

From: [Shoemaker, Rebecca](#)
To: [Daniel Thompson](#)
Subject: RE: recovery criteria status
Date: Thursday, October 02, 2014 9:34:30 AM
Attachments: [GYA CS Revisions_Aug.2014.docx](#)

oooohhhhhh. That document that was up on the screen is attached. Good memory! looks like you have some tasks.

From: Daniel Thompson [daniel.thompson@wyo.gov]
Sent: Thursday, October 02, 2014 9:31 AM
To: Shoemaker, Rebecca
Subject: Re: recovery criteria status

Actually meant Strategy...last meeting we identified a bunch of those changes. But I understand completely. I was just going to work off most recent thing we had.

DT

On Thu, Oct 2, 2014 at 9:20 AM, Shoemaker, Rebecca <rebecca.shoemaker@cfc.umt.edu> wrote:

howdy, sorry, just woke up! hahahahha!
do you really mean the conservation strategy? i haven't made any edits to it yet cuz i'm waiting until we have agreement...do you mean the recovery criteria?

From: Daniel Thompson [daniel.thompson@wyo.gov]
Sent: Thursday, October 02, 2014 8:21 AM
To: Shoemaker, Rebecca
Subject: Re: recovery criteria status

Is there an edited version of Cons Strategy that I could work from? I wanted to see a few things we didn't talk about but would like to have an updated version versus the one that will be thrust upon me at Study Team meeting..if available.

On Wed, Oct 1, 2014 at 10:25 AM, Shoemaker, Rebecca
<rebecca.shoemaker@cfc.umt.edu<<mailto:rebecca.shoemaker@cfc.umt.edu>>> wrote:
Demographic Recovery Criterion 1

Within the Demographic Monitoring Area (DMA), maintain a minimum population size of at least 500 animals, as indicated by methods established in published, peer-reviewed scientific literature and calculated by the Study Team using the most updated Protocol, as posted on their website. The annual estimate of total population size cannot drop below 500. Status: This recovery criterion has been met since at least 2007 (see Study Team annual reports from 2008–2013 available at <http://www.nrmssc.usgs.gov/products/IGBST>).

Demographic Recovery Criterion 2

Sixteen of 18 bear management units within the Recovery Zone (see map at <http://mountain-prairie.fws.gov/species/mammals/grizzly/yellowstone.htm>) must be occupied by females with young, with no 2 adjacent bear management units unoccupied, during a 6-year sum of observations. Status: This criterion is important as it ensures that reproductive females occupy the majority of the Recovery Zone and are not concentrated in one portion of the ecosystem. This recovery criterion has been met since at least 2001.

Demographic Recovery Criterion 3

Within the DMA, establish annual mortality limits for independent females (at least 2 years old), independent males (at least 2 years old), and dependent young (less than 2 years old) that correspond to a lambda value (i.e., population growth rate) of at least 1.0. Annual mortality limits are calculated using sustainable mortality rates and the estimated population size for that year, as reported by the Study Team using peer reviewed scientific methods such as known-fate analyses (see Schwartz et al. 2006, pp. 9–16). For example, the sustainable mortality rate using data from 2002–2011 is 7.6 percent for independent females while the rates for independent males and dependent young are 15 percent and 7.6 percent, respectively. These rates for independent females and dependent young are lower than what was calculated using data from 1983–2002. Mortalities are tracked and reported annually using data obtained within the DMA shown in Figure 1. Status: This criterion was met for all age and sex classes in 2012 and 2013. The Study Team has not retrospectively calculated what the sustainable mortality limits would have been for earlier years and whether they were met because this is not necessary considering other independent data (i.e., survival rates and estimates of annual population growth) indicate mortality has been within limits that result in population stability.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.

E-Mail to and from me, in connection with the transaction of public business, is subject to the Wyoming Public Records Act and may be disclosed to third parties.