From: Rosalie del Rosario - NOAA Federal <rosalie.delrosario@noaa.gov>

Sent: Tuesday, April 23, 2019 5:36 PM **To:** Joe Heublein - NOAA Federal

Cc: Howard Brown; Cathy Marcinkevage; Yip', 'Garwin; Brian Ellrott

Subject: Re: recovery in integration and synthesis

Hi Joe,

Thanks for sharing the draft I&S for green sturgeon. I recognize the I&S is modeled after 2009 OCAP and 2017 CWF BiOps and I think the issue of consistency with the prior BiOps would be a good topic to discuss with Chris K and your management in the recommendation to place emphasis on "likelihood of survival" and "likelihood of recovery" (which are the regulatory standards for jeopardize the continued existence of...) rather than discussing I&S in terms of extinction.

I offer preliminary comments in the attached document. You'll probably have questions so feel free to set up a time to talk.

Thanks,

Rosalie

On Thu, Apr 18, 2019 at 9:31 AM Joe Heublein - NOAA Federal <<u>joe.heublein@noaa.gov</u>> wrote: Hi Rosalie,

Things are a bit backed up in our office review and we were hoping you could review the green sturgeon I&S. I've attached the most recent section and it's also available on the server under the same title-R:\Draft BiOp\2 ESA\2.8-2.9 Integration and Synthesis and Conclusion

Thanks

Joe

On Tue, Apr 16, 2019 at 10:27 AM Joe Heublein - NOAA Federal < joe.heublein@noaa.gov > wrote: Hi Rosalie,

Thanks for the example, I followed a similar approach in the green sturgeon section I&S for ROC LTO but made more specific reference to criteria in the recovery plan. Not sure if we closed the loop on your review but maybe we should stick with the schedule and wait until the CVO has a chance to review the I&S sections.

Thanks again

Joe

On Mon, Apr 8, 2019 at 3:59 PM Rosalie del Rosario - NOAA Federal <<u>rosalie.delrosario@noaa.gov</u>> wrote: Hi Joe,

Good topic and I think a brief call can be effective. I don't have a template to offer, but attached is an example biop that was shared with me that addresses recovery more explicitly (see highlights). Keep the context in mind. It's for a simpler project than ROConLTO but nevertheless helpful. I also provided comments on the draft analytical approach re: analyzing likelihood of recovery under the jeopardy standard. I recommend the analysis for each species speak directly to the recovery criteria identified in the

recovery plan. McElhany's VSP is for population-specific and the recovery criteria describe what the species needs to be recovered. Again, probably best to have a brief call. My calendar is updated. Thanks,

Rosalie

On Mon, Apr 8, 2019 at 9:38 AM Joe Heublein - NOAA Federal < <u>joe.heublein@noaa.gov</u>> wrote: Hi Rosalie,

Naseem shared these thoughts on discussion of recovery criteria in integration and synthesis. Brian and I would like to have a brief call on how to incorporate a discussion of recovery criteria into the ROC LTO BO integration and synthesis section and check if you have any recent example paragraphs or templates on discussion of recovery criteria in I&S we can use. Our I&S section is due this Friday so if you can send any recent examples or templates in advance of our call that would be great.

Thanks

Joe

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