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Recovery criterion and genetics argument

2 messages

van Manen, Frank <fvanmanen@usgs.gov>
To: Chris Servheen <grizz@umontana.edu>
Cc: Lisa Landenburger <lisa_landenburger@usgs.gov>

Wed, Sep 16, 2015 at 4:09 PM

Chris,

At our meeting last week there seemed to be some disagreement regarding your statement that the recovery criterion of >500 was a minimum established for genetic reasons. Lisa and I discussed it this morning and she looked into this. This is what she came up with, showing there is a clear precedent for this notion.

You may have already documented this but I thought these facts may be of use to you:

The connection between the minimum of 500 bears and genetic management was clearly established as early as the **1993 Recovery Plan** and the **Revised Demographic Recovery Criteria Supplement to the 1993 GB Recovery Plan**, approved March 6, 2007. The following cites relevant references:

- 1993 Recovery Plan, pg. 3 AND Demographic Criteria Supplement, pg.3 :
 - Because 48 adult females with cubs of the year is equivalent to a population of approximately 500 total individuals (IGBST 2005, p. 43), we are establishing a target number of 48 adult females with cubs of the year for the GYA. This target shall not go below 48 for any two consecutive years. **For genetic reasons (Miller and Waits 2003, p. 4338) it is desirable that the total population of grizzly bears in the GYA be maintained at or above 400 bears. To assure this goal is met and in order to adopt a conservative approach, the total population will be maintained at or above 500 grizzly bears in the GYA.**
- 2003 AND 2007 Final Conservation Strategy:
 - (Executive Summary, pg.7), under items to monitor) – Maintaining a total population for the entire GYA above 500 **bears to assure the genetic needs of the population.**
 - (Chapter 2, pg. 26) – The total population (Appendix C) throughout the ecosystem must be more than **500 bears to ensure a minimum loss of genetic diversity** (Miller and Waits 2003) (Appendix D provides information about genetic management and monitoring).
- 2003 AND 2007 Conservation Strategy, APPENDIX D, pg. 128:

- Servheen, Chris** <grizz@umontana.edu>
To: "van Manen, Frank" <fvanmanen@usgs.gov>
Cc: Lisa Landenburger <lisa_landenburger@usgs.gov>

Thanks, Frank and Lisa. Very helpful to have all this in one place. Yes, the 500 number is based on genetics and it was never a demographic floor number or a population target. Some agencies have seized this minimum number necessary for minimal loss of genetic diversity as a population goal. This will be a problem into the future. This is an unfortunate minimalist approach to conservation (i.e. what is the lowest number we need?).
Chris

From: 'Frank van Manen' <fvanmanen@usgs.gov<mailto:fvanmanen@usgs.gov>>
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