

A Comparison of the Grizzly Bear Delisting Approach between 2007 and 2015: Possible Population Management

Improving legal defensibility and
grizzly bear conservation

It is important to recognize that has been a joint state-federal effort

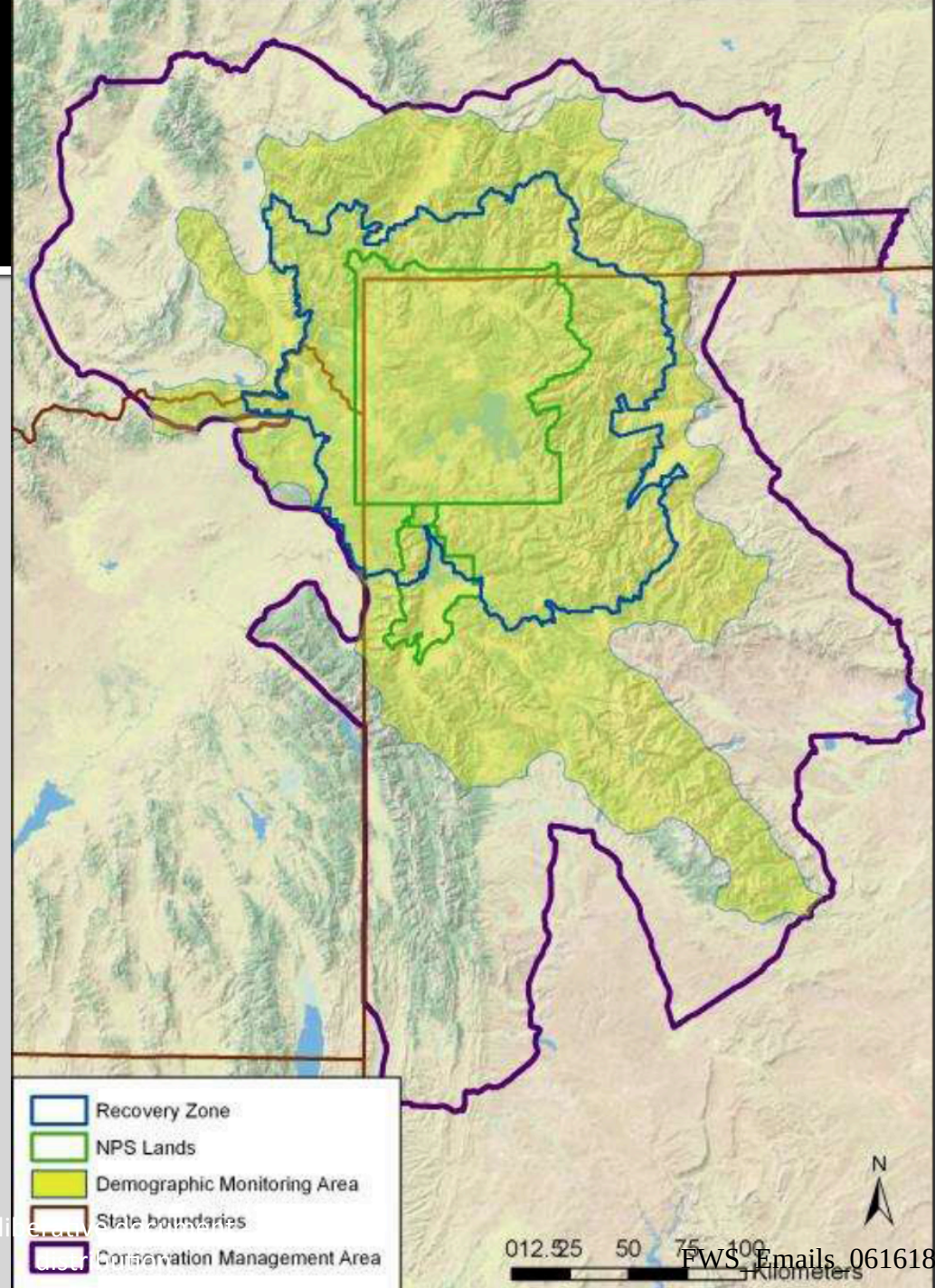
- All the changes we will discuss between the 2007 delisting rule and the 2015 delisting rule have been jointly developed by all the state and federal partners – FWS, WY, MT, ID, NPS, USFS.
- These changes have been developed to assure the future of the grizzly bear and increase our legal defensibility. These changes increase management flexibility by stabilizing the population and reducing the area where mortalities count against the mortality limits.

2007 vs. 2015 – What’s changed?

