From:	Matt Hogan
To:	Jennifer Fortin-Noreus
Subject:	RE: recalibration comments
Date:	Wednesday, August 24, 2016 11:59:08 AM

Thanks Jennifer….very helpful.

From: Jennifer Fortin-Noreus [mailto:Jennifer_fortin-noreus@fws.gov]
Sent: Wednesday, August 24, 2016 11:55 AM
To: Matt Hogan
Subject: recalibration comments

Matt,
We received comments from one peer reviewer and a significant number of the public, many of which were plaintiffs in the previous Yellowstone delisting lawsuit, expressing that details need to be included in the Conservation Strategy and the Rule on how a new population estimator would be implemented and calibrated to the Chao2 estimator.

Comments from Peer Reviewer #1:

- In response to the question: Please provide your scientific evaluation (e.g., pros and cons) of the revised recovery goal's objective to manage and maintain the population around the 2002-2014 model-averaged Chao2 estimate of 674 (95% CI 600-757). "I deem the use of the Chao2 estimator as appropriate and precautionary in approach. The statement that new estimators may be used, should an improved method become available, is a meaningful and scientifically sound approach. Continuation of the Chao2 estimator should a new estimator be used is deemed appropriate for long-term monitoring and trend detection." (p. 5)
- In their overview of the Draft Revised Demographic Recovery Criteria: "Development of population estimation methods is an active field and it is deemed sensible and scientifically sound to allow for modification in estimation methods over time. There is, however, a need to calibrate any new estimation method with the previous approaches to ensure long-term comparability of data."

Comments from the National Park Service:

- "We request that if a new estimation model other than Chao2 is used in the future, the states will recalibrate the population thresholds (i.e., the minimum and average of bears) and proportions of allocated hunter harvest based on the estimates provided by the new model in comparison to Chao2.

Examples of public comments:

- Sierra Club: "Use of different methodologies results in different numbers which could open the door to excessive killing. The Proposed Rule and Tri-State MOA only require states to maintain the population around 674…if the population was estimated at 1,000 or more bears through another methodology, several hundred bears could be killed under the proposed mortality threshold framework as 'paper bears' i.e. no actual additional bears were on the ground; the increased number is simply a result of using a different methodology. The Service must address this problem by recalibrating estimates, trend, etc. if the methodology

is changed."

- Defenders of Wildlife: "We appreciate that the Conservation Strategy Appendix [C] clarifies the process by stating that, *If another population estimator was adopted as per the Conservation Strategy procedures described above, this new population estimator will be applied to the 2002-2014 data to estimate the average population size 2002-2014. The new population estimate results would be inserted in Table 1…* (Conservation Strategy, Appendix [C], p.2). This clarifies the process but is not included in the tristate MOA or in any of the state grizzly bear management plans. The MOA and state management plans must clearly state that any new estimator must follow the direction in Appendix C and the numbers would be applied to 2002-2014 data. Any change in how bears are counted must be based on the best available science and undergo public review."
- GOAL: "Given that different estimators of total population size can yield numbers that vary by as much as 40%...the Service needs to include language in the Rule that explicitly guards against state agencies introducing a new method that dramatically increases estimates of total population size without any commensurate adjustments in reckonings of trend, methods of estimating total allowable mortality, or thresholds that trigger outside reviews--all of which is currently allowed in both the Rule and the MOA. As is, state management agencies could (for example) adopt the existing Mark-Resight method for estimating total population size as soon as Yellowstone's grizzly bears are delisted, and produce a dramatic purported "increase" in the population. This would instantaneously translate into a markedly positive increase in putative population trend along with numbers of bears available for 'discretionary' mortality---without any change whatsoever in the underlying population or on-the-ground conditions."
- Greater Yellowstone Coalition: "It must be clear that if a new population estimator is adopted, the new estimator would follow direction in Appendix C of the Draft Grizzly Bear Conservation Strategy: Calculation of Total Population Size and Mortality Limits. *If another population estimator was adopted as per the Conservation Strategy procedures described above, this new population estimator will be applied to the 2002-2014 data to estimate the average population size 2002-2014. The new population estimates would be inserted in Table 1 to reset the population size numbers with the same sliding scale, with the intent to maintain the population goal of the average population size 2002-2014*. This language should memorialize this objective in order to potentially recalibrate future methodologies to Chao2, the Table 1 proposed mortality thresholds, and the objective of maintaining a stable population within the DMA."

To summarize, some commenters were commenting on the lack of calibration language in the Proposed Rule while others were commenting on the Conservation Strategy. Some of the comments related to the Conservation Strategy seem unaware of the language in draft Appendix C. However, during the recent editing process of the Conservation Strategy through YES, the states have removed the paragraph in Appendix C, quoted by the Greater Yellowstone Coalition and Defenders of Wildlife, that discusses calibration of a new population estimator.

Please let me know if you have any questions or need anything else.
Jennifer

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