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**From:** Joe Heublein - NOAA Federal <joe.heublein@noaa.gov>  
**Sent:** Friday, May 24, 2019 9:41 AM  
**To:** Rosalie del Rosario - NOAA Federal  
**Cc:** Garwin Yip - NOAA Federal; Howard Brown; Cathy Marcinkevage; Brian Ellrott  
**Subject:** Re: ROC on LTO draft BiOp revised I&S sections for QA/QC review/clearance

Hi Rosalie,

From what I've heard thus far changes to the effects sections are not going cause any significant changes to the I&S sections beyond the stressor tables. There may be revisions to the I&S sections after we receive BOR comments on Tuesday, so that could be a good time to plug in. I'm not sure what review sequence will leave enough time for your clearance review prior to peer review.

-Joe

On Fri, May 24, 2019 at 9:18 AM Rosalie del Rosario - NOAA Federal <[rosalie.delrosario@noaa.gov](mailto:rosalie.delrosario@noaa.gov)> wrote:  
Hi Again,

I understand from Howard that folks are still revising various effects sections to address comments, which means the I&S sections may be undergoing another set of revisions. Howard and I agree that I should wait to receive the updated I&S sections that reflect the updated effects sections. So I'll hold off on reviewing I&S until the next round.

Thanks,  
Rosalie

On Fri, May 24, 2019 at 6:59 AM Rosalie del Rosario - NOAA Federal <[rosalie.delrosario@noaa.gov](mailto:rosalie.delrosario@noaa.gov)> wrote:  
Thanks Garwin. Can you please send winter run I&S because it looks like there are instead two versions of spring-run I&S attached.  
Secondly, I will assume each version incorporates changes/updates to the effects sections to date (i.e., comments from BOR, etc), right?

Will get started on my reviews now.  
Rosalie

On Fri, May 24, 2019 at 1:55 AM Garwin Yip - NOAA Federal <[garwin.yip@noaa.gov](mailto:garwin.yip@noaa.gov)> wrote:  
Rosalie,

Per your request, attached are the revised WR, SR, steelhead, and green sturgeon I&S sections for your review and clearance.

The track changes are a bit...colorful, but then you can see the changes, and how we addressed your comments.

-Garwin-

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Garwin Yip

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On Fri, May 10, 2019 at 3:45 PM Rosalie del Rosario - NOAA Federal <[rosalie.delrosario@noaa.gov](mailto:rosalie.delrosario@noaa.gov)> wrote:

Hi Garwin and Team,

Some comments on the I&S sections for winter run, spring run, steelhead, and sturgeon. I'd like to take a quick look at the revisions before they go for peer review.

Thanks,  
Rosalie

On Mon, May 6, 2019 at 11:43 PM Garwin Yip - NOAA Federal <[garwin.yip@noaa.gov](mailto:garwin.yip@noaa.gov)> wrote:  
All,

Attached are clean versions of the yellow-highlighted sections.

### **1 Introduction:**

**1.1 Background** [Garwin (C) drafted; Barb reviewed]

**1.2 COA** [Garwin (C) drafted; Barb reviewed]

**1.3 Key consultation considerations** [Garwin (C) drafted; Barb, Cathy, Howard reviewed]

**1.4 Consultation history** [Brittany drafted based on initiation memo; Garwin reviewed]

**1.5 Proposed Federal Action** [Evan drafted; Howard, Amanda, Barb, Naseem, Garwin (C) reviewed]

**2.1 Analytical approach** [Evan and Cathy drafted; Howard, Naseem (C), Rosalie (C), Chris (C), Maria, Garwin (C) reviewed]

**2.2 Status of the species and CH** [Brittany and Page drafted; Barb, Amanda, Chris (C), Naseem, Garwin reviewed (C)]

**2.3 Action Area** [Evan drafted; Barb, Naseem (C), Rosalie (C), Garwin (C) reviewed]

**2.4 Environmental Baseline** [Brian drafted; Page, Naseem (C), Brian, Rosalie, Chris, Garwin (C) reviewed]

### **2.5 & 2.6 Effects of the Action on species and CH**

**Stressor introductions** [Evan, Stephen, Kate drafted]

**American River Division** [Brian drafted; Brittany revised, Garwin reviewed x 2]

**Clear Creek** [Sarah drafted; Brittany revised, Garwin reviewed x 3]

**Shasta Division** [Evan drafted; Cathy revised x 3, Garwin reviewed x 3, Maria & Rosalie reviewed]

**East Side Division** [Barb drafted; Kristin revised, Garwin reviewed x 2]

**Delta Division** [Jeff drafted; Barb revised, Maria reviewed, Garwin reviewed x 2]

**SRKW** [Dan drafted; Jeff and Barb reviewed]

Chinook salmon analysis [John Hannon drafted; Dan, Jeff, Barb reviewed]

**Climate change** [Cathy drafted; Garwin reviewed]

**Benefits of ongoing restoration to include in multiple sections** [Naseem drafted; Garwin (C) reviewed]

**2.5.9 Life cycle model results** [Cathy drafted; Evan revised]

**2.7 Cumulative effects** [Brittany drafted, Garwin (C) reviewed]

## **2.8: Integration and Synthesis**

Winter-run Chinook salmon [Brian drafted; Howard, Cathy, Naseem, Evan, Rosalie reviewed]

CV spring-run Chinook salmon [Brian drafted; Barb, Cathy, Kristin, Naseem, Evan reviewed]

CCV steelhead [Joe drafted; Barb, Sarah, Jeff, Rosalie, Garwin reviewed]

sDPS green sturgeon [Joe drafted; Rosalie, Garwin reviewed]

-Garwin-

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*Garwin Yip*

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