Criterion	2007 delisting rule	2015 delisting rule
Area within which mortality limits apply	36,776 square miles	19,279 square miles (17,497 sq. mi. less)
Mortality limits	To allow the population to be at least stable and to increase 95% of the time. “...simulations have shown that this level of adult female mortality rate allows a stable to increasing population 95% of the time.”	To stabilize the population and allow zero net growth. “Recommend a change in management objective from one of population growth for recovery to maintenance of a stable grizzly bear population, which was deemed biologically logical and desirable given the status of the population.”
Population goal	Increasing	Stable
States agreed not to institute a hunt immediately after delisting	Yes	No
Mortality limit for % of independent females	9%	7.6%
Mortality limit for % of independent males	15%	15%
Mortality limit for % of dependent young	9%	7.6%
Allocation process for managed mortalities and response if limits are exceeded	Management within the mortality limits ecosystem-wide. Coordination assumed. “Hunting permits will not be issued by the states if ecosystem mortality limits were exceeded in any given year”.	More lenient than 2007. Allocation of mortalities by % of each state inside the monitoring area and outside NPS lands; and triggers for management response if mortality limits were exceeded in 2 consecutive years for females and 3 consecutive years for males.
Management review every 5 years to assure that management actions are achieving the objective of a stable population at the number at delisting	Not in the management protocol. Internal deliberative document - not for distribution	Will be in the management protocol. FWS_Emails_061617

Greater Yellowstone Ecosystem

- National Park lands = 10,344 km²
- Recovery Zone = 23,828 km²
- Conservation Management Area = 95,225 km²
- Demographic Monitoring Area = 49,931 km² (88 % Federal)



What are the triggers and responses to departing from the mortality limits?

TRIGGER	RESPONSE
Exceeding female mortality limits in 2 consecutive years	No grizzly bear hunting inside the DMA the following year.
	IGBST Biology & Monitoring Review
Exceeding female mortality limits in 3 consecutive years	No grizzly bear hunting inside the DMA the following year.
	USFWS status review and possible relisting.
Exceeding male mortality limits in 3 consecutive years	No grizzly bear hunting inside the DMA the following year.
	IGBST Biology & Monitoring Review
Exceeding male mortality limits in 4 consecutive years	No grizzly bear hunting inside of DMA the following year.
	USFWS status review and possible relisting.
Exceeding dependent young mortality limits in 3 consecutive years.	IGBST Biology & Monitoring Review
Exceeding dependent young mortality limits in 4 consecutive years	USFWS status review and possible relisting.
Failure to meet the distribution criterion	IGBST Biology & Monitoring Review
Failure to meet any of the habitat standards (departure from Forest Plans)	IGBST Biology & Monitoring Review
Failure to receive adequate funding to implement the monitoring and management requirements of the Conservation Strategy	IGBST Biology & Monitoring Review
Total population estimate of less than the 500 necessary to assure genetic health	No grizzly bear hunting inside the DMA the following year.
	Status review and possible relisting.
Changes in federal, state, or Tribal laws, regulations, rules, or management plans that depart significantly from the agreements reached in the Conservation Strategy	USFWS status review and possible relisting.

Implications for Mortality Management

Some Real Numbers

2014 Population estimate	Total population ≈ 1200 (mark-resight, anticipated post-delisting)	Total population = 757 (current Chao2 method)
Independent females (7.6%)	25	16
Independent males (15%)	49	31
Dependent young (7.6%; not subject to hunting)	22	14
Average mortality/year from all sources 2011-2014	38 (17 F, 21 M)	38 (17 F, 21 M)
Independent bears “available” (hunting, management purposes)	$(25 + 49) - 38 = 36$	$(16 + 31) - 38 = 9$

Thoughts from our DOJ attorney, Nov. 2014:

“The whitebark pine issue [which we lost on] cannot be divorced from population size and **the Court (9th Circuit) was worried about how we would ensure the population doesn't decline.”**

Why do we need to be more explicit about hunting this time around?

Short answer: to increase legal defensibility by proactively addressing concerns raised by both the 9th circuit and Judge Molloy

Long answer:

Molloy (grizzly):

“Without tangible requirements specifying how the mortality limits will be enforced, there is nothing in this portion of the CS that serves as a regulatory mechanism”

“While the state plans incorporate the mortality limits, the plans include no enforcement mechanism or standards to ensure mortality does, in fact, stay below the prescribed levels. Nor are the states required to take any specific management response if mortality exceeds the limits.”

from the 9th circuit dissenting opinion (i.e., the outline for plaintiffs in the next case):

“...[FWS] did not explain adequately how existing regulatory mechanisms actually prevent grizzly bear mortality.”

“There is not a single federal or state law or regulation that provides a means for enforcing the Strategy’s mortality standards.”

Why are triggers and responses necessary?

9th circuit (grizzly):

“more specific management responses, tied to more specific triggering criteria, are required.”

“the promise of adaptive management is not a sufficient answer to scientific uncertainty”

from the 9th circuit dissenting opinion (the outline for plaintiffs in the next case):

“...[FWS] did not explain adequately how existing regulatory mechanisms actually prevent grizzly bear mortality.”

Molloy (grizzly):

“[A biology and Monitoring Review] does not serve as a regulatory mechanism because...the Service and other agencies are not required to take any concrete response to protect grizzlies if monitoring shows population or habitat declines.”

A regulatory commitment to limit purely discretionary mortality (i.e., hunting) if mortality limits are exceeded is the only concrete management response we have.

Will the population continue to increase if we set mortality limits corresponding to a stable λ ?

- No.
- Because the Study Team will conduct a demographic review every 5 years.
- For example, if we find out in 2020 that the population was actually increasing from 2015–2020, the mortality rate would be adjusted based on the best available science from the study team to get the population back to the original level and produce population stability.