

Suggested edits to State Grizzly Bear Management MOA

The following represents changes that the Service believes **must be changed** in the interest of accuracy or for consistency with other documents and our proposed rule.

- Global change throughout the document regards how Chao-2 is described. Whenever Chao2 is used it should be written as the “model-averaged Chao2”. This is the method described and used by the IGBST to make the annual population estimates since it stabilizes the annual estimates. The document refers to the 2002-2014 Chao 2 average population estimate of 674.
 - This should be changed to the 2002-2014 modeled average Chao 2 population estimate of 674.
 - ~~This result in different numerical outcomes and our change reflects the accurate methodology.~~
 - On page 1 - we believe the appropriate reference would be the 2016 Conservation Sstrategy since the 2007 Strategy version is being replaced by the 2016 version.
 - On Page 3 Number 5 - the wording “Recovery “Area” should be changed to “Recovery Zone” in two places as Recovery Zone is the accepted term.
 -
 - On Page 4 bullet b. - “females with cubs” should be changed to “females with offspringoffspring”
 - On Page 4 bullet c. - The sentence sShould read as follows:
 -
 - Ensure the following annual total mortality rates are not exceeded within the DMA ~~for three consecutive years~~ for independent males, independent females and dependent young, as set forth in the following table, based on the 2002-2014 model-averaged Chao2 average point estimate for the total population with 95% confidence intervals (600-747).
 - ~~Ensure the following total annual mortality rates are not exceeded within the DMA for three consecutive years for independent males....intervals (600-747).~~
 - ~~The mortality rates that have been agreed up on annual mortality rates. (The three year criteria is actually dealt with appropriately later in the document regarding response to exceedances of mortality over a three year period (page 5 fourth bullet under number 4)).~~
 - On page 4 the table column 1 should be <674 and <7.6% for FEMALES and <7.6% for dependent young.
 -
 - Page 5 in the table the 58% should be changed to 54% to accurately reflect the footnote.
-

Suggested edits to areas of the document that the Service believes may not be accurately ~~described~~ ~~characterized~~ and will likely be addressed in the Service documents differently.:

- Page 2, third paragraph, third line “of at least 500 bears” should be changed to “at least a stable population...”

———*The 2013 Recovery Plan Supplement had three criteria, roughly stated 500 bear minimum for genetic health, bear occupancy standards, and a demographic mortality structure to ensure a stable population after delisting.*

- Page 2, fourth paragraph, 6th line ~~“~~ strike ...~~”~~ of a minimum of 500 bears~~”~~ and put a period after the word “criterion”.

~~———The modelled average Chao 2 is a standalone recovery criteria that effects but is not the purpose of supporting a minimum population of 500 bears.~~

- Page 2, last paragraph, third line from the bottom ~~“~~ strike for the ... ~~“~~ for the post-delisting monitoring period~~”~~ and put a period after the word “size”.

———*Chao 2 is intended to be the operative population estimator until changed. “Post-delisting monitoring period” has specific regulatory meaning for the Service and we are not intending the Chao 2 method to be constrained to the 5 years identified in our regulations.*

- Page 5, bullet d. we would recommend inserting ...~~“~~ based on the best available science~~”~~ after “mortality rates”.

All other documents refer to this clause when discussing adjustments to mortality rates.