatively translates the differences between the BA projections and the latest projections into a readily usable metric or change in result.

I'm happy to hear thoughts on this and ideas on incorporating it into our document. Let's shoot for COB Tuesday, 4/16.

Feel free to let me know if anyone else should contribute to this.

||| Thanks,  
Cathy