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**From:** Garwin Yip - NOAA Federal <garwin.yip@noaa.gov>  
**Sent:** Thursday, March 7, 2019 11:05 AM  
**To:** Naseem Alston - NOAA Federal  
**Cc:** Barb Byrne; Cathy Marcinkevage  
**Subject:** Re: Stressors for EFFECTS section (ROConLTO)

I think brief descriptions of the 15 stressors at the beginning of the effects section would be helpful. Helps set the stage for each of the division analyses, and the reader of those. Provides good reference as folks are analyzing. One stop shop. Also easier than having the recovery plan (and maybe the CWF BiOp) open.

Not sure about the CWF descriptions and where/how they would fit. The RP descriptions are relatively brief and provide general descriptions. Some, like water temp, defers to the CWF descriptions, which are up to a page and more for each, with data and citations.

-Garwin-

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On Wed, Mar 6, 2019 at 10:53 AM Naseem Alston - NOAA Federal <[naseem.alston@noaa.gov](mailto:naseem.alston@noaa.gov)> wrote:  
Hi Garwin and Barb,

At the "stressor" meeting Monday, we talked about using the 15 Primary Stressors identified in the CV salmonid recovery plan, as our overarching stressor list - for the Effects of the PA writers to use.

At the start of each division section, would be a table of the list of 15, indicating which ones would be affected by the PA, breaking it down into the components of that division (from the deconstructed action figure), then discussion/analysis following.

To help folks get started, I put together a table, and included some brainstormed specific effects of the PA that would likely be discussed/analyzed (depending on the division).

**see attached "Table-List"**

(this could definitely be further thought out - maybe Jeff could help? before sending out - or to be updated along the way?)

Also attached:

"Primary Stressor categories as defined in the RP"

(for folks to be clear what is meant for each)

and

"Stressor descriptions" from CWF effects section.

- We talked about this at the meeting as well - these are general discussions about a particular stressor and how it affects fish/habitat (temperature, redd scour - with best available citations). The thought was to avoid redundancy, the first section to discuss it will include these details, the following ones would refer back. These are not the same as the list of 15 stressors, these are the subsections for specific effects (and I only pulled out 7 that would likely be applicable).

**QUESTION FOR GARWIN:** Barb wondered whether we need these types of descriptions in the biop. These types of discussions are typically included to justify (back-up) our effects conclusions, so likely important. However, how much might we be able to refer to the recovery plan as appropriate, to save time?

Final NOTE: these 15 stressors are potentially CV salmonid specific. Barb and I have talked about a plan for the other species.

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